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BOSTON WEATHERHEAD® HOSE ASSEMBLY

Master Catalog



BUILT TO A TOUGHER STANDARD™

BOSTON WEATHERHEAD™



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WARNING!

Selection of Hose

Selection of the proper Boston Weatherhead hose for the application is essential to the proper operation and safe use of the hose and related equipment. Inadequate attention to selection of the hose for your application can result in hose leakage, bursting, or other failure which can cause serious bodily injury or property damage from spraying fluids or flying projectiles. In order to avoid serious bodily injury or property damage resulting from selection of the wrong hose, you should carefully review the information in this catalog. Some of the factors which are involved in the selection of the proper hose are:

- hose size
- hose length
- hose ends
- fluid conveyed
- bends
- temperature
- hose pressure
- static head pressure
- installation design

These factors and the other information in this catalog should be considered by you in selecting the proper hose for your application.

If you have any questions regarding the proper hose for your application, please contact the Boston Weatherhead Division of Dana Corporation Technical Support at 1-800-776-3262.

Proper Selection of Hose Ends

Selection of the proper Boston Weatherhead end fittings for the hose end application is essential to the proper operation and safe use of the hose and related equipment. Inadequate attention to the selection of the end fittings for your application can result in hose leakage, bursting, or other failure which can cause serious bodily injury or property damage from spraying fluids or flying projectiles. In order to avoid serious bodily injury or property damage resulting from selection of the wrong end fitting, you should carefully review the information in this catalog. Some of the factors which are involved in the selection of the proper hose ends are:

- fluid compatibility
- temperature
- installation design
- hose size
- corrosion requirements
- fluid conveyed

These factors and the other information in this catalog should be considered by you in selecting the proper hose end fitting for your application.

If you have any questions regarding the proper hose for your application, please contact Boston Weatherhead Technical Support at 1-800-776-3262.

WARNING!

Hose Installation

Proper installation of the hose is essential to the proper operation and safe use of the hose and related equipment. Improper installation of the hose can result in serious injury or property damage caused by spraying fluids or flying projectiles. In order to avoid serious bodily injury or property damage resulting from improper installation of the hose, you should carefully review the information in this catalog regarding hose installation. Some of the factors you must consider in installing the hose properly are:

- changes in length
- protection from high temperature sources
- twisting
- proper bend radius
- elbows and adapters to relieve strain
- rubbing or abrasion
- improper hose movement.

These factors and the other information in this catalog regarding hose installation should be considered by you before installing the hose.

If you have any questions regarding proper hose installation, please contact the Boston Weatherhead Division of Dana Corporation Technical Support at 1-800-PRO-DANA.

Hose Maintenance

Proper maintenance of the hose is essential to the safe use of the hose and related equipment. Hose should be stored in a dry place. Hose should also be visually inspected. Any hose that has a cut or gouge in the cover that exposes the reinforcement should be retired from service. Hoses should also be inspected for kinking or broken reinforcement. If the outside diameter of the hose is reduced by 20% at the spot where it is bent then the hose should be retired from service. Inadequate attention to maintenance of the hose can result in hose leakage, bursting, or other failure which can cause serious bodily injury or property damage from spraying fluids, flying projectiles, or other substances.

Hose and Field Attachable Hose Ends

Boston Weatherhead Hose and Field Attachable Hose Ends have been engineered and designed as a complete hose assembly system. Component compatibility along with the use of quality components insures the production of reliable hose assemblies when assembled properly. The use or intermixing of ends and hose not specifically engineered and designed for use with each other may result in the production of unsafe or unreliable hose assemblies. This can result in hose assembly leakage, hose separation or other failures which can cause serious bodily injury or property damage from spraying fluids, flying projectiles, or other substances. The Boston Weatherhead warranty is limited to apply only when Boston Weatherhead Field Attachable Hose Ends are used on compatible Boston Weatherhead hose. See back inside cover for warranty information.

Coll-O-Crimp® Hose, Hose Ends and Assembly Equipment Compatibility

The Coll-O-Crimp® Equipment Package, Coll-O-Crimp® Hose Ends and Coll-O-Crimp® Hose have been engineered and designed as a complete hose assembly system. Each component of the Coll-O-Crimp® hose assembly system is compatible with other Coll-O-Crimp® components to which it relates. Component compatibility, along with the use of quality components, insures the production of reliable hose assemblies when assembled properly. The use or intermixing of fittings and hose not specifically engineered and designed for use with each other and Coll-O-Crimp® equipment is not recommended and may result in the production of unsafe or unreliable hose assemblies. This can result in hose assembly leakage, hose separation or other failures which can cause serious bodily injury or property damage from spraying fluids, flying projectiles, or other substances. The Boston Weatherhead warranty is limited to apply only when Coll-O-Crimp® Hose Ends and compatible Coll-O-Crimp® Hose are used with Coll-O-Crimp® assembly equipment.

Hose Selection Chart

Application

⚠ WARNING—Selection of Hose: Selection of the proper hose for the application is essential to the proper operation and safe use of the hose and related equipment. Inadequate attention to selection of the hose for your application can result in hose leaking, bursting, or other failure which can cause serious bodily injury or property damage from spraying fluids or flying projectiles. You should carefully review the information in this catalog.

How to use chart: Locate the hose I.D. required and move to the right to the correct pressure. Then move up or down in this column for data on material, temperature, etc. to quickly determine whether the hose meets your requirements. For complete information on any hose refer to hose catalog page number at bottom of column.

HOSE #	H057	H8679	H077	H1719	H1987	H338	H229	H239	H429	H285
Usage	Fuel & Oil	Water Transfer	Elec. Fuel Inject.	Water Transfer	Water Transfer	Air Brake	Air & Hydraulic	Transmission Oil Cooler, Diesel Fuel, Air Brake	Transmission Oil Cooler, Fuel and Diesel Lines	Agriculture & Food
Meets	NMMA	—	—	—	—	DOT AII	DOT AII	DOT AII	—	FDA, NSF 51
SAE No.	30R7	—	30R9	—	—	J1402 Type A	J1402 Type AII	J1402 Type AII	J1019	—
Temperature Range	-40°F +275°F	-30°F +160°F	-30°F +275°F	-15°F +150°F	-30°F +160°F	-40°F +200°F	-40°F +302°F*	-40°F +320°F*	-55°F +302°F	+25°F +150°F
Inner Tube	Nitrile	Synthetic Rubber	Fluoro-elastomer Veneer	PVC	EPDM	EPDM	Nitrile	CPE	CPE	Clear PVC
Reinforcement	1 Fiber Braid	2 Fiber Spirals	Multi Fiber Braid	2 Fiber Spirals	2 Fiber Spirals	Multi Fiber Braid	2 Fiber Braids	Fiber	1 Steel Braid	2 Fiber Spirals
Outer Cover	Hypalon®	Synthetic Rubber	ECO	PVC	EPDM Pin Pricked	EPDM	Fiber Braid	Fiber Braid	Fiber Braid	Clear PVC
Hose I.D.	MAXIMUM RECOMMENDED OPERATING PRESSURE - PSI									
3/16	50						225	225		
1/4	50		125				225			250**
5/16	50		125				225			
3/8	50		125			225				225**
13/32							225	225	250	
7/16	35									
1/2						225	225	225	250	200**
5/8		100			150		225	225		
3/4				150	150		225			150**
7/8								225		
1										125**
1-1/8								225		
1-1/4										
1-1/2										
1-3/8										
1-13/16										
2										
2-3/8										
3										
Hose	Page 30	Page 30	Page 30	Page 31	Page 31	Page 31	Page 32	Page 32	Page 33	Page 33
Coll-O-Crimp Hose Ends	—	—	—	—	—	133-134	92-95 131	92-95 131	116-123	85-91
Field Attachable Hose Ends	172	—	83	—	—	177-179	180-181 190-194	190-194	130	132

Hypalon® is a registered trademark of DuPont.

*See hose product page for other media temperature variances.

** At 70° F.

Hose Selection Chart

HOSE #	H105	H9603	H275	H201	H9949	H115	H900	H039	H265	H1776/ H1777
Usage	Air & Water	Hot Tar & Asphalt	Transfer Air & Water	General Purpose Air & Oil	Air and Water (Non-Conductive)	Air Tool & Water	Propane & Butane	Hydraulic Suction Vacuum	Air, Water	Air, Water
Meets	—	—	—	MSHA (Black only)	—	—	UL 21	USCG ABS MSHA J1942	—	—
SAE No.	—	—	—	—	—	—	—	100R4 J1942	—	—
Temperature Range	-40°F +160°F*	+32°F +350°F	-10°F +150°F	-40°F +212°F	-40°F +180°F	-40°F +160°F	-40°F to +140°F LP- Gas should never exceed 100°F	-40°F +212°F	-20°F +180°F	-40°F +180°F
Inner Tube	EPDM	Nitrile (RMA Class A)	PVC	Nitrile	Nitrile	Nitrile	Nitrile	Nitrile	Modified Vinyl	Nitrile (RMA Class A)
Reinforcement	Multi Fiber Spiral	2 Wire Braid	2 Fiber Spirals	1 Fiber Braid	2 Fiber Braids	Multi Fiber Braid	Fiber Braid 1" has 2 Stainless Steel Static Wires	2 Fiber Ply & Helical Wire	2 Textile Spirals	1 or 2 Fiber Braids
Outer Cover	Red EPDM	CPE Pin Pricked	Red PVC	Neoprene (black), Vinyl Nitrile (colors)	Vinyl Nitrile	Red Vinyl Nitrile	Vinyl Nitrile Pin Pricked	Neoprene	Blue Rubber Modified Thermoplastic	Vinyl Nitrile
Hose I.D.	MAXIMUM RECOMMENDED OPERATING PRESSURE - PSI									
3/16										
1/4	300†		250**	250	275	300	350		350**	325
5/16						300				325
3/8	300†		250**	250	275	300	350		350**	325
13/32										
7/16										
1/2	300†		250**	250	275	300	350		300**	325
5/8			250**	250						325
3/4	300†		250**	250	275	300	350	300††	250**	325
7/8										
1	200†	250	250**		275	250	350	250††	200**	325
1-1/8										
1-1/4						225		200††		325
1-1/2						225		150		325
1-3/8										
1-13/16										
2								100		
2-3/8										
3										
Hose	Page 34	Page 34	Page 35	Page 35	Page 36	Page 36	Page 37	Page 37	Page 38	Page 38
Coll-O-Crimp Hose Ends	138-152	130	85-91, 132	—	138-152	138-152, 153-163	138-152	100-110, 135, 138-152, 153-163	85-100, 132	138-152
Field Attachable Hose Ends	172, 176	—	—	173-175	—	172-176	—	182-183	—	—

†When used with 'U' Series ends. ††When used with 'U', 'S', 430 'E', and 430 'U' Series ends.

*See hose product page for other media temperature variances.

**At 70° F.

Hose Selection Chart

Application

HOSE #	H100	H101	H366	H6002	H1571	H009	H757	H059	H1941/H1942	H9622
Usage	General Purpose	General Purpose	LPG	Air for Pneumatic Equipment/ Tools and Water	Air, Water	Lube	Air Cond. R12 & R134a	Fuel Oil/ Lube	Chemicals, Fuels, Fertilizer, Pesticides etc. See Chemical Resistance Chart	Air for Equipment & Tools
Meets	—	MSHA	UL 21	—	—	USCG MSHA	—	ABS NMMA USCG	—	—
SAE No.	—	—	—	—	—	J1942 100R6	J2064 Type C, CL-1	J1942	—	—
Temperature Range	-40°F +212°F	-40°F +212°F	-40°F +300°F	-40°F +200°F	-40°F +150°F	-40°F +212°F	+22°F +257°F	-4°F +212°F	-30°F +160°F	-40°F +200°F
Inner Tube	Nitrile	Nitrile	Nitrile	Nitrile	Modified PVC	Nitrile	Rubber/ Nylon/ Rubber	Nitrile	Nylon	Nitrile (RMA Class A)
Reinforcement	1 Fiber Braid	1 Fiber Braid	1 Fiber & 1 S.S. Braid	2 Fiber or 2 Ply	4 Fiber Spiral	1 Fiber Braid	1 Fiber Braid	1 Wire 1 Fiber Braid	1 or 2 Fiber Braid	1 or 2 Wire Braids
Outer Cover	Fiber Braid	Neoprene	Fiber Braid	Neoprene -8 to -16 Nitrile -20 to -32 All Sizes Pin Pricked	Vinyl Nitrile Wrapped Impression Finish	Neoprene	Butyl	Blue Neoprene	Neoprene (Black) Vinyl Nitrile (Red)	Neoprene Pin Pricked
Hose I.D.	MAXIMUM RECOMMENDED OPERATING PRESSURE - PSI									
3/16								500		
1/4	350	350				400		500	500	
5/16	350	350	350			400	400	500	500	
3/8	350	350				400			500	
13/32			350				400	500		
7/16										
1/2	350	350		400		400	350	500	1 Braid/2 Braids 500/750	1000
5/8	350	350					350	500		
3/4	350	350		400	400				750	
7/8										
1				400				500	500	850
1-1/8										
1-1/4				400						500
1-1/2				400						500
1-3/8										
1-13/16										
2				300						500
2-3/8										
3										
Hose	Page 39	Page 39	Page 40	Page 40	Page 41	Page 41	Page 42	Page 42	Page 43	Page 43
Coll-O-Crimp Hose Ends	—	—	93-95	138-152, 153-163	138-152	85-100	116-123	92-95, 131	138-152	153-163
Field Attachable Hose Ends	173-175	173-175	180-181, 190-194	—	—	171	—	190-194	—	—



Hose Selection Chart

HOSE #	H9610	H017	H6009	H166	H6008	H209	H213	H324	H104	H069
Usage	Washdown, Air	General Purpose Hydraulic	High Pressure Air	High Temp. Truck	Air for Equipment and Tools	Car Wash	High Temp. Truck	Power Steering	Hydraulic	Truck & Hydraulic
Meets	—	USCG MSHA	—	DOT AII	MSHA	—	DOT AI	—	USCG MSHA ABS	DOT AII ABS
SAE No.	—	J1942 100R3	—	J1402 Type AII	—	—	J1402 Type AI	J188 Type 2	J1942 100R1AT	J1402 AII 100R5
Temperature Range	-40°F +180°F	-40°F +212°F	-40°F +250°F	-40°F +302°F*	-40°F +200°F	-40°F +200°F	-40°F +302°F*	-40°F +250°F	-40°F +212°F	-40°F +302°F*
Inner Tube	Nitrile	Nitrile	Nitrile (RMA Class A)	Nitrile	Nitrile (RMA Class A)	Nylon 11	CPE	Neoprene	Nitrile ▲	Nitrile
Reinforcement	1 Wire Braid	2 Fiber Braids	1 or 2 Wire Braids	1 Fiber & 1 S.S. Braid	1 or 2 Wire Braids	1 Fiber Braid	1 Fiber & 1 Wire Braid	2 Fiber Braids	1 Steel Braid	1 Fiber & Steel Braid
Outer Cover	Vinyl Nitrile	Neoprene	Carboxylated Nitrile Pin Pricked	Fiber Braid	Neoprene Pin Pricked	Polyurethane	Fiber Braid	Neoprene	Neoprene	Fiber Braid
Hose I.D.	MAXIMUM RECOMMENDED OPERATING PRESSURE - PSI									
3/16				1500			2000			3000
1/4		1250		500		2250	1500		2750	3000
5/16				500		1750	1500			2250
3/8	1000	1125				1350		1500	2250	
13/32				500			1250			2000
7/16										
1/2	1000	1000		450		1000	1000		2000	1750
5/8				450			750		1500	1500
3/4	1000	750							1250	
7/8				250			400			800
1		565			1000				1000	
1-1/8				250						625
1-1/4		375	800						625	
1-1/2			600		600					
1-3/8										500
1-13/16										350
2			600		600					
2-3/8										350
3										200
Hose	Page 44	Page 44	Page 45	Page 45	Page 46	Page 46	Page 47	Page 47	Page 48	Page 49
Coll-O-Crimp Hose Ends	124-129, 137-152, 153-163	138-152	153-163	92-95, 131	153-163	85-91	—	138-152	135, 138-152	92-95
Field Attachable Hose Ends	—	—	—	180-181, 190-194	—	—	187-189	—	184-186	180-181, 190-194

*See hose product page for other media temperature variances.

**At 70° F.

▲ Size -4 inner tube Neoprene.

Hose Selection Chart

Application

HOSE #	H243	H277	H569	H169	H435	H436	H114	H190	H345	H146
Usage	Hydraulic/ Air/Steam	Hydraulic/ Air/Steam w/ Conductive Static Dissipating Liner	A/B & Hydraulic	Hydraulic	Hydraulic Non- Conductive	Hydraulic	Ag. Hyd. & Hyd. Synthetic	Hydraulic	Pressure Washer	Ag. Hyd. & Hyd. Synthetic
Meets	FDA	—	ABS DOT AII USCG	MSHA	—	—	MSHA	MSHA, USCG, ISO 1436, EN 853 Type 1SN	MSHA	—
SAE No.	—	—	100R5 J1942 J1402 Type AII	—	100R7	100R7	—	J1942, 100R1 AT	—	—
Temperature Range	-65°F +450°F	-65°F +450°F	-55°F +302°F*	-40°F +212°F	-40°F +200°F	-40°F +200°F	-40°F +250°F	-40°F +212°F	See Page 56*	-65°F +250°F
Inner Tube	Teflon®	Teflon®	CPE	Nitrile	Nylon 11	Nylon 11	Hytrel®	Nitrile	Nitrile	Hytrel®
Reinforcement	1 S.S. Braid	1 S.S. Braid	1 Fiber & 1 Steel Braid	1 Steel Braid	2 Fiber Braids	2 Fiber Braids	1 Steel Braid	1 Steel Braid	1 Steel Braid	1 Steel Braid
Outer Cover	Stainless Steel Braid	Stainless Steel Braid	Blue Fiber Braid	Neoprene (Perforated)	Orange Polyurethane	Black Polyurethane Perforated	Neoprene	Vinyl Nitrile	Blue Vinyl Nitrile	Polyester Braid
Hose I.D.	MAXIMUM RECOMMENDED OPERATING PRESSURE - PSI									
3/16	3000	3000	3000	3000						
1/4	3000	3000	3000	3000	2750	2750	3000	3265	3000	3000
5/16	2500	2500	2250	2250	2500	2500				
3/8	2000	2000			2250	2250	3000	2610	3000	3000
13/32			2000	2000						
7/16										
1/2	1750	1750	1750	1750	2000	2000	3000	2320	3000	3000
5/8			1500	1500				1885		
3/4	1000	1000			1250	1250		1525		
7/8			800	800						
1	1000	1000			1000	1000		1275		
1-1/8			625	625						
1-1/4										
1-1/2										
1-3/8				500						
1-13/16				350						
2										
2-3/8										
3										
Hose	Page 50	Page 50	Page 51	Page 52	Page 53	Page 54	Page 55	Page 55	Page 56	Page 56
Coll-O-Crimp Hose Ends	85-91	85-91	92-95	92-95	85-91	85-91	135, 138-152	164-170	124-129	138-152
Field Attachable Hose Ends	—	—	190-194	180-181, 190-194	199-200	199-200	—	—	—	—

Teflon® and Hytrel® are registered trademarks of Dupont.

*See hose product page for other media temperatures variances.

† 2 steel braids, sizes -8 thru -16.



Hose Selection Chart

HOSE #	H145	H545	H335	H336	H245	H325	H280	H290	H425	H350
Usage	Hydraulic	Hydraulic	Hydraulic Non-Conductive	Hydraulic	Hydraulic	Low Temp. Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic
Meets	USCG MSHA	—	EN 855 Type R8	EN 855 Type R8	USCG MSHA ABS	—	USCG, MSHA, ISO 1436, EN 857, Type 2SC	USCG, MSHA, ISO 1436, EN 853, Type 2SN	USCG MSHA ABS	—
SAE No.	J1942, 100R17	—	100R8 Non-Cond.	100R8	J1942 100R16	—	J1942, Code H, 100R16	J1942 100R2 AT	J1942, 100R2AT	—
Temperature Range	See Page 55*	-40°F +250°F	-40°F +212°F	-40°F +212°F	-40°F +212°F	-67°F +175°F	-40°F +212°F	-40°F +212°F	-40°F +212°F	-40°F +212°F
Inner Tube	Nitrile	Nitrile	Nylon	Nylon	Nitrile	Synthetic Rubber	Nitrile	Nitrile	Nitrile	Synthetic Rubber
Reinforcement	1 Steel Braid†	1 Steel Braid***	Multi Yarn Braids	Multi Yarn Braids	2 Steel Braids	2 Steel Braids	2 Steel Braids	2 Steel Braids	2 Steel Braids	2 Steel Braids
Outer Cover	Neoprene	Abrasive Resistant Nylon	Orange Polyurethane	Black Polyurethane Perforated	Neoprene	Synthetic Rubber	Vinyl Nitrile	Vinyl Nitrile	Neoprene	Neoprene
Hose I.D.	MAXIMUM RECOMMENDED OPERATING PRESSURE - PSI									
3/16				5000						
1/4	3045	3000	5000	5000	5000	5000	5800	5800	5000	
5/16										
3/8	3045	3000	4000	4000	4000	4000	4800	4800	4000	3500
13/32										
7/16										
1/2	3045	3000	3500	3500	3500	3500	4000	4000	3500	3500
5/8	3045	3000			2750		3630	3630	2750	3500
3/4	3045	3000		2250	2250	2250	3120	3120	2250	3500
7/8										
1	3045	3000		2000	2000	2000	2400	2400	2000	3500
1-1/8										
1-1/4					1625				1625	
1-1/2									1250	
1-3/8										
1-13/16										
2									1125	
2-3/8										
3										
Hose	Page 57	Page 57	Page 58	Page 58	Page 59	Page 59	Pages 60	Pages 61	Page 62	Page 63
Coll-O-Crimp Hose Ends	124-129, 135, 138-152, 153-163	125-129, 135, 138-152, 153-163	96-99	96-99	124-129, 135, 138-152	138-152	164-170	164-170	135, 138-152, 153-163	125-129, 138-152, 153-163
Field Attachable Hose Ends	—	—	—	—	—	—	—	—	195-198	—

*** 1 Steel braid sizes -4 thru -12; 2 steel braids sizes -8 thru -16.

▲ Size -4 inner tube Neoprene.

8 ■ 2 Steel Braids -06 thru -12. 4 Steel Spirals size -16.

Hose Selection Chart

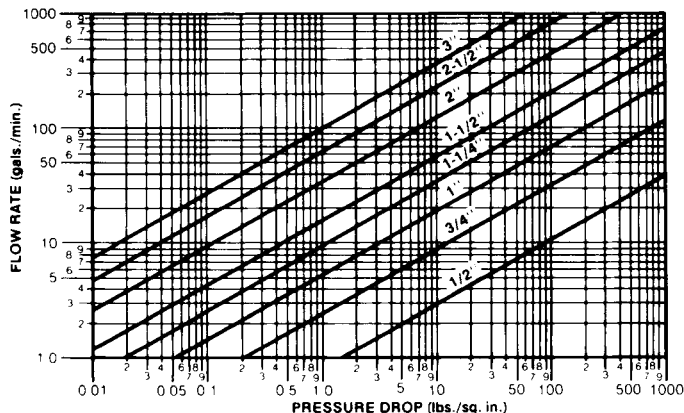
Application

HOSE #	H439	H430	H400	H470
Usage	Very High Pressure Hydraulic	Very High Pressure Hydraulic	Very High Pressure Hydraulic	Very High Pressure Hydraulic
Meets	USCG MSHA	USCG MSHA, ABS	MSHA	USCG MSHA, ABS
SAE No.	J1942, 100R12	J1942, 100R12	—	J1942, 100R13
Temperature Range	-40°F +250°F	-40°F +250°F	-40°F +212°F	-40°F +250°F*
Inner Tube	Neoprene	Neoprene	Nitrile	Neoprene
Reinforcement	Multi Spiral Steel	Multi Spiral Steel	2 Steel Braids	Multi Spiral Steel
Outer Cover	Hypalon®	Hypalon®	Vinyl Nitrile	EPDM
Hose I.D.	MAXIMUM RECOMMENDED OPERATING PRESSURE - PSI			
3/16				
1/4				
5/16				
3/8				
13/32				
7/16				
1/2	4000	4000		5000
5/8			4000	
3/4	4000	4000		5000
7/8				
1	4000	4000		5000
1-1/8				
1-1/4	3000	3000		5000
1-1/2	2500	2500		5000
1-3/8				
1-13/16				
2	2500	2500		5000
2-3/8				
3				
Hose	Page 63	Page 64	Page 65	Page 65
Coll-O-Crimp Hose Ends	98-108, 151-161	98-108, 151-161	122-127	109-113, 134-135
Field Attachable Hose Ends	—	—	—	—

*See hose product page for other media temperature variances.

WARNING—For important safety information concerning hose selection, see pages 1-2 of this catalog.

CHART 1. Hose Flow Rate vs Pressure Drop



There are several factors which affect selection of a hose sized such that it will provide the desired rate of flow at the required pressure; these are:

- Hose size
- Hose length
- Hose ends and fluid conveyed
- Bends
- Static head pressure

Hose Size

Undersized pressure lines produce excessive pressure drop with attendant energy loss and heating, and undersized suction lines cause cavitation at the pump inlet. Oversized hose assemblies, on the other hand, are excessively costly and generally too heavy.

In selecting hose for hydraulic systems, the following empirical values can be used to achieve minimum pressure drop consistent with reasonable hose size (see Chart 2):

- Velocity of pressure lines 7 to 15 ft./sec.
- Velocity of short pressure lines to 20 ft./sec.
- Velocity of suction lines 2 to 5 ft./sec.

To use Chart 2, lay a straight-edge across the chart as shown by the dotted line. To minimize pressure drop, always use the next larger size hose shown if the line passes between sizes listed.

Hose Length

Chart 1 gives the pressure drop in different-sized hoses based on hoses of 100-foot length, and is based on water as the fluid conveyed. For hoses of a different length, these values must be corrected. For example, a 100-foot length of 1/2" hose causes a pressure drop of 100 lbs./in² at a flow rate of 10 gal./min. If the hose in question is 50 feet long, the pressure drop derived from Chart 1 must be corrected by multiplying the value by the ratio of the actual length to 100 feet, or 50/100, or 0.5. Therefore, the actual pressure drop caused by a 50-foot length of 1/2" hose, at a flow rate of 10 gal./min., is 50 lbs./in² (0.5 x 100 = 50 lb./in²).

Hose Ends and Fluid Conveyed

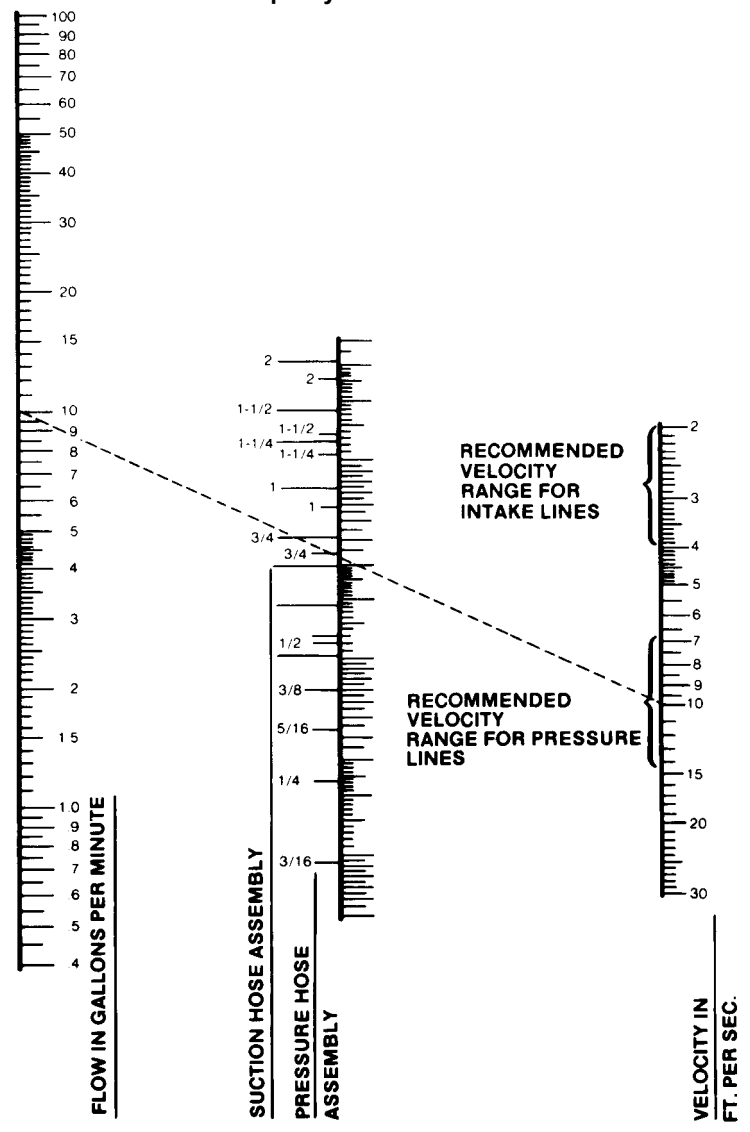
In most cases, the end fitting openings are slightly smaller than the hose itself. However, this varies widely with hose end designs from 'full-flow' ends which have the same I.D. as the hose, down to as much as 1/8" smaller I.D. than the hose bore. To allow for this, assume a 10-to-15% greater flow rate than actually measured in the system when determining pressure drop.

Chart 1 is based on water as the fluid conveyed, and for other fluids it is necessary to correct for the difference in specific gravity and viscosity. Chart 3 lists common fluids, their specific gravities, viscosities, and corresponding correction factors.

To determine the pressure drop for a specific fluid, first determine the pressure drop from Chart 1 for the hose length then divide this by the correction factor found in Chart 3.

For example, the 50-foot length of 1/2" hose just de-scribed had a pressure drop of 50 lbs./in² at a flow of 10 gal./min. of water. To determine the pres-

CHART 2. Hose Flow Capacity



Hose Selection Chart

Application

⚠ WARNING—For important safety information concerning hose selection, see pages 1-2 of this catalog.

sure drop if #2 fuel oil is the fluid conveyed, divide by 0.752 (from Chart 3)... $50 \div 0.752 = 66.5$ lbs./in² pressure drop. If, on the other hand, the fluid conveyed is Type #3 gasoline, the pressure drop would be $50 \div 1.19 = 42$ lbs./in².

Bends

If a hose of a given length is bent, the pressure drop will increase by some definite amount...the sharper the bend and the smaller the radius of bend the greater the pressure drop. The effect of a bend may be neglected if it is slight or if there are but few bends in a long length of hose. This is because the additional pressure drop caused by these bends is not significant when compared to the total pressure drop.

However, a dock hose may have four sharp 90° bends in a 25-foot length, and if pressure drop is important, these bends must be considered because they constitute a significant portion of the overall pressure drop.

The curves in Chart 4 show the effects of resistance due to 90° bends. This data can also be used as a guide for smooth bends less or greater than 90°. For example, a 45° bend has about 4/10 the resistance of a 90° bend.

Problem: Determine the equivalent length, in terms of hose inside diameters, of a 90° and a 180° bend whose relative radii are 12 inches.

Solution: Referring to the "total resistance curve," the equivalent length for a 90° bend is 34.5 hose diameters. The equivalent length of a 180° bend is 34.5 diameters for one 90° bend, 18.7 diameters for resistance due to length, and $15.8 \div 2 = 7.9$ diameters for bend resistance. Adding these 34.5, 18.7, and $7.9 \div 2 = 3.95$ diameters for a 180° bend. Note that this loss is less than the sum of losses through two 90° bends separated by tangents.

Static Head Pressure

Static head is the difference in height between the inlet and outlet ends of a hose. Before using Chart 1, it is necessary to correct for static head pressure because the values in Chart 1 are pressure losses due to friction only.

To correct for static head pressure, the difference in height is determined and multiplied by 0.433 to convert the head to an equivalent pressure in PSI (one foot of water exerts 0.433 PSI pressure).

*In a continuous bend of 180 degrees the second 90 degree bend produces approximately one-half the resistance of the first bend.

CHART 3. Fluid Flow Correction Factors

Liquid	Specific Gravity	Viscosity		Correction Factor, R
		Centistokes (CS)	Centipoises (CP)	
Acetic Acid - 100%	1.05	-	1.3	0.975
Acetic Acid - 70%	1.07	-	2.7	0.843
Ammonia liquid - 100%	0.66	0.30	-	1.290
Ammonia liquid - 26%	0.907	-	1.3	0.943
*Asphalt @ 120 F	1.40	-	300	0.350
*Beer	1.01	1.15	-	0.990
Benzene-Benzol	0.88	7.44	-	1.08
Brine-Calcium Chloride 25%	1.23	3.80	-	0.78
Brine-Sodium Chloride 25%	1.19	2.07	-	0.88
Butyl Alcohol	0.81	3.64	-	0.783
*Castor Oil	0.96	900	-	0.27
*Crude Petroleum Typical				
1 Pennsylvania Crude @ 100 F	0.80	-	3	0.78
2 California Crude @ 150 F	0.915	-	9	0.64
3 33 API Crude @ 100 F	0.86	7.2	-	0.685
4 Texas Crude @ 150 F	0.875	-	3	0.792
5 Mexican Crude @ 150 F	0.96	-	550	0.287
Decane - n	0.73	1.24	-	0.975
Ethyl Alcohol 100%	0.794	-	1.25	0.93
Ethyl Alcohol 95%	0.808	-	1.45	0.904
Ethyl Alcohol 40%	0.939	-	3.00	0.807
Ethyl Glycol	1.12	-	24.00	0.55
Formic Acid	1.22	-	-	0.94
*Fuel Oils				
No. 1 @ 100 F				
Sp Gr. 82 to 95				
Visc. 30 to 40 SSU	0.88	2.45	-	0.85
No. 2 @ 100 F				
Sp Gr. 82 to 95				
Visc. 35 to 50 SSU	0.88	4.50	-	0.752
No. 3 @ 100 F				
Sp Gr. 82 to 95				
Visc. 55 SSU max	0.88	8.6	-	0.66
No. 5 @ 100 F				
Sp Gr. 82 to 95				
Visc. 60 to 450 SSU	0.88	55.0	-	0.47
No. 6 @ 122 F				
Sp Gr. 82 to 95				
Visc. 430 to 2900 SSU	0.88	38.0	-	0.493
*Gasoline (representative)				
Type #1	74	88	-	1.04
Type #2	72	64	-	1.11
Type #3	68	46	-	1.19
Glycerine (Glycerol) - 100% @ 150°F	1.26	-	75.0	0.45
Glycerine & Water - 50%	1.13	-	6.5	0.717
Heptane - n	684	0.60	-	1.16
Hexane - n	66	0.49	-	1.21
Hydrochloric Acid - 31.5%	1.16	-	1.92	0.92
Isobutyl Alcohol	0.817	-	3.90	0.745
Isopropyl Alcohol	0.785	-	2.20	0.828
Kerosene	0.80	2.23	-	0.892
Lubricating Oil (Machine Oil)	0.90	-	198	0.35
Lubricating Oil (Automotive)	0.893	-	110	0.39
Methyl Alcohol (Methanol) - 100%	0.79	74	0.60	1.072
Methyl Alcohol - 90%	0.824	-	0.77	1.03
Methyl Alcohol - 40%	0.937	-	2.00	0.863
*Milk	1.03	1.15	-	0.99
Motor Oil	0.893	-	110	0.39
Naphthalene	1.15	0.9	-	1.04
Nitric Acid - 95%	1.50	-	1.13	1.07
Nitric Acid - 60%	1.37	-	2.35	0.913
Nonane - n	0.718	97	-	1.02
Octane - n	0.70	77	-	1.068
Olive Oil	0.91	93.0	-	0.41
Pentane - n	0.63	0.37	-	1.24
Propyl Alcohol	0.804	2.8	-	0.828
Rapeseed Oil	0.91	180	-	0.36
Sodium Hydroxide - 50%	1.53	-	95.0	0.443
Soya Bean Oil	0.924	86	-	0.418
Sperm Oil	0.88	21	-	0.55
Sugar Solution - 20%	1.08	1.9	-	0.895
Sugar Solution - 40%	1.18	5.3	-	0.728
Sugar Solution - 60%	1.29	44.0	-	0.475
Sulfuric Acid - 100%	1.83	14.6	-	0.59
Sulfuric Acid - 95%	1.83	14.5	-	0.593
Sulfuric Acid - 60%	1.50	4.4	-	0.755
Toluene	0.866	-	0.6	1.092
Turpentine	0.86	1.83	-	0.90
Water (Fresh)	1.0	1.10	-	1.00
Water (Salt)	1.03	1.10	-	1.00
Xylene (Xylol)	0.87	0.93	-	1.03

*These figures are approximate or averages of those values available.

If the inlet is higher than the outlet, the pressure equivalent is added to the pump pressure. If the outlet is higher than the inlet, the pressure equivalent is subtracted from the pump pressure. In both cases, it is assumed that the pump pressure is the pressure available at the inlet end and that the pump is outside of the hose system.

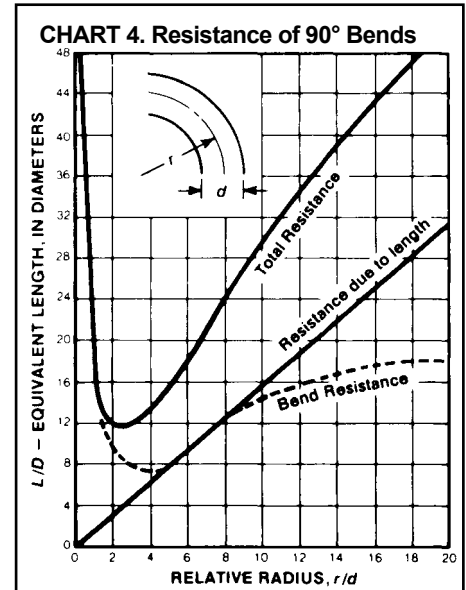
Installation Design

Hose should not be twisted or put in torsion either during the installation or while in service. Sharp or excessive bends may cause the hose to kink or rupture.

Be sure to allow enough slack to provide for changes in length which will occur when pressure is applied. This change in length can vary from +2% to -4%.

Design the installation so the hose assembly is accessible for inspection and easy removal.

Bend radius is important. A good working rule is that the minimum bend radius should be five or more times the O.D. dimension of the hose.



Chemical Compatibility Chart

These tables alphabetically list commonly used materials of various chemical composition. After each fluid listing you will find the basic hose tube and fitting materials rated according to their chemical resistance to each individual fluid. The chart is intended to be used as a guide only. Consult the Boston Weatherhead Division of Dana Corporation for further information.

⚠ WARNING – Selection of Hose: Selection of the proper hose for the application is essential to the proper operation and safe use of the hose and related equipment. Inadequate attention to selection of the hose for your application can result in serious bodily injury or property damage from spraying fluids or flying projectiles. In order to avoid serious bodily injury or property damage resulting from selection of the wrong hose, you should carefully review the information in this catalog.

⚠ WARNING – Proper Selection of Hose Fittings: Selection of the proper fittings for the hose end application is essential to the proper operation and safe use of the hose and related equipment. Inadequate attention to the selection of the fittings for your application can result in serious bodily injury or property damage resulting from spraying fluids or flying projectiles. In order to avoid serious bodily injury or property damage resulting from selection of the wrong fitting, you should carefully review the information in this catalog.

⚠ WARNING – The following list of chemicals is offered as a guide to the chemical resistance properties of the tube material of the hoses shown. It should be used as a guide only, as the degree of resistance of any elastomer to a particular fluid depends upon such variables as temperature, concentration, pressure conditions, velocity of flow, duration of exposure, aeration, stability of the fluid, etc.

Therefore, when in doubt, it is advisable not to use the hose. If this is not practical, tests should be devised that simulate actual service conditions as nearly as possible. Boston Weatherhead offers additional technical assistance. Contact your Boston Weatherhead representative for assistance or call Technical Support at 1-800-776-3262.

FLUID	HOSE MATERIAL										HOSE END FITTINGS			FLUID	HOSE MATERIAL										HOSE END FITTINGS					
	PVC	Nitrile	Vinyl Nitrile	Neoprene	Teflon	Nylon/Nylon II	EPDM	Hypalon	Hyrel	Polyurethane	CPE	Brass	Steel		316 Stainless	PVC	Nitrile	Vinyl Nitrile	Neoprene	Teflon	Nylon/Nylon II	EPDM	Hypalon	Hyrel	Polyurethane	CPE	Brass	Steel	316 Stainless	
Acetaldehyde	X	X	X	X	G	G	G	F	X	X	-	X	X	G	Butyl Alcohol, Butanol	X	G	G	G	G	G	G	G	X	G	G	G	G	G	
Acetic Acid (Concentrated)	X	X	X	X	G	X	G	X	X	X	G	X	X	G	Calcium Bisulfite	G	G	G	G	F	G	G	X	G	X	X	X	X	X	
Acetic Acid (Diluted)	F	X	X	F	G	F	G	F	G	X	G	X	X	G	Calcium Chloride	G	G	G	G	G	F	G	G	G	G	G	G	G	X	F
Acetic Anhydride	X	G	G	X	G	X	G	F	X	X	G	X	F	F	Calcium Hydroxide	G	F	F	G	G	F	G	F	G	X	G	F	G	G	
Acetone	X	X	X	X	G	G	G	F	F	X	G	G	G	G	Calcium Hypochlorite	G	F	F	F	G	F	G	F	F	X	G	F	X	F	
Acrylonitrile	G	X	X	X	G	G	X	X	-	X	G	-	G	G	Cane Sugar Liquors	G	G	G	G	G	G	G	G	G	X	G	F	F	G	G
Air	G	G	G	G	G	G	G	G	G	G	G	G	G	G	Carbon Dioxide (Dry)	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
Alcohols (Methanol & Ethanol)	X	G	G	G	G	G	G	G	G	X	G	G	F	G	Carbon Dioxide (Wet)	-	G	G	G	G	G	G	G	-	G	-	F	G	G	
Aluminum Chloride	G	G	G	G	X	G	G	G	G	G	X	X	F	G	Carbon Disulfide (Bisulfide)	X	X	X	G	X	X	X	X	G	X	G	X	G	G	
Aluminum Fluoride	G	G	G	F	G	X	G	G	-	G	X	X	X	G	Carbon Monoxide (Hot)	X	F	F	G	X	F	X	G	F	G	X	F	G	G	
Aluminum Hydroxide	G	G	G	G	G	G	G	G	-	G	G	X	F	G	Carbon Tetrachloride	X	X	X	X	G	G	X	X	F	X	X	G	G	G	
Aluminum Sulfate	G	G	G	G	G	G	G	G	G	G	X	X	G	G	Carbonic Acid	X	G	G	G	G	X	G	X	F	X	X	X	F	G	
Alums	G	G	G	G	F	G	G	X	G	G	X	X	F	G	Castor Oil	G	G	G	F	G	F	F	F	F	X	G	X	G	G	
Ammonia, Anhydrous	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Cellosolve Acetate	X	X	X	G	F	F	F	F	X	X	X	X	G		
Ammonia Solution (10%)	G	G	G	F	G	G	G	X	X	X	X	G	G	G	Chlorinated Solvents	X	X	X	X	G	F	X	X	X	X	X	X	G	F	
Ammonium Chloride	G	G	G	G	X	G	G	G	G	G	X	G	F	G	Chloroacetic Acid	X	X	X	X	G	X	F	X	X	X	X	X	F	G	
Ammonium Hydroxide	X	F	F	F	G	G	G	X	X	G	X	F	G	G	Chlorobenzene	X	X	X	X	G	G	X	X	X	X	F	F	G	G	
Ammonium Nitrate	G	G	G	G	G	G	G	G	X	G	-	-	G	G	Chloroform	X	X	X	G	G	X	X	X	X	X	X	G	G	G	
Ammonium Phosphate	F	G	G	G	G	G	G	G	F	G	X	X	G	G	Chlorosulfonic Acid	X	X	X	X	G	X	X	X	X	X	X	F	X	G	
Ammonium Sulfate	G	G	G	G	G	G	G	G	G	G	X	X	F	G	Chromic Acid (Under 25%)	F	X	X	X	G	X	G	X	X	X	X	X	X	G	
Amyl Acetate	X	X	X	X	G	F	X	X	X	X	G	F	F	G	Chromic Acid (Over 25%)	X	X	X	X	G	X	G	G	X	X	X	X	X	F	
Amyl Alcohol	X	G	G	F	G	G	G	G	X	G	G	F	F	G	Citric Acid	G	F	F	G	G	X	G	G	G	X	X	X	X	G	
Aniline	X	X	X	X	G	X	X	X	X	X	X	G	G	G	Coke Oven Gas	X	X	X	X	F	X	X	X	-	X	X	F	G	G	
Aniline Dyes	X	F	F	F	G	X	G	F	X	X	X	X	F	G	Copper Chloride	G	G	F	G	G	G	G	G	G	X	X	X	X	G	
Animal Oils and Fats	G	G	G	X	G	F	F	G	X	F	G	G	G	G	Copper Sulfate	G	G	G	G	G	G	G	G	G	G	X	X	X	G	
Anti-Freeze (Glycol Base)	G	G	G	G	F	G	G	G	X	G	G	G	G	G	Corn Syrup (non-food)	G	G	G	F	G	G	F	G	G	-	-	G	G	G	
Aqua Regia	X	X	X	X	G	X	X	X	X	X	X	X	X	X	Cottonseed Oil	F	G	G	X	G	F	F	G	G	G	G	G	G	G	
Asphalt	X	G	G	X	G	G	X	-	X	F	G	G	G	G	Creosote	X	F	F	X	G	X	X	F	X	F	F	F	-	G	
Barium Chloride	G	G	G	G	X	G	G	G	G	G	X	F	G	G	Cresol	X	X	X	X	G	X	X	X	X	X	G	-	G	G	
Barium Hydroxide	G	G	G	G	G	G	G	G	X	G	X	G	G	G	Dextrose (food grade)	X	X	X	X	G	X	X	X	X	X	X	X	G	G	
Barium Sulfide	G	G	G	G	X	G	G	X	G	X	X	X	X	G	Diaminoethane	X	X	X	X	G	X	F	X	-	X	-	G	G	G	
Beet Sugar Liquors	G	G	G	G	G	X	G	G	X	G	X	G	G	G	Dibromoethane	X	X	X	G	G	X	X	-	X	-	-	-	-	-	
Benzaldehyde	X	X	X	X	G	G	F	X	X	X	X	F	F	G	Dichlorobenzene	X	X	X	X	G	G	X	X	X	X	X	-	-	G	
Benzene, Benzol	X	X	X	X	G	G	X	X	X	X	F	G	G	G	Diesel Fuel	X	G	G	X	G	G	X	F	F	F	G	G	G	G	
Benzoic Acid	X	X	X	G	X	X	X	X	X	X	F	F	X	F	Diethanolamine	-	F	F	X	G	X	G	X	X	X	X	G	G	G	
Black Sulfate Liquor	X	F	F	G	F	G	F	G	X	F	X	G	F	G	Diethylenetriamine	-	F	F	X	G	X	G	X	X	X	X	G	-	-	
Borax	G	F	F	G	G	G	G	G	G	G	G	G	G	G	Dowtherm A	X	X	X	X	G	X	X	X	X	X	X	X	F	G	
Boric Acid	G	G	G	G	G	G	G	G	G	X	X	X	X	G	Enamel (Solvent Base)	X	F	F	X	G	X	X	X	X	X	X	X	G	-	G
Brake Fluid (Glycol Ether Base)	X	X	X	F	G	G	G	G	-	X	G	G	G	G	Ethanolamine	X	F	F	X	G	X	X	X	-	X	G	X	G	G	
Brine	G	G	G	G	G	G	G	G	X	G	-	X	F	G	Ethers (Ethyl Ether)	X	X	X	G	F	X	X	X	F	G	G	G	G	G	
Butane	Use H366 Hose Only													Ethyl Alcohol (To 150°)	F	G	G	G	G	G	G	G	G	G	F	G	G	G		
Butyl Acetate	X	X	X	X	G	G	F	X	F	X	F	G	G	G	Ethyl Acetate	X	X	X	X	G	G	G	X	F	X	F	G	G	G	

CODES: G – Good resistance. F – Fair resistance. X – Incompatible. – No data available.

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▲ In all applications, the cover must be pinpricked.

Chemical Compatibility Chart

Application

FLUID	HOSE MATERIAL										HOSE END FITTINGS			FLUID	HOSE MATERIAL										HOSE END FITTINGS						
	PVC	Nitrile	Vinyl Nitrile	Neoprene	Teflon	Nylon/Nylon II	EPDM	Hypalon	Hyrel	Polyurethane	CPE	Brass	Steel		316 Stainless	PVC	Nitrile	Vinyl Nitrile	Neoprene	Teflon	Nylon/Nylon II	EPDM	Hypalon	Hyrel	Polyurethane	CPE	Brass	Steel	316 Stainless		
Ethyl Acrylate	X	X	X	X	G	G	F	X	X	X	F	-	G	G	Lye	G	F	F	G	G	X	G	G	-	-	G	F	X	F	G	
Ethylamine	X	X	X	X	G	X	F	X	-	X	-	G	-	G	Magnesium Chloride	G	G	G	G	X	G	G	F	F	G	G	F	F	G	G	
Ethyl Cellulose	-	F	F	F	G	G	F	F	G	F	G	F	G	F	Magnesium Hydroxide	G	F	F	G	G	X	G	F	F	X	G	G	F	G	G	
Ethyl Chloride	X	X	X	X	G	G	X	X	X	F	X	F	F	G	Magnesium Sulfate	G	G	G	G	G	G	G	G	G	X	G	F	G	G		
Ethylene Dichloride	X	X	X	X	G	G	X	X	X	X	X	G	X	X	Mercuric Chloride	F	F	F	G	X	G	G	-	-	G	G	X	X	X	G	
Ethylene Glycol	G	G	G	G	G	F	G	G	G	F	G	F	G	G	Mercury	F	F	G	G	G	G	G	G	G	G	X	X	X	G		
Ethylene Oxide	X	X	X	X	G	G	X	X	G	X	X	F	F	F	Methanol	X	G	G	G	G	G	G	G	G	F	G	F	G	G		
Ethyl Methacrylate	X	X	X	X	G	F	X	X	X	F	-	G	G	G	Methyl Acrylate	X	X	X	X	G	X	F	X	X	F	G	G	G	G		
Fatty Acids	G	F	F	X	G	F	X	G	F	X	F	F	F	F	Methyl Chloride	X	X	X	X	G	F	X	X	X	F	G	G	G	G		
Ferric Chloride	G	G	G	G	G	G	G	G	G	F	G	X	X	X	Methylene Chloride	X	X	X	X	G	G	X	X	X	X	F	G	G	G		
Ferric Sulfate	G	G	G	G	G	G	G	G	G	G	G	X	X	F	Methyl t-Butyl Ether (MTBE)	X	F	F	X	G	G	X	X	-	-	-	-	-	G	G	
Fertilizer Solution (Water Base)	G	F	F	F	G	F	G	G	-	-	-	-	-	G	Methyl Ethyl Ketone	X	X	X	X	G	F	X	X	X	X	X	G	G	G		
Formaldehyde	X	F	F	F	G	G	G	X	F	X	G	F	X	G	Methyl Isobutyl Ketone	X	X	X	X	G	F	X	X	X	X	X	G	G	G		
Formic Acid	X	F	F	F	G	X	G	X	X	X	G	F	X	G	Methyl Isopropyl Ketone	X	X	X	X	G	F	X	X	X	X	X	G	G	G		
Freon 12 ^Δ	X	F	F	F	G	G	X	X	X	X	F	G	G	G	Methyl Methacrylate	X	X	X	X	G	F	X	X	X	X	-	G	G	G		
Fuel Oil	F	G	G	F	G	G	X	G	F	G	F	G	F	G	Mineral Oil	F	G	G	F	G	G	X	F	G	G	G	G	G	G		
Furfural	X	X	X	X	G	F	F	X	X	F	F	F	G	G	Mineral Spirits	F	G	G	F	G	G	X	X	G	G	G	G	G	G		
Gasoline (Refined)	X	F	F	X	G	G	X	X	G	F	G	G	G	G	Naphtha	X	F	F	F	G	G	X	X	G	F	F	G	F	G	G	
Gasoline (Unleaded)	X	G	G	X	G	X	F	X	X	X	G	G	G	G	Naphthalene	X	X	X	X	G	X	X	F	F	F	F	G	F	G	G	
Gasoline (10% Ethanol)	X	G	G	X	G	X	X	X	X	X	G	G	G	G	Nickel Acetate	G	X	X	G	G	G	X	-	X	-	-	-	-	-	-	
Gasoline (10% Methanol)	X	F	F	X	G	G	X	X	X	X	X	G	G	G	Nickel Chloride	G	G	G	F	G	G	G	X	X	G	X	X	F	G	G	
Glycerine, Glycerol	G	G	G	G	G	G	G	G	G	X	G	G	G	G	Nitric Acid (Under 35%)	G	X	X	X	G	X	F	F	X	X	X	X	X	G	G	
Greases	G	G	G	F	G	X	F	G	G	G	G	G	G	G	Nitric Acid (35% to 60%)	F	X	X	X	G	X	X	X	X	X	X	X	X	X	G	G
Green Sulfate Liquor	G	F	F	F	G	X	G	X	G	X	X	X	X	G	Nitric Acid (Over 60%)	X	X	X	X	G	X	X	X	X	X	X	X	X	X	G	G
Heptane	X	G	G	F	G	G	X	F	G	F	G	G	G	G	Nitrobenzene	X	X	X	X	G	G	X	X	X	X	X	F	G	G	G	
Hexane	X	G	G	F	G	G	X	F	G	F	G	G	G	G	Nitrogen Gas [▲]	G	X	X	G	G	G	X	-	G	G	G	-	-	-	-	
Houghto Safe 273 to 640	F	G	G	G	G	G	-	-	X	G	G	G	G	G	Nitrous Oxide	X	X	X	X	G	X	X	X	X	X	X	G	G	G	G	
Houghto Safe 5046, 5047F	G	G	G	G	G	X	X	G	X	G	G	G	G	G	Oleic Acid	F	F	F	X	G	G	F	F	G	F	G	F	F	G	G	
Houghto Safe 1000 Series	X	X	X	X	G	G	X	-	X	-	G	G	G	G	Oleum (Fuming Sulfuric Acid)	X	X	X	X	G	X	X	X	X	X	X	X	F	G	G	
Hydraulic Oils															Oxalic Acid	G	X	X	X	G	X	X	X	-	X	X	F	X	G	G	
Straight Petroleum Base	G	G	G	F	G	G	X	F	G	G	G	G	G	G	Paint (Solvent Base)	X	F	F	X	G	G	X	-	-	-	-	G	G	G	G	
Water Petroleum Emulsion	-	G	G	F	G	G	X	F	G	X	G	G	G	G	Palmitic Acid	F	F	F	F	G	G	F	X	G	X	G	X	F	F	F	
Water Glycol	-	G	G	G	G	G	-	X	X	G	G	G	G	G	Pentane	X	G	G	F	G	G	X	F	G	G	G	G	G	G	G	
Straight Phosphate Ester	X	X	X	X	G	G	X	-	X	G	G	G	G	G	Perchloroethylene	X	X	X	X	G	X	X	X	X	X	X	F	G	G	G	
Phos. Ester/Petroleum Blend	X	X	X	X	G	G	X	X	-	X	-	G	G	G	Petroleum Ether	X	G	F	X	G	G	X	X	G	G	G	G	G	G	G	
Polyol Ester	-	G	G	X	G	G	X	-	X	G	G	G	G	G	Petroleum Oils	G	G	G	F	G	G	X	F	G	G	G	G	G	G	G	
Hydrobromic Acid	G	X	X	X	G	X	G	X	X	X	X	X	X	X	Phenol	X	X	X	X	G	X	X	X	X	X	X	X	X	F	G	
Hydrochloric Acid	G	X	X	X	X	G	X	X	X	X	X	X	X	X	Phosphoric Acid (to 85%)	G	X	X	F	G	X	G	X	X	X	X	X	X	X	F	G
Hydrocyanic Acid	G	F	F	X	G	X	F	G	X	X	X	F	G	G	Picric Acid (Molten)	X	X	X	X	G	X	X	F	X	X	X	X	X	F	G	
Hydrofluoric Acid (Under 50%)	F	X	X	X	G	X	F	G	X	X	X	X	X	X	Picric Acid (Solution)	X	F	F	X	G	X	F	G	X	F	X	X	X	F	G	
Hydrofluoric Acid (Over 50%)	X	X	X	X	G	X	X	G	X	X	X	X	X	X	Potassium Chloride	G	G	G	G	G	G	G	G	G	G	G	F	X	G	G	
Hydrofluosilicic Acid	G	F	F	X	G	X	G	G	X	G	X	X	X	X	Potassium Cyanide	G	G	G	G	G	G	G	G	G	G	G	X	G	G	G	
Hydrogen	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Potassium Dichromate	G	X	X	X	G	F	G	X	G	G	G	X	G	G	G	
Hydrogen Peroxide	-	X	X	X	X	F	X	X	-	G	X	X	X	G	Potassium Hydroxide	G	F	F	F	G	G	G	F	X	G	F	F	X	G	G	
Hydrogen Sulfide	-	X	X	X	X	X	F	G	-	X	F	F	F	F	Potassium Sulfate	G	G	G	G	G	G	G	G	G	G	G	F	F	F	G	
Hydrolube	-	G	G	F	G	G	-	-	G	X	-	G	G	G	Propane Liquid																
Isopropyl Alcohol	G	G	G	G	G	G	G	X	G	G	G	G	G	G	Propylene Glycol	F	G	F	G	G	G	G	G	-	-	G	F	G	G	G	
Isopropylamine	X	X	X	F	G	X	F	X	-	-	G	-	G	-	Pyridine	X	X	X	X	G	X	F	X	X	X	X	F	G	G	G	
Iso-Octane	X	G	G	F	G	X	F	G	X	G	G	G	G	G	Sea Water	G	G	G	G	G	F	G	X	G	X	G	G	F	G	G	
Jet Fuel (Transfer Only)	X	G	G	F	G	G	X	X	-	G	-	G	F	G	Skydrol (Transfer Only)	X	X	X	X	G	G	G	X	-	X	G	G	G	G	G	
Kerosene	X	G	G	F	G	X	F	F	G	G	G	G	G	G	Soap Solution	G	G	G	F	G	G	G	G	G	G	G	G	F	F	F	
Lacquer	X	X	X	X	G	X	X	X	X	F	X	F	G	X	Sodium Bisulfate	G	G	G	G	G	G	G	G	G	G	G	F	F	F	F	
Lacquer Solvents	G	X	X	X	G	X	X	F	X	F	G	X	G	G	Sodium Carbonate	G	G	G	G	G	G	G	G	G	G	G	X	G	G	G	
Lactic Acid	G	X	X	G	X	F	G	X	X	X	F	F	G	G	Sodium Chloride	G	G	G	G	G	G	G	G	G	G	G	X	F	G	G	
Lime Sulfur	G	X	X	G	F	G	F	-	-	-	X	-	G	-	Sodium Cyanide	G	G	G	G	G	G	G	G	G	G	G	X	F	F	G	
Lindol	-	X	X	X	G	G	X	-	X	-	F	G	G	G	Sodium Hydroxide	G	F	F	G	X	G	G	F	X	X	F	X	X	G	G	
Linseed Oil	G	G	G	X	G	X	F	F	F	G	F	G	G	G	Sodium Hypochlorite	G	X	X	X	G	X	G	G	X	F	X	X	F	G	G	
Lubricating Oils	G	G	G	F	G	X	F	G	F	G	G	G	G	G	Sodium Nitrate	G	G	G	F	G	G	G	G	G	F	G	F	G	G	G	

CODES: G – Good resistance. F – Fair resistance. X – Incompatible. – No data available.

NOTE: All data given herein is believed to be accurate and reliable, but presented without guarantee, warranty, or responsibility of any kind, express or implied, on our part. Chemical resistance will vary with the wide diversity of possible mixtures and service conditions. It is therefore not possible to give any guarantee whatsoever in individual cases.

^Δ Use approved Freon Hose.

[▲] In all applications, the cover must be pinpricked.

*This chemical has some deteriorative effects, but the elastomer is still adequate for moderate service.




FLUID	HOSE MATERIAL											HOSE END FITTINGS				FLUID	HOSE MATERIAL											HOSE END FITTINGS			
	PVC	Nitrile	Vinyl Nitrile	Neoprene	Teflon	Nylon/Nylon II	EPDM	Hypalon	Hytre	Polyurethane	CPE	Brass	Steel	316 Stainless	PVC		Nitrile	Vinyl Nitrile	Neoprene	Teflon	Nylon/Nylon II	EPDM	Hypalon	Hytre	Polyurethane	CPE	Brass	Steel	316 Stainless		
Sodium Perborate	G	G	G	X	G	G	G	X	G	X	X	F	F	G	Tar	X	F	F	F	G	X	X	X	G	F	G	F	F	G		
Sodium Peroxide	X	F	F	F	G	X	G	F	G	X	X	X	F	G	Tartaric Acid	G	G	G	F	G	X	G	G	G	G	F	X	F	G		
Sodium Phosphates	G	G	G	F	G	G	G	F	G	X	F	F	F	F	Tetrachloroethane	X	X	X	X	G	X	X	X	X	X	-	-	-	-	G	
Sodium Silicate	G	G	G	G	G	G	G	G	G	G	F	F	F	G	Tetrahydrofuran (THF)	X	X	X	X	G	G	X	X	-	X	X	-	-	-	G	
Sodium Sulfate	G	G	G	G	G	G	G	G	G	G	F	F	F	G	Toluene	X	X	X	X	G	G	X	X	X	X	X	G	G	G	G	
Sodium Sulfide	G	G	G	G	G	G	G	G	G	G	X	X	G	G	Transmission Oil (Petrol. Based)	G	G	G	F	G	G	X	F	G	G	G	G	G	G	G	
Sodium Thiosulfate	G	G	G	G	G	G	G	-	G	G	X	X	G	G	Trichloroethane	X	X	X	X	G	X	X	X	X	X	X	X	X	X	G	
Soybean Oil	F	G	G	F	G	G	F	G	G	G	G	G	G	G	Trichloroethylene	X	X	X	X	G	G	X	X	X	X	X	X	X	X	G	
Stannic Chloride	G	G	G	X	G	X	G	G	G	X	X	X	X	X	Tung Oil	-	G	G	F	G	G	X	F	G	X	X	F	G	G	G	
Steam 450°	X	X	X	X	G	X	G	X	X	X	F	F	F	G	Turpentine	X	F	F	X	G	X	X	X	F	X	F	F	G	G	G	
Stearic Acid	F	F	F	F	G	F	F	G	G	X	X	X	G	G	Urea (Water Solution)	G	X	X	G	G	G	G	G	G	G	-	-	-	-	G	
Stoddard Solvent	X	G	G	F	G	G	X	X	G	G	G	G	G	G	Varnish	X	X	X	X	G	G	X	X	-	X	F	G	G	G	G	
Sulfur	F	X	X	X	X	X	F	-	-	G	X	X	G	G	Vegetable Oil (Non-food)	F	G	G	X	G	G	X	G	-	G	-	-	-	-	G	
Sulfur Chloride	X	X	X	X	G	F	X	F	X	X	X	X	X	X	Vinyl Acetate	X	X	X	X	G	F	X	X	X	X	F	F	F	F	G	
Sulfur Dioxide	X	X	X	X	G	X	G	X	X	-	X	X	-	G	Water	G	G	G	G	G	G	G	G	G	G	G	F	F	F	G	
Sulfuric Acid (Under 50%)	G	X	X	X	G	X	G	G	X	X	X	X	X	X	Water-Glycol mixture	-	G	G	G	G	G	G	G	X	X	G	F	G	G	G	
Sulfuric Acid (51% to 70%)	G	X	X	X	G	X	F	G	X	X	X	X	X	X	Water-Petroleum mixture	-	G	G	F	G	G	X	F	G	X	G	G	G	G	G	
Sulfuric Acid (71% to 95%)	X	X	X	X	G	X	F	X	X	X	X	X	X	X	Xylene	X	X	X	X	G	G	X	X	F	X	X	X	X	G		
Sulfuric Acid (96% to 98%)	X	X	X	X	G	X	X	X	X	X	X	X	X	X	Zinc Chloride	G	G	G	G	G	X	G	G	X	G	X	X	X	X		
Styrene	X	X	X	X	G	G	X	X	X	X	G	G	G	G	Zinc Sulfate	G	G	G	G	G	G	G	-	G	X	X	X	X	G		
Tannic Acid	G	F	F	F	G	X	G	G	G	G	F	X	G	G																	

CODES: G – Good resistance. F – Fair resistance. X – Incompatible. – No data available.

*This chemical has some deteriorative effects, but the elastomer is still adequate for moderate service.

NOTE: All data given herein is believed to be accurate and reliable, but presented without guarantee, warranty, or responsibility of any kind, express or implied, on our part. Chemical resistance will vary with the wide diversity of possible mixtures and service conditions. It is therefore not possible to give any guarantee whatsoever in individual cases.

For compatibility of fluids not listed with this chart, contact  Technical Support at 1-800-776-3262.

Working Pressure – Hose Ends

Application

The maximum dynamic working pressure of a hose assembly is the lesser of the rated working pressure of the hose and the end connection used.

HOSE END CONNECTION	CODE LETTER OR NUMBER	HOSE END SIZE											MAXIMUM WORKING PRESSURE (PSI)
		-04	-05	-06	-08	-10	-12	-16	-20	-24	-32		
Male Pipe (NPTF)	100	5000		4000	4000		4000	4000	3000	2500	2500		
Female Pipe (NPTF)	050, 200, 250	5000		4000	4000		2250	2000	1625				
37° JIC seat	C60, 500, 550, 600, 640, 660, 680	5000	5000	4000	4000	4000	4000	4000	3000	3000	3000		
SAE Flareless	750	5000	5000	4000	3500	2750	2250	2000	1625				
Ready-Lok®*	00S	5000		4000	4000		4000	4000	3000	2500			
FOR-SEAL®♦	A20, A60, E60, J30, L60, S60	6000		6000	6000	6000	6000	6000	4000	4000			
SAE Straight Thread O-Ring Male	P00, R00, R60	5000	5000	5000	4500	4000	4000	4000	3000				
SAE Flange Code 61	G00, G40, G70, H00, H20, H50, H60, H70, H80, H90, K00, K60				5000	3000	5000	5000	4000	3000	3000		
SAE Flange Code 62	D00, D40, D60, N20, N50						5000	5000	5000	5000	5000		
THICK-FLANGE® Code 62	K00, K40, K70						5000	5000	5000	5000	5000		

*Rated pressures are for low surge, static type applications. ♦ O-Ring Face Seal (ORFS) Style Fitting.

Metric Pressure Rating Charts

HOSE END CONNECTION	CODE LETTER OR NUMBER	HOSE END SIZE											MAX WORKING PRESSURE (PSI)
		-04	-05	-06	-08	-10	-12	-16	-20	-24	-32		
Male British Pipe (BSP)	150	5000		4000	4000	3500	4000	3500	2500	2000	2000		
Female British Pipe (BSP)	05P, 70P, 350	5000		4000	4000	3500	4000	3500	2500	2000	2000		
Female Pipe (JIS)	00L	5000		5000	5000		4000	4000					

HOSE END CONNECTION	CODE LETTER OR NUMBER	HOSE END SIZE										MAXIMUM WORKING PRESSURE (PSI)
		-06	-08	-10	-12	-15	-18	-22	-28	-35	-42	
Din Light	00A, 00C, 00D, 50D	3625	3625	3625	3625	3625	2325	2325	1450	1450	1450	

Temperature vs. Pressure Table for Reinforced PVC Hose

Temperature		Allowable % of Original Work. Pressure	
°C	°F	2-Spiral	4-Spiral
20	68	100%	100%
25	77	86%	90%
30	86	75%	81%
35	95	65%	73%
40	104	56%	66%
45	113	47%	59%

Temperature		Allowable % of Original Work. Pressure	
°C	°F	2-Spiral	4-Spiral
50	120	40%	53%
55	131	33%	47%
60	140	27%	43%
65	149	23%	40%
70	158	20%	38%
75	167	17%	37%
80	176	15%	35%

NOTE: For additional information on a specific hose, refer to the hose description on pages 30-65.

Fitting Identification

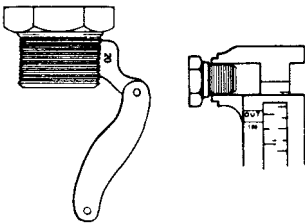
Fitting Thread Size Comparison Chart – The male connections have (Male unified thread class 2 fit) UN-2A specification threads and the female connections have (Female unified thread class 2 fit) UN-2B specification threads. The exceptions are male and female pipe threads.

Size	Pipe	FOR-SEAL®	37° Flare Flare-Twin®	Ermeto® 7000 Series	Straight Thread O-Ring SAE	45° Flare	Inverted Flare
1/8	1/8-27	—	5/16-24	5/16-24	5/16-24	5/16-24	5/16-28
3/16	—	—	3/8-24	3/8-24	3/8-24	3/8-24	3/8-24
1/4	1/4-18	9/16-18	7/16-20	7/16-20	7/16-20	7/16-20	7/16-24
5/16	—	—	1/2-20	1/2-20	1/2-20	1/2-20	1/2-20
3/8	3/8-18	11/16-16	9/16-18	9/16-18	9/16-18	5/8-18	5/8-18
7/16	—	—	—	—	—	11/16-16	11/16-18
1/2	1/2-14	13/16-16	3/4-16	3/4-16	3/4-16	3/4-16	3/4-18
5/8	—	1-14	7/8-14	7/8-14	7/8-14	7/8-14	7/8-18
3/4	3/4-14	1-3/16-12	1-1/16-12	1-1/16-12	1-1/16-12	1-1/16-14	1-1/16-16
7/8	—	—	1-3/16-12	1-3/16-12	1-3/16-12	—	1-3/16-16
1	1-11-1/2	1-7/16-12	1-5/16-12	1-5/16-12	1-5/16-12	—	1-5/16-16
1 1/4	1-1/4-11-1/2	1-11/16-12	1-5/8-12	1-5/8-12	1-5/8-12	—	—
1 1/2	1-1/2-11-1/2	2-12	1-7/8-12	1-7/8-12	1-7/8-12	—	—
2	2-11-1/2	—	2-1/2-12	2-1/2-12	2-1/2-12	—	—
2 1/2	2-1/2-8	—	3-12	—	—	—	—
3	3-8	—	3-1/2-12	—	—	—	—

Tube Fittings

There are four basic types of tube fittings: Flare, Flareless, Straight Thread O-Ring, and Flat Face O-Ring Seal (FOR-SEAL™). Tube fittings seal in two ways. Flare and Flareless fittings use metal to metal contact joints. Straight Thread O-Ring and Flat Face O-Ring fittings use a rubber o-ring. Where extreme vibration is present, use Flareless, Straight Thread or Flat Face O-Ring Seal fittings.

SIZING: For accuracy, it is recommended the male thread be measured. Measure the outside diameter. For our example use 7/16" Next measure the threads per inch – use 20. Our fitting size measures 7/16-20. Refer to the thread chart on this page for appropriate tube size and illustration.



Pipe Fittings

The American Society of Automotive Engineers in cooperation with industry set up a standard for improvement in pipe threads. This improvement is known as the Dryseal Pipe Thread. All Weatherhead pipe threads are American Standard Taper Dryseal Pipe Threads (NPTF). The metal to metal seal is formed by contact at the thread crest and root.

Nominal pipe sizes do not agree with either the I.D., O.D., or thread sizes. To determine pipe size (up to 1-1/4") measure the diameter of the threads and subtract 1/4" For example, subtract 1/4" from a 1" pipe to obtain the nominal pipe size of 3/4".

Pipe sizes can also be given in 'dash numbers.' A dash number is always the numerator of an inch over 16th. For instance, if the pipe O.D. measures 1/2" that would be converted to 16ths (8/16), but be written as -8.



See page 309 for Thread Measuring Kits.

Fitting Identification

Application

Identifying metric, or non-USA, threaded connections is similar to identifying the connections that have been commonly used in the United States. The following text covers how to identify the different styles of metric connections offered by Boston Weatherhead.

BSP Thread Size	1/8-28	1/4-19	3/8-19	1/2-14	5/8-14	3/4-14	1-11	1-1/4-11	1-1/2-11	2-11
Male Thread Diameter	9.72 (.375)	13.16 (.518)	16.66 (.656)	20.96 (.825)	22.91 (.902)	26.44 (1.041)	33.25 (1.309)	41.91 (1.650)	47.80 (1.882)	59.51 2.347
Female Thd. Diameter	8.73 (.343)	11.66 (.459)	15.37 (.605)	18.90 (.744)	20.85 (.821)	24.38 (.960)	30.61 (1.205)	39.24 (1.545)	45.24 (1.781)	55.94 2.242
Pitch	.91 (.036)	1.34 (.053)	1.34 (.053)	1.81 (.071)	1.81 (.071)	1.81 (.071)	2.31 (.091)	2.31 (.091)	2.31 (.091)	2.31 (.091)

BSPP & BSPT Thread Chart

Figure 4a. Dimension Note: MM(IN)

THREADS - The thread forms and their corresponding specifications listed below are used on all of the metric styles of connections which will be discussed later. These cover the basic forms of the threads but not the style of connection.

Thread Type	Specifications
British Parallel Pipe Threads	BS 2779, ISO/R 228
British Taper Pipe Threads	BS 21, ISO/R 7
Metric Parallel Threads	DIN 3852, ISO/R 6149
Metric Taper Threads	DIN 3852

Note: BS – British Standards Institution
ISO – International Standards Organization
DIN – Deutsche Industrie Norme

To identify metric connections, you will need instruments that can accurately measure thread inside and outside diameters, thread pitch and fitting seat angles. The TA-1002 Thread Measuring Guide and Tool Kit is a basic kit that will help you in identifying most of the connections you will be encountering on imported equipment.

PARALLEL and TAPERED THREADS

Parallel Threads ('G')

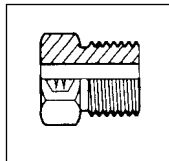


Figure 1.

Tapered Threads ('R')

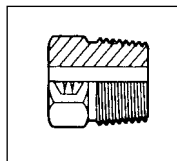


Figure 2.

The first step in identifying thread forms is to determine if the thread is parallel or tapered. Parallel threads are not used for sealing fluids. Sealing is achieved by an elastomeric o-ring, metal seal, machined ring into the hex itself or a seat machined into the end of the fitting. This style is similar to straight thread o-ring port connections where the threads are used for retention of the sealing method against a machine port. Parallel threads can be determined by laying a straight edge along the threads. If the threads are parallel to the center line of the fitting, then the fitting has parallel threads. See Figure 1.

Tapered threads seat by the interference caused by the male and female threads. These threads create a pressure-tight joint by metal deformation when they are tightened. Sealants on the threads are commonly used in this style of connection. Laying a straight edge on the threads, compare this line with the center line of the fitting. If this line tapers slightly away from the center line, then the threads are tapered. See Figure 2.

BRITISH PIPE THREADS

There are two forms of British Standard Pipe Threads that are used in the world today. They are BSPP (British Standard Pipe Parallel) and BSPT (British Standard Pipe Tapered). The BSPT male thread mates with the female BSPT thread similar to an NPTF connection. The 30° BSPP male adapters connect to a female BSPP thread with a 30° cone. This style is comparable to an NPSM swivel style. These threads are almost identical to the NPTF Pipe Thread except for the flank angle. This angle is 55° versus 60° on the NPTF. See Figure 3. Because of this difference, the two forms are **NOT** interchangeable.

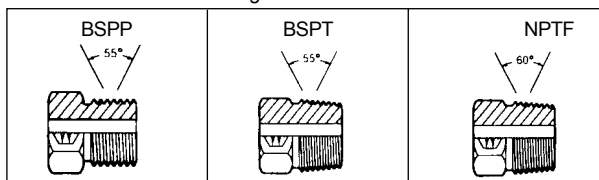


Figure 3.

Identifying BSP threads starts with determining if it is a parallel or tapered thread. Next, referencing Figure 4 and 4a, measure the lead thread diameter. Compare this measurement to the listed dimensions to determine size. If instruments are not available to measure this, you can compare it end-to-end with a known NPTF thread to approximately arrive at the nominal BSP size. Finally, measure the pitch and compare it to the chart on Figure 4 to complete the identification. These dimensions will be the same for both BSPP and BSPT.

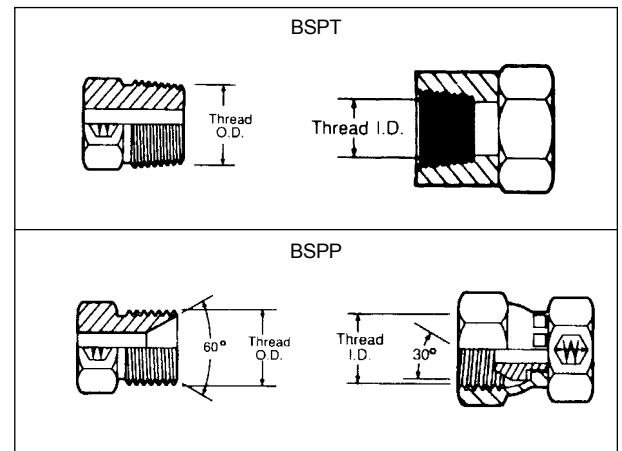


Figure 4.

METRIC THREADS

Metric threads are similar to inch-sized threads except for the sizing which is based on standard metric units. Identifying metric threads starts with determining if it is a parallel or tapered thread. Next, measure the thread diameter. Compare this measurement to the dimensions listed in Figure 5 to determine size. Finally, measure the pitch and compare to chart. These dimensions will be common for both parallel and tapered threads.

Metric Thread Size	Male Thread Diameter		Female Thread Diameter		Pitch	
	MM	IN	MM	IN	MM	IN
M10 x 1.0	10.0	.394	8.5	.335	1.0	.039
M12 x 1.5	12.0	.472	10.5	.413	1.5	.059
M14 x 1.5	14.0	.551	12.5	.492	1.5	.059
M16 x 1.5	16.0	.630	15.5	.610	1.5	.059
M18 x 1.5	18.0	.709	16.5	.650	1.5	.059
M20 x 1.5	20.0	.787	18.5	.728	1.5	.059
M22 x 1.5	22.0	.866	20.5	.807	1.5	.059
M24 x 1.5	24.0	.945	22.5	.886	1.5	.059
M26 x 1.5	26.0	1.024	24.5	.964	1.5	.059
M20 x 2.0	27.0	1.063	25.5	1.004	2.0	.079
M30 x 2.0	30.0	1.181	28.5	1.122	2.0	.079
M33 x 2.0	33.0	1.299	31.5	1.240	2.0	.079
M36 x 2.0	36.0	1.417	34.5	1.358	2.0	.079
M42 x 2.0	42.0	1.653	40.5	1.594	2.0	.079

Figure 5.

Fitting Identification

METRIC FLARELESS CONNECTIONS—Din 3901/3902L, 3901/3902S

The most popular metric flareless, or bite-type, fitting style is the 24° Metric Tube Seat. This style incorporates a tapered seat in the fitting body with a bite-type sleeve, or ferrule, for the connection. When the nut is tightened, the tapered seat forces the sleeve into the tube creating a positive seal. This style of connection is available in both a Light and Heavy series and is designed for medium and high pressure applications respectively. The two series have different parallel thread sizes in relationship to the nominal tube outside diameter, but share a common sleeve. This style can be identified by the combination of the 24° internal seat and a male metric parallel thread. The series can be determined by measuring the seat counterbore, which is the approximate tube outside diameter, and comparing it to the thread size. Compare these dimensions to those shown in Figure 6 to determine the series. The nominal sleeve size is taken directly from the tube outside diameter dimension.

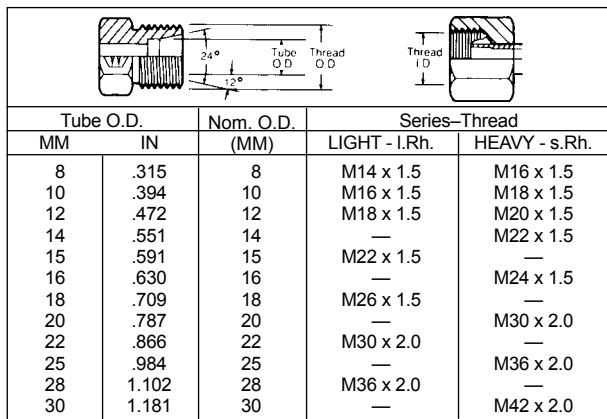


Figure 6.

METRIC 60° TUBE SEAT—DIN 7631

This series combines an internal 60° seat with parallel metric Light series threads. Mating with female metric swivel fittings with a globe seal made to DIN 3863L, this connection provides a metal to metal seal when tightened. This style can be identified by the internal 60° seat on the male thread threaded portion. Reference Figure 7 for thread information.

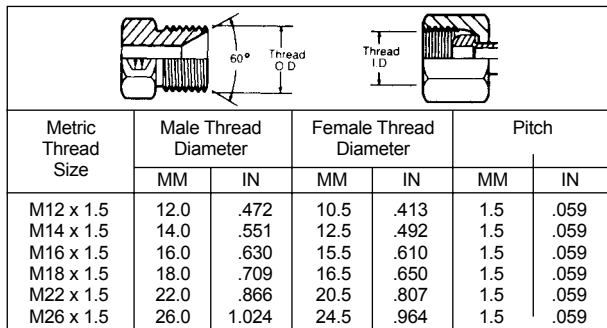


Figure 7.

JAPANESE 30° FLARE

The Japanese 30° flare style is similar to the 37° JIC flare connection except for two things. The seat angle is 30° and threads are metric straight threads. This fitting is often referred to as a 'Komatsu' style connection. To identify this style, first verify the seat angle is 30°. Next establish the metric thread size by measuring the thread outside diameter. Compare this dimension to those shown in Figure 9. The threads in this series will conform to Japanese Industrial Standard (JIS) B 0207.

See page 309 for Thread Measuring Kits.

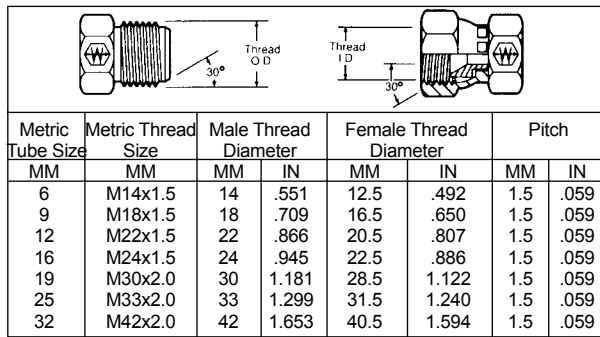


Figure 8.

JAPANESE 30° FLARE (JIS)

Similar to BSPP and a 30° seat. The seal is made when contact is made between the male and female flares, with the threads retaining the connection. The JIS 30° flare is similar to the 37° flare connection. To determine the difference between the JIS 30° flare and the JIC 37° flare, carefully measure the seat angle. The threads in this series conform to Japanese Industrial Standard (JIS) B 0207.

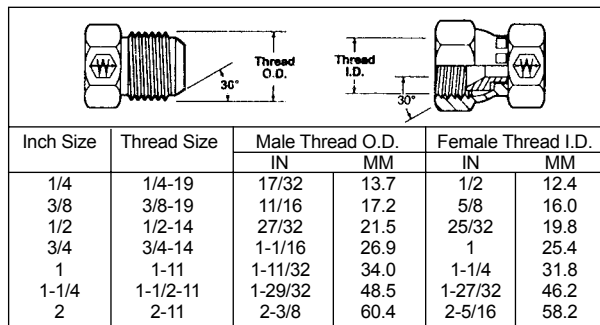


Figure 9.

METRIC SPLIT FLANGE FITTINGS

Metric split flanges are found in applications where high pressure and high vibration conditions exist. A flange clamp is used to secure the split flange head and o-ring against a machined port to provide an elastomeric and metal-to-metal seal. They are used in applications up to 3000 PSI. The physical dimensions are similar to the SAE Code 61 standard pressure series which makes the two styles fully interchangeable. To identify, referencing Figure 10, simply measure the flange head diameter to arrive at the nominal flange size.

Note: To prevent leakage when replacing this type of fitting with standard Code 61 hose end, make sure to use the existing flange halves and hardware with a new SAE-style o-ring. Also note that in this series there is a 5/8 nominal size which is a non-standard SAE size and require a special o-ring. Failure to reuse flange halves and hardware will result in an improper connection which could cause the hose assembly to fail.

Proper selection of hose and hose ends is critical for proper operation and safe use of the hose and hose ends. See pages 1-2 of this catalog for important safety information.

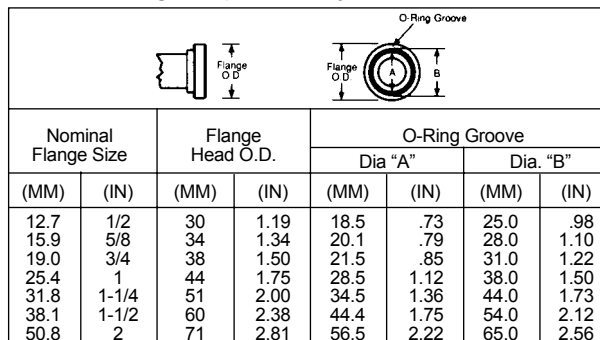
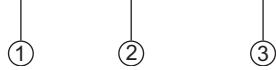


Figure 10.

HOSE

H 425 08



1. All Boston Weatherhead hose is designated with the letter 'H'.
2. Eash hose is assigned a three or four digit base number from 001-999, i.e., H069, H425, H470, H1571.
3. The last two digits indicate inside hose diameter (I.D.) in sixteenths of an inch. In the example used above 08 is equal to 8/16" – or 1/2" I.D. hose.

Exceptions: H059, H069, H166, H169, H213, H229, H239, H366, H429, H569 and H757. The I.D. sizes of these hoses deviate somewhat from the above standard. The sizing method used on these hoses is based on deducting twice the wall thickness from the O.D. of the connecting tubing to determine the I.D. of the hose. In other words, match the inside diameters rather than the dash sizes when going from tubing to hose.

Examples:

	Actual Hose I.D.	Nominal Hose I.D.	Tubing I.D.	Tubing O.D.
H06906	5/16	3/8	5/16	3/8
H06910	1/2	5/8	1/2	5/8

Table 1 shows standard hose size and H069 type hose sizes and dash numbers. Wherever these hoses are listed in this catalog, the size is listed and the dash number is the last two digits of the Catalog Number.

Table 1 – Catalog Numbers for Hose Sizes

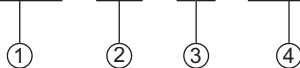
Actual Hose I.D.	Std. Catalog Nos.	H069 Type Catalog Nos.
3/16	03	04
1/4	04	05
5/16	05	06
3/8	06	
13/32		08
7/16	07	
1/2	08	10
5/8	10	12
3/4	12	
7/8		16
1	16	
1-1/8		20
1-1/4	20	
1-3/8		24
1-1/2	24	
1-13/16		32
2	32	
2-3/8		40
3		48

HOSE ENDS

Every type of Boston Weatherhead hose end is designed to fit a certain group of hose with limiting dimensions and tolerances. For your convenience the hoses used on each end style are indicated in the hose end catalog listings.

Crimp

08 U-2 58



1. The first two digits indicate hose size (I.D.) in sixteenths of an inch.

The exceptions to this are the spiral and truck hose.

Spiral hose ends use the hose base number as a prefix to the size. Example: 47012E.

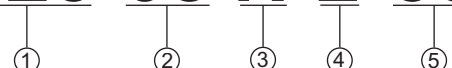
Truck hose ends use the base number 069 as a prefix to the size. Example: 06908E.

Refer to the top of the catalog page where these hose ends are detailed for recommended hose types.

2. Hose end type and material. Refer to Table 2 (page 17). This letter is always followed by a dash.
3. The first number or letter indicates the style of the end connection. See individual hose end catalog listings or refer to the hose end configuration chart on pages 21 and 24.
4. The last two digits indicate the size of the end connection in sixteenths of an inch. Refer to individual catalog listing for metric and specialty ends.

Field Attachable

425 08 N-2 58



1. Description of basic hose.

The exceptions are the 247 series and clamp-type ends. These ends are designed for use with a variety of hose types.

Refer to the top of the catalog page where these hose ends are detailed for recommended hose types.

2. Hose size (I.D.) in sixteenths of an inch, or as shown in Table 1.
3. Hose end type and material. Refer to Table 2 (page 17). This letter is always followed by a dash.
4. The first number or letter indicates the style of the end connection. See individual hose end catalog listings or refer to the hose end configuration chart on pages 21 and 24.
5. The last two digits indicate the size of the end connection in sixteenths of an inch. Refer to individual catalog listing for metric and specialty ends.

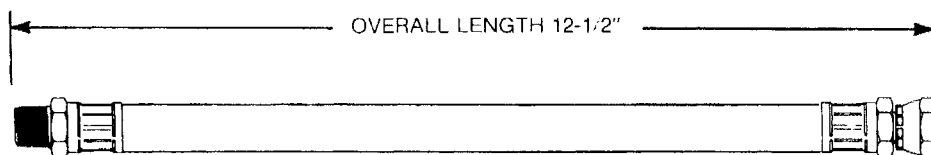
NUMBERING SYSTEMS

Table 2 – Standard Hose End and Material Code

Code Letter	Coupling Type	Material
A	Crimp/Field Attachable	Aluminum
B	Field Attachable	Brass
C	Crimped	Brass
D	Field Attachable*	Steel*
E	Crimp	Steel
H	Crimp	Brass
K	Clamp Type	Steel
M	Crimp	Steel
N	Field Attachable	Steel
P	Crimp	Brass
S	Crimp	Stainless Steel
T	Field Attachable*	Brass
U	Crimp	Steel

*High Flow Hose Assemblies

HOSE ASSEMBLIES



42504 U - P04 604 01250

① ② ③ ④ ⑤ ⑥

Catalog Numbers for hose assemblies are basically the same as hose ends, except both the ends must be specified as well as the overall length. This process is detailed below:

1. Type of desired hose (see hose selection guide pages 3-9 or individual hose listings).
2. Hose size (I.D.) in sixteenths of an inch (04 = 4/16" = 1/4").
Exception: 13/32" I.D. hose.
3. End style and material. Refer to Table 2.
- 4./5. Style and size of each hose end. Refer to the individual hose end catalog listings or to Hose End Configuration Chart on pages 21 and 22 for available styles and sizes.
Example: P04 Male Straight Thread O-Ring 1/4", 604 SAE 37° Female Swivel 1/4."
6. Length of assembly. The first three digits specify a length in inches. The last two digits are for fractions of an inch expressed in decimal hundredths (01250 = 12 1/2").

NOTE: To determine the hose only length when making a hose assembly, subtract each hose end cut-off factor from the overall hose assembly length. Please see the individual hose end listings for cut-off factor information.

To determine Hose Cut-Off Factors reference page 25.

Numbering Systems

Application

The chart below is designed to offer quick identification of Boston Weatherhead hose end series. Included in this chart are: base numbers, descriptions, hose end series, and page number in which the configuration appears.

Catalog numbers may be derived by adding the size in sixteenths of an inch to the base. **Example:** 100 series 3/4" male pipe rigid. 3/4" = 12/16" thus 100 + 12 = 112.

Part # Suffix	Hose End	Style	009 'B'	057 'B'	100 'B'	105 'B'	057 'P'	338 'B'	069 'D'	'E'	069 'E'	336 'E'	430 'E'	470 'E'	757 'E'	'K'	039 'K'	'M'	104 'N'	213 'N'	247 'N'	425 'N'	436 'N'	229 'P'	265 'P'	338 'P'	'S'	570 'S'	069 'T'	'U'	430 'U'	'W'	WOLF			
00A	Male DIN (Light)	Rigid																124											139		164					
00C	Female DIN (Light)	Swivel											101					125											142	155	167					
00D	Female DIN 45° (Light)	Swivel																127											147							
00E	Female Din 24° 45° Tube Elbow	Swivel																127																		
00F	Male DIN (Heavy)	Rigid												111				125											139							
00K	Female 30° Flare (Komatsu)	Swivel							94				102																143	155						
00L	Female JIS 30° Flare	Swivel							87																				144		167					
00P	Female Flat Face BSPP	Swivel																											144							
00S	Ready Lok®	Rigid											103																145	156						
0PW	Pressure Washer	Swivel																126														170				
30T	Straight Tube-Metric	Rigid																											146							
40P	Brit. Std. 60° Cone Parallel Female Pipe 45°	Swivel											105	113				128											147	157						
50C	Female DIN (Heavy)	Swivel																125											143	155						
50D	Female DIN 90° (Light)	Swivel																128											150							
50E	Female DIN 90° (Heavy)	Swivel																129											150							
70P	Brit. Std 60° Cone Parallel Female Pipe 90°	Swivel								90			107	115				129											151	169						
050	Female Straight Pipe	Swivel										97						126											142		166					
100	Male Pipe	Rigid	171	172	173	176			180	85	92	96	100	111			182	183	124	184	187	190	195	199				180	138	153	164					
150	Male Pipe, British Standard Tapered	Rigid																											138							
200	Female Pipe	Rigid				176						97																	141		166					
250	Female Pipe	Swivel				175																							142							
300	SAE 45° Male	Rigid			173							97																	140							
350	Brit. Std 60° Cone Parallel Female Pipe	Swivel								87			102	112															143	155	167					
380	SAE 45° Male 45° Elbow	Rigid													119																					
400	SAE 45° Female	Swivel								181	87	93	98		118														142		166					
440	SAE 45° Female 90° Tube Elbow Long	Swivel																											150							
460	SAE 45° Female 90° Tube Elbow Short	Swivel																																		
480	SAE 45° Female 45° Tube Elbow	Swivel								90	95				121																					
500	JIC 37° Male	Rigid								86	92	97	101																147	154	165					

= Denotes Coll-O-Crimp® Hose Ends

Part # Suffix	Hose End	Style	009 'B'	057 'B'	100 'B'	105 'B'	057 'P'	338 'B'	069 'D'	'E'	069 'E'	336 'E'	430 'E'	470 'E'	757 'E'	'K'	039 'K'	'M'	104 'N'	213 'N'	247 'N'	425 'N'	436 'N'	229 'P'	265 'P'	338 'P'	'S'	570 'S'	069 'T'	'U'	430 'U'	'W'	WOLF					
550	JIC 37° Female 90° Tube Elbow	Swivel																																				
600	JIC 37° Female Elbow Long	Swivel	171		174				181	87	93	98	101	111			183	125	185	187	192	196	198				135	181	152	156	166							
640	JIC 37° Female 90° Tube Elbow Long	Swivel								90	99	99	107						186		194	198							150	163	169							
660	JIC 37° Female 90° Tube Elbow	Swivel								89	95	99		114				129	186	189	193	198	198					149		169								
680	JIC 37° Female 45° Tube Elbow	Swivel								89	94	98	104	113				127	186	188	193	197	198					146	160	168								
750	Flareless Tube Ermeb®	Rigid								86					117													140										
950	Flareless Tube Ermeb® 45°	Rigid																										146										
970	Flareless Tube Ermeb® 90°	Rigid																										149										
A00	Inverted Female	Rigid			174																																	
A20	Female For-Seal® 90° Tube Elbow Short	Swivel								90	99	108	115					128													163	170						
A60	Female For-Seal® 90° Tube Elbow Long	Swivel								90	90		108					128													163	170						
B00	Inverted Male	Swivel							180	86	93										187	191																
B20	Inverted Male Swivel Extended	Swivel																																				
B40	Inverted Male 45° Tube Elbow	Swivel																																				
B60	Inverted Male 90° Tube Elbow	Swivel								89																												
C00	Male Pipe 90° Elbow	Rigid			175																																	
C30	Female Grease Tap	Rigid																																				
C60	SAE 37° Female 60° Tube Elbow	Swivel											106																									
D00	Flange Straight	Code 62											103	113																								
D40	Flange 45° Tube Elbow	Code 62											106	114																								
D70	Flange 90° Tube Elbow	Code 62											110	125																								
E00	Inverted Male 90° Elbow	Swivel									95																											
E40	Inverted Male 45° Tube Elbow	Swivel									94	98																										
E60	Male For-Seal® Straight	Rigid											100																									
G00	Flange Straight	Code 61											103	112																								
G09	Flange Straight (Komatsu)	Special																																				
G40	Flange 45° Tube Elbow	Code 61											105	113																								
G69	Flange 45° Tube Elbow (Komatsu)	Special																																				
G70	Flange 90° Tube Elbow	Code 61											109	115																								
G99	Flang 90° Tube Elbow	Special																																				

☐ = Denotes Coll-O-Crimp® Hose Ends

Numbering Systems

Application

Part # Suffix	Hose End	Style	009 'B'	057 'B'	100 'B'	105 'B'	057 'P'	338 'B'	069 'D'	'E'	069 'E'	336 'E'	430 'E'	470 'E'	757 'E'	'K'	039 'K'	'M'	104 'N'	213 'N'	247 'N'	425 'N'	436 'N'	229 'P'	265 'P'	338 'P'	'S'	570 'S'	069 'T'	'U'	430 'U'	'W'	WOLF		
H00	Flange 22-1/2" Tube Elbow	Code 61										104																	157						
H20	Flange 30" Tube Elbow	Code 61										104																	158						
H50	Flange 60" Tube Elbow	Code 61										106																	160						
H60	Flange 67-1/2" Tube Elbow	Code 61										107																	160						
H70	Flange 100" Tube Elbow	Code 61										110																	160						
H80	Flange 110" Tube Elbow	Code 61										110																	163						
H90	Flange 135" Tube Elbow	Code 61										110																	163						
J00	Male Pipe	Swivel							85			96						124										139			165				
J33	Female For-Seal® 90° Tube Elbow Med.	Swivel																										151		170					
J63	Female For-Seal® Straight	Swivel																													167				
K00	Flange Straight "Thick Flange"	Code 62																								137									
K30	Flange 45" Tube Elbow "Thick Flange"	Code 62																								137									
K60	Flange 90" Tube Elbow "Thick Flange"	Code 62																								137									
L00	Banjo (Ford Tractor)	Special																																	
L10	JIC 37" Female 30° Tube Elbow	Swivel																126																	
L40	Male 45" Tube Elbow O-Ring Port	Swivel																																	
L60	Female 45" For-Seal® Tube Elbow	Swivel								89			132					127													158	168			
M00	Male Pipe 90° Elbow	Swivel										99																			148	168			
N20	Split Flange 30° Tube Elbow	Code 62											113																						
N50	Split Flange 60° Tube Elbow	Code 62											114																						
N60	Split Flange 67 1/2° Tube Elbow	Code 62											114																						
P00	Male Straight Thread O-Ring	Rigid																																	
P50	Male Pipe, Brit. Std. 60° Cone Parallel	Rigid											100																		141	154	165		
R00	Male Straight Thread O-Ring	Swivel																													138	153	167		
R60	Male Straight Thread O-Ring 90° Elbow	Swivel																													141				
S60	Female For-Seal® Straight	Swivel																														144			
T00	Straight Tube	Rigid																														152	156		
T50	Straight Tube-Long	Rigid																														145			
W00	Bumped Tube O-Ring Male	Rigid																																	
W40	Bumped Tube O-Ring Female 45° Tube Elbow	Swivel																																	

= Denotes Coll-O-Crimp® Hose Ends

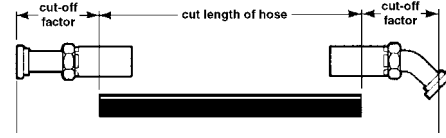


Part # Suffix	Hose End	Style	009 'B'	057 'B'	100 'B'	105 'B'	057 'P'	338 'B'	069 'D'	'E'	069 'E'	336 'E'	430 'E'	470 'E'	757 'E'	'K'	039 'K'	'M'	104 'N'	213 'N'	247 'N'	425 'N'	436 'N'	229 'P'	265 'P'	338 'P'	'S'	570 'S'	069 'T'	'U'	430 'U'	'W'	WOLF	
W60	Bumped Tube O-Ring Male 90° Tube Elbow	Rigid									120																							
X00	SAE 45° Flare Male 90° Elbow	Rigid									120																							
X20	30° Flare Female (P.T.T. Thread for Diesel Applications)	Swivel							181			93								188														
X60	SAE 37° Male 90° Elbow	Rigid								88																								
X80	Compressor Discharge (Teflon® Hose)	Flange																																
Y00	Hose Mender	Rigid			175																													
Y20	Male Connector	Rigid						177																										
Y30	Male Connector w/ Spring Guard	Rigid						177																										
Y33	Hose Splicer	Special																																
Y50	Air Brake Connection Tube	Rigid								86						118																		
Y60	Air Brake Slider	Rigid																																
Y70	Air Brake	Swivel						177																										
Y80	Female Connector	Swivel						177																										
Z00	Bumped Tube O-Ring Male	Swivel														117																		
Z20	Bumped Tube O-Ring 45° Tube Elbow	Swivel														119																		
Z40	Bumped Tube O-Ring Female	Swivel														118																		
Z50	Bumped Tube O-Ring Female w/Service Port	Swivel														118																		
Z60	Bumped Tube O-Ring Male 90° Tube Elbow	Swivel														120																		
Z80	Bumped Tube O-Ring Female 90° Tube Elbow	Swivel														120																		
Z90	Bumped Tube O-Ring 90° Tube Elbow w/Service Port	Swivel														121																		
WOLF	Male Pipe (NPTF)	Rigid																																130

= Denotes Coll-O-Crimp® Hose Ends

Hose Cut-Off Factor

Select the proper hose and ends and cut hose to length. The cut length of the hose is determined by subtracting the cut-off factor for each end from the overall length of the assembly. See individual catalog listings for hose cut-off factors.



SKIVING BOSTON WEATHERHEAD HOSE

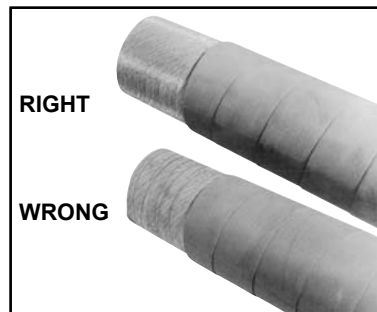
When using H430, and H439 hoses with 430 'E' series hose ends
and H470 hose with 470 'E' and 570 'S' series hose ends

The outer protective covering of wire-wrapped hose must be carefully removed (skived) to the wire to allow proper installation of crimped hose ends and to assure the best possible hose service.

When skiving a hose, it is advisable to skive a practice piece of hose to determine:

- That covering is properly removed and that the hose **wire-wrap reinforcements are not displaced, damaged or cut** in the process.
- The hose should be checked for **correct skive length**.
- The hose should be checked for **100% cover removal**.

HOSE	H430 and H439		H470	
Hose I.D.	Skive Length	Cutting Head	Skive Length	Cutting Head
1/2	1-3/8	T-410-30	1-1/4	T-410-50
3/4	1-11/16	T-410-31	1-13/16	T-410-52
1	1-15/16	T-410-32	2-1/8	T-410-53
1-1/4	2-1/8	T-410-33	2-7/8	T-410-54
1-1/2	2-1/4	T-410-34	3-1/8	T-410-55
2	2-9/16	T-410-35	3-3/8	T-410-56
T-410-36 Handle				
T-410-37 Replacement cutting blades				



Hand-Tool Method

Skiving heads are shipped preset for proper skive length. Depending on hose cover thickness, the skiving blade may require adjustment. The skiving blade may need periodic adjustment. Directions are packed with the skive tool.

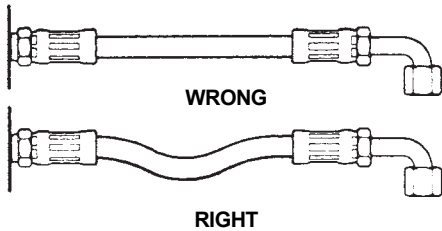
1. Clamp hose in a vise or other suitable holding device. Be sure not to clamp so tight as to damage hose.
2. Lubricate hose I.D. and skiving tool mandrel with oil/soap solution.
3. Carefully align mandrel with hose I.D.; apply steady pressure and start mandrel into hose.
4. When cutting head contacts hose end, slowly rotate skiving tool clockwise. Cutting head will remove hose covering while threading itself to a preset skive length when bottomed against hose end. Continue to rotate skiving tool clockwise to remove excess rubber from wire wrap while slowly pulling tool from hose. (See illustration to right.)
5. Wire-brush hose end to remove any remaining cover from wire wrap.
6. **Inspect skive for 100% cover removal.**

IMPORTANT: Clean hose I.D. by brushing, blowing compressed air, or by flushing. By doing so, contaminants are kept out of operating systems.

WARNING - Failure to completely remove the cover may result in serious personal injury or property damage due to hose ends blowing off, hose leakage, and other failures.

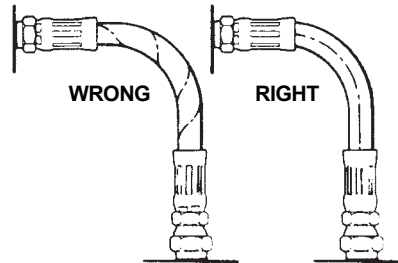
 Refer to safety information regarding Coll-O-Crimp® hose installation on page 1-2.

1. Provide for length change.



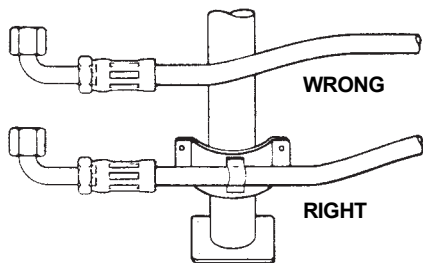
In straight hose installations, allow enough slack in the hose line to provide for changes in length that will occur when pressure is applied. This change in length can be from +2% to -4%.

2. Avoid twisting and orient properly.



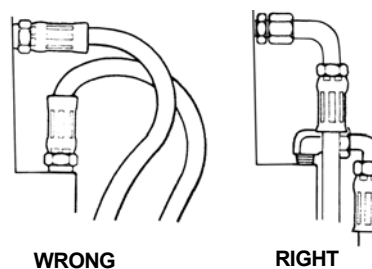
Do not twist hose during installation. This can be determined by the printed layline on the hose. Pressure applied to a twisted hose can cause hose failure or loosening of connections.

3. Protect from hazardous environment.



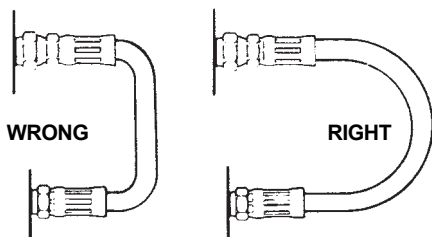
Keep hose away from hot parts. High ambient temperature will shorten hose life. If you can not route it away from the heat source, insulate it. (See Spring Guards page 66-76.)

4. Avoid mechanical strain.



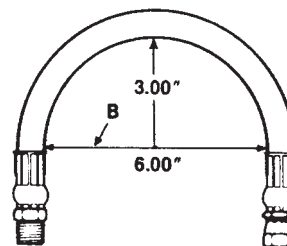
Use elbows and adapters in the installation to relieve strain on the assembly and to provide easier and neater installations that are accessible for inspection and maintenance.

5. Use proper bend radius.



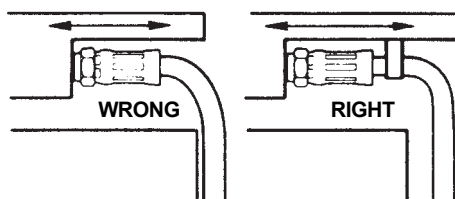
Keep the bend radius of the hose as large as possible to avoid collapsing of the hose and restriction of flow. Follow catalog specs on minimum bend radii.

6. Use proper bend radius (cont'd).



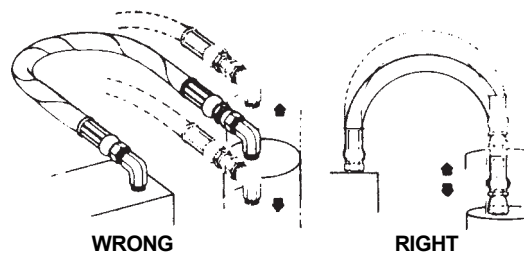
Minimum bend radius is measured on the inside bend of the hose. To determine minimum bend, divide the total distance between ends (B length) by 2. For example, B = 6, minimum bend radius = 3.

7. Secure for protection.



Install hose runs to avoid rubbing or abrasion. Use Boston Weatherhead Hose Clamps to support long runs of hose or to keep hose away from moving parts. It is important that the clamps not allow the hose to move. This movement will cause abrasion and premature hose failure. (See Hose Clamps page 83.)

8. Avoid improper hose movement.

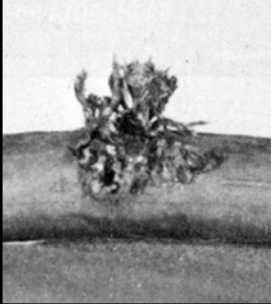
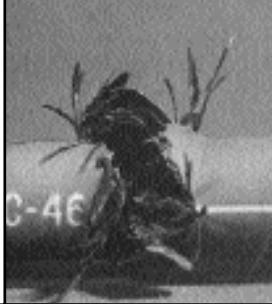

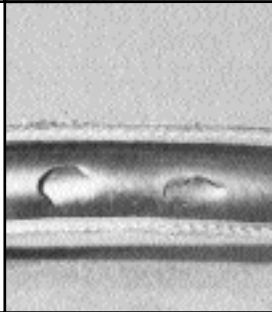
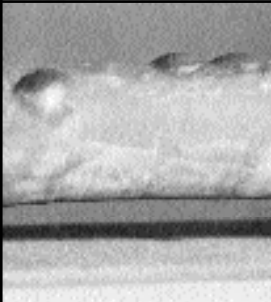


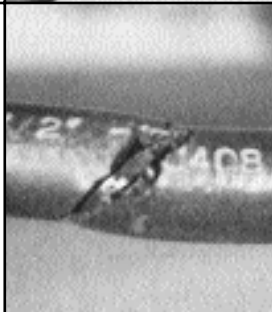
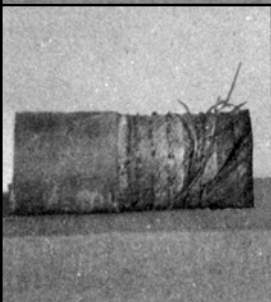



Make sure relative motion of the machine components produces bending rather than twisting of the hose. Hose should be routed so that the flex is in the same plane as the equipment movement.

Hose Failure Analysis

Application

⚠ WARNING – Selection of Hose: Selection of the proper hose for the application is essential to the proper operation and safe use of the hose and related equipment. Inadequate attention to selection of hose for application can result in serious bodily injury or property damage. In order to avoid serious bodily injury or property damage resulting from selection of the wrong hose, you should carefully review the information in this catalog. Refer to Selection of Hose and Hose Installation (page 3-11 and page 26) for additional safety information. Hose failures can be caused by conditions such as excessive pressures, fluid incompatibility, extreme temperatures, and many more. Boston Weatherhead has illustrated below some of the more common failures. If the conditions you are experiencing are not listed, please contact your Boston Weatherhead representative for further assistance.

	<p>1. Problem: Hose has burst. Rusted wire, torn and rotted fibers are present. This was caused by abrasion damage. Exposure to elements will accelerate the deterioration.</p> <p>Solution: Route the hose so it does not rub against other objects while under pressure. Suggest using clamps and spring guards to protect.</p>		<p>2. Problem: Hose has burst on outside bend of hose. This hose has been bent past minimum bend radius. It has also taken a set in a bent position due to a kink in the inner tube or reinforcement.</p> <p>Solution: Check minimum bend radius for hose. Refer to page 26 to determine minimum bend radius. Utilize bend tube elbows if possible.</p>
	<p>3. Problem: Excessive heat. Hose cover and/or inner tube is brittle and cracked and is not flexible at room temperature.</p> <p>Solution: Use hose with higher temperature rating or protect from heat with shields. Examine entire system for potential heat source. For example: undersized lines, excessively long lines, too many bends and/or fittings, reservoir low on oil.</p>		<p>4. Problem: Incompatible fluid. Portions of the inner tube are swollen and/or washed out. Cover may also be swollen.</p> <p>Solution: Make sure hose used is compatible with fluid being used. Refer to chemical compatibility chart.</p>
	<p>5. Problem: Hose cover blistered and pulling away from carcass. Gas has effused through the tube and become trapped under the cover.</p> <p>Solution: Use perforated, pinpricked or fiber cover hose.</p>		<p>6. Problem: End fitting blown off. Improper assembly procedures, incorrect hose end series, mixing competitor's components and Boston Weatherhead components.</p> <p>Solution: Refer to hose assembly procedures and Hose End and Tool Selector Chart in this catalog. NEVER intermix components. Refer to pages 1-2 for important safety information.</p>
	<p>7. Problem: Hose has burst cleanly with no random wire breakage and cover abrasion. This condition is caused by excessive pressure.</p> <p>Solution: Use hose with higher pressure rating. Check pressure relief for damage or improper setting.</p>		<p>8. Problem: Hose has burst. Hose is permanently twisted and kinked. Many broken wires in failure area.</p> <p>Solution: Hose twisting can reduce hose life 90%. Tighten ends properly. Reroute hose to eliminate twist. Route hose to flex in only one plane. Use hose layline for a guide.</p>
	<p>9. Problem: End fitting blown off. This condition has been caused by improper skiving. Any remaining cover on hose in the crimping area will prohibit proper end retention.</p> <p>Solution: Make sure hose is properly skived. Refer to page 25 for hose skiving instructions.</p>		<p>10. Problem: Hose end appears to have been pinched on one side.</p> <p>Solution: This is an early sign of collet wear. Replace collet. New Weatherhead® collets offer the feature of being rebuildable. See the tool section chart in the back of this catalog.</p>

SAE J1942

Hose Number	Application Code	Hose ID	MAWP (PSI)	Hose Ends	Fire Sleeve Required	Hose Number	Application Code	Hose ID	MAWP (PSI)	Hose Ends	Fire Sleeve Required
H009	H	1/4	400	009 'H'	--	H245*	F	5/8	500	'U'	A6920
H009	H	5/16	400	'E', 009 'H'	--	H245*	F	3/4	500	'U', 'S'	A6924
H009	H	3/8	400	'E', 009 'H'	--	H245*	F	1	500	'U', 'S'	A6928
H009	H	1/2	400	'E', 009 'H'	--	H245*	F	1-1/4	500	'U', 'S'	A6936
H017	H	1/4	1250	'U'	--	H280	H	1/4	5600	'W'	--
H017	H	3/8	1125	'U'	--	H280	H	3/8	4800	'W'	--
H017	H	1/2	1000	'U'	--	H280	H	1/2	4000	'W'	--
H017	H	3/4	750	'U'	--	H280	H	5/8	3630	'W'	--
H017	H	1	560	'U'	--	H280	H	3/4	3120	'W'	--
H017	H	1-1/4	375	'U'	--	H280	H	1	2350	'W'	--
H039	H	3/4	300	'U', 'S'	--	H290	H	1/4	5800	'W'	--
H039	H	1	250	'U', 'S'	--	H290	H	3/8	4800	'W'	--
H039	H	1-1/4	200	'U', 'S'	--	H290	H	1/2	4000	'W'	--
H039	H	1-1/2	150	430 'E', 430 'U'	--	H290	H	5/8	3630	'W'	--
H039	H	2	100	430 'E', 430 'U'	--	H290	H	3/4	3120	'W'	--
						H290	H	1	2350	'W'	--
H059	F	3/16	500	069 'E', 229 'P', 247 'N'	--						
H059	F	1/4	500	069 'E', 247 'N'	--	H425	H	1/4	5000	'U', 'S'	--
H059	F	5/16	500	069 'E', 229 'P', 247 'N'	--	H425	H	3/8	4000	'U', 'S', 425 'N'	--
H059	F	13/32	500	069 'E', 229 'P', 247 'N'	--	H425	H	1/2	3500	'U', 'S', 425 'N'	--
H059	F	1/2	500	069 'E', 229 'P', 247 'N'	--	H425	H	5/8	2750	'U'	--
H059	F	5/8	500	069 'E', 247 'N'	--	H425	H	3/4	2250	430 'E', 'U', 'S', 430 'U', 425 'N'	--
H059	F	7/8	500	069 'E', 247 'N'	--					430 'E', 'U', 'S', 430 'U', 425 'N'	--
H104	H	1/4	2750	'U', 104 'N', 'S'	--	H425	H	1	2000	430 'E', 'U', 'S', 430 'U', 425 'N'	--
H104	H	3/8	2250	'U', 104 'N', 'S'	--					430 'E', 'U', 'S', 430 'U', 425 'N'	--
H104	H	1/2	2000	'U', 104 'N', 'S'	--					430 'E', 'U', 'S', 430 'U', 425 'N'	--
H104	H	5/8	1500	'U'	--	H425	H	1-1/2	1250	430 'E', 430 'U'	--
H104	H	3/4	1250	'U', 104 'N', 'S'	--	H425	H	2	1125	430 'E', 430 'U', 425 'N'	--
H104	H	1	1000	'U', 104 'N', 'S'	--						
H104	H	1-1/4	625	'U', 'S'	--						
H104*	F	1/4	500	'U', 104 'N', 'S'	A6912	H425*	F	1/4	500	'U', 'S', 425 'N'	A6912
H104*	F	3/8	500	'U', 104 'N', 'S'	A6914	H425*	F	3/8	500	'U', 'S', 425 'N'	A6916
H104*	F	1/2	500	'U', 104 'N', 'S'	A6916	H425*	F	1/2	500	'U', 'S', 425 'N'	A6920
H104	F	5/8	500	'U'	--	H425*	F	5/8	500	'U'	A6920
H104	F	3/4	500	'U', 104 'N', 'S'	--	H425*	F	3/4	500	'U', 'S', 425 'N', 430 'E'	A6924
H104	F	1	500	'U', 104 'N', 'S'	--	H425*	F	1	500	'U', 'S', 425 'N', 430 'E'	A6928
H104	F	1-1/4	500	'U', 'S'	--	H425*	F	1-1/4	500	'U', 'S', 425 'N', 430 'E'	--
H145	H	1/4	3000	'U', 'M', 'S'	--	H430	H	1/2	4000	430 'E'	--
H145	H	3/8	3000	'U', 'M', 'S'	--	H430	H	3/4	4000	430 'E', 430 'U'	--
H145	H	1/2	3000	'U', 'M', 'S'	--	H430	H	1	4000	430 'E', 430 'U'	--
H145	H	5/8	3000	'U', 'M'	--	H430	H	1-1/4	3000	430 'E', 430 'U'	--
H145	H	3/4	3000	'U', 'S'	--	H430	H	1-1/2	2500	430 'E', 430 'U'	--
H145	H	1	3000	430 'U', 'S'	--	H430	H	2	2500	430 'E', 430 'U'	--
H190	H	1/4	3265	'W'	--	H439	H	1/2	4000	430 'E', 430 'U'	--
H190	H	3/8	2610	'W'	--	H439	H	3/4	4000	430 'E', 430 'U'	--
H190	H	1/2	2320	'W'	--	H439	H	1	4000	430 'E', 430 'U'	--
H190	H	5/8	1885	'W'	--	H439	H	1-1/4	3000	430 'E', 430 'U'	--
H190	H	3/4	1575	'W'	--	H439	H	1-1/2	2500	430 'E', 430 'U'	--
H190	H	1	1275	'W'	--	H439	H	2	2500	430 'E', 430 'U'	--
H245	H	1/4	5000	'U', 'S', 'M'	--	H470	H	3/4	5000	470 'E'	--
H245	H	3/8	4000	'U', 'S', 'M'	--	H470	H	1	5000	470 'E'	--
H245	H	1/2	3500	'U', 'S', 'M'	--	H470	H	1-1/4	5000	470 'E'	--
H245	H	5/8	2750	'U', 'M'	--	H569	H	3/16	3000	069 'E'	--
H245	H	3/4	2250	'U', 'S', 430 'U'	--	H569	H	5/16	2250	069 'E', 247 'N'	--
H245	H	1	2000	'U', 'S', 430 'U'	--	H569	H	13/32	2000	069 'E', 247 'N'	--
H245	H	1-1/4	1625	'U', 'S', 430 'U'	--	H569	H	1/2	1750	069 'E', 247 'N'	--
						H569	H	5/8	1500	069 'E', 247 'N'	--
						H569	H	7/8	800	069 'E'	--
H245*	F	1/4	500	'U', 'S'	A6912	H569	H	1-1/8	625	069 'E'	--
H245*	F	3/8	500	'U', 'S'	A6914						
H245*	F	1/2	500	'U', 'S'	A6916						

Note: Application codes:
H - Hydraulic service

MAWP - Maximum Allowable Working Pressure
F - Fuel and Lube service

*Fire sleeve required for fuel applications

ABS Steel Vessel Rules 2000 (4-6-2/5.7)

Intended Service: Fuel Oil, Hydraulic Fluid and Water Systems for Marine and Offshore Applications

Hose Number	Hose ID	MAWP (PSI)	Hose End Series	Fire Sleeve	Hose Number	Hose ID	MAWP (PSI)	Hose End Series	Fire Sleeve
H03912	3/4	300	'U', 'S', 039 'K'	A6924	H42504	1/4	5000	'U', 'S', 425 'N'	--
H03916	1	250	'U', 'S', 039 'K'	A6928	H42506	3/8	4000	'U', 'S', 425 'N'	--
H03920	1-1/4	200	'U', 'S', 039 'K'	A6932	H42508	1/2	3500	'U', 'S', 425 'N'	--
H03924	1-1/2	150	430 'U'	A6936	H42510	5/8	2750	'U'	--
H03932	2	100	430 'U'	A6948	H42512	3/4	2250	'U', 'S', 425 'N'	--
H05904	3/16	500	247 'N', 229 'P', 069 'E'	--	H42516	1	2000	'U', 'S', 425 'N'	--
H05905	1/4	500	247 'N', 069 'E'	--	H42520	1-1/4	1625	'U', 'S', 425 'N'	--
H05906	5/16	500	247 'N', 229 'P', 069 'E'	--	H42524	1-1/2	1250	430 'U', 425 'N'	--
H05908	13/32	500	247 'N', 229 'P', 069 'E'	--	H42532	2	1125	430 'U', 425 'N'	--
H05910	1/2	500	247 'N', 229 'P', 069 'E'	--	H43008	1/2	4000	430 'U'	--
H05912	5/8	500	247 'N', 069 'E'	--	H43012	3/4	4000	430 'U'	--
H05916	7/8	500	229 'P', 069 'E'	--	H43016	1	4000	430 'U'	--
H06904	3/16	3000	069 'E', 247 'N'	--	H43020	1-1/4	3000	430 'U'	--
H06905	1/4	500	069 'E', 247 'N'	--	H43024	1-1/2	2500	430 'U'	--
H06906	5/16	2250	069 'E', 247 'N'	--	H43032	2	2500	430 'U'	--
H06908	13/32	2000	069 'E', 247 'N'	--	H47012	3/4	5000	570 'S'	--
H06910	1/2	1750	069 'E', 247 'N'	--	H47016	1	5000	570 'S'	--
H06912	5/8	1500	069 'E', 247 'N'	--	H47020	1-1/4	5000	570 'S'	--
H06916	7/8	800	069 'E', 247 'N', 069 'D'	--	H47024	1-1/2	5000	570 'S'	--
H06920	1-1/8	625	069 'E'	--	H47032	2	5000	570 'S'	--
H06924	1-3/8	500	069 'E'	--	H56906	5/16	2250	069 'E'	--
H06932	1-13/16	350	069 'E'	--	H56908	13/32	2000	069 'E'	--
H10404	1/4	2750	'U', 'S', 104 'N'	--	H56910	1/2	1750	069 'E'	--
H10406	3/8	2250	'U', 'S', 104 'N'	--	H56912	5/8	1500	069 'E'	--
H10408	1/2	2000	'U', 'S', 104 'N'	--	H56916	7/8	800	069 'E'	--
H10410	5/8	1500	'U'	--	H56920	1-1/8	625	069 'E'	--
H10412	3/4	1250	'U', 'S', 104 'N'	--					
H10416	1	1000	'U', 'S', 104 'N'	--					
H10420	1-1/4	625	'U', 'S'	--					
H24504	1/4	5000	'U', 'S'	--					
H24506	3/8	4000	'U', 'S'	--					
H24508	1/2	3500	'U', 'S'	--					
H24510	5/8	2750	'U'	--					
H24512	3/4	2250	'U', 'S'	--					
H24516	1	2000	'U', 'S'	--					
H24520	1-1/4	1625	'U', 'S'	--					

MAWP - Maximum Allowable Working Pressure

NOTE: Restrictions on taper thread joints in hydraulic systems for steering gear, controllable pitch propellers, or other systems associated with propulsion or propulsion control are applicable. See SVR 2000 4-6-2/5.5.5.

Split flanges, such as 570 'S' Series, are not permitted in steering gear systems.

Each hose may only utilize end fitting series listed above.

These products/models are covered under ABS Product Design Assessment Certificate #00-HS191306-PDA dated 15/Dec/2000. It will remain valid for five years from date of issue or until rules or specifications used in the assessment are revised (whichever occurs first).

H057 Fuel Line Hose SAE 30R7

Typical Application: Low pressure/high temperature fuel for passenger cars and light trucks; also small engine applications.

Inner Tube: Nitrile

Reinforcement: 1 Fiber Braid

Cover: Hypalon

Temp. Range: -40°F to +257°F (-40°C to +125°C)

NOTE: Not intended for fuel injection applications.



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Inch. Merc. Vac. ("Hg)	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H05703-25R H05703-100R	3/16	13/32	50	250	2	24	6	25' 100'	Field Attachable 057 'B' Series Page 172
H05704-25R H05704-100R	1/4	1/2	50	250	2-1/2	24	9	25' 100'	
H05705-25R H05705-100R	5/16	9/16	50	250	2-3/4	24	11	25' 100'	
H05706-25R H05706-50R	3/8	5/8	50	250	3	24	12	25' 50'	
H05707-25R H05707-50R	7/16	11/16	35	140	3-1/4	24	16	25' 50'	

H8679 Green Garden Hose

Typical Application: Low pressure general purpose water transfer hose.

Tube: Synthetic Rubber

Reinforcement: 2 Fiber Spirals

Cover: Synthetic Rubber

Color: Green

Temperature Range: -30°F to +160°F (-34°C to +71°C)

Working Pressure: 100 PSI 3:1 safety factor



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H867910C-50C	5/8	29/32	100	400	19	50-50's coupled	Machined brass hex head GHT
H867910-600R	5/8	29/32	100	400	19	600'	

H077 Fuel Injection Hose SAE 30R9

Typical Application: Designed specifically for electronic fuel injection systems

Inner Tube: Fluoroelastomer Veneer

Reinforcement: Multi-Fiber Braids

Cover: ECO (Epichlorohydrin Copolymer)

Temp. Range: -30°F to +275°F (-34°C to +135°C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Inch. Merc. Vac. ("Hg)	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H07704-10	1/4	1/2	125	900	3	24	11	10'	E.F.I. Clamps Page 83
H07705-10	5/16	9/16	125	900	3-3/4	24	13	10'	
H07706-10	3/8	5/8	125	900	4-1/2	24	16	10'	

NOTE: Hose Protection Products on pages 66-76.

H1719 *Contrac-Force*®

Typical Application: Low pressure general purpose water transfer hose that is abrasion, age and ozone resistant.

Tube: Polyvinyl Chloride (PVC)

Reinforcement: 2 Fiber Spirals

Cover: Polyvinyl Chloride (PVC)

Color: Black

Temperature Range: -15°F to +150°F (-9°C to +66°C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Wt. Per 100 Ft.	MTO Min. Order Qty.	Avail. Lengths	Hose End
H171912-50C	3/4	1-3/64	150	600	19	—	25-50's	Machined brass hex head GHT
H171912-500♦						5,000	500	

Stated working pressures are tested at 70°F. Working pressure decreases as temperature increases. See chart on page 15 showing the relationship between working pressure and temperature for reinforced PVC hose.

H1987 *Contractors Water*®

Typical Application: Low pressure general purpose water transfer hose that is abrasion, age, heat and water resistant.

Tube: EPDM

Reinforcement: 2 Fiber Spirals

Cover: EPDM/Perforated

Color: Black

Temperature Range: -30°F to +160°F (-34°C to +71°C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H198710	5/8	15/16	150	600	23	50'	Machined brass hex head GHT
H198710-50C	5/8	15/16	150	600	23	50-50's coupled	
H198712	3/4	1-3/32	150	600	30	50'	
H198712-50C	3/4	1-3/32	150	600	30	50-50's coupled	

H338 Air Brake Hose SAE J1402 A DOT All

Typical Application: Air brake hose lines

Inner Tube: Synthetic EPDM

Reinforcement: Multi-Fiber Braids

Cover: Synthetic EPDM

Temp. Range: -40°F to +200°F (-40°C to +93°C)

Color: Black



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H33806	3/8	3/4	225	900	3-1/2	24	50'	C-O-C 338 'P' Pages 132-134
H33806-250R							250'	
H33808	1/2	7/8	225	900	4	29	50'	Field Attachable 338 'B' Series Pages 176-179
H33808-250R							250'	

NOTE: Hose Protection Products on pages 66-76.

H229 Truck Hose SAE J1402 TYPE AII DOT AII

Typical Application: General purpose truck hose. High temperature hydraulic, air brake and diesel fuel applications.

Inner Tube: Nitrile

Reinforcement: 2 Fiber Braids

Cover: Fiber Braids

Temp. Range: Air Brake: -40° to +200°F (-40° to +93°C)

Hot Oil: -40° to +302°F (-40° to +150°C)

*16 size not SAE or DOT approved for air brake applications.



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H22904 H22904-250R	3/16	1/2	225	2,000	1-1/2	7	50' 250'	C-O-C 069 'E' Series Pages 92-95 C-O-C 229 'P' Series (sizes -4 to -12) Page 131 Field Attachable 069 'D' Series Pages 180-181 Field Attachable 247 'N' Series Pages 190-194
H22906 H22906-250R	5/16	3/4	225	2,000	2	11	50' 250'	
H22908 H22908-250R	13/32	29/32	225	2,000	2-5/16	14	50' 250'	
H22910 H22910-250R	1/2	1-1/16	225	1,800	2-3/4	21	50' 250'	
H22912 H22912-250R	5/8	1-1/4	225	1,800	3-1/4	27	50' 250'	
H22916* H22916-250R	7/8	1-1/2	225	1,000	4	31	50' 250'	

H239 Truck Hose SAE J1402 TYPE AII DOT AII

Typical Application: High temperature medium pressure truck hose for use in transmission oil cooler lines, fuel lines, diesel fuel and air brake lines. Resistant to air, diesel fuel and petroleum base fluids.

Inner Tube: CPE

Reinforcement: 2 Fiber Braids

Cover: Black Fiber Braid

Temp. Range: Hot Oil: -40°F to +302°F (-40°C to +150°C) sizes -4

through -12. Hot Oil: -40°F to +320°F (-40°C to +160°C) sizes -16

through -20. Air Brake: -40°F to +200°F (-40°C to +93°C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H23904 H23904-250R	3/16	1/2	225	2,000	1-1/2	7	50' 250'	C-O-C 069 'E' Series Pages 92-95 C-O-C 229 'P' Series (size -4 thru -10) Page 131 Field Attachable 247 'N' Series (size -16 only) Pages 190- 194
H23908 H23908-250R	13/32	3/4	225	2,000	2-5/16	14	50' 250'	
H23910 H23910-250R	1/2	29/32	225	1,800	2-3/4	21	50' 250'	
H23912 H23912-250R	5/8	1-1/16	225	1,800	3-1/4	27	50' 250'	
H23916 H23916-250R	7/8	1-1/4	225	1,000	4	31	50' 250'	
H23920	1-1/8	1-1/2	225	1,000	5-1/2	41	50'	

NOTE: Hose Protection Products on pages 66-76.

H429 Truck Hose SAE J1019

Typical Application: High temperature truck hose for use in transmission oil cooler lines, fuel lines and diesel fuel lines. Oil and temperature resistant tube.

Inner Tube: CPE

Reinforcement: 1 Wire Braid

Cover: Fiber Braid

Temp. Range: -55°F to +302°F (-48°C to +150°C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H42908 H42908-250R	13/32	11/16	250	1,000	1-3/4	24	50' 250'	C-O-C 757 'E' Series Pages 116-123 C-O-C 057 'P' Series Pages 130
H42910 H42910-250R	1/2	3/4	250	1,000	2-1/4	37	50' 250'	

H285 Clearforce® Thermoplastic Hose (Air/Water)

NSF International

Typical Application: Suitable for agricultural and food applications.

NSF 51 and FDA certified.

Inner Tube: Clear PVC

Reinforcement: 2 Fiber Spirals

Cover: Clear PVC

Cover Color: Clear

Temp. Range: +25°F to +150°F (-4°C to +66°C)



Catalog Number	Hose I.D.	Hose O.D.	Work. Press. (PSI) 70°F	Work. Press. (PSI) 150°F	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H28504 H28504-300R	1/4	29/64	250	50	1,000	1	7	50' 300'	C-O-C 'E' Series Pages 85-91 C-O-C 265 'P' Series (sizes -4 to -12) Page 132
H28506 H28506-300R	3/8	19/32	225	45	900	1-1/4	12	50' 300'	
H28508 H28508-300R	1/2	3/4	200	40	800	2	15	50' 300'	
H28512 H28512-300R	3/4	1-1/32	150	30	600	2-1/2	23	50' 300'	
H28516 H28516-200R	1	1-5/16	125	25	500	3-1/2	34	50' 200'	

Stated working pressures are tested at 70°F. Working pressure decreases as temperature increases. See chart on page 15 showing the relationship between working pressure and temperature for reinforced PVC hose.

NOTE: Hose Protection Products on pages 66-76.

**H105 Bosflex A/W® General Purpose Hose
(Air/Water)**

Typical Application: Air and water applications where petroleum contact is limited; some agricultural solutions.

Inner Tube: EPDM

Reinforcement: Multi-Fiber Spiral

Cover: EPDM

Cover Color: Red

Temp. Range:

Air: -40°F to +160°F (-40°C to +71°C)

Water: 32°F to +180°F (0°C to +82°C)

*When used with 105 'B' and 057 'B' Series only.

**When used with 'U' Series only.



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H10504 H10504-600R	1/4	5/8	**300 *175	**1,200 *700	3	13	50' 600'	C-O-C 'U' Series Pages 138-152 Field Attachable 057 'B' Series (except sizes -8 & -16) Page 136 105 'B' Series (sizes -4 to -12) Page 140
H10506 H10506-600R	3/8	3/4	**300 *175	**1,200 *700	3-1/2	18	50' 600'	
H10508 H10508-600R	1/2	7/8	**300 *150	**1,200 *600	4-1/2	23	50' 600'	
H10512 H10512-600R	3/4	1-3/16	**225 *150	**900 *600	5-3/4	37	50' 600'	
H10516 H10516-300R	1	1-7/16	200	800	7-1/4	60	50' 300'	

H9603 Hot Tar Pumping

Typical Application: Suitable to convey hot tar and asphalt.

Tube: Nitrile (RMA Class A)

Reinforcement: 2 Steel Braids

Cover: CPE/Perforated

Color: Black

Temperature Range: +350°F (+177°C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H960316 H960316-100	1	1-9/16	250	1,000	90	50' 100'	Wolf Series Page 130

Handles intermittent temperature of hot tar up to 400°F.

NOTE: Hose Protection Products on pages 66-76.

H275 Polyforce II® Thermoplastic Hose (Air/Water)

Typical Application: Suitable for transferring air and water.

Inner Tube: PVC

Reinforcement: 2 Fiber Spirals

Cover: PVC

Cover Color: Red

NOTE: Available in other colors on a made to order basis.

Temp. Range: -10°F to +150°F (-23°C to +65°C)



Catalog Number	Hose I.D.	Hose O.D.	Work. Press. (PSI) 70°F	Work. Press. (PSI) 150°F	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H27504 H27504-600R	1/4	1/2	250	50	1,000	1	7	50' 600'	C-O-C 'E' Series (sizes -06 thru -16) Pages 85-91 C-O-C 265 'P' Series (sizes -04 thru -12) Page 132
H27506 H27506-600R	3/8	5/8	250	50	1,000	1-1/2	12	50' 600'	
H27508 H27508-500R	1/2	3/4	250	50	1,000	2-1/8	15	50' 500'	
H27512 H27512-500R	3/4	1-1/32	250	50	1,000	2-1/2	23	50' 500'	
H27516 H27516-200R	1	1-5/16	200	40	800	3-1/2	34	50' 200'	

Stated working pressures are tested at 70°F. Working pressure decreases as temperature increases. See chart on page 15 showing the relationship between working pressure and temperature for reinforced PVC hose.

H201 Easy Couple® General Purpose Hose

MSHA Accepted (Black only)

Typical Application: General purpose low pressure air, diesel fuel, oil and water lines.

Inner Tube: Nitrile

Reinforcement: 1 Fiber Braid

Cover: Neoprene (Black), Vinyl Nitrile (Colored Hoses)

Temp. Range: -40°F to +212°F (-40°C to +100°C)

Optional Cover Colors: BU=Blue, GY=Gray, RD=Red,

YW=Yellow, GN=Green **Example:** H20108YW-250R

NOTE: Available in other colors on a made to order basis.



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H20104 H20104-250R H20104-500R	1/4	1/2	250	1,000	3	9	50' 250' 500'	Field Attachable 100 'B' Series Pages 173-139
H20106 H20106-250R H20106-500R	3/8	5/8	250	1,000	3	13	50' 250' 500'	
H20108 H20108-250R H20108-500R	1/2	3/4	250	1,000	5	15	50' 250' 500'	
H20110-250R	5/8	29/32	250	1,000	6	23	250'	
H20112-250R	3/4	1-1/32	250	1,000	7	26	250'	

NOTE: Hose Protection Products on pages 66-76.

H9949 Shock-Safe®

Typical Application: General purpose air and water hose where hoses must be non-conductive.

Tube: Nitrile (non-conductive)

Reinforcement: 2 Fiber Braids

Cover: Vinyl Nitrile (non-conductive)

Color: Red

Temperature Range: -40°F to +180°F (-40°C to +82°C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H994904-500R	1/4	19/32	275	1,100	15	500'	C-O-C 'U' Series Pages 138-152
H994906-500R	3/8	23/32	275	1,100	19	500'	
H994908-500R	1/2	7/8	275	1,100	27	500'	
H994912-500R	3/4	1-5/32	275	1,100	41	500'	
H994916-300R	1	1-7/16	275	1,100	64	300'	

Factory tested to exceed minimum electrical resistivity of one megaohm per inch at 1,000 volts D.C.

H115 Performer II® Oil Resistant General Purpose Hose (Air/Water)

Typical Application: Medium oil resistant, water. Ideal for pneumatic tool operation.

Inner Tube: Nitrile

Reinforcement: Multi-Fiber Braids

Cover: Vinyl Nitrile

Cover Color: Red

Temp. Range: -40°F to +160°F (-40°C to +71°C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H11504 H11504-550R	1/4	19/32	300	1,200	3	15	50' 550'	C-O-C 'U' Series (except size -05 & -24) Pages 138-152
H11505 H11505-550R	5/16	21/32	300	1,200	3-1/2	17	50' 550'	
H11506 H11506-550R	3/8	23/32	300	1,200	3-1/2	19	50' 550'	C-O-C 430 'U' Series (Size -24) Pages 153-163
H11508 H11508-550R	1/2	7/8	300	1,200	4-1/2	27	50' 550'	
H11512 H11512-550R	3/4	1-5/32	300	1,200	5-3/4	41	50' 550'	Field Attachable 057 'B' Series (except sizes -8, -16, -20 & -24) Page 172
H11516 H11516-300R	1	1-7/16	300	1,200	7-1/4	62	50' 300'	
H11520 H11520-300R	1-1/4	1-3/4	225	900	8-3/4	101	50' 300'	Field Attachable 105 'B' Series (Sizes -4 to -12) Page 176
H11524 H11524-300R	1-1/2	2	225	900	10	106	50' 300'	

NOTE: Hose Protection Products on pages 66-76.

Low Pressure

Hose

WARNING: Natural gas transfer applications: • Hose should only be used in open, well ventilated areas.
• Maximum natural gas working pressure should not exceed 1 PSI (UL Specification). • Not for use in vehicles using compressed natural gas.

H900 Black Line® Liquid Propane Gas (LPG)

Typical Application: Transfer and delivery of propane and butane.

Tube: Nitrile

Reinforcement: Fiber Braid (1" has 2 Stainless Steel Static Wires)

Cover: Vinyl Nitrile, Perforated

Temperature Range: -40°F to +140°F (Hose is capable of this rating. LP-Gas should never be elevated above 100°F)

Working Pressure: LP-Gas 350 PSIG Max WP PSIG Max WP-5:
1 Safety Factor on 350 PSIG

Standards: UL 21 Approved LP-Gas/Natural Gas



Catalog Number	Hose I.D.	Hose O.D.	Braid	Working Press. (PSIG)	Min. Burst Press. (PSI)	Wt. Per 100 Ft.	Avail. Lengths*	Hose End
H90004-500R	1/4	37/64	1	350	1,400	12	500'	C-O-C 'U' Series Pages 138-152
H90006-500R	3/8	23/32	1	350	1,400	17	500'	
H90008-500R	1/2	29/32	1	350	1,400	24	500'	
H90012-500R	3/4	1-15/64	2	350	1,400	41	500'	
H90016-150	1	1-1/2	2	350	1,400	52	150'	
H90016-300R							300'	

*All lengths on reels are in 50' increments.

H039 Suction Hose SAE 100R4

Marine Application J1942/1 - Hydraulic only.

ABS¹, MSHA Accepted

Typical Application: Hydraulic Suction Hose

Inner Tube: Nitrile Blend

Reinforcement: 3/4" thru 1-1/2" – 1 helical cable wire and 1 fiber braid. 2" – 1 helical, single-stranded wire and 1 fiber braid.

Cover: Neoprene

Temp. Range: -40°F to +212°F (-40°C to +100°C)

*When used with 039 'K' Series Ends and 6203 clamps.



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Inch. Merc. Vac. ("Hg)	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H03912	3/4	1-3/8	300	1,200	5	25	44	50'	C-O-C 430 'E' Series Ends (sizes -24 & -32) Pages 100-110
H03912-100			*100	*400				100'	
H03912-150								150'	
H03916	1	1-5/8	250	1,000	6	25	66	50'	C-O-C 'S' Series (sizes -12 thru -20) Page 135 C-O-C 'U' Series (sizes -12 thru -20) Pages 138-152
H03916-100			*70	*280				100'	
H03916-150								150'	
H03920	1-1/4	1-25/32	200	800	8	25	79	50'	C-O-C 430 'U' Series (sizes -24 & -32) Pages 153-163
H03920-100			*50	*200				100'	
H03920-150								150'	
H03924	1-1/2	2-5/64	150	600	10	25	96	50'	Field Attachable 'K' Series (sizes -12 to -20) Page 182 039 'K' Series (sizes -12 to -20) Page 183
H03924-100								100'	
H03924-150								150'	
H03932	2	2-1/2	100	400	12	25	130	50'	
H03932-100								100'	
H03932-150								150'	

NOTE: Hose Protection Products on pages 66-76.

¹See pages 28-29 for applicable service pressures, required fire sleeves and qualified hose ends.

H265 Ultraforce® Thermoplastic Hose (Air/Water)

Typical Application: Suitable for air, water and robotics applications.

Inner Tube: Modified PVC

Reinforcement: 2 Fiber Spirals

Cover: Blue rubber modified thermoplastic

Cover Color: Blue

NOTE: Available in other colors on a made to order basis.

Temp. Range: -20°F to +180°F (-29°C to +82°C)



Catalog Number	Hose I.D.	Hose O.D.	Work. Press. (PSI) 70°F	Work. Press. (PSI) 150°F	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H26504 H26504-600R	1/4	1/2	350	70	1,400	3/4	9	50' 600'	C-O-C 'E' Series (sizes -06 thru -16) Pages 85-91 C-O-C 265 'P' Series (sizes -04 thru -12) Page 132
H26506 H26506-600R	3/8	41/64	350	70	1,400	1-1/4	12	50' 600'	
H26508 H26508-500R	1/2	25/32	300	60	1,200	2	17	50' 500'	
H26512 H26512-500R	3/4	1-1/16	250	50	1,000	2-1/2	26	50' 500'	
H26516 H26516-200R	1	1-5/16	200	40	800	3-1/2	35	50' 200'	

Stated working pressures are tested at 70°F. Working pressure decreases as temperature increases. See chart on page 15 showing the relationship between working pressure and temperature for reinforced PVC hose.

H1776/H1777 Perfection 300®

Typical Application: Pneumatic tools and conveying of air and water. High oil resistance.

Tube: Nitrile (RMA Class A)

Reinforcement: 1 or 2 Fiber Braids

Cover: Vinyl Nitrile

Color: Red

Temperature Range: -40°F to +180°F (-40°C to +82°C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H177704-500R	1/4	1/2	325	1,300	11	500'	C-O-C 'U' Series Page 138-152 C-O-C 430 'U' Series (size 24) Page 153-163
H177604-500R	1/4	19/32	325	1,300	15	500'	
H177705-500R	5/16	5/8	325	1,300	17	500'	
H177706-500R	3/8	21/32	325	1,300	17	500'	
H177606-500R	3/8	23/32	325	1,300	20	500'	
H177708-500R	1/2	13/16	325	1,300	24	500'	
H177608-500R	1/2	7/8	325	1,300	31	500'	
H177610-500R	5/8	1	325	1,300	36	500'	
H177612-500R	3/4	1-5/32	325	1,300	44	500'	
H177616-300R	1	1-7/16	325	1,300	46	300'	
H177620-300R	1-1/4	1-3/4	325	1,300	65	300'	
H177624-300R	1-1/2	2	325	1,300	82	300'	

NOTE: Hose Protection Products on pages 66-76.

H100 General Purpose Hose (Fabric Cover)

Typical Application: General purpose low pressure air, diesel fuel, oil, and water lines.

Inner Tube: Nitrile

Reinforcement: 1 Fiber Braid

Cover: Fiber Braid

Temp. Range: -40°F to +212°F (-40°C to +100°C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H10004 H10004-250R	1/4	1/2	350	1,400	3	10	50' 250'	Field Attachable 100 'B' Series Pages 173-175
H10005 H10005-250R	5/16	9/16	350	1,400	3	10	50' 250'	
H10006 H10006-250R	3/8	5/8	350	1,400	3	11	50' 250'	
H10008 H10008-250R	1/2	3/4	350	1,400	5	12	50' 250'	
H10010 H10010-250R	5/8	29/32	350	1,400	6	18	50' 250'	
H10012 H10012-250R	3/4	1-1/32	350	1,400	7	21	50' 250'	

H101 General Purpose Hose (Rubber Cover)

MSHA Accepted

Typical Application: General purpose low pressure air, oil, water and diesel fuel lines.

Inner Tube: Nitrile

Reinforcement: 1 Fiber Braid

Cover: Neoprene

Temp. Range: -40°F to +212°F (-40°C to +100°C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H10104 H10104-250R	1/4	1/2	350	1,400	3	9	50' 250'	Field Attachable 100 'B' Series Pages 173-175
H10105 H10105-250R	5/16	9/16	350	1,400	3	11	50' 250'	
H10106 H10106-250R	3/8	5/8	350	1,400	3	13	50' 250'	
H10108 H10108-250R	1/2	3/4	350	1,400	5	15	50' 250'	
H10110 H10110-250R	5/8	29/32	350	1,400	6	23	50' 250'	
H10112 H10112-250R	3/4	1-1/32	350	1,400	7	26	50' 250'	

NOTE: Hose Protection Products on pages 66-76.

H366 LPG Hose
UL File Number MH 6776
ULMH 10198

Typical Application: Most commonly used for medium pressure LP gas service. UL listed for LP gas applications
Inner Tube: Nitrile
Reinforcement: 1 Fiber Braid – 1 Stainless Steel Braid
Cover: Fiber Braid
Temp. Range: -40°F to +300°F (-40°C to +149°C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H36606	5/16	43/64	350	1,750	4	18	50'	C-O-C 069 'E' Series Pages 92-95 Field Attachable 069 'D' Series Pages 180-181 247 'N' Series Pages 190-194
H36608	13/32	49/64	350	1,750	4-5/8	21	50'	

H6002 Concord Air®

Typical Application: On air operated construction equipment (jack-hammer, etc.) drills, boring and mining equipment. Can be used to transfer water.
Tube: Nitrile
Reinforcement: Fiber, 2 Braid or 2 Plies
Cover: Neoprene 1/2", 3/4" & 1" Perforated
 Vinyl Nitrile 1-1/4", 1-1/2" & 2" Perforated
Color: Red
Temperature Range: -40°F to +200°F (-40°C to +93°C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H600208 H600208-100	1/2	29/32	400	1,600	31	50' 100'	C-O-C 'U' Series (sizes -8 thru -20) Page 138-152 C-O-C 430 'U' Series (sizes -24 & -32) Page 153-163
H600212 H600212-100	3/4	1-3/16	400	1,600	46	50' 100'	
H600216 H600216-100	1	1-1/2	400	1,600	67	50' 100'	
H600220 H600220-100	1-1/4	1-13/16	400	1,600	86	50' 100'	
H600224 H600224-100	1-1/2	2-1/16	400	1,600	99	50' 100'	
H600232 H600232-100	2	2-5/8	300	1,600	127	50' 100'	

NOTE: Hose Protection Products on pages 66-76.

H1571 Mineforce®

Typical Application: Transfer air and water. High pressure air tools and water washdown.

Tube: Modified PVC

Reinforcement: 4 Fiber Spirals

Cover: PVC/Nitrile Blend Wrapped Impression Finish

Color: Yellow

Temperature Range: -20°F to +150°F (-29°C to +66°C)

Do not use internal expanded couplings.



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H157112	3/4	1-3/16	400	1,600	40	50'	C-O-C 'U' Series Page 138-152
H157112-100						100'	

Stated working pressures are tested at 68°F. Working pressure decreases as temperature increases. See chart on page 12 showing the relationship between working pressure and temperature for reinforced PVC hose.

*95% One Piece Reel **One Piece Coil

H009 General Purpose Hose SAE 100R6

Marine Application, SAE J1942/1 - Hydraulic only¹

MSHA Accepted

Typical Application: General purpose air, oil and water lines.

Low pressure hydraulic service.

Inner Tube: Nitrile

Reinforcement: 1 Fiber Braid

Cover: Neoprene

Temp. Range: -40°F to +212°F (-40°C to +100°C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H00904-25R	1/4	1/2	400	1,600	2-1/2	10	25'	C-O-C 'E' Series (sizes -5 to -8) Pages 85-91 Field Attachable 009 'B' Series Pages 171
H00904-50R							50'	
H00904-250R							250'	
H00905-25R	5/16	9/16	400	1,600	3	12	25'	
H00905-50R							50'	
H00905-250R							250'	
H00906-25R	3/8	5/8	400	1,600	3	14	25'	
H00906-50R							50'	
H00906-250R							250'	
H00908	1/2	25/32	400	1,600	4	20	50'	
H00908-250R							250'	

NOTE: Hose Protection Products on pages 66-76.

¹See pages 28 for applicable service pressures, required fire sleeves and qualified hose ends.

H757 Air Conditioning Hose SAE J2064 Type C Class 1

Typical Applications: A refrigerant hose recommended for R134a and R12 applications. Ideal for heavy duty truck use as well as industrial and automotive applications.

Inner Tube: Rubber/Nylon/Rubber

Reinforcement: 1 Fiber Braid

Cover: Butyl (perforated)

Temperature Range: -22°F to +248°F (-30°C to +120°C) for R12; -22°F to +257°F (-30°C to +125°C) for R134a



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Inch. Merc. Vac. ("Hg)	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H75706 H75706-100 H75706-250	5/16	9/16	400	2,000	2	25.4	10	50' 100' 250'	C-O-C 757 'E' Series Black Zinc Pages 116-123
H75708 H75708-100 H75708-250	13/32	11/16	400	2,000	2-1/2	25.4	12	50' 100' 250'	
H75710 H75710-100 H75710-250	1/2	3/4	350	1,750	3	25.4	13	50' 100' 250'	
H75712 H75712-100 H75712-250	5/8	15/16	350	1,750	4	25.4	23	50' 100' 250'	

H059 Marine Fuel-Oil-Lube Hose SAE J1942/1, NMMA, 33CFR183, ABS

Marine Application SAE J1942/1 Fuel and Lube Service, ABS¹

Typical Applications: Marine fuel, oil and lube hose is specially designed for gas and diesel marine engines. Its blue cover makes it easily identified in marine environments.

Inner Tube: Special Blended Nitrile

Reinforcement: 1 Fiber Braid - 1 Steel Braid - 1 Nomex® Braid

Cover: CPE

Cover Color: Blue

Temperature Range: -4°F to +212°F (-20°C to +100°C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H05904 H05904-250R	3/16	33/64	500	2,000	3/4	16	50' 250'	C-O-C 069 'E' Series Pages 92-95 C-O-C 229 'P' Series (For sizes -04, -06, -08 & -10 size) Page 131 Field Attachable 247 'N' Series Pages 190-194
H05905 H05905-250R	1/4	37/64	500	2,000	1	20	50' 250'	
H05906 H05906-250R	5/16	43/64	500	2,000	1-1/4	26	50' 250'	
H05908 H05908-250R	13/32	49/64	500	2,000	1-3/4	29	50' 250'	
H05910 H05910-250R	1/2	59/64	500	2,000	2-1/4	40	50' 250'	
H05912 H05912-250R	5/8	1-5/64	500	2,000	2-3/4	46	50' 250'	
H05916 H05916-250R	7/8	1-15/64	500	2,000	3-1/2	48	50' 250'	

NOTE: Hose Protection Products on pages 66-76.

¹See pages 28-29 for applicable service pressures, required fire sleeves and qualified hose ends.

H1941/H1942 Nyal[®]

Typical Application: Nylon tube is very compatible with many different materials: paints, chemicals, fertilizer, pesticides, fuels, etc. Will transfer air and water as well. See chemical resistance chart.

Tube: Nylon

Reinforcement: 1 or 2 Fiber Braids

Cover: Neoprene (BK), Vinyl Nitrile (RD). Red—RMA Class B Oil Resistance

Color: Black (BK), Red (RD)

Temperature Range: -30°F to +160°F (-34°C to +71°C)



Catalog Number	Hose I.D.	Hose O.D.	Braid	Working Press. (PSI)	Min. Burst Press. (PSI)	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H194104-500R	1/4	1/2	1	500	2,000	10	500'(RD, BK)	C-O-C 'U' Series Pages 138-152
H194105-500R	5/16	9/16	1	500	2,000	13	500'(BK)	
H194106-500R	3/8	11/16	1	500	2,000	15	500'(RD, BK)	
H194108-500R	1/2	25/32	1	500	2,000	19	500'(RD)	
H194208-500R	1/2	7/8	2	750	3,000	26	500'(RD, BK)	
H194212-500R	3/4	1-3/16	2	750	3,000	40	500'(RD)	
H194216-300R	1	1-1/2	2	500	2,000	56	300'(RD)	

H9622 Contractors Air[®]

Typical Application: On air operated construction equipment (jackhammer, etc.) drills, boring and mining equipment.

Tube: Nitrile (RMA Class A)

Reinforcement: 1 or 2 Steel Braids

Cover: Neoprene/Perforated

Color: Yellow

Temperature Range: -40°F to +200°F (-40°C to +93°C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H962208	1/2	15/16	1,000	4,000	34	50'	C-O-C 430 'U' Series Pages 153-163
H962208-100						100'	
H962216	1	1-1/2	850	3,400	61	50'	
H962216-100						100'	
H962220	1-1/4	1-23/32	500	2,000	81	50'	
H962220-100						100'	
H962224	1-1/2	2-1/8	500	2,000	150	50'	
H962224-100						100'	
H962232	2	2-21/32	500	2,000	204	50'	
H962232-100						100'	

NOTE: Hose Protection Products on pages 66-76.

H9610 Washdown 1000®

Typical Application: Washdown of food processing facilities and equipment. Transfer of hot detergent type solutions.

Tube: Nitrile

Reinforcement: 1 Steel Braid

Cover: Vinyl Nitrile

Color: Yellow (YW)

Temperature Range: -40°F to +180°F (-40°C to +82°C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H961006-350R	3/8	11/16	1,000	4,000	25	350'(YW)	C-O-C 'M' Series Pages 124-129 C-O-C 'U' Series Page 138-152 C-O-C 430 'U' Series Page 153-163
H961008-350R	1/2	27/32	1,000	4,000	32	350'(YW)	
H961012-350R	3/4	1-5/32	1,000	4,000	46	350'(YW)	

Reels will vary from 300 to 400 feet with maximum of 3 pieces per reel, no piece less than 50 feet.

H017 Hydraulic Hose SAE 100R3

Marine Application J1942/1/1 - Hydraulic only¹

MSHA Accepted

Typical Application: Low pressure fuel & oil lines. Hydraulic return lines.

Inner Tube: Nitrile

Reinforcement: 2 Fiber Braids

Cover: Neoprene

Temp. Range: -40°F to +212°F (-40°C to +100°C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H01704 H01704-250R	1/4	9/16	1,250	5,000	3	13	50' 250'	C-O-C 'U' Series Pages 138-152
H01706 H01706-250R	3/8	3/4	1,125	4,500	4	22	50' 250'	
H01708 H01708-250R	1/2	15/16	1,000	4,000	5	28	50' 250'	
H01712 H01712-250R	3/4	1-1/4	750	3,000	6	43	50' 250'	
H01716 H01716-250R	1	1-1/2	565	2,250	8	64	50' 250'	
H01720 H01720-100	1-1/4	1-3/4	375	1,500	10	80	50' 100'	

NOTE: Hose Protection Products on pages 66-76.

¹See pages 28 for applicable service pressures, required fire sleeves and qualified hose ends.

Medium Pressure

Hose

H6009 Bulldog Gold®

Typical Application: On air operated construction equipment (jackhammer, etc.) drills, boring and mining equipment; abrasion resistant cover.

Tube: Nitrile (RMA Class A)

Reinforcement: 1 or 2 Steel Braids

Cover: Carboxylated Nitrile/Perforated

Temperature Range: -40°F to +250°F (-40°C to +121°C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H600920 H600920-100	1-1/4	1-13/16	800	3,200	114	50' 100'	C-O-C 430 'U' Series Page 151-161
H600924 H600924-100	1-1/2	2-1/8	600	3,200	146	50' 100'	
H600932 H600932-100	2	2-21/32	600	3,200	210	50' 100'	

H166 Truck Hose SAE J1402 TYPE AII DOT AII

Typical Application: General purpose truck hose. For use in air brake, fuel, diesel fuel and high temperatures petroleum oil applications.

Inner Tube: Nitrile

Reinforcement: 1 Fiber Braid – 1 Stainless Steel Braid

Cover: Fiber Braid

Temp. Range:

Air Brake: -40°F to +200°F (-40°C to +93°C)

Hot Oil: -40°F to +302°F (-40°C to +150°C)

Hydraulic Fluid: -40°F to +212°F (-40°C to +100°C)

*16 and 20 sizes not SAE or DOT approved for air brake applications.



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Inch. Merc. Vac. ("Hg)	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H16604 H16604-250R	3/16	33/64	1,500	6,000	1-1/2	25	11	50' 250'	C-O-C 069 'E' Series Pages 92-95 069 'D' Series Pages 180-181 Field Attachable 247 'N' Series 9(except -20 size) Pages 190-194
H16605 H16605-250R	1/4	37/64	500	2,000	1-3/4	25	13	50' 250'	
H16606 H16606-250R	5/16	43/64	500	2,000	2	25	18	50' 250'	
H16608 H16608-250R	13/32	49/64	500	2,000	2-5/16	25	21	50' 250'	
H16610 H16610-250R	1/2	59/64	450	1,800	2-3/4	25	29	50' 250'	
H16612 H16612-250R	5/8	1-5/64	450	1,800	3-1/4	25	37	50' 250'	
H16616* H16616-250R*♦	7/8	1-15/64	250	1,000	4	25	38	50' 250'	
H16620*	1-1/8	1-33/64	250	1,000	5-1/2	25	46	50'	

NOTE: Hose Protection Products on pages 66-76.

♦MTO - Made To Order

H6008 Yellow Jack®

Typical Application: On air operated construction equipment (jack-hammer, etc.) drills, boring and mining equipment.

Tube: Nitrile (RMA Class A)

Reinforcement: 1 or 2 Steel Braids

Cover: Neoprene/Perforated MSHA Accepted

Color: Yellow

Temperature Range: -40°F to +200°F (-40°C to +93°C)



Catalog Number	Hose I.D.	Hose O.D.	Braid	Working Press. (PSI)	Min. Burst Press. (PSI)	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H600816	1	1-1/2	1	1,000	4,000	85	50'	C-O-C 430 'U' Series Page 153-163
H600816-100							100'	
H600824	1-1/2	2-1/8	2	600	2,400	166	50'	
H600824-100							100'	
H600832	2	2-21/32	2	600	2,400	206	50'	
H600832-100							100'	

H209 General Purpose Hose

Typical Application: General hydraulic and pneumatic service; high temperature industrial cleaning and car wash applications.

Inner Tube: Nylon 11

Reinforcement: 1 Fiber Braid

Cover: Polyurethane

Temp. Range: -40°F to +200°F (-40°C to +93°C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H20904-500R	1/4	29/64	2,250	9,000	1-1/2	5	500'	C-O-C 'E' Series Pages 85-91
H20905-500R	5/16	1/2	1,750	7,000	1-3/4	6	500'	
H20906-250R	3/8	9/16	1,350	5,400	2-1/2	7	250'	
H20908-250R	1/2	45/64	1,000	4,000	3-1/2	9	250'	

NOTE: Hose Protection Products on pages 66-76.

Medium Pressure

Hose

H213 Truck Hose SAE J1402 TYPE AI DOT AI

Typical Application: General purpose truck hose. For use in air brake, fuel, diesel fuel and high temperature petroleum oil applications.

Inner Tube: CPE

Reinforcement: 1 Fiber Braid - 1 Steel Braid.

Cover: Fiber Braid

Cover Color: Black with 2 green stripes 180° apart.

Temp. Range:

Air Brake: -40°F to +200°F (-40°C to +93°C)

Hot Oil: -50°F to +302°F (-45°C to +150°C)

*16 size is not SAE J1402 or DOT approved for air brake applications.



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Inch. Merc. Vac. ("Hg)	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H21304 H21304-250R	3/16	31/64	2,000	8,000	3/4	25	12	50' 250'	Field Attachable 213 'N' Series Pages 187-189
H21305 H21305-250R	1/4	35/64	1,500	6,000	1	25	13	50' 250'	
H21306 H21306-250R	5/16	39/64	1,500	6,000	1-1/4	25	16	50' 250'	
H21308 H21308-250R	13/32	47/64	1,250	5,000	1-3/4	25	19	50' 250'	
H21310 H21310-250R	1/2	53/64	1,000	4,000	2-1/4	25	21	50' 250'	
H21312 H21312-250R	5/8	61/64	750	3,000	2-3/4	25	26	50' 250'	
H21316*	7/8	1-13/64	400	1,600	3-1/2	25	32	50'	

H324 Power Steering Hose SAE J188 TYPE 2

Typical Application: Passenger Car/Light Truck power steering hose (Volumetric Expansion 8 to 17 cc/ft).

Inner Tube: Neoprene

Reinforcement: 2 Fiber Braids

Cover: Neoprene

Temp. Range: -40°F to +250°F (-40°C to +120°C)

*See pages 316-317 for Power Steering Makeup information.



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H32406*	3/8	3/4	1,500	6,000	3-1/8	24	50'	C-O-C 'U' Series Pages 138-152

NOTE: Hose Protection Products on pages 66-76.

H104 Hydraulic Hose SAE 100R1 TYPE AT, ABS

MSHA Accepted

Marine Application J1942/1/1 - Fuel and Lube Service, ABS¹

Typical Application: Most commonly used for medium pressure hydraulic lines. Especially popular for farm implement hydraulic lines.

Inner Tube: Nitrile all sizes except 1/4" is Neoprene

Reinforcement: 1 Steel Braid

Cover: Neoprene

Temp. Range: -40°F to +212°F (-40°C to +100°C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H10404 H10404-250R H10404-500R	1/4	17/32	2,750	11,000	4	15	50' 250' 500'	C-O-C 'S' Series (except -10 size) Page 135 C-O-C 'U' Series Page 138-152 Field Attachable 104 'N' Series (except -10 size) Page 184-186
H10406 H10406-250R H10406-500R	3/8	23/32	2,250	9,000	5	23	50' 250' 500'	
H10408 H10408-250R H10408-500R	1/2	27/32	2,000	8,000	7	29	50' 250' 500'	
H10410 H10410-250R	5/8	31/32	1,500	6,000	8	35	50' 250'	
H10412 H10412-250R	3/4	1-1/8	1,250	5,000	9-1/2	41	50' 250'	
H10416 H10416-250R	1	1-7/16	1,000	4,000	12	55	50' 250'	
H10420 H10420-100	1-1/4	1-3/4	625	2,500	16-1/2	85	50' 100'	

NOTE: Hose Protection Products on pages 66-76.

¹See pages 28-29 for applicable service pressures, required fire sleeves and qualified hose ends.

H069 General Purpose Hose Truck Hose SAE 100R5, SAE J1402 TYPE II†, DOT AII†, ABS

ABS¹

Typical Application: General purpose truck and hydraulic hose. For use in air brake, fuel, grease lines, high temperature petroleum oils and medium pressure hydraulic applications. -16 thru -48 sizes are not SAE or DOT approved for air brake applications.

Inner Tube: Nitrile

Reinforcement: 1 Fiber Braid - 1 Steel Braid

Cover: Fiber Braid

Temp. Range:

Air Brake: -40°F to +200°F (-40°C to +93°C)

Hot Oil: -40°F to +302°F (-40°C to +149°C) For sizes -04 thru -16

-40°F to +250°F (-40°C to +121°C) For sizes -20 thru -48

Hydraulic Fluid: -40°F to +212°F (-40°C to +100°C)

†Sizes -4 thru -12 only



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Inch. Merc. Vac. ("Hg)	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H06904 H06904-250R	3/16	33/64	3,000	12,000	3	25	16	50' 250'	C-O-C 069 'E' Series (except size -32, -40 & -48) Pages 92-95 247 'N' Series (sizes -4 to -16) Pages 190- 194 Field Attachable 069 'D' & 'T' Pages 180- 181
H06905 H06905-250R	1/4	37/64	3,000	12,000	3-3/8	25	20	50' 250'	
H06906 H06906-250R	5/16	43/64	2,250	9,000	4	25	23	50' 250'	
H06908 H06908-250R	13/32	49/64	2,000	8,000	4-5/8	25	27	50' 250'	
H06910 H06910-250R	1/2	59/64	1,750	7,000	5-1/2	25	36	50' 250'	
H06912 H06912-250R	5/8	1-5/64	1,500	6,000	6-1/2	25	44	50' 250'	
H06916 H06916-250R	7/8	1-15/64	800	3,200	7-3/8		46	50' 250'	
H06920 H06920-150	1-1/8	1-1/2	625	2,500	9		51	50' 150'	
H06924 H06924-100	1-3/8	1-3/4	500	2,000	10-1/2		62	50' 150'	
H06932 H06932-100	1-13/16	2-7/32	350	1,400	13-1/4		85	50' 100'	
H06940	2-3/8	2-7/8	350	1,400	24		143	50'	
H06948	3	3-9/16	200	800	33		209	50'	

NOTE: Hose Protection Products on pages 66-76.

¹See pages 29 for applicable service pressures, required fire sleeves and qualified hose ends.

WARNING: For Teflon® hose application, 'E' series fittings must be used with H243 .030" thin wall hose only.

H243 TEFLON® Hose

FDA Accepted Material

Typical Application: Hydraulic, air and steam lines. Particularly suited for air compressor discharge lines where vibration and high temp are present.

Inner Tube: Teflon®

Reinforcement: Single Stainless Steel Braid, 1" Size Double Stainless Steel Braid (Type 304)

Temp. Range: -65°F to +450°F (-54°C to +232°C)

*For applications above +300°F (+149°C)

NOTE: Not for use in applications requiring static dissipation.



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H24303 H24303-150R	3/16	5/16	3,000	12,000 9,600*	2	6	50' 150'	C-O-C 'E' Series Pages 85-91
H24304 H24304-100R	1/4	23/64	3,000	12,000 9,600*	3	8	50' 100'	
H24305 H24305-100R	5/16	27/64	2,500	10,000 8,000*	4	10	50' 100'	
H24306 H24306-100R	3/8	1/2	2,000	8,000 6,000*	5	12	50' 100'	
H24308 H24308-100R	1/2	41/64	1,750	7,000 5,500*	6-1/2	15	50' 100'	
H24312	3/4	57/64	1,000	4,000 3,500*	9	22	50'	
H24316	1	1-1/8	1,000	4,000 3,250*	12	49	50'	

H277 Conductive TEFLON® Hose

Typical Application: Hydraulic, air and steam lines. Particularly suited for air compressor discharge lines where vibration and high temp are present.

Inner Tube: Teflon®

Reinforcement: Single Stainless Steel Braid, 1" Size Double Stainless Steel Braid (Type 304)

Temp. Range: -65°F to +450°F (-54°C to +232°C)

*For applications above +300°F (+149°C)

NOTE: For use in applications requiring static dissipation.



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H27703 H27703-150R	3/16	5/16	3,000	12,000 9,600*	2	6	50' 150'	C-O-C 'E' Series Pages 85-91
H27704 H27704-100R	1/4	23/64	3,000	12,000 9,600*	3	8	50' 100'	
H27705 H27705-100R	5/16	27/64	2,500	10,000 8,000*	4	10	50' 100'	
H27706 H27706-100R	3/8	1/2	2,000	8,000 6,000*	5	12	50' 100'	
H27708 H27708-100R	1/2	41/64	1,750	7,000 5,500*	6-1/2	15	50' 100'	
H27712	3/4	57/64	1,000	4,000 3,500*	9	22	50'	
H27716	1	1-1/8	1,000	4,000 3,350*	12	49	50'	

NOTE: Hose Protection Products on pages 66-76.

H569 Hydraulic Hose SAE 100R5, SAE J1402 TYPE AII, DOT AII*, ABS

Marine Application - Hydraulic only¹

ABS approved for sizes 5/16 through 1-1/8 inches.¹

Typical Application: General purpose truck, marine and hydraulic hose.

For use in air brake*, diesel fuel, grease lines, high temperature petroleum oils and medium pressure hydraulic applications.

Inner Tube: CPE

Reinforcement: 2 Fiber Braids and 1 Steel Braid

Cover: Fiber Braid

Cover Color: Blue

Temp. Range: Hydraulic Fluid: -55°F to 302°F (-48°C to 150°C)

Air Brake: -40°F to 200°F (-40°C to 93°C)*

Air: -40°F to 212°F (-40°C to 100°C) Intermittent to 250°F

*Air brake applications, sizes -04 through -12 only.



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Inch. Merc. Vac. ("Hg)	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H56904 H56904-250R	3/16	33/64	3,000	12,000	3	28	16	50' 250'	C-O-C 069 'E' Series Pages 92-95 Field Attachable 247 'N' Series (sizes -6 to -12) Pages 190-194
H56905 H56905-250R	1/4	37/64	3,000	12,000	3-3/8	28	20	50' 250'	
H56906 H56906-250R	5/16	43/64	2,250	9,000	4	28	23	50' 250'	
H56908 H56908-250R	13/32	49/64	2,000	8,000	4-5/8	28	27	50' 250'	
H56910 H56910-250R	1/2	59/64	1,750	7,000	5-1/2	28	36	50' 250'	
H56912 H56912-250R	5/8	1-5/64	1,500	6,000	6-1/2	28	44	50' 250'	
H56916 H56916-250R	7/8	1-15/64	800	3,200	7-3/8	20	46	50' 250'	
H56920 H56920-250R	1-1/8	1-1/2	625	2,500	9	20	51	50' 250'	

NOTE: Hose Protection Products on pages 66-76.

¹See pages 28-29 for applicable service pressures, required fire sleeves and qualified hose ends.

H169 Hydraulic Hose

MSHA Accepted

Typical Application: Medium pressure hydraulic, air, grease, oil, truck and power steering lines.**Inner Tube:** Nitrile**Reinforcement:** 1 Steel Braid**Cover:** Neoprene Perforated**Temp. Range:** -40°F to +212°F (-40°C to +100°C)

Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H16904 H16904-250R	3/16	33/64	3,000	12,000	3	16	50' 250'	C-O-C 069 'E' Series (except -32 size) Pages 92-95 Field Attachable 069 'D' Series Pages 180-181 247 'N' Series (except -20, -24 & -32 size) Pages 190-194
H16905 H16905-250R	1/4	37/64	3,000	12,000	3-3/8	20	50' 250'	
H16906 H16906-250R	5/16	43/64	2,250	9,000	4	23	50' 250'	
H16908 H16908-250R	13/32	49/64	2,000	8,000	4-5/8	27	50' 250'	
H16910 H16910-250R	1/2	59/64	1,750	7,000	5-1/2	36	50' 250'	
H16912 H16912-250R	5/8	1-5/64	1,500	6,000	6-1/2	44	50' 250'	
H16916 H16916-250R	7/8	1-15/64	800	3,200	7-3/8	46	50' 250'	
H16920 H16920-150	1-1/8	1-1/2	625	2,500	9	51	50' 150'	
H16924 H16924-100	1-3/8	1-3/4	500	2,000	10-1/2	62	50' 100'	
H16932	1-13/16	2-7/32	350	1,400	13-1/4	85	50'	

NOTE: Hose Protection Products on pages 66-76.

H435 Non-Conductive Hose SAE 100R7

Typical Application: Compatible w/most hydraulic fluids, designed for use where electric shock hazards exist. Max. leakage is 50 Micro Amperes per ft. at 75 KV per ft. for five minutes.

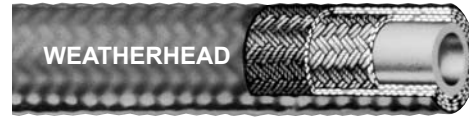
Inner Tube: Nylon 11

Reinforcement: 2 Fiber Braids

Cover: Non-Conductive Polyurethane

Cover Color: Orange

Temp. Range: -40°F to +200°F (-40°C to +93°C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H43504	1/4	29/64	2,750	11,000	1	5	50'	C-O-C 'E' Series Pages 85-91 Field Attachable 436 'N' Series Pages 199-200
H43504-500R							500'	
H43505	5/16	9/16	2,500	10,000	1-1/2	7	50'	
H43505-500R							500'	
H43506	3/8	5/8	2,250	9,000	2	8	50'	
H43506-250R							250'	
H43508	1/2	13/16	2,000	8,000	2-1/2	12	50'	
H43508-250R							250'	
H43512	3/4	1-1/16	1,250	5,000	9-1/2	19	50'	
H43516	1	1-3/8	1,000	4,000	12	25	50'	

H435 Twin Line Non-Conductive Hose SAE 100R7, Multi-Tube

Typical Application: Compatible w/most hydraulic fluids, designed for use where electric shock hazards exist. Max. leakage is 50 Micro Amperes per ft. at 75 KV per ft. for five minutes.

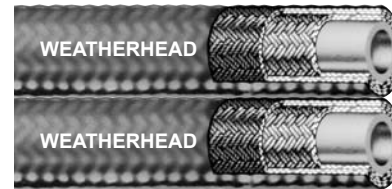
Inner Tube: Nylon 11

Reinforcement: 2 Fiber Braids

Cover: Non-Conductive Polyurethane

Cover Color: Orange

Temp. Range: -40°F to +200°F (-40°C to +93°C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End	
H43544	1/4, 1/4				1	10	50'	C-O-C 'E' Series Pages 85-91 Field Attachable 436 'N' Series Pages 199-200	
H43544-250R							250'		
H43545	1/4, 5/16				1-1/2	12	50'		
H43545-250R							250'		
H43546	1/4, 3/8				2	13	50'		
H43546-250R							250'		
H43555	5/16, 5/16		Same as H435 Above		1-1/2	14	50'		
H43555-250R									250'
H43556	5/16, 3/8				2	15	50'		
H43556-250R									250'
H43558	5/16, 1/2				2-1/2	19	50'		
H43558-250R									250'
H43566	3/8, 3/8				2	16	50'		
H43566-250R									250'
H43568	3/8, 1/2			2-1/2	20	50'			
H43568-250R							250'		
H43588	1/2, 1/2			2-1/2	24	50'			
H43588-250R							250'		

NOTE: Hose Protection Products on pages 66-76.

H436 Perforated Cover Hose SAE 100R7

Typical Application: In addition to its compatibility with most hydraulic fluids, the low effusion rate of this hose makes it ideally suited for CO₂ and nitrogen. Perforated cover permits breathing, eliminating condensation and blistering.

Inner Tube: Nylon 11

Reinforcement: 2 Fiber Braids

Cover: Polyurethane (Perforated)

Temp. Range: -40°F to +200°F (-40°C to +93°C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H43604 H43604-500R	1/4	29/64	2,750	11,000	1	5	50' 500'	C-O-C 'E' Series Pages 85-91 Field Attachable 436 'N' Series Pages 199-200
H43605 H43605-500R	5/16	9/16	2,500	10,000	1-1/2	7	50' 500'	
H43606 H43606-250R	3/8	5/8	2,250	9,000	2	8	50' 250'	
H43608 H43608-250R	1/2	51/64	2,000	8,000	2-1/2	12	50' 250'	
H43612	3/4	1-1/16	1,250	5,000	9-1/2	19	50'	
H43616	1	1-3/8	1,000	4,000	12	25	50'	

H436 Twin Line Perforated Cover Hose SAE 100R7, Multi-Tube

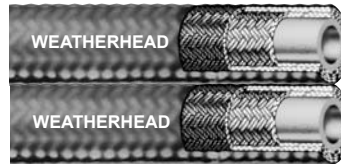
Typical Application: In addition to its compatibility with most hydraulic fluids, the low effusion rate of this hose makes it ideally suited for CO₂ and nitrogen. Perforated cover permits breathing, eliminating condensation and blistering.

Inner Tube: Nylon 11

Reinforcement: 2 Fiber Braids

Cover: Polyurethane (Perforated)

Temp. Range: -40°F to +200°F (-40°C to +93°C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H43644 H43644-250R	1/4, 1/4				1	10	50' 250'	C-O-C 'E' Series Pages 85-91 Field Attachable 436 'N' Series Pages 199-200
H43645 H43645-250R	1/4, 5/16				1-1/2	12	50' 250'	
H43646 H43646-250R	1/4, 3/8				2	13	50' 250'	
H43648 H43648-250R	1/4, 1/2				2-1/2	17	50' 250'	
H43655 H43655-250R	5/16, 5/16		Same as H436 Above		1-1/2	14	50' 250'	
H43656 H43656-250R	5/16, 3/8				2	15	50' 250'	
H43658 H43658-250R	5/16, 1/2				2-1/2	19	50' 250'	
H43666 H43666-250R	3/8, 3/8				2	16	50' 250'	
H43668 H43668-250R	3/8, 1/2				2-1/2	18	50' 250'	
H43688 H43688-250R	1/2, 1/2				2-1/2	24	50' 250'	

NOTE: Hose Protection Products on pages 66-76.

H114 Hydraulic Hose

MSHA Accepted

Typical Application: 3,000 PSI continuous working pressure hose. Ideal for farm implement high temperature hydraulic lines. Will work with synthetic or petroleum-based fluids.

Inner Tube: Hytrel

Reinforcement: 1 Steel Braid

Cover: Neoprene

Temp. Range: -40° F to +250° F (-40° C to +121° C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H11404 H11404-250R H11404-500R	1/4	1/2	3,000	12,000	4	11	50' 250' 500'	C-O-C 'S' Series Page 135 C-O-C 'U' Series Pages 138-152
H11406 H11406-250R H11406-500R	3/8	41/64	3,000	12,000	5	18	50' 250' 500'	
H11408 H11408-250R H11408-500R	1/2	13/16	3,000	12,000	7	25	50' 250' 500'	

H190 Hydraulic Hose SAE 100R1 Type AT, EN 853 Type 1SN

MSHA Accepted

ISO 1436a

Marine Application J1942/1 Fuel and Lube Service¹

Typical Application: Transfer of hydraulic fluid, water and air.

Inner Tube: Nitrile

Reinforcement: 1 Steel Braid

Cover: Vinyl Nitrile

Temp. Range: Petroleum based Hydraulic Fluids: -40°F to +212°F (-40°C to +100°C). Water based Hydraulic Fluids: -40°F to +158°F (-40°C to +70°C). Water: +32°F to 158°F (0°C to 70°).



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H19004 H19004-250R	1/4	17/32	3,265	13,060	4	15	50' 250'	C-O-C 'W' Series Pages 164-170
H19006 H19006-250R	3/8	11/16	2,610	10,440	5	21	50' 250'	
H19008 H19008-250R	1/2	13/16	2,320	9,280	7	28	50' 250'	
H19010 H19010-250R	5/8	15/16	1,885	7,540	8	33	50' 250'	
H19012 H19012-250R	3/4	1-3/32	1,525	6,100	9-1/2	41	50' 250'	
H19016 H19016-250R	1	1-13/32	1,275	5,100	12	60	50' 250'	

NOTE: Hose Protection Products on pages 66-76.

¹See pages 28 for applicable service pressures, required fire sleeves and qualified hose ends.

H345 Pressure Washer Hose

MSHA Accepted, IC - 46/10

Typical Application: Pressure washer hose for cold and hot water. Resistant to usual detergents. Not for use with steam or hydraulic applications.

Inner Tube: Nitrile

Reinforcement: 1 Steel Braid

Cover: Vinyl Nitrile

Cover Color: Blue

Temp. Range: Pressure Washer Service Up to 0°F to +200°F (-180°C to +93°C); Hydraulic Service -40°F to +250°F (-40°C to +121°C)

*50 and *100 are one continuous length.



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H34504 H34504-100 H34504-250R H34504-500R	1/4	31/64	3,000	12,000	2	13	*50' *100' 250' 500'	C-O-C 'M' Series Pages 124-129
H34506 H34506-100 H34506-250R H34506-500R	3/8	41/64	3,000	12,000	2-1/2	18	*50' *100' 250' 500'	
H34508 H34508-100 H34508-250R H34508-500R	1/2	25/32	3,000	12,000	3-1/2	28	*50' *100', 250' 500'	

H146 3000 PSI Hydraulic Hose

Typical Application: 3,000 PSI continuous working pressure hose. Ideal for Arctic cold weather hydraulic applications, as well as for farm implement high temperature hydraulic lines. Will work with synthetic or petroleum-based fluids.

Inner Tube: Hytrel

Reinforcement: 1 Steel Braid

Cover: Abrasion Resistant Fiber Braid

Temp. Range: -65°F to +250°F (-53°C to +121°C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H14604 H14604-250R	1/4	33/64	3,000	12,000	4	11	50' 250'	C-O-C 'U' Series Pages 138-152
H14606 H14606-250R	3/8	43/64	3,000	12,000	5	18	50' 250'	
H14608 H14608-250R	1/2	13/16	3,000	12,000	7	25	50' 250'	

NOTE: Hose Protection Products on pages 66-76.

H145 Hydraulic Hose SAE 100R17

Marine Application J1942/1 - Hydraulic only¹
(see chart on page 23-24 for qualified hose sizes and hose ends)
MSHA Accepted

Typical Application: Ideal for use in high pressure lines on off road construction equipment, farm equipment, and other high pressure applications where a small bend radius is needed.

Inner Tube: Nitrile

Reinforcement: 4-6 Size: 1 Steel Braid

8-16 Size: 2 Steel Braids

Cover: Neoprene

Temp. Range: 4-8 Size: -40° F to +250° F (-40° C to +121° C)

10-16 Size: -40° F to +212° F (-40° C to +100° C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H14504 H14504-250R H14504-500R	1/4	1/2	3,045	12,180	2	13	50' 250' 500'	C-O-C 'M' Series (sizes -4, -6, -8 & -10) Page 124-129 C-O-C 'S' Series (except size -10) Page 135 C-O-C 'U' Series (sizes -4 thru -12 only) Pages 138-152 C-O-C 430 'U' (size -16 only) Pages 153-163
H14506 H14506-250R H14506-500R	3/8	41/64	3,045	12,180	2-1/2	18	50' 250' 500'	
H14508 H14508-250R H14508-500R	1/2	13/16	3,045	12,180	3-1/2	36	50' 250' 500'	
H14510 H14510-250R	5/8	31/32	3,045	12,180	4	42	50' 250'	
H14512 H14512-250R	3/4	1-5/32	3,045	12,180	4-3/4	54	50' 250'	
H14516 H14516-250R	1	1-15/32	3,045	12,180	6	91	50' 250'	

NOTE: Hose Protection Products on pages 66-76.

¹See pages 28 for applicable service pressures, required fire sleeves and qualified hose ends.

H335 Non-Conductive Hose SAE 100R8 EN 855 Type R8

Typical Application: Compatible with most hydraulic fluids, designed for use where electric shock hazards exist. Max. leakage is 50 micro amperes per ft. at 75 KV per ft. for five minutes.

Inner Tube: Nylon

Reinforcement: Multiple Fiber Braids

Cover: Polyurethane (Perforated)

Cover Color: Orange

Temp. Range: Petroleum/Synthetic based Hydraulic Fluids: -40°F to +212°F (-40°C to +100°C)

Water-Based Hydraulic Fluids: -32°F to +158°F (-0°C to +70°C)

Fire Resistant Fluids: -40°F to +158°F (-40°C to +70°C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H33503-250R	3/16	33/64	5,000	20,000	1-1/2	8	250'	C-O-C 336 'E' Series Pages 96-99
H33504	1/4	5/8	5,000	20,000	2	12	50'	
H33504-250R							250'	
H33504-500R							500'	
H33506	3/8	13/32	4,000	16,000	2-1/2	15	50'	
H33506-250R							250'	
H33508	1/2	57/64	3,500	14,000	4	19	50'	
H33508-250R							250'	
H33512	3/4	1-9/64	2,250	9,000	6-1/2	26	50'	
H33512-200R							200'	
H33516	1	1-15/32	2,000	8,000	10	38	50'	
H33516-200R							200'	

H336 Perforated Cover Hose SAE 100R8 EN 855 Type R8

Typical Application: General hydraulic applications, High Pressure Pneumatic systems. H336 is compatible with petroleum and synthetic based hydraulic fluids.

Inner Tube: Nylon

Reinforcement: Multiple Fiber Braids

Cover: Perforated Polyurethane

Temp. Range: Petroleum/Synthetic based Hydraulic Fluids: -40°F to +212°F (-40°C to +100°C)

Water-Based Hydraulic Fluids: -32°F to +158°F (-0°C to +70°C)

Fire Resistant Fluids: -40°F to +158°F (-40°C to +70°C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H33603	3/16	33/64	5,000	20,000	1-1/2	8	50'	C-O-C 336 'E' Series Pages 96-99
H33603-250R							250'	
H33604	1/4	5/8	5,000	20,000	2	12	50'	
H33604-250R							250'	
H33604-500R							500'	
H33606	3/8	13/32	4,000	16,000	2-1/2	15	50'	
H33606-250R							250'	
H33608	1/2	57/64	3,500	14,000	4	19	50'	
H33608-250R							250'	
H33612	3/4	1-9/64	2,250	9,000	6-1/2	26	50'	
H33612-200R							200'	
H33616	1	1-15/32	2,000	8,000	10	38	50'	
H33616-200R							200'	

NOTE: Hose Protection Products on pages 66-76.

High Pressure

Hose

H245 High Pressure Hydraulic Hose SAE 100R16, ABS

HI-R FLEX™

MSHA Accepted, ABS¹

Marine Application J1942/1 - Fuel and Lube Service.¹

Typical Application: Most commonly used for high pressure lines on off road construction equipment, farm equipment and other high pressure applications. Compatible with water/glycol, water, generic hydraulic fluids, and diesel fuel.

Inner Tube: Nitrile Blend

Reinforcement: 2 Steel Braids

Cover: Neoprene

Temp. Range: -40°F to +212°F (-40°C to +100°C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H24504 H24504-250R H24504-500R	1/4	17/32	5,000	20,000	2	19	50' 250' 500'	C-O-C 'M' Series (size -4, -6, -8 & -10 only) Pages 124-129 C-O-C 'S' Series (except -10 size) Page 135 C-O-C 'U' Series Pages 138-152 C-O-C 430 'U' Series (sizes -12, -16 & -20) Pages 153-163
H24506 H24506-250R H24506-500R	3/8	11/16	4,000	16,000	2-1/2	29	50' 250' 500'	
H24508 H24508-250R H24508-500R	1/2	13/16	3,500	14,000	3-1/2	36	50' 250' 500'	
H24510 H24510-250R	5/8	15/16	2,750	11,000	4	42	50' 250'	
H24512 H24512-250R	3/4	1-3/32	2,250	9,000	4-3/4	54	50' 250'	
H24516 H24516-250R	1	1-13/32	2,000	8,000	6	81	50' 250'	
H24520 H24520-150	1-1/4	1-25/32	1,625	6,500	8-1/4	114	50' 150'	

H325 SUB ZERO™ High Pressure Hydraulic Hose

Typical Application: For non-impulse, high pressure hydraulic service, specifically designed for use in frigid environment, where temperatures to -67°F are encountered.

Inner Tube: Oil and heat resistant black synthetic rubber

Reinforcement: 2 Steel Braids

Cover: Oil, abrasion and weather resistant synthetic rubber.

Cover Color: Black with highly visible blue layline

Temp. Range: -67° to +175°F (-55°C to +80°C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H32504-250R	1/4	19/32	5,000	20,000	4	26	250'	C-O-C 'U' Series Pages 138-152
H32506-250R	3/8	3/4	4,000	16,000	5	37	250'	
H32508-250R	1/2	7/8	3,500	14,000	7	45	250'	
H32512-250R	3/4	1-5/32	2,250	9,000	9-1/2	67	250'	
H32516-250R	1	1-1/2	2,000	8,000	12	98	250'	

NOTE: Hose Protection Products on pages 66-76.

¹See page 28-29 for applicable service pressures, required fire sleeves and qualified hose ends.

H545 RhinoHide™ Abrasion Resistant Constant Pressure Hydraulic Hose

Typical Application: 3,000 PSI constant working pressure hose with abrasion resistant cover. Ideal for logging, construction, mining and other off highway applications.

Inner Tube: Nitrile

Reinforcement: 4-6 Size: 1 Steel Braid; 8-16 Size: 2 Steel Braids

Cover: Abrasion resistant (woven nylon)

Temp. Range: -40°F + 250°F (-40°C to +121°C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H54504 H54504-250R H54504-500R	1/4	17/32	3,000	12,000	2	14	50' 250' 500'	C-O-C 'M' Series (size -8 only) Pages 124-129 C-O-C 'S' Series (sizes -4, -6, -8 & -12 only) Pages 135 C-O-C 'U' Series (sizes -4 thru -12 only) Pages 138-152 C-O-C 430 'U' Series (sizes -16 only) Pages 153-163
H54506 H54506-250R H54506-500R	3/8	5/8	3,000	12,000	2-1/2	18	50' 250' 500'	
H54508 H54508-250R H54508-500R	1/2	13/16	3,000	12,000	3-1/2	32	50' 250' 500'	
H54510 H54510-250R	5/8	15/16	3,000	12,000	4	37	50' 250'	
H54512 H54512-250R	3/4	1-1/8	3,000	12,000	4-3/4	54	50' 250'	
H54516 H54516-250R	1	1-13/32	3,000	12,000	6	86	50' 250'	

H280 Hydraulic Hose 100R8 EN 855 Type R8

MSHA Accepted, Marine Application J1942/1 - Hydraulic only¹

Typical Application: High pressure hose for hydraulic fluid. Transfer water also.

Inner Tube: Nitrile

Reinforcement: 2 Steel Braids

Cover: Vinyl Nitrile

Temp. Range: Petroleum based Hydraulic Fluids: -40°F to +212°F (-40°C to +70°C). Water based Hydraulic Fluids: -40°F to +158°F (-40°C to +70°C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H28004 H28004-250R	1/4	17/32	5,800	23,200	2	18	50' 250'	C-O-C 'W' Series Pages 164-170
H28006 H28006-250R	3/8	11/16	4,800	19,200	2-1/2	27	50' 250'	
H28008 H28008-250R	1/2	13/16	4,000	16,000	3-1/2	34	50' 250'	
H28010 H28010-250R	5/8	15/16	3,630	14,520	4	40	50' 250'	
H28012 H28012-250R	3/4	1-3/32	3,120	12,480	4-3/4	54	50' 250'	
H28016 H28016-250R	1	1-13/32	2,400	9,600	6	80	50' 250'	

NOTE: Hose Protection Products on pages 66-76.

¹See pages 28 for applicable service pressures, required fire sleeves and qualified hose ends.

H290 Hydraulic Hose 100R2 EN 853 Type 2SN

MSHA Accepted
Marine Application J1942/1 - Hydraulic only¹
Typical Application: High pressure hose for hydraulic fluid applications. Transfer water also.

Inner Tube: Nitrile

Reinforcement: 2 Steel Braids

Cover: Vinyl Nitrile

Temp. Range: Petroleum based Hydraulic Fluids: -40°F to +212°F (-40°C to +70°C). Water based Hydraulic Fluids: -40°F to +158°F (-40°C to +70°C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H29004 H29004-250R	1/4	19/32	5,800	23,200	4	24	50' 250'	C-O-C 'W' Series Pages 164-170
H29006 H29006-250R	3/8	3/4	4,800	19,200	5	33	50' 250'	
H29008 H29008-250R	1/2	7/8	4,000	16,000	7	42	50' 250'	
H29010 H29010-250R	5/8	1	3,630	14,520	8	50	50' 250'	
H29012 H29012-250R	3/4	1-5/32	3,120	12,480	9-1/2	63	50' 250'	
H29016 H29016-250R	1	1-1/2	2,400	9,600	12	90	50' 250'	

NOTE: Hose Protection Products on pages 66-76.

¹See pages 28 for applicable service pressures, required fire sleeves and qualified hose ends.

H425 High Pressure Hydraulic Hose SAE 100R2 TYPE AT

MSHA Accepted

Marine Application J1942/1 - Hydraulic (-4 thru -32) Fuel (-4 through -20).¹

ABS¹

Typical Application: Most commonly used for high pressure lines on off road construction equipment, farm equipment and other high pressure applications.

Inner Tube: Nitrile (Neoprene -4 only)

Reinforcement: 2 Steel Braids

Cover: Neoprene

Temp. Range: -40°F to +212°F (-40°C to +100°C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H42504 H42504-250R H42504-500R	1/4	19/32	5,000	20,000	4	28	50' 250' 500'	C-O-C 'S' Series (except sizes -10, -24 & -32) Pages 135 C-O-C 'U' Series (except sizes -24 & -32) Pages 138-152 C-O-C 430 'U' Series (sizes -12 thru -32) Pages 153-163 Field Attachable 425 'N' Series (except size -10) Pages 195-198
H42506 H42506-250R H42506-500R	3/8	3/4	4,000	16,000	5	38	50' 250' 500'	
H42508 H42508-250R H42508-500R	1/2	7/8	3,500	14,000	7	45	50' 250' 500'	
H42510 H42510-250R	5/8	1	2,750	11,000	8	51	50' 250'	
H42512 H42512-250R	3/4	1-5/32	2,250	9,000	9-1/2	66	50' 250'	
H42516 H42516-250R	1	1-1/2	2,000	8,000	12	95	50' 250'	
H42520 H42520-150	1-1/4	1-7/8	1,625	6,500	16-1/2	142	50' 150'	
H42524 H42524-100	1-1/2	2-5/32	1,250	5,000	20	176	50' 100'	
H42532	2	2-21/32	1,125	4500	25	208	50'	

NOTE: Hose Protection Products on pages 66-76.

¹See pages 28-29 for applicable service pressures, required fire sleeves and qualified hose ends.

H350 High Pressure Hydraulic Hose

MSHA Accepted

Typical Application: Most commonly used for high pressure lines on off road equipment, farm equipment and other high pressure applications. Compatible with water/glycol, water and hydraulic fluids.

Inner Tube: Nitrile

Reinforcement: 6-12 sizes - 2 Steel Braids, 16 size - 4 Spiral-Steel Plies

Cover: Neoprene

Temp. Range: -40°F to +212°F (-40°C to +100°C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H35006 H35006-250R	3/8	11/16	3,500	14,000	2-1/2	29	50' 250'	C-O-C 'M' Series (Sizes -06 to -10 only) Pages 124-129
H35008 H35008-250R	1/2	13/16	3,500	14,000	3-1/2	36	50' 250'	
H35010 H35010-250R	5/8	1	3,500	14,000	4	60	50' 250'	C-O-C 'U' Series (Sizes -06 & -08 only) Pages 138-152
H35012 H35012-250R	3/4	1-5/32	3,500	14,000	4-3/4	70	50' 250'	C-O-C 430 'U' Series (Sizes -12 & -16 only) Pages 153-163
H35016 H35016-150R	1	1-1/2	3,500	14,000	12	140	50' 150'	

H439 Very High Pressure Hydraulic Hose SAE 100R12, ABS

MSHA Accepted

Marine Application J1942/1/1 - Hydraulic only¹, ABS¹

Hose must be skived when using 430 'E' Series ends.

Typical Application: For very high pressure hydraulic lines subjected to pressure surges and flexing. Typical applications include construction, mining, farming and high performance industrial equipment.

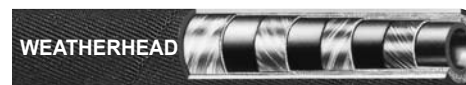
Inner Tube: Neoprene

Reinforcement: 4 Spiral Steel Plies

Cover: Hypalon

Cover Color: Gray

Temp. Range: -40°F to +250°F (-40°C to +121°C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H43908	1/2	15/16	4,000	16,000	7	54	50'	C-O-C 430 'E' Series Pages 100-110
H43912	3/4	1-7/32	4,000	16,000	9-1/2	94	50'	
H43916	1	1-33/64	4,000	16,000	12	134	50'	
H43920	1-1/4	1-7/8	3,000	12,000	16-1/2	174	50'	C-O-C 430 'U' Series No Skive Pages 153-163
H43924	1-1/2	2-1/8	2,500	10,000	20	201	50'	
H43932	2	2-21/32	2,500	10,000	25	275	50'	

NOTE: Hose Protection Products on pages 66-76.

¹See pages 28 for applicable service pressures, required fire sleeves and qualified hose ends.

H430 Very High Pressure Hydraulic Hose SAE 100R12, ABS

MSHA Accepted

Marine Application J1942/1 - Hydraulic only¹, ABS¹

Hose must be skived when using 430 'E' Series hose ends.

Typical Application: For very high pressure hydraulic lines subjected to pressure surges and flexing. Typical applications include construction, mining, farming and high performance industrial equipment.

Inner Tube: Neoprene

Reinforcement: 4 Spiral Steel Plies

Cover: Hypalon

Cover Color: Gray

Temp. Range: -40°F to +250°F (-40°C to +121°C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H43008 H43008-100 H43008-150	1/2	15/16	4,000	16,000	7	58	50' 100' 150'	C-O-C 430 'E' Series Pages 100-110 C-O-C 430 'U' Series No Skive Pages 153-163
H43012 H43012-100 H43012-150	3/4	1-7/32	4,000	16,000	9-1/2	87	50' 100' 150'	
H43016 H43016-100 H43016-150	1	1-33/64	4,000	16,000	12	140	50' 100' 150'	
H43020 H43020-100 H43020-150	1-1/4	1-7/8	3,000	12,000	16-1/2	184	50' 100' 150'	
H43024 H43024-100 H43024-150	1-1/2	2-1/8	2,500	10,000	20	210	50' 100' 150'	
H43032 H43032-100 H43032-150	2	2-21/32	2,500	10,000	25	281	50' 100' 150'	

NOTE: Hose Protection Products on pages 66-76.

¹See pages 28-29 for applicable service pressures, required fire sleeves and qualified hose ends.

H400 Very High Pressure Hydraulic Hose

MSHA Accepted, IC - 46/9

Typical Application: Most commonly used for high pressure lines on off the road equipment, farm equipment and other high pressure applications. Compatible with water/glycol, water and hydraulic fluids.

Inner Tube: Nitrile

Reinforcement: 2 Steel Braids

Cover: Vinyl Nitrile

Temp. Range: -40°F to +212°F (-40°C to +100°C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H40010-250R	5/8	1	4,000	16,000	4	60	250'	C-O-C 'M' Series Pages 124-129

H470 Very High Pressure Hydraulic Hose

SAE 100R13

Hose must be skived.

MSHA Accepted

Marine Application J1942/1 - Hydraulic Only¹ (-12 thru -20)

Typical Application: For very high pressure hydraulic lines subjected to pressure surges and flexing. Typical applications include construction, mining, farming and high performance industrial equipment.

Inner Tube: Neoprene

Reinforcement: Multi-Spiral Steel (8,12,16, 4 plies) (20,24,32, 6 plies)

Cover: EPDM

Cover Color: size -08 Black, sizes -12 to -32 Brown

Temp. Range: Size -08: -40° F to +212° F (-40° C to +100° C) Size -12 thru -32: -40° F to +250° F (-40° C to +121° C)



Catalog Number	Hose I.D.	Hose O.D.	Working Press. (PSI)	Min. Burst Press. (PSI)	Min. Bend Radius	Wt. Per 100 Ft.	Avail. Lengths	Hose End
H47008*	1/2	31/32	5,000	20,000	7	65	50'	C-O-C 470 'E' Series Pages 111-115 C-O-C 570 'S' Series (except size -8) Pages 136-137
H47012	3/4	1-1/4	5,000	20,000	9-1/2	109	50'	
H47016	1	1-17/32	5,000	20,000	12	142	50'	
H47020	1-1/4	1-31/32	5,000	20,000	16-1/2	252	50'	
H47024	1-1/2	2-1/4	5,000	20,000	20	325	50'	
H47032	2	2-13/16	5,000	20,000	25	505	50'	

* Size -8 does not meet SAE 100R13.

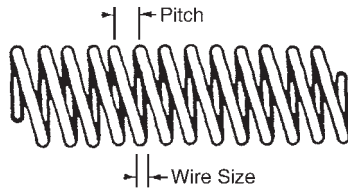
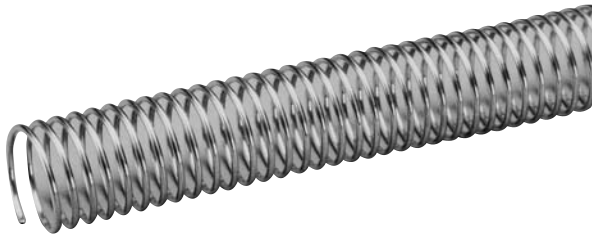
NOTE: Hose Protection Products on pages 66-76.

¹See pages 28-29 for applicable service pressures, required fire sleeves and qualified hose ends.

Round Wire Spring Guard

Spring guards should be considered for those applications which call for tough, steel armor protection. They offer heavy-duty hose defense against cuts and abrasion, with the added benefit of kink resistance and the ability to mold hose assembly routing for applications which require tight bends.

Material: Hot Dipped Galvanized steel, chemically treated and oiled.

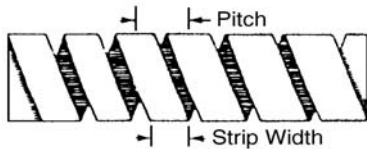


Guard I.D.	Catalog Number	Package Length (feet)	Wire Diameter	Pitch
.515	A1900	100'	.063	.188
.515	A1900-20	20'	.063	.188
.550	A1901	100'	.063	.188
.550	A1901-20	20'	.063	.188
.610	A1902	100'	.063	.188
.610	A1902-20	20'	.063	.188
.650	A1903	100'	.080	.188
.650	A1903-20	20'	.080	.188
.750	A1904	100'	.080	.188
.750	A1904-20	20'	.080	.188
.835	A1905	100'	.080	.188
.835	A1905-20	20'	.080	.188
.900	A1906	100'	.080	.188
.900	A1906-20	20'	.080	.188
.990	A1907	100'	.080	.188
.990	A1907-20	20'	.080	.188
1.055	A1908	100'	.080	.188
1.055	A1908-20	20'	.080	.188
1.110	A1909	100'	.080	.250
1.110	A1909-20	20'	.080	.250
1.240	A1910	100'	.080	.250
1.240	A1910-20	20'	.080	.250
1.300	A1911	60'	.120	.375
1.300	A1911-20	20'	.120	.375
1.380	A1912	60'	.120	.375
1.630	A1913	60'	.120	.375
1.810	A1915	60'	.120	.375
2.000	A1916	40'	.120	.375
2.125	A1917	40'	.120	.375
2.300	A1919	40'	.120	.375

Flat Wire Spring Guard

Spring guards should be considered for those applications which call for tough, steel armor protection. They offer heavy-duty hose defense against cuts and abrasion, with the added benefit of kink resistance and the ability to mold hose assembly routing for applications which require tight bends.

Material: Hot Dipped Galvanized steel, chemically treated and oiled.



Guard I.D.	Catalog Number	Package Length (feet)	Strip Thickness	Strip Width	Pitch
.515	A2900	100'	.028	.375	.500
.550	A2901	100'	.028	.375	.500
.610	A2902	100'	.028	.375	.500
.650	A2903	100'	.028	.375	.500
.750	A2904	100'	.028	.375	.500
.835	A2905	100'	.028	.500	.688
.900	A2906	100'	.028	.500	.688
.990	A2907	100'	.028	.500	.688
1.055	A2908	100'	.028	.500	.688
1.110	A2909	100'	.028	.500	.688
1.240	A2910	100'	.028	.500	.688
1.300	A2911	60'	.028	.500	.688
1.380	A2912	60'	.042	.500	.812
1.630	A2913	60'	.042	.500	.812
2.125	A2917	40'	.042	.500	.812
2.300	A2919	40'	.042	.500	.812

Heavy Duty Poly Hose Guard

Weatherhead's Heavy Duty Guard can be easily placed around a single or bundle of hydraulic and pneumatic hoses. It protects against abrasion, and also provides crush resistance, reducing or eliminating costly premature hose failures.

Features: Resists oils, lubricants, gasoline and most solvents.

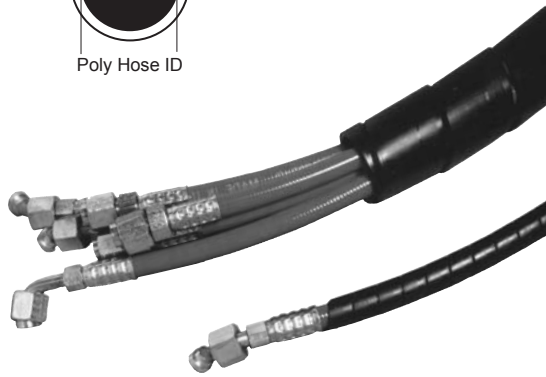
Temperature: -100°F to +220°F

Color: Black

Material: High Density Polyethylene with a Weatherhead Imprint



Poly Hose ID



Guard I.D.	Catalog Number	Wall Thickness	Guard O.D.	Foot/ Roll
.492	A9900	.069	.630	100'
.668	A9901	.086	.840	100'
1.014	A9902	.118	1.250	100'
1.600	A9903	.150	1.900	50'
2.457	A9904	.209	2.875	50'
3.065	A9905	.218	3.500	35'

RELATED PROD

Abrasion Sleeve

A hose protection product used to help safeguard hose covers from abrasions and cuts. Typical areas of use include agricultural, logging, construction and mining applications. The abrasion sleeve is also useful for bundling two or more hose assemblies together, in addition to the protective qualities the sleeving provides. Available in .045" thin wall and .090" thick wall sleeving.

Note: Wall thickness is for single wall.

Material: Bulk continuous filament nylon.

MSHA Accepted

ISO 6945



Sleeve I.D.	.045"	.090"	Package* Length (feet)	Flat I.D. (inch)
	Thin Wall Catalog Number	Thick Wall Catalog Number		
.90	A4900	A3900	100'	1.32-1.51
1.06	A4901	A3901	100'	1.57-1.76
1.22	A4902	A3902	100'	1.82-2.01
1.35	A4903	A3903	100'	2.03-2.21
1.66	A4904	A3904	100'	2.63-2.87
1.81	A4905	A3905	100'	2.75-2.94
2.19	A4906	A3906	100'	3.43-3.53
2.62	A4907	A3907	100'	4.02-4.21
2.80	A4908	A3908	100'	4.43-4.62

*Package contains two pieces that are not less than 30 feet long each.

Hose Bend Restrictors

Boston Weatherhead Hose Bend Restrictors are available for many popular hose applications. For use in protecting the last section of hose at the fitting connection, bend restrictors are designed to allow for an appropriate degree of "bend" without compromising the integrity of your hose assembly. They are also recommended for hose assemblies which receive substantial handling, such as pressure washer, air, oil, and hydraulic fluid transfer applications.

Material: Plastisol MR 436 Gloss PVC



NOTE: Colors RD, BU, GN, YW available by special order.

Restrictor I.D.	Catalog Number	Restrictor Length (inch)	Hose Type Application
.530	A5953	6	H14504, H00904
.625	A5962	6	H10404, H20906, H24504, H34504, H42504
.690	A5969	6	H14506, H34506
.750	A5975	7	H10406, H20908, H24506, H30006
.840	A5984	7	H10408, H14508, H24508
.875	A5987	7	H34508

Firesleeve

Boston Weatherhead Firesleeve is a flame-resistant sheathing constructed of tightly-woven fiberglass coated with a specially compounded, highly temperature-resistant, silicone rubber. Firesleeve offers you protection in hostile environments involving heat extremes. Not compatible with hydrocarbons.

Temperature Range: Continuous exposure up to 500°F.
Up to 2000°F for 15-20 minutes.
Up to 3000°F for durations of 15-30 seconds.

Color: Red-Orange

NOTE: Refer to application chart on pages 69-76 for locating Firesleeve part numbers for specific Boston Weatherhead hoses.



Firesleeve Tape

Firesleeve Tape is manufactured from a high temperature-resistant, non-adhesive, silicone elastomer. It provides a self-bonding, self-curing insulator and used in conjunction with Weatherhead® Firesleeve, acts as an end sealant in preventing moisture and hydraulic oils from wicking into the inner braids of Firesleeve.

Maximum Temperature: +475° continuous.

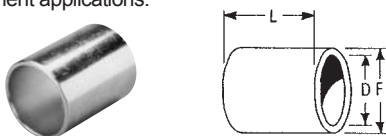
Sleeve I.D.	Catalog Number	Roll Length (feet)
1/2	A6908	100'
5/8	A6910	100'
3/4	A6912	100'
7/8	A6914	100'
1	A6916	100'
1-1/4	A6920	100'
1-1/2	A6924	100'
1-3/4	A6928	100'
2	A6932	50'
2-1/4	A6936	50'
2-1/2	A6940	50'
3	A6948	50'

Tape Coverage	Catalog Number	Roll Length (inch)
All sizes	A6900W	1x432

Caution: Tests should be made to determine the suitability of Firesleeve product for each application.

Locator Clamp

Locator Clamps are designed for crimping to H14510 or H42510 hydraulic hoses to provide a support for routing clamps. Popular for use in Case equipment applications.



NOTE: Crimp using collet T-400-5C and spacer ring T-400-62 (yellow), flat side up.

Hose I.D.	Catalog Number	L	D	F
5/8	A4910	1.60	1.084	1.25

Hose Sleeves and Guards

Related Products

HOSE TYPE	DASH SIZE	HOSE CLAMP	ROUND WIRE	FLAT WIRE	NYLON (.45)	NYLON (.90)	SILICONE	POLY
			SPRING GUARD	SPRING GUARD	ABRASION SLEEVE	ABRASION SLEEVE	FIBERGLASS FIRESLEEVE	HOSE GUARD
H009	04	HK0913	A1901	A2901	A4900	A3900	A6910	A9901
	05	HK1013	A1902	A2902	A4900	A4900	A6914	A9901
	06	HK1113	A1903	A2903	A4901	A3901	A6916	A9901
	08	HK1313	A1905	A2905	A4901	A3901	A6916	A9902
	12	HK1813	A1909	A2909	A4902	A3902	A6920	A9903
H017	04	HK1013	A1902	A2902	A4900	A3900	A6912	A9901
	06	HK1313	A1905	A2905	A4900	A3900	A6914	A9902
	08	HK1613	A1907	A2907	A4901	A3901	A6920	A9902
	12	HK2117	A1911	A2911	A4903	A3903	A6924	A9903
	16	HK2517	A1913	A2913	A4904	A3904	A6928	A9903
	20	HK2917	A1915	A2915	A4906	A3906	A6932	A9904
H039	12	HK2117	A1913	A2913	A4904	A3904	A6928	A9903
	16	HK2517	A1915	A2915	A4905	A3605	A6932	A9904
	20	HK2917	A1915	A2915	A4906	A3906	A6932	A9904
	24	HK3317	A1917	A2917	A4907	A3907	A6936	A9904
	32	HK3817	-	-	A4908	A3908	A6948	A9905
H057	03	HK0709	A1900	A2900	A4900	A3900	A6910	A9900
	04	HK1013	A1901	A2901	A4900	A3900	A6912	A9901
	05	HK1013	A1902	A2902	A4900	A3900	A6914	A9901
	06	HK1113	A1903	A2903	A4900	A3900	A6914	A9901
	07	HK1213	A1904	A2904	A4901	A3901	A6916	A9902
	H059	04	HK0913	A1901	A2901	A4900	A3900	A6912
05		HK1013	A1902	A2902	A4900	A3900	A6912	A9901
06		HK1213	A1904	A2904	A4901	A3901	A6916	A9902
08		HK1313	A1905	A2905	A4901	A3901	A6916	A9902
10		HK1613	A1907	A2907	A4902	A3902	A6916	A9902
12		HK1813	A1909	A2909	A4904	A3904	A6924	A9903
16		HK2117	A1910	A2910	A4905	A3905	A6928	A9903
H069	04	HK0913	A1901	A2901	A4900	A3900	A6912	A9901
	05	HK1013	A1905	A2905	A4900	A3900	A6912	A9901
	06	HK1213	A1905	A2905	A4901	A3901	A6912	A9902
	08	HK1413	A1905	A2905	A4901	A3901	A6916	A9902
	10	HK1613	A1907	A2907	A4902	A3902	A6916	A9902
	12	HK1913	A1909	A2909	A4903	A3903	A6920	A9903
	16	HK2117	A1910	A2910	A4904	A3904	A6924	A9903
	20	HK2517	A1913	A4913	A4906	A3906	A6928	A9903
	24	HK2117	A1916	A2916	A4907	A3907	A6932	A9904
	32	-	A1919	A2919	-	-	A6940	A9904
40	-	-	-	-	-	A6948	A9905	
48	-	-	-	-	-	-	-	
H077	04	HK0913	A1902	A2902	A4900	A3900	A6912	A9901
	05	HK1013	A1902	A2903	A4900	A3900	A6914	A9901
	06	HK1113	A1903	A2903	A4901	A3901	A6914	A9901

RELATED PRODUCT



Hose Sleeves and Guards

HOSE TYPE	DASH SIZE	HOSE CLAMP	ROUND WIRE	FLAT WIRE	NYLON (.45)	NYLON (.90)	SILICONE	POLY
			SPRING GUARD	SPRING GUARD	ABRASION SLEEVE	ABRASION SLEEVE	FIBERGLASS FIRESLEEVE	HOSE GUARD
H100	04	HK0913	A1900	A2900	A4900	A3900	A6912	A9901
	05	HK1013	A1903	A2903	A4900	A3900	A6912	A9901
	06	HK1113	A1903	A2903	A4900	A3900	A6912	A9902
	08	HK1313	A1905	A2905	A4901	A3901	A6916	A9902
	10	HK1613	A1907	A2907	A4902	A3902	A6920	A9902
	12	HK1813	A1908	A2908	A4903	A3903	A6924	A9903
H101	04	HK0913	A1902	A2902	A4900	A3900	A6910	A9901
	05	HK1013	A1903	A2903	A4900	A3900	A6912	A9901
	06	HK1113	A1903	A2903	A4900	A3900	A6912	A9901
	08	HK1413	A1905	A2905	A4902	A3902	A6916	A9902
	10	HK1613	A1907	A2907	A4903	A3903	A6920	A9902
	12	HK1813	A1908	A2908	A4903	A3903	A6924	A9903
H104	04	HK1903	A1902	A2902	A4900	A3900	A6912	A9901
	06	HK1213	A1904	A2904	A4900	A3900	A6914	A9902
	08	HK1413	A1907	A2907	A4902	A3902	A6920	A9902
	10	HK1613	A1907	A2907	A4903	A3903	A6924	A9902
	12	HK1913	A1910	A2910	A4903	A3903	A6924	A9903
	16	HK2317	A1913	A2913	A4904	A3904	A6928	A9903
	20	HK2117	A1916	A2916	A4906	A3906	A6936	A9904
H105	04	HK1113	A1903	A2903	A4900	A3900	A6914	A9901
	06	HK1313	A1905	A2905	A4903	A3903	A6914	A9902
	08	HK1513	A1907	A2907	A4904	A3904	A6924	A9902
	12	HK2017	A1910	A2910	A4904	A3904	A6924	A9903
	16	HK2517	A1913	A2913	A4906	A3906	A6932	A9903
H114	04	HK0913	A1902	A2902	A4900	A3900	A6912	A9901
	06	HK1113	A1904	A2904	A4900	A3900	A6914	A9901
	08	HK1413	A1906	A2906	A4902	A3902	A6920	A9902
H115	04	HK1113	A1902	A2902	A4900	A3900	A6912	A9901
	05	HK1113	A1904	A2904	A4900	A3900	A6912	A9901
	06	HK1213	A1904	A2904	A4900	A3900	A6914	A9902
	08	HK1513	A1907	A2907	A4901	A3901	A6920	A9902
	12	HK2017	A1910	A2910	A4903	A3903	A6924	A9903
	16	HK2317	A1913	A2913	A4904	A3904	A6928	A9903
	20	HK2117	A1916	A2916	A4906	A3906	A6936	A9904
	24	HK3317	A1917	A2917	A4907	A3907	A6940	A9904
H145	04	HK0913	A1900	A2900	A4900	A3900	A6912	A9900
	06	HK1113	A1904	A2904	A4901	A3901	A6916	A9901
	08	HK1413	A1906	A2906	A4901	A3901	A6916	A9902
	10	HK1613	A1908	A2908	A4903	A4903	A6924	A9902
	12	HK1813	A1910	A2910	A4903	A3903	A6924	A9902
	16	HK2317	A1913	A2913	A4904	A3904	A6928	A9903
H146	04	HK0913	A1902	A2902	A4900	A3900	A6912	A9901
	06	HK1213	A1905	A2905	A4901	A3901	A6914	A9902
	08	HK1413	A1906	A2906	A4901	A3901	A6920	A9903

Hose Sleeves and Guards

Related Products

HOSE TYPE	DASH SIZE	HOSE CLAMP	ROUND WIRE	FLAT WIRE	NYLON (.45)	NYLON (.90)	SILICONE	POLY
			SPRING GUARD	SPRING GUARD	ABRASION SLEEVE	ABRASION SLEEVE	FIBERGLASS FIRESLEEVE	HOSE GUARD
H166	04	HK0913	A1900	A2900	A4900	A3900	A6912	A9901
	05	HK1013	A1902	A2902	A4900	A3900	A6912	A9901
	06	HK1013	A1904	A2904	A4901	A3901	A6916	A9902
	08	HK1413	A1905	A2905	A4901	A3901	A6916	A9902
	10	HK1613	A1907	A2907	A4901	A3901	A6920	A9902
	12	HK1913	A1910	A2910	A4903	A3903	A6924	A9903
	16	HK2117	A1911	A2911	A4905	A3905	A6932	A9903
	20	HK2517	A1913	A2913	A4905	A3905	A6940	A9903
H169	04	HK1013	A1901	A2901	A4900	A3900	A6914	A9901
	05	HK1113	A1902	A2902	A4900	A3900	A6914	A9901
	06	HK1213	A1904	A2904	A4901	A3901	A6916	A9902
	08	HK1413	A1905	A2905	A4901	A3901	A6916	A9902
	10	HK1613	A1907	A2907	A4901	A3901	A6920	A9902
	12	HK1913	A1910	A2910	A4903	A3903	A6924	A9903
	16	HK2117	A1912	A2912	A4905	A3905	A6932	A9903
	20	HK2517	A1913	A2913	A4904	A3904	A6940	A9903
	24	HK2917	A1916	A2916	A4907	A3907	A6948	A9904
	32	HK3417	A1919	A2919	-	-	-	A9904
H190	04	HK1013	A1902	A2902	A4900	A3900	A6914	A9901
	06	HK1213	A1904	A2904	A4901	A3901	A6916	A9902
	08	HK1413	A1906	A2906	A4901	A3901	A6916	A9902
	10	HK1613	A1908	A2908	A4901	A3901	A6920	A9902
	12	HK1913	A1910	A2910	A4903	A3903	A6924	A9903
	16	HK2517	A1913	A2913	A4905	A3905	A6932	A9903
H201	04	HK0913	A1901	A2901	A4900	A3900	A3612	A9901
	06	HK1113	A1903	A2903	A4901	A3901	A6914	A9901
	08	HK1313	A1905	A2905	A4901	A3901	A6916	A9902
	10	HK1613	A1907	A2907	A4902	A3902	A6920	A9902
	12	HK1813	A1908	A2908	A4903	A3903	A6924	A9903
H209	04	HK0809	A1900	A2900	A4900	A3900	A6910	A9900
	05	HK0913	A1902	A2902	A4900	A3900	A6914	A9900
	06	HK1013	A1903	A2903	A4901	A3901	A6914	A9900
	08	HK1213	A1905	A2905	A4901	A3901	A6920	A9902
H213	04	HK0913	A1901	A2901	A4900	A3900	A6910	A9900
	05	HK1013	A1902	A2902	A4900	A3900	A6914	A9900
	06	HK1113	A1903	A2903	A4900	A3900	A6914	A9901
	08	HK1313	A1905	A2905	A4901	A3901	A6920	A9902
	10	HK1413	A1907	A2907	A4902	A3902	A6920	A9902
	12	HK1713	A1908	A2908	A4903	A3903	A6924	A9902
	16	HK2017	A1911	A2911	A4904	A3904	A6928	A9903
H229	04	HK0913	A1901	A2901	A4900	A3900	A6910	A9901
	06	HK1213	A1904	A2904	A4901	A3901	A6914	A9902
	08	HK1413	A1905	A2905	A4902	A3902	A6924	A9902
	10	HK1613	A1907	A2907	A4902	A3902	A6924	A9902

RELATED PRODUCT



Hose Sleeves and Guards

HOSE TYPE	DASH SIZE	HOSE CLAMP	ROUND WIRE	FLAT WIRE	NYLON (.45)	NYLON (.90)	SILICONE	POLY
			SPRING GUARD	SPRING GUARD	ABRASION SLEEVE	ABRASION SLEEVE	FIBERGLASS FIRESLEEVE	HOSE GUARD
H229	12	HK2617	A1912	A2912	A4905	A3905	A6928	A9903
	16	HK2117	A1912	A2912	A4906	A3906	A6932	A9906
H239	04	HK0913	A1901	A2901	A4900	A3900	A6912	A9901
	08	HK1313	A1905	A2905	A4901	A3901	A6920	A9902
	10	HK1613	A1907	A2907	A4902	A3902	A6920	A9902
	12	HK1813	A1910	A2910	A4905	A3905	A6928	A9903
	16	HK2117	A1912	A2912	A4906	A3906	A6932	A9903
	20	HK2517	A1913	A2913	A4904	A3904	A6940	A9903
	H243	03	HK0709	A1900	A2900	A4900	A3900	A6910
	04	HK0709	A1900	A2900	A4900	A3900	A6914	A9900
	05	HK0809	A1902	A2902	A4900	A3900	A6914	A9901
	06	HK0913	A1903	A2903	A4901	A3901	A6920	A9901
	08	HK1113	A1905	A2905	A4902	A3902	A6920	A9902
	12	HK1513	A1909	A2909	A4904	A3904	A6924	A9903
	16	HK1913	A1911	A2911	A4905	A3905	A6928	A9904
H245	04	HK1013	A1902	A2902	A4900	A3900	A6914	A9901
	06	HK1013	A1904	A2904	A4903	A3903	A6920	A9902
	08	HK1213	A1906	A2906	A4904	A3904	A6924	A9902
	10	HK1413	A1907	A2907	A4904	A3904	A6924	A9902
	12	HK1613	A1910	A2910	A4905	A3905	A6928	A9903
	16	HK2317	A1913	A2913	A4906	A3906	A6932	A9903
	20	HK2917	A1916	A2916	A4907	A3907	A6940	A9904
	H265	04	HK0913	A1902	A2902	A4900	A3900	A6914
	06	HK1213	A1904	A2904	A4901	A3901	A6916	A9901
	08	HK1413	A1905	A2905	A4902	A3902	A6920	A9902
	12	HK1813	A1910	A2910	A4904	A3904	A6928	A9903
	16	HK2217	A1913	A2913	A4905	A3905	A6932	A9903
H275	03	HK0809	A1900	A2900	A4900	A3900	A6912	A9900
	04	HK0913	A1902	A2902	A4900	A3900	A6914	A9901
	06	HK1113	A1903	A2903	A4901	A3901	A6916	A9901
	08	HK1413	A1905	A2905	A4902	A3902	A6920	A9902
	12	HK1813	A1907	A2907	A4904	A3904	A6924	A9902
	16	HK2217	A1913	A2913	A4905	A3905	A6928	A9903
	20	HK2917	A1916	A2916	A4907	A3907	A6936	A9904
	24	HK3217	A1917	A2917	A4908	A3908	A6940	A9904
	32	HK3817	-	-	-	-	A6948	A9904
H277	03	HK0709	A1900	A2900	A4900	A3900	A6910	A9900
	04	HK0709	A1900	A2900	A4900	A3900	A6914	A9900
	05	HK0809	A1900	A2900	A4901	A3901	A6920	A9902
	06	HK0913	A1903	A2903	A4902	A3902	A6920	A9902
	08	HK1113	A1903	A2903	A4901	A3901	A6920	A9902
	12	HK1513	A1907	A2907	A4904	A3904	A6928	A9903
	16	HK1913	A1910	A2910	A4905	A3905	A6932	A9903

Hose Sleeves and Guards

Related Products

HOSE TYPE	DASH SIZE	HOSE CLAMP	ROUND WIRE	FLAT WIRE	NYLON (.45)	NYLON (.90)	SILICONE	POLY
			SPRING GUARD	SPRING GUARD	ABRASION SLEEVE	ABRASION SLEEVE	FIBERGLASS FIRESLEEVE	HOSE GUARD
H280	04	HK1013	A1901	A2901	A4900	A3900	A6914	A9901
	06	HK1213	A1904	A2904	A4901	A3901	A6920	A9902
	08	HK1413	A1906	A2906	A4901	A3901	A6920	A9902
	10	HK1613	A1907	A2907	A4904	A3904	A6928	A9903
	12	HK1913	A1910	A2910	A4904	A3904	A6928	A9903
	16	HK2517	A1913	A2913	A4905	A3905	A6932	A9903
H285	04	HK0913	A1900	A2900	A4900	A3900	A6914	A9900
	06	HK1213	A1903	A2903	A4901	A3901	A6916	A9901
	08	HK1413	A1905	A2905	A4901	A3901	A6920	A9902
	12	HK1813	A1910	A2910	A4904	A3904	A6924	A9903
	16	HK2217	A1912	A2912	A4905	A3905	A6928	A9903
H290	04	HK1113	A1903	A2903	A4900	A3900	A6914	A9901
	06	HK1313	A1905	A2905	A4901	A3901	A6916	A9902
	08	HK1513	A1907	A2907	A4902	A3902	A6920	A9902
	10	HK1713	A1909	A2909	A4904	A3904	A6924	A9903
	12	HK2017	A1910	A2910	A4904	A3904	A6928	A9903
	16	HK2517	A1913	A2913	A4904	A3904	A6932	A9903
H324	06	HK1313	A1905	A2905	A4900	A3900	A6924	A9902
H325	04	HK1013	A1903	A2903	A4900	A3900	A6914	A9901
	06	HK1313	A1905	A2905	A4900	A3900	A3616	A9902
	08	HK1513	A1907	A2907	A4901	A3901	A6920	A9902
	12	HK2017	A1910	A2910	A4904	A3904	A6928	A9903
	16	HK2517	A1913	A4913	A4904	A3904	A3932	A9903
H335	03	HK0913	A1901	A2901	A4900	A3900	A6916	A9901
	04	HK1113	A1903	A2903	A4901	A3901	A6916	A9902
	06	HK1313	A1904	A2904	A4902	A3902	A6920	A9902
	08	HK1513	A1907	A2907	A4902	A3902	A6924	A9902
	12	HK1913	A1910	A2910	A4903	A3903	A6924	A9903
	16	HK2517	A1913	A2913	A4905	A3905	A6928	A6603
H336	03	HK0913	A1901	A2901	A4900	A3900	A6916	A9901
	04	HK1113	A1903	A2903	A4901	A3901	A6916	A9902
	06	HK1313	A1904	A2904	A4902	A3902	A6920	A9902
	08	HK1513	A1907	A2907	A4902	A3902	A6924	A9903
	12	HK1913	A1910	A2910	A4903	A3903	A6924	A9903
	16	HK2517	A1913	A2913	A4905	A3905	A6928	A9902
H338	06	HK1313	A1905	A2905	A4900	A3900	A6920	A9902
	08	HK1513	A1907	A2907	A4901	A3901	A6920	A9902
H345	04	HK0913	A1900	A2900	A4900	A3900	A6916	A9901
	06	HK1113	A1904	A2904	A4900	A3900	A6920	A9902
	08	HK1313	A1905	A2905	A4901	A3901	A6924	A9902
H350	06	HK1313	A1904	A2904	A4901	A3901	A6916	A9902
	08	HK1513	A1906	A2906	A4901	A3901	A6916	A9902
	10	HK1813	A1908	A2908	A4904	A3904	A6924	A9903
	12	HK2017	A1910	A2910	A4905	A3905	A6928	A9903
	16	HK2517	A1913	A4913	A4906	A3906	A6936	A9903

RELATED PRODUCT



Hose Sleeves and Guards

HOSE TYPE	DASH SIZE	HOSE CLAMP	ROUND WIRE	FLAT WIRE	NYLON (.45)	NYLON (.90)	SILICONE	POLY
			SPRING GUARD	SPRING GUARD	ABRASION SLEEVE	ABRASION SLEEVE	FIBERGLASS FIRESLEEVE	HOSE GUARD
H366	06	HK1213	A1904	A2904	A4901	A3901	A6916	A9902
	08	HK1413	A1905	A2905	A4901	A3901	A6916	A9902
H400	10	HK1713	A1909	A2909	A4903	A3903	A6920	A9903
H425	04	HK1113	A1903	A2903	A4900	A3900	A6916	A9902
	06	HK1313	A1905	A2905	A4900	A3900	A6916	A9902
	08	HK1513	A1907	A2907	A4902	A3902	A6920	A9902
	10	HK1713	A1909	A2909	A4903	A3903	A6920	A9903
	12	HK2017	A1911	A2911	A4903	A3903	A6924	A9903
	16	HK2517	A1913	A2913	A4905	A3905	A6928	A9903
	20	HK3117	A1916	A2916	A4906	A3906	A6936	A9904
	24	HK3417	A1919	A2919	A4907	A3907	A6940	A9904
	32	HK3817	-	-	-	-	-	A9905
H430	08	HK1613	A1908	A2908	A4904	A3904	A6924	A9903
	12	HK2117	A1912	A2912	A4905	A3905	A6928	A9903
	16	HK2517	A1913	A2913	A4906	A3906	A6936	A9903
	20	HK3117	A1916	A2916	A4907	A3907	A6940	A9904
	24	-	A1919	A2919	A4907	A3907	A6940	A9904
	32	HK3817	-	-	-	-	-	A9905
H435	04	HK0809	A1900	A2900	A4900	A3900	A6912	A9901
	05	HK1013	A1903	A2903	A4900	A3900	A6912	A9901
	06	HK1113	A1904	A2904	A4900	A3900	A6916	A9901
	08	HK1413	A1906	A2906	A4902	A3902	A6920	A9902
	12	HK1813	A1910	A2910	A4903	A3903	A6924	A9903
	16	HK2317	A1913	A2913	A4904	A3904	A6928	A9903
H436	04	HK0809	A1900	A2900	A4900	A3900	A6912	A9901
	05	HK1013	A1903	A2903	A4900	A3900	A6912	A9901
	06	HK1113	A1904	A2904	A4901	A3901	A6916	A9901
	08	HK1413	A1906	A2906	A4902	A3902	A6920	A9902
	12	HK1813	A1910	A2910	A4903	A3903	A6924	A9903
	16	HK2317	A1913	A2913	A4904	A3904	A6928	A9903
H439	08	HK1613	A1907	A2907	A4903	A3903	A6924	A9902
	12	HK2117	A1911	A2911	A4904	A3904	A6928	A9903
	16	HK2517	A1913	A2913	A4906	A3906	A6936	A9903
	20	HK3117	A1916	A2916	A4907	A3907	A6940	A9904
	24	HK3417	A1919	A2919	A4907	A3907	A6940	A9904
	32	HK3817	-	-	-	-	-	A9905
H470	08	HK1713	A1908	A2908	A4901	A3901	A6916	A9902
	12	HK2117	A1911	A2911	A4904	A3904	A6928	A9903
	16	HK2517	A1913	A2913	A4904	A3904	A6928	A9903
	20	HK3217	A1917	A2917	A4906	A3906	A6936	A9904
	24	HK3417	A1919	A2919	A4907	A3907	A6940	A9904
	32	HK3817	-	-	-	-	-	A9905

Hose Sleeves and Guards

Related Products

HOSE TYPE	DASH SIZE	HOSE CLAMP	ROUND WIRE	FLAT WIRE	NYLON (.45)	NYLON (.90)	SILICONE	POLY
			SPRING GUARD	SPRING GUARD	ABRASION SLEEVE	ABRASION SLEEVE	FIBERGLASS FIRESLEEVE	HOSE GUARD
H545	04	HK1013	A1902	A2902	A4900	A3900	A6912	A9901
	06	HK1213	A1904	A2904	A4901	A3901	A6916	A9901
	08	HK1513	A1906	A2906	A4901	A3901	A6916	A9902
	10	HK1713	A1907	A2907	A4903	A3903	A6924	A9902
	12	HK2017	A1910	A2910	A4904	A3904	A6928	A9903
	16	HK2517	A1913	A2913	A4906	A3906	A6936	A9903
H569	04	HK0913	A1901	A2901	A4900	A3900	A6912	A9901
	05	HK1113	A1902	A2902	A4900	A3900	A6912	A9901
	06	HK1213	A1904	A2904	A4901	A3901	A6916	A9902
	08	HK1413	A1905	A2905	A4901	A3901	A6916	A9902
	10	HK1613	A1907	A2907	A4901	A3901	A6916	A9902
	12	HK1913	A1910	A2910	A4903	A3903	A6924	A9903
	16	HK2117	A1911	A2911	A4904	A3904	A6928	A9903
	20	HK2517	A1913	A2913	A4906	A3906	A6936	A9903
H757	06	HK1013	A1902	A2902	A4900	A3900	A6916	A9901
	08	HK1213	A1904	A2904	A4900	A3900	A6920	A9902
	10	HK1313	A1905	A2905	A4901	A3901	A6920	A9902
	12	HK1613	A1907	A2907	A4902	A3902	A6924	A9902
	14	HK1913	A1910	A2910	A4903	A3903	A6924	A9903
H900	04	HK1013	A1902	A2902	A4900	A3900	A6912	A9901
	06	HK1313	A1904	A2904	A4900	A3900	A6914	A9902
	08	HK1613	A1907	A2907	A4903	A3903	A6920	A9902
	12	HK2117	A1910	A2910	A4904	A3904	A6924	A9903
	16	HK2517	A1913	A2913	A4904	A3904	A6924	A9903
H1571	12	HK2017	A1910	A2910	A4904	A3904	A6924	A9903
H1719	10	HK1413	A1906	A2906	A4902	A3902	A6920	A9902
	12	HK1813	A1909	A2909	A4902	A3902	A6920	A9903
H1776	04	HK0913	A1902	A2902	A4900	A3900	A6914	A9902
	06	HK1313	A1904	A2904	A4900	A3900	A6914	A9902
	08	HK1513	A1907	A2907	A4901	A3901	A6920	A9902
	10	HK1813	A1908	A2908	A4902	A3902	A6924	A9903
	12	HK2017	A1910	A2910	A4903	A3903	A6924	A9903
	16	HK2517	A1913	A2913	A4906	A3906	A6932	A9903
	20	HK2117	A1916	A2916	A4906	A3906	A6932	A9903
	24	HK3317	A1917	A2917	A4907	A3907	A6936	A9904
H1777	04	HK0913	A1902	A2902	A4900	A3900	A6914	A9901
	05	HK1113	A1903	A2903	-	-	A6910	A9901
	06	HK1113	A1904	A2904	A4900	A3900	A6916	A9901
	08	HK1413	A1906	A2906	A4902	A3902	A6920	A9902
H1941	04	HK0913	A1902	A2902	A4900	A3900	A6914	A9901
	05	HK1013	A1903	A2903	A4900	A3900	A6914	A9901
	06	HK1213	A1904	A2904	A4901	A3901	A6916	A9902
	08	HK1413	A1906	A2906	A4900	A3900	-	A9902

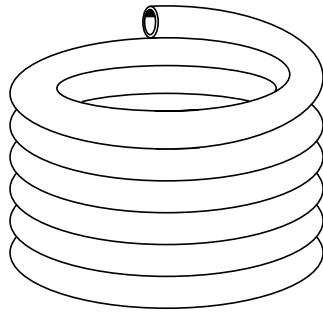
RELATED PRODUCT



Hose Sleeves and Guards

HOSE TYPE	DASH SIZE	HOSE CLAMP	ROUND WIRE	FLAT WIRE	NYLON (.45)	NYLON (.90)	SILICONE	POLY
			SPRING GUARD	SPRING GUARD	ABRASION SLEEVE	ABRASION SLEEVE	FIBERGLASS FIRESLEEVE	HOSE GUARD
H1987	10	HK1613	A1908	A2908	A4903	A3903	A6920	A9902
	12	HK2117	A1910	A2910	A4904	A3904	A6924	A9903
H6002	08	HK1613	A1907	A2907	A4903	A3903	A6920	A9902
	12	HK2017	A1910	A2910	A4904	A3904	A6924	A9903
	16	HK2517	A1913	A2913	A4906	A3906	A6928	A9903
	20	HK3117	A1916	A2916	A4906	A3906	A6932	A9904
	24	HK3317	A1917	A2917	A4907	A3907	A6940	A9904
	32	HK3817	-	-	-	-	-	-
H6008	16	HK2517	A1913	A2913	A4904	A3904	A6924	A9903
	24	HK3417	A1919	A2919	A4907	A3907	A6940	A9904
	32	HK3817	-	-	-	-	A6948	A9905
H6009	20	HK3117	A1916	A2916	A4906	A3906	A6932	A9904
	24	HK3417	A1917	A2917	A4907	A3907	A6940	A9904
	32	HK3817	-	-	-	-	A6948	A9905
H8679	10	HK1613	A1907	A2907	A4903	A3903	A6920	A9902
H9603	16	HK2517	A1913	A2913	A4904	A3904	A6928	A9904
H9610	06	HK1213	A1904	A2904	A4901	A3901	A6916	A9902
	08	HK1513	A1907	A2907	A4902	A3902	A6920	A9902
	12	HK2017	A1910	A2910	A4903	A3903	A6924	A9903
H9622	08	HK1613	A1908	A2908	A4901	A3901	-	-
	16	HK2517	A1913	A2913	A4906	A3906	A6928	A9903
	20	HK2917	A1915	A2915	A4906	A3906	A6928	A9904
	24	HK3417	A1919	A2919	A4907	A3907	A6940	A9904
	32	HK3817	-	-	-	-	A6948	A9905
H9949	04	HK1113	A1903	A2903	A4900	A3900	A6912	A9901
	06	HK1313	A1904	A2904	A4900	A3900	A6914	A9902
	08	HK1513	A1907	A2907	A4901	A3901	A6920	A9903
	12	HK2017	A1910	A2910	A4903	A3903	A6924	A9903
	16	HK2517	A1913	A2913	A4906	A3906	A6932	A9903
H9000	04	HK1013	A1902	A2902	A4900	A3900	A6912	A9901
	06	HK1313	A1904	A2904	A4900	A3900	A6914	A9902
	08	HK1613	A1907	A2907	A4903	A3903	A6920	A9902
	12	HK1813	A1909	A2909	A4904	A3904	A6924	A9903
	16	HK2517	A1913	A2913	A4906	A3906	A6928	A9903
H1942	08	HK1513	A1907	A2907	A4901	A3901	A6920	A9902
	12	HK2017	A1910	A2910	A4904	A3904	A6924	A9903
	16	HK2517	A1913	A2913	A4904	A3904	A6932	A9903

H130 Coiled Hose Polycoil® Hose



- Hose Construction: Nylon 12 extruded.
- Color: Yellow
- Temperature: -40°F to +200°F (-40°C to +93°C)
- Application: All types of air tools.
- Working Length: For 100' of Polycoil® is 94'.
- Easy to clean.
- Self-retracting.
- Lightweight.
- Easy to handle.
- Out of the way when not in use.
- Eliminates need for reels and other expensive take-up devices.
- May also be ordered as ready-made hose assemblies. See below.

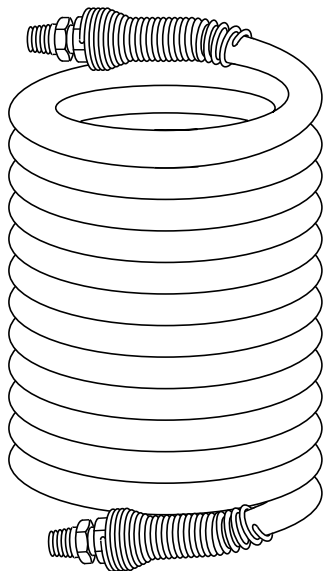
Hose I.D.	Hose O.D.	Catalog Number	Recom. Oper. Press. at 78°F	Min. Burst Press.	Retracted Length	*Std. Pack
1/4	.316	H13004-100	200	800	39-1/4	1200'
3/8	.465	H13006-100	200	800	34-1/2	600'

*Packaged in 100' continuous lengths.

Higher temperatures reduce pressure capabilities and retractability.

CAUTION: Product should not be used in applications where temperature exceeds 200° F. Exceeding temperature level could result in hose rupture.

Polycoil® Assemblies



Nominal Hose I.D.	Maximum Working Length	Male Pipe Rigid	Male Pipe Swivel	Catalog Number	Nominal Coil O.D.
1/4"	10.5'	—	1/4"	13004JJ-12†	3-1/2"
1/4"	10.5'	1/4"	1/4"	130041J-12	3-1/2"
1/4"	10.5'	1/4"	—	1300411-12*	3-1/2"
1/4"	23.5'	—	1/4"	13004JJ-25†	3-1/2"
1/4"	23.5'	1/4"	1/4"	130041J-25	3-1/2"
1/4"	23.5'	1/4"	—	1300411-25*	3-1/2"
1/4"	47'	—	1/4"	13004JJ-50†	3-1/2"
1/4"	47'	1/4"	1/4"	130041J-50	3-1/2"
1/4"	47'	1/4"	—	1300411-50*	3-1/2"
3/8"	10.5'	—	3/8"	13006JJ-12†	5-3/4"
3/8"	10.5'	3/8"	3/8"	130061J-12	5-3/4"
3/8"	10.5'	3/8"	—	1300611-12*	5-3/4"
3/8"	23.5'	—	3/8"	13006JJ-25†	5-3/4"
3/8"	23.5'	3/8"	3/8"	130061J-25	5-3/4"
3/8"	23.5'	3/8"	—	1300611-25*	5-3/4"
3/8"	47'	—	3/8"	13006JJ-50†	5-3/4"
3/8"	47'	3/8"	3/8"	130061J-50	5-3/4"
3/8"	47'	3/8"	—	1300611-50*	5-3/4"

†Male pipe swivel on both ends. *Male pipe rigid on both ends.

RELATED PROD

13000 Series Brass Hose Ends

Typical Application: Shop air with pneumatic air tools.

Material: CA360 Brass.


Used With: H130 Hose.



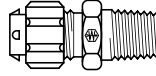

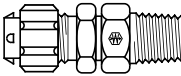
Advantages: Self-storing, compact and low cost.



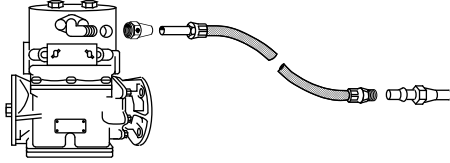
Polycoil® Assembly Instructions

1. Assemble onto hose in this order:
 - a. Spring guard
 - b. Nut and sleeve
 - c. End fitting—make sure hose is bottomed
2. Tighten nut and sleeve onto fitting—finger tight
3. Tighten nut onto fitting 1-1/2 additional turns
4. Assemble spring guard over nut

 **Caution:** Overtightening may be detrimental to the connection.

Nut (Brass) 	Hose I.D.		Catalog Number
	1/4 3/8		13004-B 13006-B
Spring Guard (Steel) 	Hose I.D.		Catalog Number
	1/4 3/8		13004-C 13006-C
Male Pipe Rigid (Brass) 	Hose I.D.	Male Pipe Size	Catalog Number
	1/4 3/8	1/4 3/8	13004-1 13006-1
Sleeve (Plastic) 	Hose I.D.		Catalog Number
	1/4 3/8		13004-A 13006-A
Male Pipe Swivel (Brass) 	Hose I.D.	Male Pipe Size	Catalog Number
	1/4 3/8	1/4 3/8	13004-J 13006-J

Air Compressor Discharge Teflon® Hose Assemblies



Teflon® is a registered trademark of DuPont.

Replace troublesome copper tubing running from the air compressor discharge to the reservoir with ready-made Teflon® assemblies. Hoses of Teflon® assemblies eliminate tubing failures caused by vibration and heat. And they are easy to install with standard air brake nuts and sleeves. No special fittings or adapters needed.

Max. Working Pressure: 1000 PSI

Temperature Range: -65°F to +450°F (-18°C to +232°C)

Standpipe to Male Air Brake



	Length	Catalog Number
1/2" hose I.D. – 1/2" tube size	24"	WTY824
	30"	WTY830
	36"	WTY836
	48"	WTY848
5/8" hose I.D. – 5/8" tube size	24"	WTY024
	30"	WTY030
	36"	WTY036
	48"	WTY048
5/8" hose I.D. – 3/4" tube size	24"	WTY224
	30"	WTY230
	36"	WTY236
	48"	WTY248

Standpipe to Standpipe



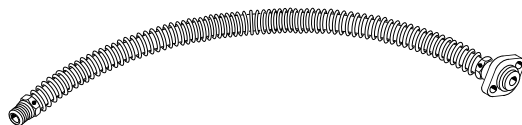
	Length	Catalog Number
1/2" hose I.D. – 1/2" tube size	24"	WTT824
	36"	WTT836
5/8" hose I.D. – 5/8" tube size	24"	WTT024
	36"	WTT036
5/8" hose I.D. – 3/4" tube size	24"	WTT224
	36"	WTT236

SAE 45° FLARE TO SAE 45° FLARE



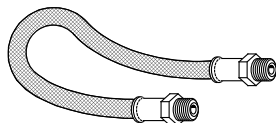
	Length	Catalog Number
1/2" hose I.D. – 5/8" tube size	34"	W44034
	38"	W44038
	40"	W44040
	42"	W44042
	48"	W44048
	50"	W44050
	52"	W44052
	54"	W44054
5/8" hose I.D. – 3/4" tube size	67"	W44067
	35"	W44235
	39"	W44239
	52"	W44252

Air Compressor Discharge Teflon® Hose Assembly for GM Buses



	Overall Length	Catalog Number	Replaces GM Number
3/4" male pipe to flange	27-5/8"	W67157	2267157

Fuel Line Hose Assembly

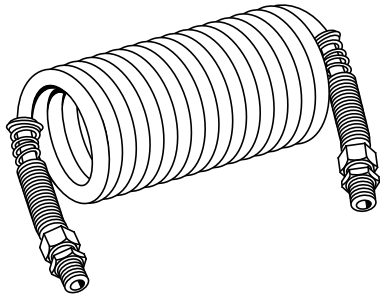


Catalog Number	Inverted Flare
11100	5/16"

11100 preformed fuel line assembly fits all Ford Escort and Mercury Lynx cars through 1986. 5/16" inverted flare swivel hose ends, steel braided cover. Replaces OEM part number E1FZ9327-F.

Air compressor discharge hose assemblies can also be made using Boston Weatherhead's H243 hose and 'E' Series hose ends with the Coll-O-Crimp® field crimping system.

Coiled Air Brake Tube Assemblies



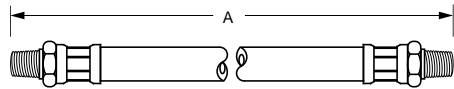
*Each catalog number contains a coiled red assembly and a coiled blue assembly.

Conforms to SAE J844 Type B and SAE J1131.
 Conforms to DOT FMVSS 571.106.
 Brass end fittings with spring guards and 1/2" male pipe connections.
 Spring guards zinc plated for maximum corrosion resistance.
 Preassembled for immediate installation.
Maximum Working Pressure: 150 PSI. **Minimum Burst:** 950 PSI.
Temperature Range: -40°F to +200°F (-40°C to +93°C).
Color Coding: Red for emergency and blue for service.

Catalog Number	Tube O.D.	Male Pipe	Working Length	Pigtail Length
W1206*	1/2"	1/2"	12'	6"
W1212*	1/2"	1/2"	12'	12"
W1212-1R	1/2"	1/2"	12'	12"
W1212-1B	1/2"	1/2"	12'	12"
W1512*	1/2"	1/2"	15'	12"
W1512-1R	1/2"	1/2"	15'	12"
W1512-1B	1/2"	1/2"	15'	12"

Grease Hose Whip Ends for High Pressure Grease Applications

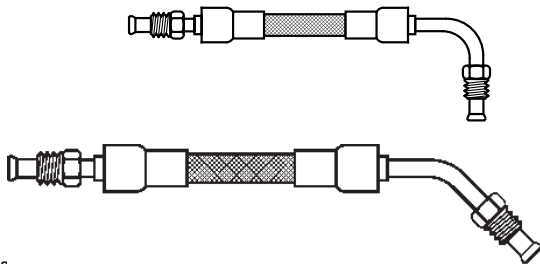
Max. Working Pressure: 3000 PSI
Temperature Range: -40°F to +200°F (-40°C to +93°C)



Catalog Number	Pipe Thread	Hose I.D.	A	Hose Material
11312	1/8-27	3/16"	12"	Rubber
11318	1/8-27	3/16"	18"	Rubber
11352	1/8-27	3/16"	12"	Nylon
11358	1/8-27	3/16"	18"	Nylon

NOTE: Use with hand operated grease gun only!

Power Trim Hose Assembly



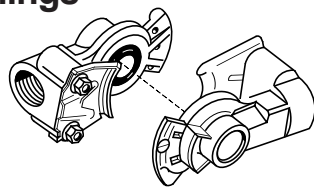
Teflon[®] is a registered trademark of DuPont.

Expand your service to marinas with the new Inboard/Outboard Power Trim Hose of Teflon[®] assemblies from Boston Weatherhead. These hose assemblies offer a working pressure of 3000 PSI and temperature range of -65°F to +450°F. It is available in the most popular size, 3/16" I.D., 14-1/2" long, with inverted nut end styles. You also get the non-aging and temperature resistant qualities of Teflon[®] plus the corrosion resistance of 300 Series stainless steel fittings and braid.

Catalog Number	Overall Length	Fitting Description
1909	14-1/2"	3/16" Inv. Nut Straight x 3/16" Inv. Nut 90° Elbow
1910	14-1/2"	3/16" Inv. Nut Straight x 3/16" Inv. Nut 45° Elbow

Gladhand Couplings

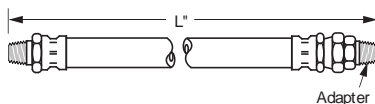
- Die cast aluminum body
- Conforms to SAE J318
- Connects to 1/2" pipe



	Catalog Number
SERVICE (Signal) (Connects only to service)	W79850
EMERGENCY (Supply line) (Connects only to emergency)	W79851
UNIVERSAL (Connects to all three styles)	W76150
GLADHAND SEAL	W14630**

** For use with W79850, W79851, and W76150 Gladhands.

Air Brake Air Chamber Hose Lines



- Low cost
- Ready to install
- Available in both 3/8" and 1/2" I.D. (see next page for details)

Ready-Made Hose Assemblies

Related Products

Air Brake Air Chamber Hose Lines

Hose Assy. I.D.	Male Pipe	Air Brake Swivel	Length L (Inches)	Factory Made Catalog Number**	Previous Catalog Number
1/2"	3/8"	3/8"	15"	38353-01500	
1/2"	3/8"	3/8"	16"	38353-01600	
1/2"	3/8"	3/8"	18"	38353-01800	W86471
1/2"	3/8"	3/8"	19"	38353-01900	
1/2"	3/8"	3/8"	20-3/8"	38353-02037	W86539
1/2"	3/8"	3/8"	22"	38353-02200	
1/2"	3/8"	3/8"	23"	38353-02300	
1/2"	3/8"	3/8"	24"	38353-02400	W86472
1/2"	3/8"	3/8"	26"	38353-02600	
1/2"	3/8"	3/8"	28-3/8"	38353-02837	W86473
1/2"	3/8"	3/8"	30"	38353-03000	W86550
1/2"	3/8"	3/8"	32"	38353-03200	W86552
1/2"	3/8"	3/8"	34-3/8"	38353-03437	W86554
1/2"	3/8"	3/8"	36"	38353-03600	W86555
1/2"	3/8"	3/8"	41-1/8"	38353-04112	W86559
1/2"	3/8"	3/8"	44"	38353-04400	
1/2"	3/8"	3/8"	46"	38353-04600	
1/2"	3/8"	3/8"	48"	38353-04800	
1/2"	3/8"	3/8"	60"	38353-06000	
1/2"	3/8"	3/8"	72"	38353-07200	

Air chamber hose assemblies can also be made using Weatherhead's® H338 hose, 33808P-106 and 33808P-Y76 hose ends, and 1390x6x6 adapter with the Coll-O-Crimp® field crimping system.

**Adapter included 3/8" A.B.S. to 3/8" male pipe. Adapter Catalog no. 1390X6X6.

Hose Assy. I.D.	Male Pipe	Air Brake Swivel	Length L (Inches)	Factory Made Catalog Number*	Previous Catalog Number
3/8"	1/4"	3/8"	18-1/8"	38166-01812	W28471
3/8"	1/4"	3/8"	20-3/8"	38166-02137	W28539
3/8"	1/4"	3/8"	22"	38166-02200	
3/8"	1/4"	3/8"	24-1/8"	38166-02412	W28472
3/8"	1/4"	3/8"	24-7/8"	38166-02487	
3/8"	1/4"	3/8"	26"	38166-02600	
3/8"	1/4"	3/8"	27-5/8"	38166-02762	
3/8"	1/4"	3/8"	28-3/8"	38166-02837	W28473
3/8"	1/4"	3/8"	29-1/8"	38166-02912	
3/8"	1/4"	3/8"	30-1/8"	38166-03012	W28550
3/8"	1/4"	3/8"	32"	38166-03200	W28552
3/8"	1/4"	3/8"	34"	38166-03400	
3/8"	1/4"	3/8"	34-3/8"	38166-03437	W28554
3/8"	1/4"	3/8"	36-1/8"	38166-03612	W28555
3/8"	1/4"	3/8"	38-1/8"	38166-03812	
3/8"	1/4"	3/8"	40"	38166-04000	
3/8"	1/4"	3/8"	41-1/8"	38166-04112	W28559
3/8"	1/4"	3/8"	42"	38166-04200	
3/8"	1/4"	3/8"	48"	38166-04800	
3/8"	1/4"	3/8"	60"	38166-06000	
3/8"	1/4"	3/8"	72"	38166-07200	

Air chamber hose assemblies can also be made using Weatherhead's® H33806 hose, 33806P-104 and 33806P-Y76 hose ends, and 1390x6 adapter with the Coll-O-Crimp® field crimping system.

*Adapter included 3/8" A.B.S. to 1/4" male pipe. Catalog No. 1390x6.

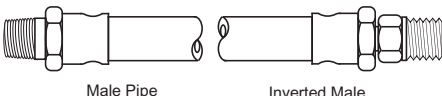
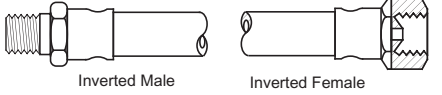
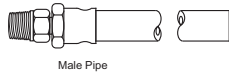
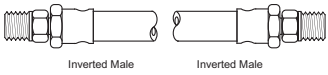
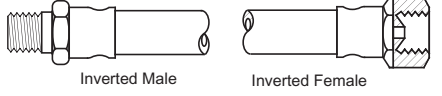
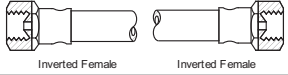
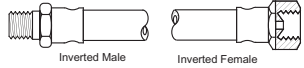
Hose Assy. I.D.	Male Pipe	Air Brake Swivel	Length L (Inches)	Factory Made Catalog Number**	Previous Catalog Number
3/8"	3/8"	3/8"	18"	38097-01800	
3/8"	3/8"	3/8"	20"	38097-02000	
3/8"	3/8"	3/8"	24"	38097-02400	
3/8"	3/8"	3/8"	26"	38097-02600	
3/8"	3/8"	3/8"	28"	38097-02800	
3/8"	3/8"	3/8"	30"	38097-03000	
3/8"	3/8"	3/8"	32"	38097-03200	
3/8"	3/8"	3/8"	34"	38097-03400	
3/8"	3/8"	3/8"	40"	38097-04000	
3/8"	3/8"	3/8"	42"	38097-04200	
3/8"	3/8"	3/8"	60"	38097-06000	
3/8"	3/8"	3/8"	72"	38097-07200	

**Adapter included 3/8" A.B.S. to 3/8" male pipe. Catalog no. 1390X6X6. Air chamber hose assemblies can also be made using Weatherhead's® H33806 hose, 33806P-106 and 33806P-Y76 hose ends, and 1390x6x6 adapter with the Coll-O-Crimp® field crimping system.



***Automobile, Light Truck Gas/Oil Lines**

Max. Working Pressure: 50 PSI
 Temperature Range: -40°F to +257°F

	Catalog Number	Overall Length	Fitting Description
 <p>Male Pipe Inverted Male</p>	11461	10"	1/8" Male Pipe x 1/4" Inv. Male
	11462	12"	1/8" Male Pipe x 1/4" Inv. Male
	11463	13"	1/8" Male Pipe x 1/4" Inv. Male
	11464	15"	1/8" Male Pipe x 1/4" Inv. Male
	11465	21"	1/8" Male Pipe x 1/4" Inv. Male
	11466	28"	1/8" Male Pipe x 1/4" Inv. Male
	11474	19"	1/8" Male Pipe x 1/4" Inv. Male
	11477	17"	1/8" Male Pipe x 1/4" Inv. Male
 <p>Inverted Male Inverted Female</p>	11079	6-5/8"	1/8" Male Pipe x 5/16" Inv. Female
	11076	8-1/4"	1/8" Male Pipe x 5/16" Inv. Female
	11205	8-7/8"	1/8" Male Pipe x 5/16" Inv. Female
	11215	9-3/8"	1/8" Male Pipe x 5/16" Inv. Female
	11093	18"	1/8" Male Pipe x 5/16" Inv. Female
	11217	7-1/2"	1/4" Male Pipe x 3/8" Inv. Female
 <p>Male Pipe</p>	11223	15-1/4"	1/8" Male Pipe (one end only), other end blank
	 <p>Inverted Male Inverted Male</p>	11486	10"
 <p>Inverted Male Inverted Female</p>		11080	5"
	11224	7"	1/4" Inv. Male x 1/4" Inv. Female
	11089	10-5/8"	1/4" Inv. Male x 1/4" Inv. Female
	11078	7"	5/16" Inv. Male x 5/16" Inv. Female
	11212	7-7/8"	5/16" Inv. Male x 5/16" Inv. Female
	11041	9"	5/16" Inv. Male x 5/16" Inv. Female
	11208	10-3/4"	5/16" Inv. Male x 5/16" Inv. Female
 <p>Inverted Female Inverted Female</p>	11219	6-1/4"	5/16" Inv. Female x 5/16" Inv. Female
 <p>Inverted Male Inverted Female</p>	11009	8-7/8"	Special Ford Ends
	11082	8-7/8"	Special Ford Male x Inv. Female

NOTE:

A-C lists filter lines FT7 to FT72 made up using double compression ends. We recommend the more popular Boston Weatherhead 81430 Series listed below.

***Automobile, Light Truck Universal Type Filter Lines**

(1/4" SAE Swivel Nut to 1/8" Male Pipe)

Max. Working Pressure: 400 PSI

Temperature Range: -40°F to +250°F

Hose End Material is Brass



Catalog Number	Overall Length	Catalog Number	Overall Length
81430-8	8"	81430-20	20"
81430-10	10"	81430-22	22"
81430-12	12"	81430-24	24"
81430-14	14"	81430-28	28"
81430-16	16"	81430-30	30"
81430-18	18"	81430-36	36"

*The hose assemblies listed are for automobile or light truck (up to 3/4 ton pickup truck) application only. Consult Boston Weatherhead Technical Support at 1-800-776-3262 prior to any other use.

Hose Clamps

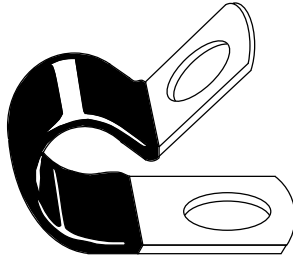
Related Products

Hose Clamps

Typical Application: Hose support for long hose lengths. Also used to insure proper hose routing where abrasion, moving parts or heat may exist.

Material: C1010 steel with 1/32" thick black vinyl cushion.

Plating: Zinc-plated dichromate finish.

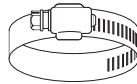


Clamping Dia.	Catalog Number	Bolt Hole
1/4	HK0509	1/4
3/8	HK0709	9/32
7/16	HK0809	9/32
1/2	HK0913	13/32
9/16	HK1013	13/32
5/8	HK1113	13/32
11/16	HK1213	13/32
3/4	HK1313	13/32
13/16	HK1413	13/32
7/8	HK1513	13/32
15/16	HK1613	13/32
1	HK1713	13/32
1-1/16	HK1813	13/32
1-1/8	HK1913	13/32
1-3/16	HK2017	17/32
1-1/4	HK2117	17/32
1-3/8	HK2317	17/32
1-1/2	HK2517	17/32
1-9/16	HK2617	17/32
1-3/4	HK2917	17/32
1-7/8	HK3117	17/32
1-15/16	HK3217	17/32
2	HK3317	17/32
2-5/32	HK3417	17/32
2-21/32	HK3817	17/32

Miniature Size Clamps

Typical Application: Industrial, automotive, agriculture, and general market applications.

Material: Plated band and housing – 301 stainless steel; 5/16" (8mm) band width. Screw – 1/4" carbon steel.

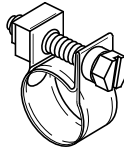


Clamp Size	Catalog Number	Min. Dia.	Max. Dia.	Nominal Dia.
04	6202	.219	.625	.25

E.F.I. Hose Clamps

Typical Application: Electronic fuel injection hose.

Material: Plated carbon steel; 23/64" (9mm) band width.



Clamp Size	Catalog Number	Min. Dia.	Max. Dia.	Nominal Dia.
04	6207-004	.433	.551	.512
05	6207-005	.472	.590	.551
06	6207-006	.551	.669	.630

Round Wire Clamps

Typical Application: Industrial, automotive, agriculture, and general market applications.

Material: Carbon steel spring wire.

Plating: Zinc-plated dichromate finish.



Clamp Size	Hose Size	Catalog Number	Min. Dia.	Max. Dia.	Nominal Dia.
06	1/4	1538	.370	.380	.375
08	5/16	1539	.551	.573	.562
10	3/8	1540	.610	.640	.625

RELATED PROD

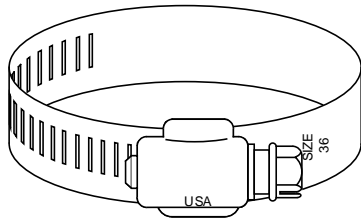


Full and Micro Size Partial Stainless Steel Clamps SAE J1508 Type F

Clamps are suitable for a wide variety of uses including automotive, heavy-duty equipment, agriculture, and general industry.

Weatherhead® partial stainless steel clamps utilize a 300 Series stainless steel band and housing with a steel case-hardened, zinc-plated and chromate-dipped screw. They feature a 9/16" (14.3mm) band housing with a 5/16" (8mm) hexagon and screwdriver slotted screw.

Micro part stainless clamps have a 5/16" (8mm) band and housing manufactured with a 300 Series stainless steel.



*Micro size clamps

Clamp Size	Catalog Number	Min. Dia.	Max. Dia.	Nominal Dia.
*004	6205-004	7/32	5/8	1/4
*006	6205-006	5/16	7/8	1/2
006	6203-006	3/8	7/8	1/2
008	6203-008	7/16	1	9/16
010	6203-010	9/16	1-1/16	5/8
012	6203-012	9/16	1-1/4	3/4
016	6203-016	11/16	1-1/2	1
020	6203-020	3/4	1-3/4	1-1/4
024	6203-024	1-1/16	2	1-1/2
028	6203-028	1-5/16	2-1/4	1-3/4
032	6203-032	1-9/16	2-1/2	2
036	6203-036	1-13/16	2-3/4	2-1/4
040	6203-040	2-1/16	3	2-1/2
044	6203-044	2-5/16	3-1/4	2-3/4
048	6203-048	2-9/16	3-1/2	3
052	6203-052	2-13/16	3-3/4	3-1/4
056	6203-056	3-1/16	4	3-1/2
064	6203-064	3-9/16	4-1/2	4
072	6203-072	4-1/16	5	4-1/2
080	6203-080	4-5/8	5-1/2	5
088	6203-088	4-3/32	6	5-1/2
096	6203-096	4-1/2	6-1/2	6
104	6203-104	5	7	6-1/2

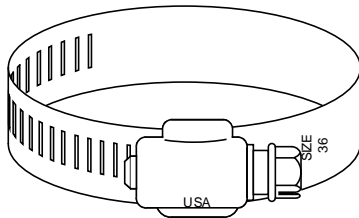
Full and Micro Size All Stainless Steel Clamps SAE J1508 Type F

Weatherhead's® all stainless steel construction offers maximum protection against corrosion. Applications include chemical, marine, food processing, dairy, automotive, electrical and plumbing.

Full size all stainless clamps are manufactured with 300 Series stainless steel. They feature a 9/16" (14.3mm) band and housing with a 5/16" (8mm) hexagon and screwdriver slotted screw.

Micro all stainless clamps have a 5/16" (8mm) band housing manufactured with a 300 Series stainless steel.

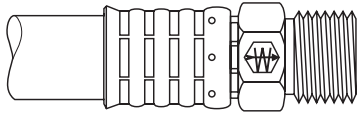
The 1/4" (6.35mm) hexagon and screwdriver slotted screw features 410 stainless steel.



*Micro size clamps

Clamp Size	Catalog Number	Min. Dia.	Max. Dia.	Nominal Dia.
*004	6206-004	7/32	5/8	1/4
*006	6206-006	5/16	7/8	1/2
006	6204-006	3/8	7/8	1/2
008	6204-008	7/16	1	9/16
010	6204-010	9/16	1-1/16	5/8
012	6204-012	9/16	1-1/4	3/4
016	6204-016	11/16	1-1/2	1
020	6204-020	3/4	1-3/4	1-1/4
024	6204-024	1-1/16	2	1-1/2
028	6204-028	1-5/16	2-1/4	1-3/4
032	6204-032	1-9/16	2-1/2	2
036	6204-036	1-13/16	2-3/4	2-1/4
040	6204-040	2-1/16	3	2-1/2
044	6204-044	2-5/16	3-1/4	2-3/4
048	6204-048	2-9/16	3-1/2	3
052	6204-052	2-13/16	3-3/4	3-1/4
056	6204-056	3-1/16	4	3-1/2
064	6204-064	3-9/16	4-1/2	4
072	6204-072	4-1/16	5	4-1/2
080	6204-080	4-5/8	5-1/2	5
088	6204-088	4-3/32	6	5-1/2
096	6204-096	4-1/2	6-1/2	6
104	6204-104	5	7	6-1/2

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.



Hose End Series: 'E' Series

Typical Application: General purpose low- and medium-pressure hydraulics. Use H277 or H435 where shock hazards exist.

Pressure: Determined by maximum working pressure for hose size and hose end configuration whichever is lesser. See page 15 for working pressure ratings for hose end configurations.

Material: Low Carbon Steel

Plating: Zinc; yellow dichromate finish

Advantages: Wide selection of hose and end configurations allowing for a diverse number of applications where hose compatibility is a problem.

Assemble With: T-400-1, T-410-1, T-420-1, T-440-1, T-460, T-462, T-465-1, T480.

Ordering Information: Order individually by catalog number.

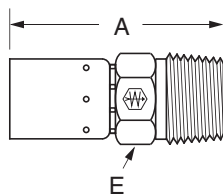
NOTE: Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

Label Set: FS-1200

WARNING: For Teflon hose applications, 'E' Series fittings must be used with H243 and H277 .030" thin wall hose only.

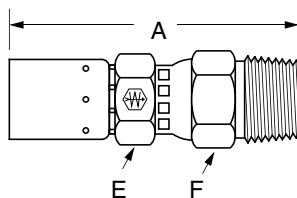
Refer to important safety information on pages 1-2.

Male Pipe Rigid



Hose I.D.	Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
3/16	1/8	03E-102	1/8-27	1.58	.75	.09	7/16
3/16	1/4	03E-104	1/4-18	1.83	1.00	.09	9/16
1/4	1/8	04E-102	1/8-27	1.60	.75	.16	7/16
1/4	1/4	04E-104	1/4-18	1.79	1.00	.16	9/16
1/4	3/8	04E-106	3/8-18	1.82	1.00	.16	11/16
5/16	1/4	05E-104	1/4-18	1.86	.94	.22	9/16
5/16	3/8	05E-106	3/8-18	1.89	1.00	.22	11/16
3/8	1/4	06E-104	1/4-18	1.90	1.00	.27	9/16
3/8	3/8	06E-106	3/8-18	1.93	1.00	.27	11/16
3/8	1/2	06E-108	1/2-14	2.17	1.25	.27	7/8
1/2	3/8	08E-106	3/8-18	2.02	1.00	.38	3/4
1/2	1/2	08E-108	1/2-14	2.27	1.25	.38	7/8
3/4	3/4	12E-112	3/4-14	2.51	1.31	.61	1-1/16
1	1	16E-116	1-11-1/2	2.95	1.63	.84	1-3/8

Male Pipe Swivel



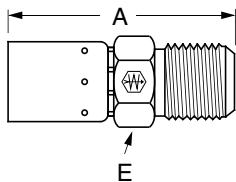
Hose I.D.	Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	1/4	04E-J04	1/4-18	2.68	1.81	.16	5/8	13/16
5/16	1/4	05E-J04	1/4-18	2.75	1.81	.22	5/8	13/16
3/8	3/8	06E-J06	3/8-18	2.79	1.81	.27	11/16	7/8
1/2	1/2	08E-J08	1/2-14	3.03	2.00	.39	3/4	7/8
3/4	3/4	12E-J12	3/4-14	3.73	2.50	.61	1-1/4	1-1/4

NOTE: Swivel for installation purposes only. (Not for temperatures above 212°F.)

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

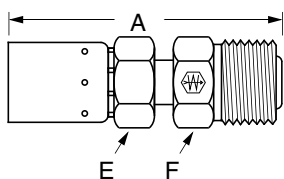
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

JIC 37° Male Rigid



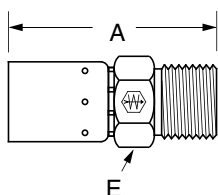
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
1/4	1/4	04E-504	7/16-20	1.78	.94	.16	1/2
1/4	5/16	04E-505	1/2-20	1.78	.94	.19	9/16
1/4	3/8	04E-506	9/16-18	1.82	1.00	.22	5/8
5/16	5/16	05E-505	1/2-20	1.86	.94	.22	9/16
3/8	3/8	06E-506	9/16-18	1.92	1.00	.27	5/8
3/8	1/2	06E-508	3/4-16	2.08	1.19	.27	13/16
1/2	1/2	08E-508	3/4-16	2.18	1.19	.27	13/16
1/2	5/8	08E-510	7/8-14	2.31	1.25	.42	15/16
3/4	3/4	12E-512	1-1/16-12	2.63	1.44	.61	1-1/8
1	1	16E-516	1-5/16-12	2.83	1.50	.84	1-3/8

Inverted Male Swivel Straight



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	3/16	04E-B03	3/8-24	3.06	2.19	.12	7/16	3/8
1/4	1/4	04E-B04	7/16-24	2.44	1.63	.15	7/16	7/16
1/4	5/16	04E-B05	1/2-20	3.71	2.88	.16	7/16	1/2
5/16	5/16	05E-B05	1/2-20	2.57	1.61	.21	9/16	1/2
3/8	5/16	06E-B05	1/2-20	2.56	1.63	.21	9/16	1/2
3/8	3/8	06E-B06	5/8-18	2.81	1.81	.24	5/8	5/8
1/2	1/2	08E-B08	3/4-18	3.14	2.06	.33	3/4	3/4

Air Brake Connection – Tube (For Use With H243 Teflon® Hose Only)

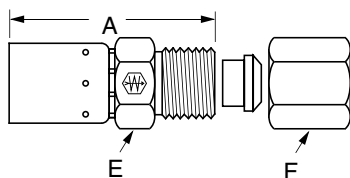


Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
1/2	1/2	08E-Y58	11/16-20	2.12	1.06	.38	3/4
1/2	5/8	08E-Y60	13/16-18	2.18	1.13	.38	7/8
3/4	5/8	12E-Y60	13/16-18	2.31	1.13	.53	1
3/4	3/4	12E-Y62	1-18	2.38	1.19	.61	1

Hose to Copper Tubing

Tube Size	Catalog Number Sleeve	Catalog Number Nut
3/8	1360x6	1361x6
1/2	1360x8	1361x8
5/8	1360x10	1361x10
3/4	1360x12	1361x12

Flareless Tube Rigid (With Ermeto® Nut and Sleeve)



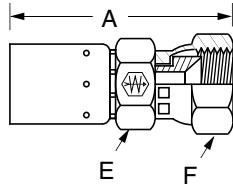
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
5/16	3/8	05E-756	9/16-18	1.88	1.00	.22	5/8	11/16
3/8	5/16	06E-755	1/2-20	1.78	.88	.23	9/16	5/8
3/8	3/8	06E-756	9/16-18	1.82	.88	.27	5/8	11/16
1/2	1/2	08E-758	3/4-16	2.08	1.06	.38	13/16	7/8

(For replacement Nuts and Sleeves, see page 237).

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

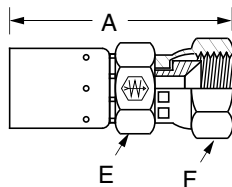
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

JIC 37° Female Swivel (Exceptions Noted, Refer to Footnotes)



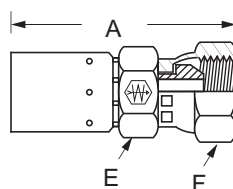
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
3/16	1/4	03E-604 ^a	7/16-20	1.89	1.00	.09	7/16	9/16
1/4	1/4	04E-604 ^a	7/16-20	1.92	1.13	.16	7/16	9/16
1/4	5/16	04E-605 ^a	1/2-20	2.00	1.19	.16	1/2	5/8
1/4	3/8	04E-606	9/16-18	2.06	1.25	.16	9/16	11/16
5/16	5/16	05E-605 ^a	1/2-20	2.07	1.19	.22	1/2	5/8
5/16	3/8	05E-606	9/16-18	2.12	1.19	.22	9/16	11/16
3/8	3/8	06E-606	9/16-18	2.19	1.25	.27	9/16	11/16
3/8	1/2	06E-608 ^a	3/4-16	2.30	1.38	.27	3/4	7/8
1/2	1/2	08E-608 ^a	3/4-16	2.39	1.38	.38	3/4	7/8
1/2	5/8	08E-610 ^a	7/8-14	2.51	1.50	.38	7/8	1
3/4	3/4	12E-612	1-1/16-12	2.76	1.56	.61	1	1-1/4
1	1	16E-616	1-5/16-12	3.05	1.75	.84	1-1/4	1-1/2

SAE 45° Female Swivel



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
5/16	3/8	05E-406	5/8-18	2.03	1.13	.22	9/16	3/4
3/8	3/8	06E-406	5/8-18	2.06	1.13	.27	9/16	3/4
3/4	3/4	12E-412	1-1/16-14	2.76	1.56	.61	1	1-1/4

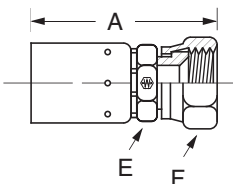
British Standard (BSPP) 60° Cone Female Pipe Swivel



Hose I.D.	BSPP Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Dia. E	Hex F
3/16	1/4	03E-354	G-1/4-19*	2.01	1.19	.16	9/16	11/16
1/4	1/4	04E-354	G-1/4-19*	2.07	1.25	.16	9/16	3/4
3/8	3/8	06E-356	G-3/8-19*	2.09	1.13	.27	3/4	7/8
3/8	1/2	06E-358	G-1/2-14*	2.47	1.50	.27	13/16	1
1/2	1/2	08E-358	G-1/2-14*	2.56	1.50	.39	13/16	1
1/2	5/8	08E-360	G-5/8-14*	2.70	1.63	.39	7/8	1-3/16
3/4	3/4	12E-362	G-3/4-14*	2.94	1.69	.61	1	1-1/4
1	1	16E-366	G-1-11*	3.38	2.00	.84	1-1/4	1-1/2

*G As Part of Thread Size is ISO Designation for Parallel Thread.

Female Swivel JIS 30° Flare Parallel Pipe Swivel



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	1/4	04E-04L	G-1/4-19*	2.03	1.19	.16	9/16	3/4
3/8	3/8	06E-06L	G-3/8-19*	2.22	1.25	.27	11/16	7/8
1/2	1/2	08E-08L	G-1/2-14*	2.30	1.25	.39	13/16	1-1/16
3/4	3/4	12E-12L	G-3/4-14*	2.75	1.50	.81	1	1-5/16
1	1	16E-16L	G-1-11*	3.15	1.81	.84	1-1/4	1-1/2

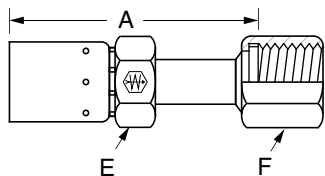
*G As Part of Thread Size is ISO Designation for Parallel Thread.

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

^a Swivel nuts are universal – both SAE 37° and 45° connections.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

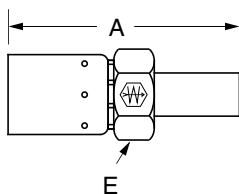
Female FOR-SEAL® Swivel Straight



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	1/4	04E-S64	9/16-18	2.14	1.31	.15	5/8	11/16
1/4	3/8	04E-S66	11/16-16	2.20	1.38	.16	5/8	13/16
5/16	3/8	05E-S66	11/16-16	2.28	1.38	.22	9/16	13/16
3/8	3/8	06E-S66	11/16-16	2.37	1.44	.24	9/16	13/16
3/8	1/2	06E-S68	13/16-16	2.65	1.69	.24	5/8	15/16
1/2	1/2	08E-S68	13/16-16	2.74	1.69	.33	3/4	15/16
1/2	5/8	08E-S70	1-14	2.83	1.81	.39	3/4	1-1/8
3/4	3/4	12E-S72	1-3/16-12	3.10	1.88	.59	1	1-3/8
1	1	16E-S76	1-7/16-12	3.76	2.44	.78	1-1/4	1-5/8

Straight Tube – Brass

(For Use With H243 Teflon Hose Only)

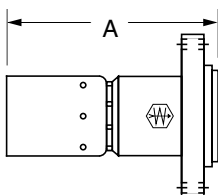


Insert - Brass
Collar - Steel

Hose I.D.	Tube Size	Catalog Number	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Compatible Air Brake Nuts & Sleeves (order separately)	
							Tube Size	Catalog Number Sleeve
1/2	1/2	08E-T58	3.32	2.31	.39	3/4	1/2	1360x8 1361x8
1/2	5/8	08E-T60	3.45	2.44	.47	3/4	5/8	1360x10 1361x10
3/4	5/8	12E-T60	3.66	2.44	.47	1	3/4	1360x12 1361x12
3/4	3/4	12E-T62	4.00	2.81	.61	1		

Compressor Discharge Flange End – GM Bus Only

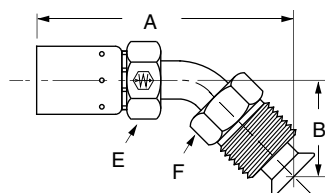
(For Use With H243 Teflon Hose Only)



NOTE: Part will not crimp in T-420 press.

Hose I.D.	Catalog Number	A	Hose Cut-Off Factor†	Hole Dia.
3/4	12E-X92	2.64	1.38	.61

Inverted Male Swivel 45° Tube Elbow

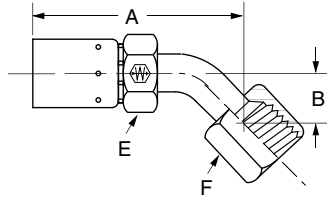


Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	3/16	04E-B43	3/8-24	2.82	.69	2.00	.12	7/16	3/8
1/4	1/4	04E-B44	7/16-24	2.94	.93	2.13	.15	7/16	7/16
1/4	5/16	04E-B45	1/2-20	3.32	1.14	2.50	.21	7/16	1/2
3/8	5/16	06E-B45	1/2-20	3.37	1.14	2.44	.21	9/16	1/2
3/8	3/8	06E-B46	5/8-18	3.63	1.34	2.69	.24	5/8	5/8
1/2	1/2	08E-B48	3/4-18	4.32	1.58	3.25	.33	3/4	3/4
1/2	5/8	08E-B50	7/8-18	4.45	1.75	3.44	.39	3/4	7/8

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

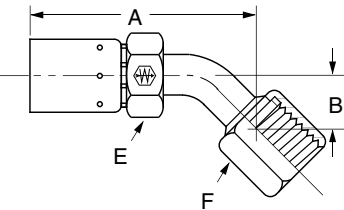
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

JIC 37° Female Swivel 45° Tube Elbow
(Exceptions Noted, Refer to Footnotes)



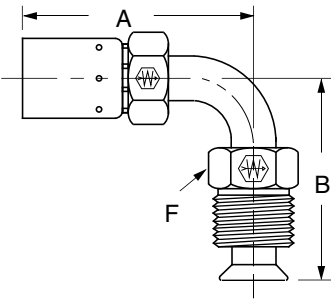
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	1/4	04E-684 ^a	7/16-20	2.37	.33	1.56	.15	7/16	9/16
1/4	5/16	04E-685 ^a	1/2-20	2.50	.36	1.63	.16	7/16	5/8
5/16	3/8	05E-686	9/16-18	2.65	.39	1.69	.22	9/16	11/16
3/8	3/8	06E-686	9/16-18	2.74	.39	1.75	.24	5/8	11/16
3/8	1/2	06E-688 ^a	3/4-16	2.99	.56	2.00	.27	5/8	7/8
1/2	1/2	08E-688 ^a	3/4-16	2.88	.56	1.78	.33	3/4	7/8
1/2	5/8	08E-690 ^a	7/8-14	3.28	.63	2.25	.39	3/4	1
3/4	3/4	12E-692	1-1/16-12	3.72	.78	2.38	.58	1	1-1/4
1	1	16E-696	1-5/16-12	4.67	1.10	3.31	.83	1-1/4	1-1/2

Female FOR-SEAL® Swivel 45° Tube Elbow



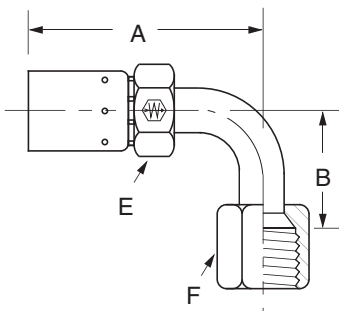
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	1/4	04E-L64	9/16-18	2.46	.41	1.63	.15	7/16	11/16
1/4	3/8	04E-L66	11/16-16	2.69	.43	1.75	.15	5/8	13/16
5/16	3/8	05E-L66	11/16-16	2.70	.43	1.75	.22	9/16	13/16
3/8	3/8	06E-L66	11/16-16	2.79	.43	1.81	.24	5/8	13/16
1/2	1/2	08E-L68	13/16-16	3.14	.60	2.13	.33	3/4	15/16
3/4	3/4	12E-L72	1-3/16-12	3.83	.83	2.63	.59	1	1-3/8
1	1	16E-L76	1-7/16-12	4.31	.94	3.00	.76	1-1/4	1-5/8

Inverted Male Swivel 90° Tube Elbow



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	3/16	04E-B63	3/8-24	2.23	1.06	1.38	.12	7/16	3/8
1/4	1/4	04E-B64	7/16-24	2.25	1.36	1.31	.15	7/16	7/16
3/8	5/16	06E-B65	1/2-20	2.49	1.61	1.56	.21	9/16	1/2
3/8	3/8	06E-B66	5/8-18	2.92	1.97	1.94	.24	5/8	5/8
1/2	1/2	08E-B68	3/4-18	3.03	2.32	2.00	.33	3/4	3/4

JIC 37° Female Swivel 90° Tube Elbow
(Exceptions Noted, Refer to Footnotes)

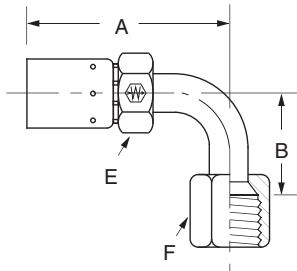


Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	1/4	04E-664 ^a	7/16-20	2.27	.68	1.44	.15	7/16	9/16
1/4	5/16	04E-665 ^a	1/2-20	2.47	.77	1.63	.16	7/16	5/8
5/16	5/16	05E-665 ^a	1/2-20	2.58	.77	1.63	.21	9/16	5/8
5/16	3/8	05E-666	9/16-18	2.57	.85	1.62	.22	9/16	11/16
3/8	3/8	06E-666	9/16-18	2.63	.85	1.68	.24	5/8	11/16
3/8	1/2	06E-668 ^a	3/4-16	2.76	1.09	1.81	.27	5/8	7/8
1/2	1/2	08E-668 ^a	3/4-16	2.82	1.09	1.75	.33	3/4	7/8
1/2	5/8	08E-670 ^a	7/8-14	3.34	1.23	2.31	.39	3/4	1
3/4	3/4	12E-672	1-1/16-12	3.70	1.82	2.50	.59	1	1-1/4
1	1	16E-676	1-5/16-12	4.39	2.14	3.00	.83	1-1/4	1-1/2

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.
^a Swivel nuts are universal – both SAE 37° and 45° connections.

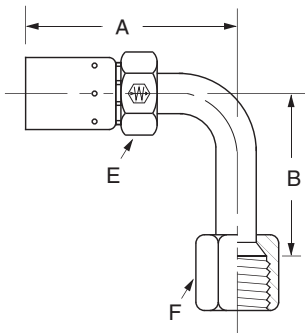
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

SAE 45° Female Swivel 90° Tube Elbow



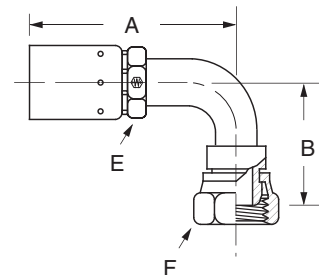
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
3/8	3/8	06E-466	5/8-18	2.72	.85	1.75	.24	5/8	3/4

JIC 37° Female Swivel Long Drop 90° Tube Elbow (Exceptions Noted)



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	1/4	04E-644 ^a	7/16-20	2.27	1.80	1.42	.15	7/16	9/16
1/4	5/16	04E-645 ^a	1/2-20	2.51	1.80	1.63	.16	7/16	5/8
5/16	3/8	05E-646	9/16-18	2.63	2.18	1.69	.22	9/16	11/16
3/8	3/8	06E-646	9/16-18	2.66	2.18	1.69	.24	5/8	11/16
3/8	1/2	06E-648 ^a	3/4-16	2.83	2.43	1.88	.27	5/8	7/8
1/2	1/2	08E-648 ^a	3/4-16	2.82	2.43	1.75	.33	3/4	7/8
1/2	5/8	08E-650 ^a	7/8-14	2.96	2.57	1.94	.39	3/4	1
3/4	3/4	12E-652	1-1/16-12	3.74	3.73	2.50	.58	1	1-1/4
1	1	16E-656	1-5/16-12	4.36	4.33	3.00	.83	1-1/4	1-1/2

British Standard (BSPP) 60° Cone Female Pipe Swivel 90° Elbow



Hose I.D.	BSPP Pipe Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	1/4	04E-74P	G-1/4-19*	2.89	1.50	2.06	.16	7/16	3/4
3/8	3/8	06E-76P	G-3/8-19*	2.96	1.66	2.00	.27	5/8	7/8
1/2	1/2	08E-78P	G-1/2-14*	2.95	1.73	1.88	.37	3/4	1
3/4	3/4	12E-82P	G-3/4-14*	3.83	2.43	2.61	.61	1	1-1/4

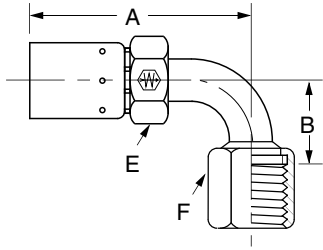
*G As Part of Thread Size is ISO Designation for Parallel Thread.

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

^a Swivel nuts are universal – both SAE 37° and 45° connections.

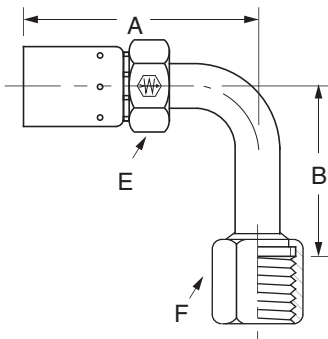
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

**Female FOR-SEAL®
Swivel Short Drop 90°
Elbow**



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	1/4	04E-A24	9/16-18	2.27	.81	1.44	.21	7/16	11/16
1/4	3/8	04E-A26	11/16-16	2.54	.90	1.69	.16	5/8	13/16
5/16	3/8	05E-A26	11/16-16	2.62	.90	1.69	.22	9/16	13/16
3/8	3/8	06E-A26	11/16-16	2.71	.90	1.75	.24	5/8	13/16
3/8	1/2	06E-A28	13/16-16	2.81	1.15	1.88	.27	5/8	15/16
1/2	1/2	08E-A28	13/16-16	2.90	1.15	1.88	.33	3/4	15/16
3/4	3/4	12E-A32	1-3/16-12	3.70	1.88	2.50	.59	1	1-3/8
1	1	16E-A36	1-7/16-12	4.01	2.21	2.69	.76	1-1/4	1-5/8

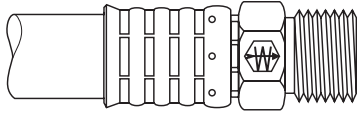
**Female FOR-SEAL®
Swivel Long Drop 90°
Tube Elbow**



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	1/4	04E-A64	9/16-18	2.41	1.80	1.56	.21	7/16	11/16
5/16	3/8	05E-A66	11/16-16	2.73	2.12	1.81	.22	9/16	13/16
3/8	3/8	06E-A66	11/16-16	2.82	2.12	1.88	.24	5/8	13/16
3/8	1/2	06E-A68	13/16-16	2.80	2.50	1.88	.27	5/8	15/16
1/2	1/2	08E-A68	13/16-16	2.89	2.50	1.88	.33	3/4	15/16

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.



Hose End Series: 069 'E' Series

Typical Application: General purpose low- and medium-pressure hydraulics. Generally used for truck and off-road vehicle applications.

Pressure: Determined by maximum working pressure for hose size and hose end configuration whichever is lesser. See page 15 for working pressure ratings for hose end configurations.

Material: Low Carbon Steel

Plating: Zinc; yellow dichromate finish; Collar: zinc, green dichromate

Advantages: Wide selection of hose and end configurations allowing for a diverse number of applications. Limited competition and economical cost.

Assemble With: T-400-1, T-410-1, T-420-1, T-440-1, T-460, T-462, T-465-1, T-480.

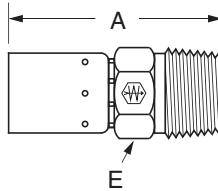
Ordering Information: Order individually by catalog number.

NOTE: Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

Label Set: FS-1500

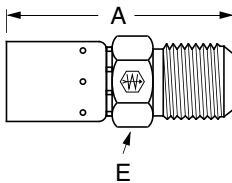
Refer to important safety information on pages 1-2.

Male Pipe Rigid



Hose I.D.	Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
3/16	1/8	06904E-102	1/8-27	1.70	.75	.13	7/16
3/16	1/4	06904E-104	1/4-18	1.88	1.00	.13	9/16
1/4	1/4	06905E-104	1/4-18	1.88	1.00	.18	9/16
5/16	1/4	06906E-104	1/4-18	2.04	1.00	.24	5/8
5/16	3/8	06906E-106	3/8-18	2.03	1.00	.24	11/16
13/32	3/8	06908E-106	3/8-18	2.04	1.00	.31	3/4
13/32	1/2	06908E-108	1/2-14	2.29	1.25	.31	7/8
1/2	1/2	06910E-108	1/2-14	2.41	1.38	.39	7/8
1/2	3/4	06910E-112	3/4-14	2.47	1.38	.39	1-1/16
5/8	3/4	06912E-112	3/4-14	2.52	1.25	.51	1-1/16
7/8	3/4	06916E-112	3/4-14	2.69	1.44	.71	1-1/8
7/8	1	06916E-116	1-11-1/2	2.88	1.63	.75	1-3/8
1-1/8	1-1/4	06920E-120	1-1/4-11-1/2	3.06	1.69	1.00	1-11/16
1-3/8	1-1/2	06924E-124	1-1/2-11-1/2	3.37	2.00	1.25	2
1-13/16	2	06932E-132	2-11-1/2	3.38	2.00	1.63	2-1/2

JIC 37° Male Rigid

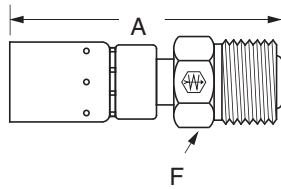


Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
3/16	1/4	06904E-504	7/16-20	1.87	1.00	.13	1/2
1/4	5/16	06905E-505	1/2-20	1.87	1.00	.18	9/16
5/16	3/8	06906E-506	9/16-18	2.03	1.00	.24	5/8
13/32	1/2	06908E-508	3/4-16	2.19	1.19	.31	13/16
1/2	5/8	06910E-510	7/8-14	2.43	1.25	.39	15/16
5/8	3/4	06912E-512	1-1/16-12	2.63	1.38	.51	1-1/8
7/8	1	06916E-516	1-5/16-12	2.85	1.50	.75	1-3/8
1-1/8	1-1/4	06920E-520	1-5/8-12	3.06	1.63	1.00	1-11/16
1-3/8	1-1/2	06924E-524	1-7/8-12	3.17	1.81	1.25	2

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

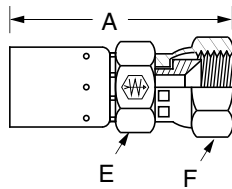
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

Inverted Male Swivel Straight



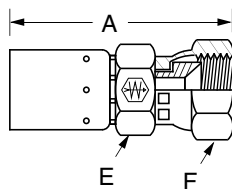
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex F
3/16	1/4	06904E-B04	7/16-24	2.58	1.56	.13	7/16
1/4	5/16	06905E-B05	1/2-20	2.63	1.63	.18	1/2
5/16	3/8	06906E-B06	5/8-18	2.87	1.78	.24	5/8
13/32	1/2	06908E-B08	3/4-18	3.24	2.06	.31	3/4

JIC 37° Female Swivel (Exceptions Noted, Refer to Footnotes)



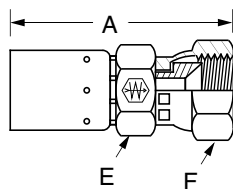
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
3/16	1/4	06904E-604 ^a	7/16-20	2.01	1.06	.13	7/16	9/16
1/4	5/16	06905E-605 ^a	1/2-20	2.09	1.19	.18	7/16	5/8
5/16	3/8	06906E-606	9/16-18	2.26	1.19	.24	9/16	11/16
5/16	1/2	06906E-608 ^a	3/4-16	2.41	1.31	.24	3/4	7/8
13/32	1/2	06908E-608 ^a	3/4-16	2.41	1.38	.31	3/4	7/8
1/2	1/2	06910E-608 ^a	3/4-16	2.53	1.44	.39	13/16	7/8
1/2	5/8	06910E-610 ^a	7/8-14	2.62	1.50	.39	13/16	1
5/8	3/4	06912E-612	1-1/16-12	2.77	1.50	.51	1	1-1/4
7/8	1	06916E-616	1-5/16-12	3.11	1.75	.75	1-1/4	1-1/2
1-1/8	1-1/4	06920E-620	1-5/8-12	3.30	1.81	1.00	1-9/16	2
1-3/8	1-1/2	06924E-624	1-7/8-12	3.45	2.13	1.25	2	2-1/4
1-13/16	2	06932E-632	2-1/2-12	4.15	2.81	1.63	2-1/2	3

SAE 45° Female Swivel



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
5/16	3/8	06906E-406	5/8-18	2.18	1.13	.24	9/16	3/4
5/8	3/4	06912E-412	1-1/16-14	2.81	1.50	.51	1	1-1/4

30° Flare Female Swivel (PTT Thread For Diesel Applications)



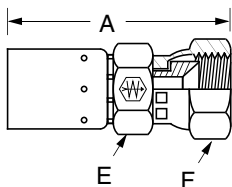
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
7/8	1	06916E-X26	1-5/16-14	2.96	1.69	.75	1-1/4	1-1/2

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

^a Swivel nuts are universal – both SAE 37° and 45° connections.

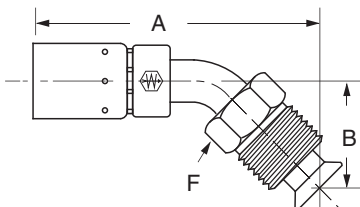
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

Female Swivel 30° Flare (Komatsu, Linkbelt)



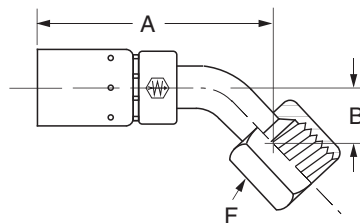
Hose I.D.	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
5/16	06906E-18K	M18x1.5	2.38	1.31	.24	3/4	7/8
1/2	06910E-22K	M22x1.5	2.65	1.56	.39	13/16	1
5/8	06912E-24K	M24x1.5	2.88	1.56	.52	1	1-1/4
5/8	06912E-30K	M30x1.5	2.90	1.63	.52	1-1/4	1-3/8
7/8	06916E-33K	M33x1.5	3.11	1.81	.75	1-1/4	1-1/2
1-3/8	06924E-42K	M42x1.5	3.55	2.19	1.25	2	2-1/8

Inverted Male Swivel 45° Tube Elbow



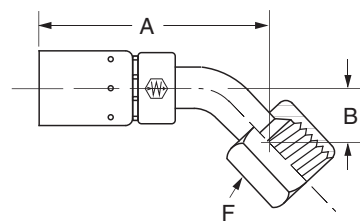
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F
3/16	1/4	06904E-E44	7/16-24	3.08	.93	2.06	.12	7/16
1/4	5/16	06905E-E45	1/2-20	3.42	1.14	2.44	.18	1/2
5/16	3/8	06906E-E46	5/8-18	3.65	1.34	2.56	.21	5/8

JIC 37° Female Swivel 45° Tube Elbow (Refer to Footnotes)



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F
3/16	1/4	06904E-684 ^a	7/16-20	2.50	.33	1.50	.13	9/16
1/4	5/16	06905E-685 ^a	1/2-20	2.63	.36	1.63	.18	5/8
5/16	3/8	06906E-686	9/16-18	2.78	.38	1.69	.24	11/16
13/32	1/2	06908E-688 ^a	3/4-16	3.07	.55	1.83	.31	7/8
1/2	5/8	06910E-690 ^a	7/8-14	3.39	.63	2.31	.45	1
5/8	3/4	06912E-692	1-1/16-12	3.70	.78	2.38	.52	1-1/4
7/8	1	06916E-696	1-5/16-12	4.68	1.10	3.38	.75	1-1/2

SAE 45° Female Swivel 45° Tube Elbow



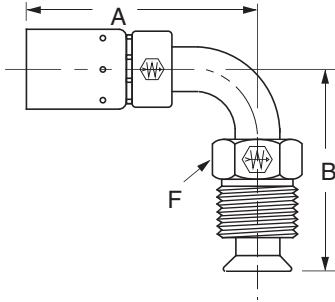
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F
5/16	3/8	06906E-486	5/8-18	2.77	.39	1.69	.24	3/4
5/8	3/4	06912E-492	1-1/16-14	3.74	.78	2.44	.52	1-1/4

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

^a Swivel nuts are universal – both SAE 37° and 45° connections.

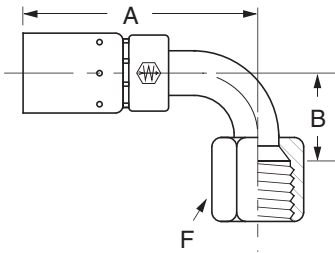
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

**Inverted Male Swivel
90° Tube Elbow**



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F
3/16	1/4	06904E-E04	7/16-24	2.31	1.36	1.25	.13	7/16
1/4	5/16	06905E-E05	1/2-20	2.59	1.61	1.56	.18	1/2
5/16	1/4	06906E-E04	7/16-24	2.43	1.36	1.31	.15	7/16
5/16	5/16	06906E-E05	1/2-20	2.66	1.61	1.56	.21	1/2
5/16	3/8	06906E-E06	5/8-18	2.94	1.97	1.85	.24	5/8
1/2	5/8	06910E-E10	7/8-18	3.27	2.58	2.30	.39	7/8

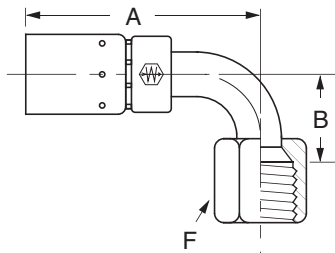
**JIC 37° Female Swivel
90° Tube Elbow
(Exceptions Noted, Refer to Footnotes)**



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F
3/16	1/4	06904E-664 ^a	7/16-20	2.41	.68	1.38	.13	9/16
1/4	5/16	06905E-665 ^a	1/2-20	2.62	.77	1.63	.21	5/8
5/16	3/8	06906E-666	9/16-18	2.73	.85	1.78	.24	11/16
13/32	1/2	06908E-668 ^a	3/4-16	2.87	1.09	1.75	.31	7/8
1/2	5/8	06910E-670 ^a	7/8-14	3.52	1.23	2.44	.39	1
5/8	3/4	06912E-672	1-1/16-12	3.66	1.82	2.31	.58	1-1/4
7/8	1	06916E-676	1-5/16-12	4.40	2.14	3.13	.76	1-1/2
1-1/8	1-1/4*	06920E-657 ^Δ	1-5/8-12	4.22	5.31	2.88	1.00	2
1-1/8	1-1/4*	06920E-677	1-5/8-12	4.22	3.31	2.81	1.01	2
1-3/8	1-1/2*	06924E-678	1-7/8-12	4.18	3.02	2.81	1.25	2-1/2

* 20 and 24 size ends have crimped nuts.
^Δ Long drop elbow.

**SAE 45° Female Swivel
90° Tube Elbow**

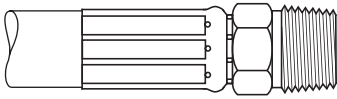


Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F
5/16	3/8	06906E-466	5/8-18	2.76	.85	1.56	.24	3/4
5/8	3/4	06912E-472	1-1/16-14	3.64	1.82	2.31	.52	1-1/4

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

^a Swivel nuts are universal – both SAE 37° and 45° connections.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.



Hose End Series: 336 'E' Series

Typical Application: General purpose high-pressure hydraulics. Use H335 non-conductive hose where shock hazards exist.

Pressure: Determined by maximum working pressure for hose size and hose end configuration whichever is less. See page 15 for working pressure ratings for hose end configurations.

Material: Low Carbon Steel

Plating: Zinc; yellow dichromate finish

Advantages: Wide selection of hose and end configurations allowing for a diverse number of applications where hose compatibility is a problem.

Assemble With: T-400-1, T-410-1, T-420-1, T-440-1, T-460, T-462, T-465, T-480.

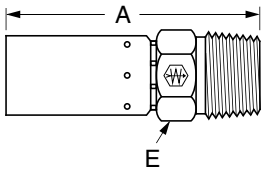
Ordering Information: Order individually by catalog number.

NOTE: Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

Label Set: FS-3500

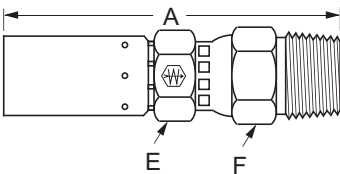
 Refer to important safety information on pages 1-2.

Male Pipe Rigid



Hose I.D.	Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
3/16	1/8	33603E-102	1/8-27	1.88	1.06	.11	9/16
3/16	1/4	33603E-104	1/4-18	2.06	1.25	.11	11/16
1/4	1/8	33604E-102	1/8-27	2.13	1.06	.16	5/8
1/4	1/4	33604E-104	1/4-18	2.31	1.25	.16	11/16
1/4	3/8	33604E-106	3/8-18	2.40	1.31	.16	3/4
3/8	1/4	33606E-104	1/4-18	2.59	1.15	.28	3/4
3/8	3/8	33606E-106	3/8-18	2.59	1.15	.28	3/4
3/8	1/2	33606E-108	1/2-14	2.84	1.41	.28	15/16
1/2	3/8	33608E-106	3/8-18	2.78	1.13	.39	7/8
1/2	1/2	33608E-108	1/2-14	3.03	1.38	.39	15/16
3/4	3/4	33612E-112	3/4-14	3.22	1.38	.63	1-1/8
1	1	33616E-116	1-11-1/2	3.97	1.62	.81	1-3/8

Male Pipe Swivel



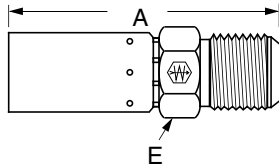
Hose I.D.	Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
3/16	1/4	33603E-J04	1/4-18	2.64	1.84	.11	5/8	11/16
1/4	1/4	33604E-J04	1/4-18	2.87	1.79	.16	5/8	11/16
3/8	3/8	33606E-J06	3/8-18	3.15	1.72	.28	3/4	3/4
3/8	1/2	33606E-J08	1/2-14	3.31	1.88	.28	3/4	7/8
1/2	1/2	33608E-J08	1/2-14	3.61	1.97	.39	7/8	15/16

NOTE: Swivel for installation purposes (Not for temperatures above 212°F.)

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

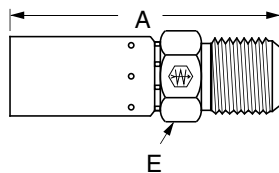
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

JIC 37° Male Rigid



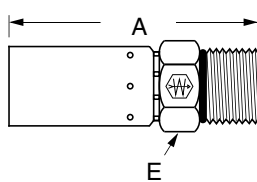
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
3/16	1/4	33603E-504	7/16-20	2.05	1.25	.11	9/16
1/4	1/4	33604E-504	7/16-20	2.30	1.22	.16	5/8
1/4	5/16	33604E-505	1/2-20	2.30	1.23	.16	5/8
3/8	3/8	33606E-506	9/16-18	2.59	1.13	.28	3/4
3/8	1/2	33606E-508	3/4-16	2.69	1.25	.28	13/16
1/2	1/2	33608E-508	3/4-16	2.88	1.25	.39	7/8
1/2	5/8	33608E-510	7/8-14	3.10	1.42	.39	15/16
1/2	3/4	33608E-512	1-1/16-12	3.15	1.52	.39	1-1/8
3/4	3/4	33612E-512	1-1/16-12	3.32	1.52	.61	1-1/8

SAE 45° Flare Male Rigid



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
3/16	1/4	33603E-304	7/16-20	2.00	1.19	.11	9/16
3/8	3/8	33606E-306	5/8-18	2.65	1.19	.28	3/4
1/2	1/2	33608E-308	3/4-16	3.03	1.31	.39	7/8

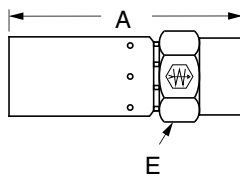
Male Straight Thread O-Ring Rigid



(Includes O-Ring)

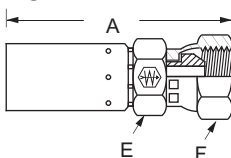
Hose I.D.	Port Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
3/16	1/4	33603E-P04	7/16-20	1.86	1.06	.11	9/16
1/4	5/16	33604E-P05	1/2-20	2.11	1.03	.16	5/8
1/4	3/8	33604E-P06	9/16-18	2.14	1.06	.16	11/16
3/8	3/8	33606E-P06	9/16-18	2.42	1.00	.28	3/4
3/8	1/2	33606E-P08	3/4-16	2.47	1.03	.28	7/8
1/2	1/2	33608E-P08	3/4-16	2.78	1.03	.39	15/16
1/2	5/8	33608E-P10	7/8-14	2.84	1.16	.39	1-1/16

Female Pipe Rigid



Hose I.D.	Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
1/4	1/4	33604E-204	1/4-18	2.34	1.25	.16	3/4
1/2	1/2	33608E-208	1/2-14	3.03	1.31	.39	1-1/16

Female Straight Pipe Swivel



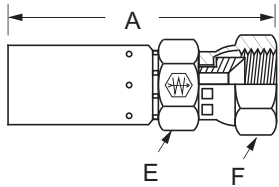
NOTE: For use with male pipe fittings with internal seat.

Hose I.D.	Pipe Size	Catalog Number	NPSM Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	1/4	33604E-054	1/4-18	2.38	1.31	.16	5/8	3/4
3/8	3/8	33606E-056	3/8-18	2.66	1.22	.28	3/4	7/8
1/2	1/2	33608E-058	1/2-14	3.06	1.38	.39	1	1
3/4	3/4	33612E-062	3/4-14	3.43	1.62	.63	1-1/8	1-1/8

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

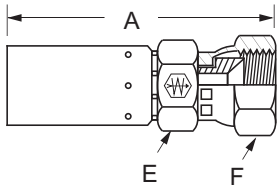
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

JIC 37° Female Swivel (Exceptions Noted, Refer to Footnotes)



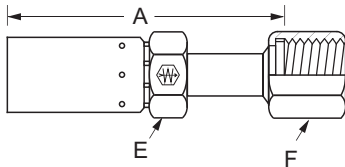
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
3/16	1/4	33603E-604 ^a	7/16-20	2.16	1.38	.11	9/16	5/8
3/16	5/16	33603E-605 ^a	1/2-20	2.16	1.38	.11	9/16	3/4
1/4	1/4	33604E-604 ^a	7/16-20	2.53	1.44	.16	5/8	5/8
1/4	5/16	33604E-605 ^a	1/2-20	2.53	1.44	.16	5/8	3/4
1/4	3/8	33604E-606	9/16-18	2.53	1.44	.16	5/8	3/4
3/8	3/8	33606E-606	9/16-18	2.81	1.38	.28	3/4	3/4
3/8	1/2	33606E-608 ^a	3/4-16	2.81	1.38	.28	3/4	15/16
1/2	1/2	33608E-608 ^a	3/4-16	3.16	1.63	.39	7/8	15/16
1/2	5/8	33608E-610 ^a	7/8-14	3.16	1.63	.39	7/8	1-1/16
3/4	3/4	33612E-612	1-1/16-12	3.44	1.63	.63	1-1/8	1-1/4
1	1	33616E-616	1-5/16-12	4.06	1.75	.81	1-3/8	1-1/2

SAE 45° Female Swivel



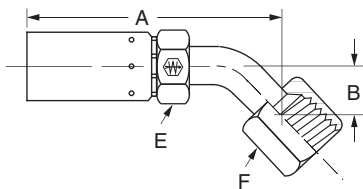
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	3/8	33604E-406	5/8-18	2.53	1.44	.16	5/8	13/16
3/8	3/8	33606E-406	5/8-18	2.81	1.38	.28	3/4	13/16

Female FOR-SEAL® Swivel Straight



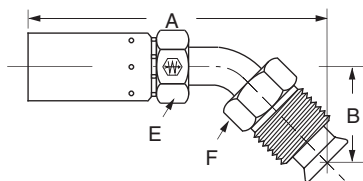
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	1/4	33604E-S64	9/16-18	2.60	1.52	.16	5/8	11/16
3/8	3/8	33606E-S66	11/16-16	2.92	1.61	.21	3/4	13/16
1/2	1/2	33608E-S68	13/16-16	3.29	1.72	.38	7/8	15/16
3/4	3/4	33612E-S72	1-3/16-12	3.71	1.95	.61	1-1/8	1-3/8
1	1	33616E-S76	1-7/16-12	4.36	2.11	.81	1-3/8	1-5/8

JIC 37° Female Swivel 45° Tube Elbow (Exceptions Noted, Refer to Footnotes)



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
3/16	1/4	33603E-684 ^a	7/16-20	2.30	.47	1.50	.11	9/16	9/16
1/4	5/16	33604E-685 ^a	1/2-20	2.65	.53	1.56	.16	5/8	5/8
3/8	3/8	33606E-686	9/16-18	2.92	.59	1.48	.28	3/4	11/16
3/8	1/2	33606E-688 ^a	3/4-16	3.10	.71	1.66	.28	3/4	7/8
1/2	1/2	33608E-688 ^a	3/4-16	3.28	.71	1.66	.39	7/8	7/8
1/2	5/8	33608E-690 ^a	7/8-14	3.52	.84	1.84	.39	7/8	1
3/4	3/4	33612E-692	1-1/16-12	4.33	1.12	2.44	.62	1-1/8	1-1/4

Inverted Male Swivel 45° Tube Elbow



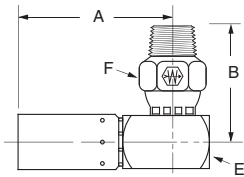
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
3/8	3/8	33606E-B46	5/8-18	3.30	.97	1.88	.28	3/4	5/8

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

^a Swivel nuts are universal – both SAE 37° and 45° connections.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

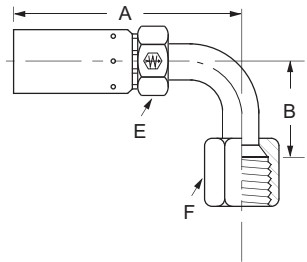
Male Pipe Swivel 90° Elbow



NOTE: Swivel for installation purposes only. (Not for temperatures above 212°F.)

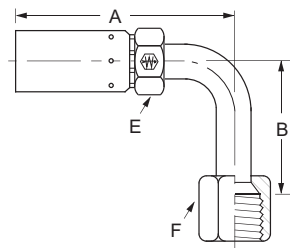
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
3/8	3/8	33606E-M06	3/8-18	2.19	1.64	.88	.28	.81	3/4
1/2	1/2	33608E-M08	1/2-14	2.48	1.95	.94	.39	1	15/16

JIC 37° Female Swivel 90° Tube Elbow (Exceptions Noted, Refer to Footnotes)



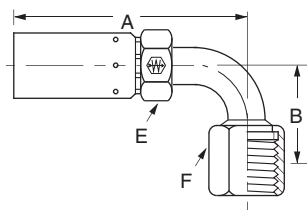
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	1/4	33604E-664 ^a	7/16-20	2.28	.88	1.31	.16	5/8	9/16
1/4	5/16	33604E-665 ^a	1/2-20	2.38	1.00	1.31	.16	5/8	5/8
3/8	3/8	33606E-666	9/16-18	2.63	1.13	1.19	.28	3/4	11/16
3/8	1/2	33606E-668 ^a	3/4-16	2.75	1.38	1.31	.28	3/4	7/8
1/2	1/2	33608E-668 ^a	3/4-16	2.94	1.38	1.31	.39	7/8	7/8
1/2	5/8	33608E-670 ^a	7/8-14	3.06	1.63	1.44	.39	7/8	1
3/4	5/8	33612E-670 ^a	7/8-14	3.38	1.63	1.56	.50	1-1/8	1
3/4	3/4	33612E-672	1-1/16-12	3.88	2.31	2.06	.62	1-1/8	1-1/4
1	1	33616E-676	1-5/16-12	4.75	2.50	2.31	.58	1-3/8	1-1/2

JIC 37° Female Swivel Long Drop 90° Tube Elbow (Exceptions Noted, Refer to Footnotes)



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	5/16	33604E-645 ^a	1/2-20	2.38	1.77	1.30	.16	5/8	5/8
3/8	3/8	33606E-646	9/16-18	2.63	2.18	1.19	.28	3/4	11/16
3/8	1/2	33606E-648 ^a	3/4-16	2.75	2.43	1.31	.28	3/4	7/8
1/2	5/8	33608E-650 ^a	7/8-14	3.06	2.57	1.44	.39	7/8	1
3/4	3/4	33612E-652	1-1/16-12	3.88	3.73	2.06	.62	1-1/8	1-1/4

Female FOR-SEAL® Swivel Short Drop 90° Elbow

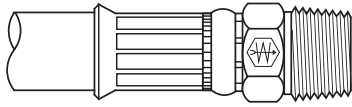


Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	1/4	33604E-A24	9/16-18	2.31	.78	1.23	.16	5/8	11/16
3/8	3/8	33606E-A26	11/16-16	2.74	.90	1.43	.28	3/4	13/16
1/2	1/2	33608E-A28	13/16-16	3.04	1.15	1.48	.39	7/8	15/16
3/4	3/4	33612E-A32	1-3/16-12	3.78	1.88	2.02	.63	1-1/8	1-3/8

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

^a Swivel nuts are universal – both SAE 37° and 45° connections.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.



Hose End Series: 430 'E' Series

Typical Application: Very high pressure hydraulic lines, subjected to pressure surges and flexing. Some applications include mining, construction, farming, and high pressure performance industrial equipment.

Material: Low Carbon Steel

Pressure: Determined by maximum working pressure for hose size and hose end configuration whichever is lesser. See page 15 for working pressure ratings for hose end configurations.

Plating: Zinc; yellow dichromate finish

Advantages: Excellent selection of hose ends. Compatible with Caterpillar, John Deere, and most major manufacturers of equipment using high pressure applications.

Assemble With: T-410-1 Coll-O-Crimp® II, T420-1 Coll-O-Crimp® Super I, T-440-1 Coll-O-Crimp II Plus or T-480.

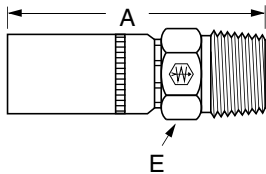
Ordering Information: Order individually by catalog number. O-rings not supplied with flange hose ends. Order o-rings by catalog number; reference individual hose end listings for details. For split flange kits, reference page 252-253.

Label Set: FS-1300

NOTE: Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

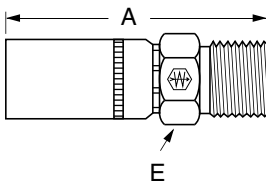
Refer to important safety information on pages 1-2.

Male Pipe Rigid



Hose I.D.	Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
1/2	1/2	43008E-108	1/2-14	3.01	1.38	.37	1
1/2	3/4	43008E-112	3/4-14	3.04	1.44	.37	1-1/16
3/4	3/4	43012E-112	3/4-14	3.23	1.50	.61	1-1/4
3/4	1	43012E-116	1-11-1/2	3.46	1.75	.61	1-3/8
1	1	43016E-116	1-11-1/2	4.13	2.00	.81	1-3/8
1	1-1/4	43016E-120	1-1/4-11-1/2	4.16	2.06	.81	1-11/16
1-1/4	1-1/4	43020E-120	1-1/4-11-1/2	4.67	2.31	1.02	1-11/16
1-1/2	1-1/2	43024E-124	1-1/2-11-1/2	5.04	2.50	1.28	2
2	2	43032E-132	2-11-1/2	5.55	2.63	1.75	2-1/2

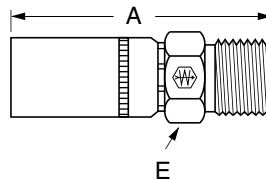
British Standard BSPP 60° Cone Male Pipe Rigid



Hose I.D.	BSPP Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
3/4	3/4	43012E-P62	G-3/4-14*	3.28	1.56	.61	1-1/8
1	1	43016E-P66	G-1-11*	3.81	1.63	.81	1-3/8
1-1/4	1-1/4	43020E-P67	G-1 1/4-11*	4.50	2.13	1.02	1-3/4

*G As Part of Thread Size is ISO Designation for Parallel Thread.

FOR-SEAL® Male Rigid



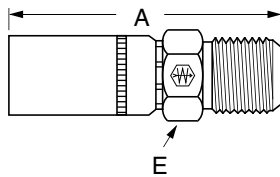
Hose I.D.	Tube Size	Catalog Number	O-Ring	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
1/2	1/2	43008E-E68	4629x8	13/16-16	2.79	1.19	.38	7/8
3/4	3/4	43012E-E72	4629x12	1-13/16-12	3.20	1.50	.61	1-1/4
1	1	43016E-E76	4629x16	1-7/16-12	3.63	1.50	.81	1-1/2
1-1/4	1-1/4	43020E-E80	4629x20	1-11/16-12	4.14	1.75	1.02	1-3/4

Does not include O-Ring. See page 217 for O-Ring.

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

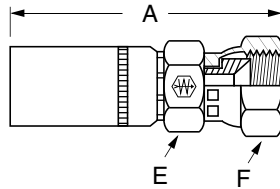
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

JIC 37° Male Rigid



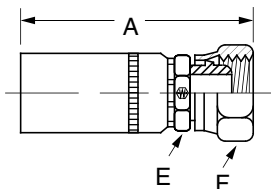
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
1/2	1/2	43008E-508	3/4-16	2.95	1.31	.38	1
1/2	5/8	43008E-510	7/8-14	3.05	1.38	.38	1
3/4	3/4	43012E-512	1-1/16-12	3.38	1.69	.61	1-1/8
3/4	7/8	43012E-514	1-3/16-12	3.41	1.69	.61	1 1/4
1	1	43016E-516	1-5/16-12	4.10	2.00	.81	1-3/8
1-1/4	1-1/4	43020E-520	1-5/8-12	4.66	2.31	1.02	1-11/16
1-1/2	1-1/2	43024E-524	1-7/8-12	5.11	2.50	1.31	2
2	2	43032E-532	2-1/2-12	5.61	2.63	1.78	2-5/8

JIC 37° Female Swivel (Refer to Footnotes)



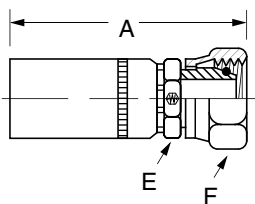
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/2	3/8	43008E-606	9/16-18	3.07	1.44	.30	1	11/16
1/2	1/2	43008E-608^a	3/4-16	3.19	1.56	.38	1	7/8
1/2	5/8	43008E-610^a	7/8-14	3.23	1.63	.38	1	1
1/2	3/4	43008E-612	1-1/16-12	3.37	1.75	.38	1	1-1/4
3/4	3/4	43012E-612	1-1/16-12	3.56	1.81	.61	1-1/8	1-1/4
3/4	7/8	43012E-614	1-13/16-12	3.57	1.81	.61	1 1/4	1 3/8
3/4	1	43012E-616	1-5/16-12	3.69	2.00	.61	1-1/4	1-1/2
1	1	43016E-616	1-5/16-12	4.36	2.25	.81	1-1/4	1-1/2
1	1-1/4	43016E-620	1-5/8-12	4.20	2.13	.81	1-5/8	2
1-1/4	1-1/4	43020E-620	1-5/8-12	4.96	2.63	1.02	1-11/16	2
1-1/4	1-1/2	43020E-624	1-7/8-12	5.12	2.75	1.02	1-7/8	2-1/4
1-1/2	1-1/2	43024E-624	1-7/8-12	5.45	2.88	1.28	2	2-1/4
2	2	43032E-632	2-1/2-12	6.08	3.13	1.75	2-1/2	3

Female Swivel DIN Universal Seat l. Rh. (Light)



Hose I.D.	Tube Size (mm)	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
3/4	22	43012E-22C	M30x2.0	3.43	1.69	.61	1-1/4	1-7/16

Female Swivel DIN 24° Seat s. Rh. DKO (Heavy)



Hose I.D.	Tube Size (mm)	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
3/4	25	43012E-75C	M36x2.0	3.86	2.13	.61	1-1/4	1-5/8
1-1/4	30	43020E-80C	M42x2.0	4.33	2.00	.84	1-5/8	2

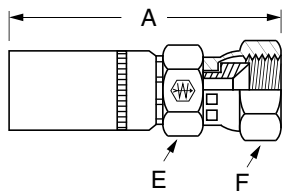
O-ring included.

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

^a Swivel nuts are universal – both SAE 37° and 45° connections.

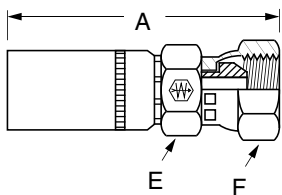
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

Female Swivel 30° Flare (Komatsu, Linkbelt)



Hose I.D.	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/2	43008E-22K	M22x1.5	3.41	1.75	.38	7/8	1-1/16
3/4	43012E-30K	M30x1.5	4.10	2.38	.61	1-1/4	1-7/16
1	43016E-33K	M33x1.5	4.43	2.25	.81	1-1/4	1-5/8
1-1/4	43020E-36K	M36x1.5	5.28	2.94	1.02	1-5/8	1-3/4

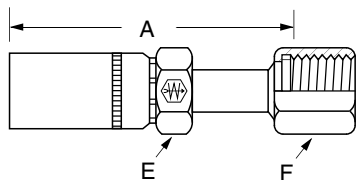
British Standard (BSP) 60° Cone Female Pipe Swivel



Hose I.D.	BSPP Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/2	1/2	43008E-358	G-1/2-14*	3.53	1.88	.38	7/8	1-1/16
3/4	3/4	43012E-362	G-3/4-14*	3.84	1.94	.61	1-1/4	1-5/16
1	1	43016E-366	G-1-11*	4.37	2.18	.81	1-1/4	1-1/2
1-1/4	1-1/4	43020E-370	G-1-1/4-11*	4.50	2.19	1.02	1-5/8	1-7/8

*G As Part of Thread Size is ISO Designation for Parallel Thread.

Female FOR-SEAL® Swivel Straight

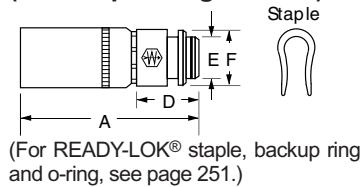


Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/2	1/2	43008E-S68	13/16-16	3.43	1.81	.36	7/8	15/16
1/2	5/8	43008E-S70	1-14	3.54	1.94	.45	1	1-1/8
3/4	5/8	43012E-S70	1-14	3.78	2.06	.46	1-1/8	1-1/8
3/4	3/4	43012E-S72	1-3/16-12	3.88	2.19	.60	1-1/8	1-3/8
3/4	1	43012E-S76	1-7/16-12	3.87	2.19	.61	1-1/8	1-5/8
1	1	43016E-S76	1-7/16-12	4.78	2.69	.78	1-1/4	1-5/8
1	1-1/4	43016E-S80	1-11/16-12	4.43	2.31	.81	1-1/2	1-7/8
1-1/4	1-1/4	43020E-S80	1-11/16-12	4.60	2.19	1.04	1-5/8	1-7/8
1-1/2	1-1/2	43024E-S84	2-12	4.84	2.25	1.19	2	2-1/4

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

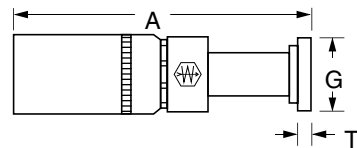
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

READY LOK® Male Connector (For Deep Mining Markets)



Hose I.D.	Conn. Size	Catalog Number	A	Hose Cut-Off Factor†	Hole Dia.	Length D	Dia. E	Dia. F
1/2	1/2	43008E-08S	3.06	1.44	.36	1.13	.70	.94
3/4	3/4	43012E-12S	3.25	1.50	.61	1.13	.94	1.13
1	1	43016E-16S	3.84	1.69	.81	1.34	1.22	1.53
1-1/4	1-1/4	43020E-20S	4.23	1.75	1.06	1.34	1.49	1.80
1-1/2	1-1/2	43024E-24S	5.22	2.63	1.25	1.47	1.63	2.25

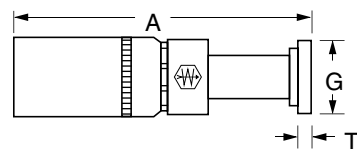
Split Flange Straight (SAE Code 61)



(For Split Flange Kits, see page 252.)

Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T Nominal
1/2	1/2	43008E-G08	8x252	3.87	2.25	.38	1.19 (30mm)	.265
1/2	3/4	43008E-G12	12x252	3.93	2.31	.38	1.50 (38mm)	.265
3/4	3/4	43012E-G12	12x252	4.13	2.44	.61	1.50 (38mm)	.265
3/4	1	43012E-G16	16x252	3.62	1.94	.61	1.75 (44mm)	.315
3/4	1-1/4	43012E-G20	20x252	3.62	1.94	.61	2.00 (51mm)	.315
1	1	43016E-G16	16x252	4.48	2.38	.77	1.75 (44mm)	.315
1	1-1/4	43016E-G20	20x252	4.48	2.38	.77	2.00 (51mm)	.315
1	1-1/2	43016E-G24	24x252	4.54	2.44	.77	2.38 (60mm)	.315
1-1/4	1-1/4	43020E-G20	20x252	5.10	2.75	1.02	2.00 (51mm)	.315
1-1/4	1-1/2	43020E-G24	24x252	5.16	2.81	1.02	2.38 (60mm)	.315
1-1/4	2	43020E-G32	32x252	5.22	2.88	1.02	2.81 (71mm)	.375
1-1/2	1-1/2	43024E-G24	24x252	5.57	2.99	1.19	2.38 (60mm)	.315
1-1/2	2	43024E-G32	32x252	5.77	3.19	1.19	2.81 (71mm)	.375
2	1-1/2	43032E-G24	24x252	6.38	3.44	1.19	2.38 (60mm)	.315
2	2	43032E-G32	32x252	5.94	2.99	1.62	2.81 (71mm)	.375

Split Flange Straight (SAE Code 62)



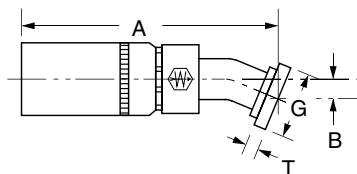
(For Split Flange Kits, see page 253.)

Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T Nominal
1/2	1/2	43008E-D08	8x252	3.94	2.31	.44	1.25	.305
1/2	3/4	43008E-D12	12x252	3.96	2.31	.44	1.62	.345
3/4	3/4	43012E-D12	12x252	4.20	2.50	.72	1.62	.345
3/4	1	43012E-D16	16x252	4.23	2.50	.72	1.88	.375
1	1	43016E-D16	16x252	4.54	2.44	.77	1.88	.375
1	1-1/4	43016E-D20	20x252	4.57	2.50	.77	2.12	.405
1-1/4	1-1/4	43020E-D20	20x252	5.19	2.81	1.02	2.12	.405
1-1/4	1-1/2	43020E-D24	24x252	5.30	2.94	1.02	2.50	.495
1-1/2	1-1/2	43024E-D24	24x252	5.71	3.78	1.19	2.50	.495
2	2	43032E-D32	32x252	7.04	4.09	1.62	3.12	.495

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

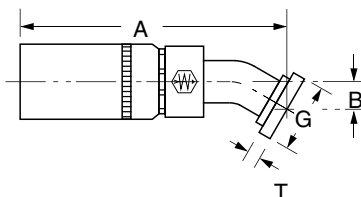
Split Flange 22-1/2° Tube Elbow (SAE Code 61)



(For Split Flange Kits, see page 252.)

Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	B	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T Nominal
1/2	1/2	43008E-H01	8x252	4.29	.38	2.69	.46	1.19 (30mm)	.265
1/2	3/4	43008E-H02	12x252	4.34	.40	2.75	.46	1.50 (38mm)	.265
3/4	3/4	43012E-H02	12x252	4.48	.44	2.75	.69	1.50 (38mm)	.265
3/4	1	43012E-H03	16x252	4.47	.44	2.75	.69	1.75 (44mm)	.315
1	1	43016E-H03	16x252	5.17	.45	3.06	.76	1.75 (44mm)	.315
1	1-1/4	43016E-H04	20x252	5.17	.45	2.89	.76	2.00 (51mm)	.315
1-1/4	1-1/4	43020E-H04	20x252	5.25	.50	2.94	1.02	2.00 (51mm)	.315
1-1/4	1-1/2	43020E-H05	24x252	5.30	.52	2.94	1.01	2.38 (60mm)	.315
1-1/2	1-1/2	43024E-H05	24x252	6.05	.64	3.44	1.19	2.38 (60mm)	.315
1-1/2	2	43024E-H06	32x252	6.24	.71	3.69	1.19	2.81 (71mm)	.375
2	2	43032E-H06	32x252	7.52	.94	4.56	1.62	2.81 (71mm)	.375

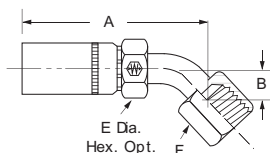
Split Flange 30° Tube Elbow (SAE Code 61)



(For Split Flange Kits, see page 252.)

Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	B	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T Nominal
1/2	1/2	43008E-H21	8x252	4.24	.50	2.63	.46	1.18 (30mm)	.265
1/2	3/4	43008E-H22	12x252	4.30	.50	2.69	.46	1.50 (38mm)	.265
3/4	3/4	43012E-H22	12x252	4.54	.59	2.81	.69	1.50 (38mm)	.265
3/4	1	43012E-H23	16x252	4.54	.59	2.81	.69	1.75 (44mm)	.315
1	1	43016E-H23	16x252	5.17	.64	3.06	.76	1.75 (44mm)	.315
1	1-1/4	43016E-H24	20x252	5.09	.64	3.00	.76	2.00 (51mm)	.315
1-1/4	1-1/4	43020E-H24	20x252	5.42	.72	3.06	1.02	2.00 (51mm)	.315
1-1/4	1-1/2	43020E-H25	24x252	5.47	.75	3.13	1.02	2.38 (60mm)	.315
1-1/2	1-1/2	43024E-H25	24x252	6.26	.91	3.69	1.19	2.38 (60mm)	.315
1-1/2	2	43024E-H26	32x252	6.44	1.01	3.88	1.19	2.81 (71mm)	.375
2	2	43032E-H26	32x252	7.72	1.31	4.75	1.62	2.81 (71mm)	.375

JIC 37° Female Swivel 45° Tube Elbow (Refer to Footnotes)



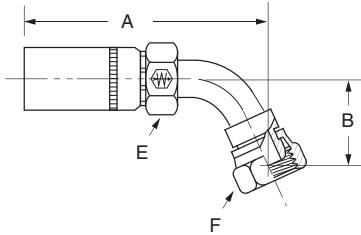
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	E	Hex F
1/2	1/2	43008E-688 ^a	3/4-16	4.35	1.14	2.69	.34	13/16	7/8
1/2	5/8	43008E-690 ^a	7/8-14	4.31	1.14	2.68	.48	1	1
3/4	3/4	43012E-692	1-1/16-12	5.20	1.25	3.50	.58	1/8	1-1/4
1	1	43016E-696	1-5/16-12	5.94	1.53	3.81	.76	1-1/4	1-1/2

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

^a Swivel nuts are universal – both SAE 37° and 45° connections.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

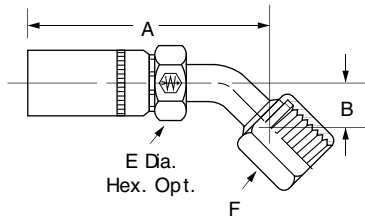
**British Standard (BSPP)
60° Cone Female Swivel
45° Elbow**



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Cut-Off Factor†	Hose Hole Dia.	Dia. E	Hex F
3/4	3/4	43012E-52P	G-3/4-14*	5.02	1.24	3.31	.56	1-1/8	1-1/4
1	1	43016E-56P	G-1-11*	5.12	1.36	3.06	.76	1-1/4	1-1/2

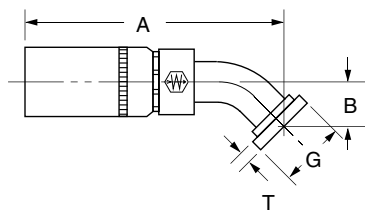
*G As Part of Thread Size is ISO Designation for Parallel Thread.

**Female FOR-SEAL®
Swivel 45° Tube Elbow**



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Cut-Off Factor†	Hose Hole Dia.	Dia. E	Hex F
1/2	1/2	43008E-L68	13/16-16	4.08	.60	2.44	.36	7/8	15/16
1/2	5/8	43008E-L70	1-14	3.91	.65	2.25	.46	1	1-1/8
3/4	3/4	43012E-L72	1-3/16-12	4.61	.84	2.88	.55	1-1/8	1-3/8
1	1	43016E-L76	1-7/16-12	5.19	.95	3.06	.76	1-1/4	1-5/8
1-1/4	1-1/4	43020E-L80	1-11/16-12	5.11	1.07	2.75	1.01	1-5/8	1-7/8
1-1/2	1-1/2	43024E-L84	2-12	6.08	1.07	3.50	1.19	2	2-1/4

**Split Flange 45° Tube
Elbow (SAE Code 61)**



Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	B	Cut-Off Factor†	Hose Hole Dia.	Dia. G	T Nominal
1/2	1/2	43008E-G41	8x252	4.08	.78	2.44	.38	1.19 (30mm)	.265
1/2	3/4	43008E-G42	12x252	4.12	.84	2.50	.38	1.50 (38mm)	.265
1/2	1	43008E-G46	16x252	3.98	.78	2.38	.38	1.75 (44mm)	.315
3/4	3/4	43012E-G42	12x252	4.84	1.00	3.12	.61	1.50 (38mm)	.265
3/4	1	43012E-G46	16x252	4.74	1.00	3.02	.61	1.75 (44mm)	.315
1	1	43016E-G46	16x252	4.85	1.06	2.95	.77	1.75 (44mm)	.315
1	1-1/4	43016E-G50	20x252	4.90	1.06	2.06	.77	2.00 (51mm)	.315
1-1/4	1-1/4	43020E-G50	20x252	5.19	1.15	2.81	1.02	2.00 (51mm)	.315
1-1/4	1-1/2	43020E-G54	24x252	5.23	1.19	2.88	1.02	2.38 (60mm)	.315
1-1/2	1-1/2	43024E-G54	24x252	6.26	1.41	3.68	1.19	2.38 (60mm)	.315
1-1/2	2	43024E-G62	32x252	6.41	1.55	3.81	1.19	2.81 (71mm)	.375
2	2	43032E-G62	32x252	8.18	2.08	5.25	1.62	2.81 (71mm)	.375

(For Split Flange Kits, see page 252.)

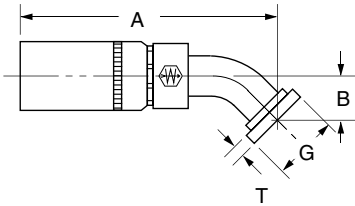
†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

HOSE ENDS



Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

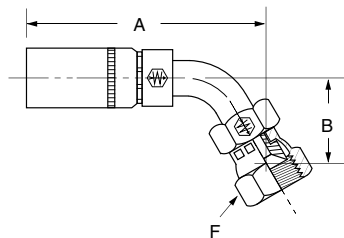
Split Flange 45° Tube Elbow (SAE Code 62)



(For Split Flange Kits, see page 253.)

Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	B	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T Nominal
1/2	1/2	43008E-D41	8x252	4.11	.94	2.50	.44	1.25	.305
1/2	3/4	43008E-D42	12x252	4.11	1.00	2.50	.44	1.62	.345
3/4	3/4	43012E-D42	12x252	5.04	1.27	3.31	.72	1.62	.345
3/4	1	43012E-D46	12x252	5.15	1.29	3.44	.72	1.88	.375
1	1	43016E-D46	16x252	5.73	1.34	3.63	.77	1.88	.375
1	1-1/4	43016E-D50	20x252	5.86	1.44	3.75	.77	2.12	.405
1-1/4	1-1/4	43020E-D50	20x252	6.69	1.68	4.31	1.02	2.12	.405
1-1/4	1-1/2	43020E-D54	24x252	6.76	1.75	4.44	1.02	2.50	.495
1-1/2	1-1/2	43024E-D54	24x252	7.19	1.86	4.63	1.19	2.50	.495
2	2	43032E-D62	32x252	8.58	2.25	5.63	1.62	3.12	.495

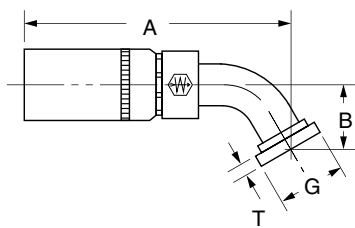
SAE 37° Female Swivel 60° Tube Elbow



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F
1/2	5/8	43008E-C60	7/8-14	4.30	1.52	2.69	.48	1
3/4	3/4	43012E-C62	1-1/16-12	4.96	1.71	3.25	.61	1-1/4
1	1	43016E-C66#	1-5/16-12	5.82	1.53	3.69	.76	1-1/2

Captive swivel nut design.

Split Flange 60° Tube Elbow (SAE Code 61)



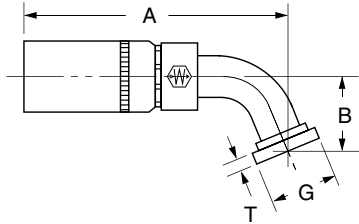
(For Split Flange Kits, see page 252.)

Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	B	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T Nominal
1/2	1/2	43008E-H51	8x252	3.92	1.09	2.31	.46	1.19	.265
1/2	3/4	43008E-H52	12x252	3.92	1.09	2.31	.46	1.50	.265
3/4	3/4	43012E-H52	12x252	4.80	1.38	3.06	.69	1.50	.265
3/4	1	43012E-H53	16x252	4.80	1.38	3.06	.69	1.75	.315
1	1	43016E-H53	16x252	5.65	1.51	3.56	.76	1.75	.315
1	1-1/4	43016E-H54	20x252	5.66	1.51	3.56	.76	2.00	.315
1-1/4	1-1/4	43020E-H54	20x252	5.66	1.69	3.31	1.02	2.00	.315
1-1/4	1-1/2	43020E-H55	24x252	5.69	1.74	3.31	1.02	2.38	.315
1-1/2	1-1/2	43024E-H55	24x252	6.45	2.03	3.88	1.19	2.38	.315
1-1/2	2	43024E-H56	32x252	6.55	2.26	3.94	1.19	2.81	.375
2	2	43032E-H56	32x252	8.34	3.00	5.38	1.62	2.81	.375

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

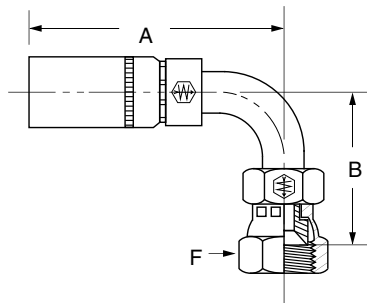
Split Flange 67-1/2° Tube Elbow (SAE Code 61)



(For Split Flange Kits, see page 252.)

Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	B	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T Nominal
1/2	1/2	43008E-H61	8x252	4.33	1.25	2.69	.46	1.19 (30mm)	.265
1/2	3/4	43008E-H62	12x252	4.02	1.25	2.38	.46	1.50 (38mm)	.265
1/2	1	43008E-H63	16x252	4.32	1.25	2.69	.46	1.75 (44mm)	.315
3/4	3/4	43012E-H62	12x252	4.78	1.59	3.06	.69	1.50 (38mm)	.265
3/4	1	43012E-H63	16x252	4.78	1.59	3.06	.69	1.75 (44mm)	.315
3/4	1-1/4	43012E-H64	20x252	4.78	1.59	3.06	.69	2.00 (51mm)	.315
1	1	43016E-H63	16x252	5.44	1.76	3.94	.76	1.75 (44mm)	.315
1	1-1/4	43016E-H64	20x252	5.45	1.76	3.31	.76	2.00 (51mm)	.315
1-1/4	1-1/4	43020E-H64	20x252	5.64	1.94	3.25	1.02	2.00 (51mm)	.315
1-1/4	1-1/2	43020E-H65	24x252	5.66	2.00	3.31	1.02	2.38 (60mm)	.315
1-1/2	1-1/2	43024E-H65	24x252	6.38	2.40	3.81	1.19	2.38 (60mm)	.315
1-1/2	2	43024E-H66	32x252	6.39	2.31	3.81	1.19	2.81 (71mm)	.375
2	2	43032E-H66	32x252	8.18	3.25	5.23	1.75	2.81 (71mm)	.375

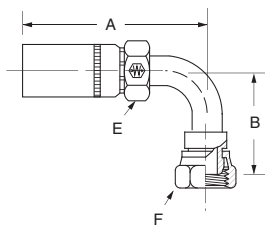
JIC 37° Female Swivel 90° Tube Elbow (Refer to Footnotes)



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F
1/2	1/2	43008E-648L36 ^a	3/4-16	3.61	3.63	1.94	.37	7/8
1/2	1/2	43008E-648L45 ^a	3/4-16	3.61	4.50	1.94	.37	7/8
1/2	1/2	43008E-668# ^a	3/4-16	3.90	2.12	2.25	.37	7/8
1/2	5/8	43008E-650 ^a	7/8-14	3.79	3.26	2.13	.48	1
1/2	5/8	43008E-670 ^a	7/8-14	3.61	2.12	1.94	.48	1
3/4	3/4	43012E-652	1-1/16-12	4.62	3.62	2.94	.61	1-1/4
3/4	3/4	43012E-672#	1-1/16-12	4.55	2.50	2.83	.61	1-1/4
1	1	43016E-656L33	1-5/16-12	5.08	3.37	3.00	.76	1-1/2
1	1	43016E-656L56	1-5/16-12	5.08	5.62	3.00	.76	1-1/2
1	1	43016E-676#	1-5/16-12	5.35	3.00	3.25	.76	1-1/2
1-1/4	1-1/4	43020E-677	1-5/8-12	5.35	3.31	3.00	1.00	2.00

Captive swivel nut design.

British Standard (BSPP) 60° Cone Female Pipe Swivel 90° Elbow



Hose I.D.	BSPP Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
3/4	3/4	43012E-82P	G-3/4-14*	4.69	2.49	2.94	.56	1-1/8	1-1/4
1	1	43016E-86P	G-1-11*	5.13	2.98	3.00	.76	1-1/4	1-1/2

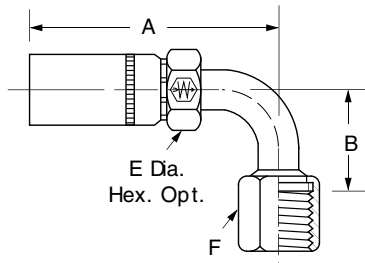
*G As Part of Thread Size is ISO Designation for Parallel Thread.

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

^a Swivel nuts are universal – both SAE 37° and 45° connections.

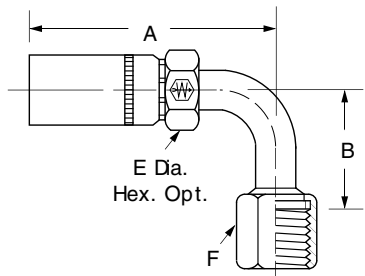
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

Female FOR-SEAL® Swivel 90° Short Drop Tube Elbow



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Dia. E	Hex F
1/2	1/2	43008E-A28	13/16-16	3.53	1.15	1.88	.33	7/8	15/16
1/2	5/8	43008E-A30	1-14	3.70	1.27	2.06	.38	1	1-1/8
3/4	5/8	43012E-A30	1-14	3.94	1.27	2.19	.46	1-1/8	1-1/8
3/4	3/4	43012E-A32	1-3/16-12	4.42	1.88	2.69	.55	1-1/8	1-3/8
1	1	43016E-A36	1-7/16-12	5.03	2.21	2.94	.76	1-1/4	1-5/8
1-1/4	1-1/4	43020E-A40	1-11/16-12	5.35	2.51	3.00	1.02	1-5/8	1-7/8
1-1/4	1-1/2	43020E-A44	2-12	5.35	2.55	3.00	1.02	1-5/8	2-1/4
1-1/2	1-1/2	43024E-A44	2-12	6.17	2.70	3.56	1.19	2	2-1/4

Female FOR-SEAL® Swivel 90° Long Drop Tube Elbow

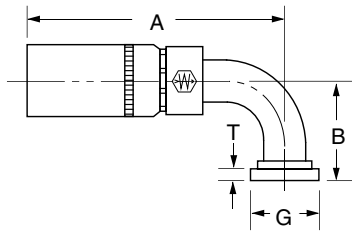


Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Dia. E	Hex F
1/2	1/2	43008E-A68	13/16-16	3.41	2.51	1.81	.38	7/8	15/16
1/2	5/8	43008E-A70	1-14	3.70	2.76	2.06	.38	1	1-1/8
3/4	3/4	43012E-A72	1-3/16-12	4.37	3.78	2.69	.56	1-1/8	1-3/8
1	1	43016E-A76	1-7/16-12	5.24	4.50	3.14	.76	1-1/4	1-5/8
1-1/4	1-1/4	43020E-A80	1-11/16-12	5.35	5.09	3.00	1.01	1-5/8	1-7/8
1-1/2	1-1/2	43024E-A84	2-12	6.17	5.54	3.56	1.19	2	2-1/4

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

**Split Flange 90°
Tube Elbow (SAE Code 61)**



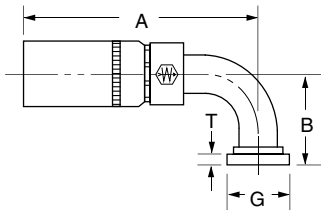
Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	B	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T Nominal
1/2	1/2	43008E-G71	8x252	3.61	1.62	2.00	.38	1.19 (30mm)	.265
1/2	1/2	43008E-G71L32	8x252	3.61	3.25	2.00	.46	1.19 (30mm)	.265
1/2	3/4	43008E-G72	12x252	3.73	1.68	2.13	.38	1.50 (38mm)	.265
1/2	1	43008E-G76	16x252	3.79	1.63	2.13	.38	1.75 (44mm)	.315
3/4	3/4	43012E-G72	12x252	4.37	2.12	2.63	.56	1.50 (38mm)	.265
3/4	3/4	43012E-G72L37	12x252	4.62	3.75	2.94	.68	1.50 (38mm)	.265
3/4	3/4	43012E-G72L50	12x252	4.62	5.00	2.94	.68	1.50 (38mm)	.265
3/4	1	43012E-G76	16x252	4.37	2.12	2.63	.56	1.75 (44mm)	.315
3/4	1	43012E-G76L31	16x252	4.62	3.12	2.94	.67	1.75 (44mm)	.315
3/4	1-1/4	43012E-G80	20x252	5.37	2.12	2.63	.56	2.00 (51mm)	.315
1	1	43016E-G76	16x252	5.29	2.38	3.19	.76	1.75 (44mm)	.315
1	1	43016E-G76L21	16x252	5.27	2.12	3.19	.76	1.75 (44mm)	.315
1	1	43016E-G76L46	16x252	5.23	4.62	3.13	.76	1.75 (41mm)	.315
1	1-1/4	43016E-G80	20x252	5.29	2.38	3.19	.76	2.00 (51mm)	.315
1	1-1/4	43016E-G80L46	20x252	5.20	4.62	3.13	.76	2.00 (51mm)	.315
1	1-1/2	43016E-G84	24x252	5.23	2.44	3.13	.76	2.38 (60mm)	.315
1-1/4	1-1/4	43020E-G80	20x252	5.35	2.62	3.00	1.02	2.00 (51mm)	.315
1-1/4	1-1/4	43020E-G80L31	20x252	5.35	3.12	3.00	1.02	2.00 (51mm)	.315
1-1/4	1-1/4	43020E-G80L40	20x252	5.35	4.00	3.00	1.02	2.00 (51mm)	.315
1-1/4	1-1/4	43020E-G80L51	20x252	5.35	5.12	3.00	1.02	2.00 (51mm)	.315
1-1/4	1-1/4	43020E-G80L66	20x252	5.35	6.62	3.00	1.02	2.00 (51mm)	.315
1-1/4	1-1/2	43020E-G84	24x252	5.35	2.68	3.00	1.02	2.38 (60mm)	.315
1-1/4	1-1/2	43020E-G84L46	24x252	5.35	4.68	3.00	1.02	2.38 (60mm)	.315
1-1/2	1-1/2	43024E-G84	24x252	5.97	3.12	3.38	1.19	2.38 (60mm)	.315
1-1/2	1-1/2	43024E-G84L58	24x252	6.09	5.80	3.50	1.31	2.38 (60mm)	.315
1-1/2	1-1/2	43024E-G84L67	24x252	6.09	6.75	3.50	1.31	2.38 (60mm)	.315
1-1/2	2	43024E-G92	32x252	5.97	3.32	3.38	1.19	2.81 (71mm)	.375
1-1/2	2	43024E-G92L45	32x252	6.09	4.50	3.50	1.31	2.81 (71mm)	.375
1-1/2	2	43024E-G92L67	32x252	6.09	6.75	3.50	1.31	2.81 (71mm)	.375
2	1-1/2	43032E-G84	24x252	6.78	3.12	3.81	1.19	2.38 (60mm)	.315
2	2	43032E-G92	32x252	7.79	4.64	4.81	1.62	2.81 (71mm)	.375
2	2	43032E-G92L65	32x252	7.75	6.50	4.81	1.75	2.81 (71mm)	.375
2	2	43032E-G92L80	32x252	7.75	8.00	4.81	1.75	2.81 (71mm)	.375

(For Split Flange Kits, see page 252.)

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

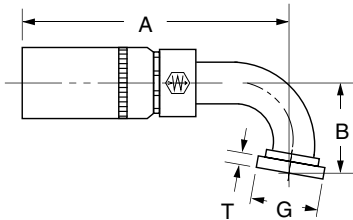
Split Flange 90° Tube Elbow (SAE Code 62)



(For Split Flange Kits, see page 253.)

Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	B	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T Nominal
1/2	1/2	43008E-D71	8x252	3.86	1.72	2.25	.38	1.25	.305
1/2	3/4	43008E-D72	12x252	4.02	1.90	2.38	.38	1.62	.345
3/4	3/4	43012E-D72	12x252	4.64	2.41	2.94	.61	1.62	.345
3/4	1	43012E-D76	16x252	4.64	2.70	2.94	.61	1.88	.375
1	1	43016E-D76	16x252	5.60	2.75	3.38	.77	1.88	.375
1	1-1/4	43016E-D80	20x252	5.39	2.90	3.25	.77	2.12	.405
1-1/4	1-1/4	43020E-D80	20x252	5.84	3.24	3.50	1.02	2.12	.405
1-1/4	1-1/2	43020E-D84	24x252	5.84	3.35	3.50	1.02	2.50	.405
1-1/2	1-1/2	43024E-D84	24x252	6.05	3.70	3.47	1.19	2.50	.495
1-1/2	2	43024E-D92	32x252	6.05	4.26	3.47	1.19	3.12	.495
2	2	43032E-D92	32x252	7.65	4.84	4.69	1.62	3.12	.495

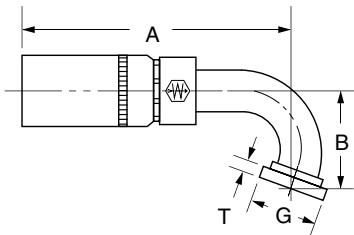
Split Flange 100° Tube Elbow (SAE Code 61)



(For Split Flange Kits, see page 252.)

Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	B	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T Nominal
3/4	3/4	43012E-H72	12x252	4.50	2.33	2.81	.61	1.50 (38mm)	.265
3/4	1	43012E-H73	16x252	4.50	2.33	2.81	.61	1.75 (44mm)	.315

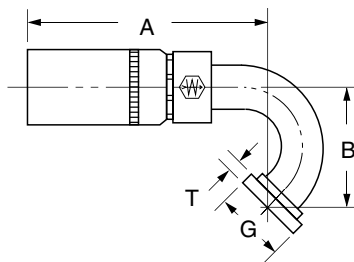
Split Flange 110° Tube Elbow (SAE Code 61)



(For Split Flange Kits, see page 252.)

Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	B	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T Nominal
1	1	43016E-H83	16x252	4.54	2.89	2.44	.76	1.75 (44mm)	.315
1-1/4	1-1/4	43020E-H84	20x252	4.91	3.12	2.50	1.01	2.00 (51mm)	.315
1-1/4	1-1/2	43020E-H85	24x252	4.89	3.17	2.50	1.01	2.38 (60mm)	.315
1-1/2	1-1/2	43024E-H85	24x252	5.44	3.69	2.88	1.19	2.38 (60mm)	.315
2	2	43032E-H86	32x252	7.11	5.64	4.19	1.62	2.81 (71mm)	.375

Split Flange 135° Tube Elbow (SAE Code 61)

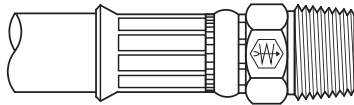


(For Split Flange Kits, see page 252.)

Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	B	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T Nominal
1/2	1/2	43008E-H91	8x252	2.96	2.12	1.38	.37	1.19 (30mm)	.265
3/4	3/4	43012E-H92	12x252	3.70	3.00	2.00	.61	1.50 (38mm)	.265

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.



Hose End Series: 470 'E' Series

Typical Application: Very high pressure hydraulic lines subjected to extreme pressure surges and flexing. Some applications include mining, construction, farming and high performance industrial equipment.

Pressure: Determined by maximum working pressure for hose size and hose end configuration whichever is lesser. See page 15 for working pressure ratings for hose end configurations.

Material: Low Carbon Steel

Plating: Zinc; yellow dichromate finish

Advantages: SAE Code 62 High Pressure Series hose ends. Excellent series for very high pressure hydraulics. Compatible with Caterpillar, John Deere, and most major manufacturers of equipment using high pressure applications.

Assemble With: T-410-1 Coll-O-Crimp® II, T-420-1 Coll-O-Crimp® Super I, T-440-1 Coll-O-Crimp II Plus or T-480 depending on size.

⚠ WARNING - 47032E ends can ONLY be crimped on the T-440.

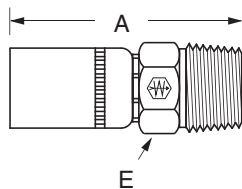
Ordering Information: Order individually by catalog number; reference individual hose end listings for details. For split flange kits, refer to pages 252-253.

NOTE: Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

Label Set: FS-1800

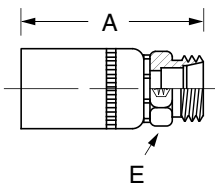
⚠ Refer to important safety information on pages 1-2.

Male Pipe Rigid



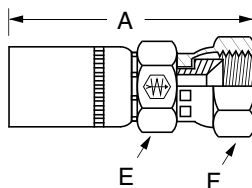
Hose I.D.	Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
1/2	1/2	47008E-108	1/2-14	2.79	1.38	.38	7/8
3/4	3/4	47012E-112	3/4-14	3.80	1.75	.61	1-1/16
1	1	47016E-116	1-11-1/2	4.30	1.94	.80	1-3/8
1-1/4	1-1/4	47020E-120	1-1/4-11-1/2	5.56	2.44	1.00	1-3/4
1-1/2	1-1/2	47024E-124	1-1/2-11-1/2	5.61	2.25	1.25	2-1/8
2	2	47032E-132	2-11-1/2	6.53	2.75	1.56	2-3/4

Male DIN 24° Seat s. Rh. (Heavy)



Hose I.D.	Tube Size (mm)	Catalog Number	Thread mm	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
3/4	25	47012E-25F	M36-2.0	3.56	1.61	.58	1-3/8
1	30	47016E-30F	M42-2.0	4.26	1.88	.79	1-3/4
1-1/4	38	47020E-38F	M52-2.0	5.22	3.81	1.00	2-1/4

JIC 37° Female Swivel



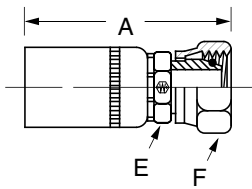
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/2	1/2	47008E-608	3/4-16	2.97	1.56	.39	7/8	7/8
3/4	3/4	47012E-612	1-1/16-12	3.90	1.88	.58	1-1/16	1-1/4
3/4	1	47012E-616	1-5/16-12	3.98	1.94	.58	1-1/4	1-1/2
1	1	47016E-616	1-5/16-12	4.34	2.00	.80	1-3/8	1-1/2
1-1/4	1-1/4	47020E-620	1-5/8-12	5.72	2.56	1.00	1-3/4	2
1-1/2	1-1/2	47024E-624	1-7/8-12	6.04	2.63	1.25	2-1/8	2-1/4
2	2	47032E-632Δ	2-1/2-12	6.98	3.22	1.56	2-3/4	3

⚠ WARNING - Δ Before crimping this fitting on a T-440 C-O-C machine, refer to T-440 crimping procedures on page 282-283.

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

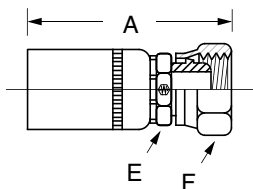
Female Swivel DIN 24° Seat s. Rh. DKO (Heavy)



(Includes O-Ring)

Hose I.D.	Tube Size (mm)	Catalog Number	Thread mm	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
3/4	25	47012E-75C	M36x2.0	3.94	1.88	.58	1-5/16	1-13/16
1	30	47016E-80C	M42x2.0	4.60	2.25	.79	1-5/8	2
1-1/4	38	47020E-88C	M52x2.0	5.96	2.63	1.00	2	2-3/8

British Standard (BSPP) 60° Cone Female Pipe Swivel

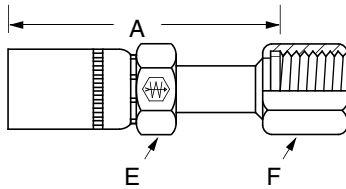


Swivel Nut Style may vary.

Hose I.D.	BSPP Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
3/4	3/4	47012E-362	G-3/4-14*	3.99	1.69	.58	1-1/16	1-1/4
1	1	47016E-366	G-1-11*	4.75	2.23	.79	1-3/8	1-1/2
1-1/4	1-1/4	47020E-370	G-1-1/4-11*	6.26	2.44	1.00	1-7/8	1-7/8
1-1/2	1-1/2	47024E-374	G-1-1/2-11*	6.46	3.04	1.18	2	2-1/4
2	2	47032E-375	G-2-11*	6.85	3.06	1.56	2-3/4	2-3/4

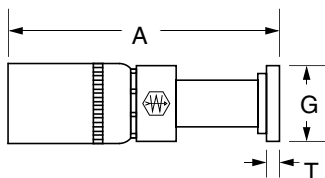
*G As Part of Thread Size is ISO Designation for Parallel Thread.

Female FOR-SEAL® Swivel Straight



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
3/4	3/4	47012E-S72	1-3/16-12	4.20	2.16	.55	1-1/8	1-3/8
1	1	47016E-S76	1-7/16-12	4.65	2.31	.79	1-3/8	1-5/8
1	1-1/4	47016E-S80	1-11/16-12	4.65	2.31	.79	1-3/8	1-7/8
1-1/4	1-1/4	47020E-S80	1-11/16-12	5.76	2.62	1.00	1-3/4	1-7/8

Split Flange Straight (SAE Code 61)

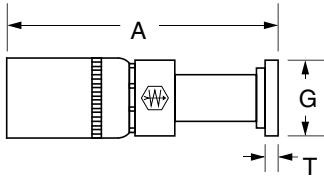


(For Split Flange Kits, see page 252.)

Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T Nominal
1/2	1/2	47008E-G08	8x252	3.79	2.38	.38	1.19	.265
3/4	3/4	47012E-G12	12x252	4.46	2.44	.58	1.50	.265
3/4	1	47012E-G16	16x252	4.46	2.44	.58	1.75	.315
1	1	47016E-G16	16x252	4.91	2.56	.77	1.75	.315
1-1/4	1-1/4	47020E-G20	20x252	5.84	2.69	1.00	2.00	.315
1-1/2	1-1/2	47024E-G24	24x252	6.83	3.50	1.25	2.38	.315
2	2	47032E-G32	32x252	7.82	4.06	1.81	2.81	.375

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

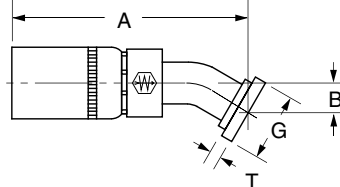
Split Flange Straight (SAE Code 62)



(For Split Flange Kits, see page 253.)

Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T Nominal
3/4	3/4	47012E-D12	12x252	4.75	2.75	.58	1.62	.345
3/4	1	47012E-D16	16x252	4.94	2.88	.58	1.88	.375
1	1	47016E-D16	16x252	4.91	2.56	.77	1.88	.375
1	1-1/4	47016E-D20	20x252	5.10	2.75	.77	2.12	.405
1	1-1/2	47016E-D24	24x252	5.30	2.94	.77	2.50	.495
1-1/4	1-1/4	47020E-D20	20x252	5.73	2.63	1.00	2.12	.405
1-1/4	1-1/2	47020E-D24	24x252	5.91	2.75	1.00	2.50	.495
1-1/2	1-1/4	47024E-D20	20x252	6.87	3.44	1.00	2.12	.405
1-1/2	1-1/2	47024E-D24	24x252	6.71	3.31	1.25	2.50	.495

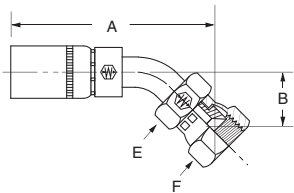
Split Flange 30° Tube Elbow (SAE Code 62)



(For Split Flange Kits, see page 253.)

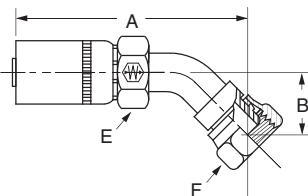
Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	B	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T Nominal
1	1-1/2	47016E-N25	24x252	6.46	1.11	4.06	.75	2.50	.495
1-1/4	1-1/2	47020E-N25	24x252	7.45	1.09	4.31	1.06	2.50	.495

JIC 37° Female Swivel 45° Tube Elbow



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/2	1/2	47008E-688	3/4-16	4.24	1.14	2.81	.39	7/8	7/8
3/4	3/4	47012E-692	1-1/16-12	5.79	1.66	3.75	.61	1-1/8	1-1/4
1	1	47016E-696	1-5/16-12	6.45	1.78	4.19	.80	1-3/16	1-1/2

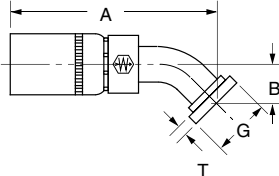
British Standard (BSPP) 60° Cone Female Pipe Swivel 45° Elbow



Hose I.D.	BSPP Pipe Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Dia/Hex E	Hex F
3/4	3/4	47012E-52P	G-3/4-14*	5.80	1.66	3.75	.61	1-1/16	1-1/4
1	1	47016E-56P	G-1-11*	6.54	1.92	4.19	.75	1-3/8	1-1/2

*G As Part of Thread Size is ISO Designation for Parallel Thread.

Split Flange 45° Tube Elbow (SAE Code 61)



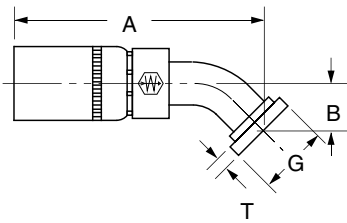
(For Split Flange Kits, see page 252.)

Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	B	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T Nom.
1/2	1/2	47008E-G41	8x252	3.94	.78	2.50	.38	1.19	.265
3/4	3/4	47012E-G42	12x252	5.47	1.34	3.44	.58	1.50	.265
1	1	47016E-G46	16x252	6.09	1.42	3.75	.75	1.75	.315
1-1/4	1-1/4	47020E-G50	20x252	7.13	1.40	4.00	1.00	2.00	.315
1-1/2	1-1/2	47024E-G54	24x252	7.81	1.41	4.38	1.25	2.38	.315
2	2	47032E-G62	32x252	9.36	2.00	5.56	1.81	2.81	.375

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

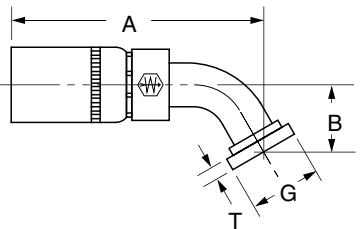
Split Flange 45° Tube Elbow (SAE Code 62)



(For Split Flange Kits, see page 253.)

Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	B	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T Nom.
3/4	3/4	47012E-D42	12x252	5.48	1.36	3.44	.58	1.62	.345
3/4	1	47012E-D46	16x252	5.62	1.50	3.56	.58	1.88	.375
1	1	47016E-D46	16x252	6.09	1.42	3.75	.79	1.88	.375
1	1-1/4	47016E-D50	20x252	6.20	1.56	3.83	.79	2.12	.405
1-1/4	1-1/4	47020E-D50	20x252	7.18	1.46	4.00	1.00	2.12	.405
1-1/4	1-1/2	47020E-D54	24x252	7.31	1.58	4.19	1.00	2.50	.495
1-1/2	1-1/2	47024E-D54	24x252	7.99	1.60	4.56	1.19	2.50	.495

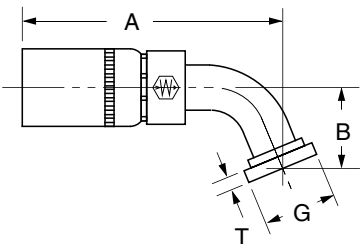
Split Flange 60° Tube Elbow (SAE Code 62)



(For Split Flange Kits, see page 253.)

Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	B	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T Nominal
1-1/4	1-1/2	47020E-N55	24x252	7.35	2.28	4.19	1.06	2.50	.495

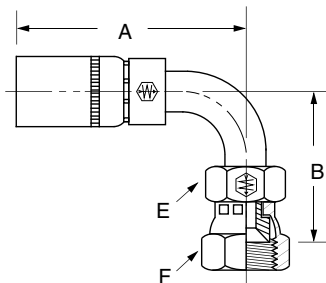
Split Flange 67 1/2° Tube Elbow (SAE Code 62)



(For Split Flange Kits, see page 253.)

Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	B	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T Nominal
1	1	47016E-N63	16x252	6.02	2.24	3.63	.75	1.88	.375

JIC 37° Female Swivel 90° Tube Elbow

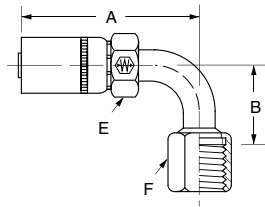


Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/2	1/2	47008E-668	3/4-16	3.53	2.12	2.80	.39	7/8	7/8
3/4	3/4	47012E-672	1-1/16-12	5.01	3.05	3.74	.61	1-1/8	1-1/4
1	1	47016E-676	1-5/16-12	5.52	3.30	4.17	.80	1-3/16	1-1/2

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

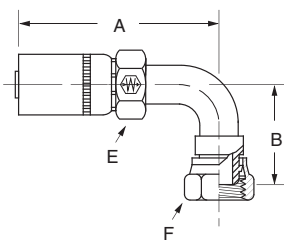
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

Female FOR-SEAL® Swivel Short 90° Tube Elbow Drop



Nominal Hose I.D.	Flange Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1-1/4	1-1/4	47020E-A40	1-11/16-12	6.51	2.51	3.38	1.00	1-3/4	1-7/8

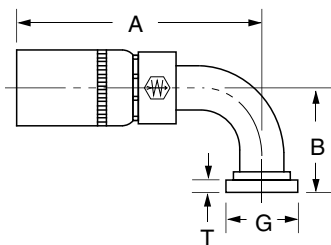
British Standard (BSPP) 60° Cone Female Pipe Swivel 90° Elbow



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
3/4	3/4	47012E-82P	G-3/4-14*	4.98	2.49	2.94	.61	1-1/8	1-1/4
1	1	47016E-86P	G-1-11*	5.52	3.43	3.13	.75	1-3/8	1-1/2

*G As part of thread size is ISO designation for Parallel thread.

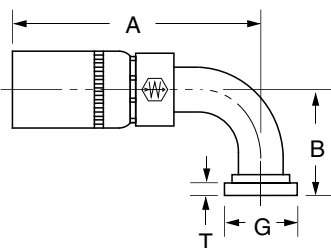
Split Flange 90° Tube Elbow (SAE Code 61)



(For Split Flange Kits, see page 252.)

Nominal Hose I.D.	Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	B	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T Nominal
1/2	1/2	47008E-G71	8x252	3.59	1.62	2.13	.50	1.19	.265
3/4	3/4	47012E-G72	12x252	5.01	2.59	2.94	.61	1.50	.265
3/4	1	47012E-G76	16x252	5.01	2.59	2.94	.58	1.75	.315
1	1	47016E-G76	16x252	5.52	2.78	3.19	.75	1.75	.315
1-1/4	1-1/4	47020E-G80	20x252	6.61	2.43	3.50	1.12	2.00	.315
1-1/2	1-1/2	47024E-G84	24x252	7.57	3.12	4.19	1.44	2.38	.315
2	2	47032E-G92	32x252	8.88	4.50	5.13	1.81	2.81	.375

Split Flange 90° Tube Elbow (SAE Code 62)

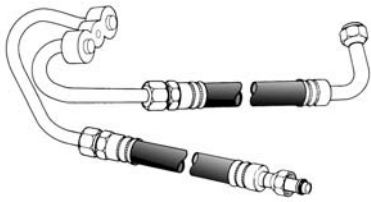


(For Split Flange Kits, see page 253.)

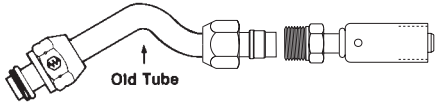
Nominal Hose I.D.	Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	B	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T Nominal
3/4	3/4	47012E-D72	12x252	5.01	2.62	2.94	.64	1.62	.345
3/4	1	47012E-D76	16x252	5.01	2.81	2.94	.60	1.88	.375
1	1	47016E-D76	16x252	5.52	2.79	3.13	.86	1.88	.375
1	1-1/4	47016E-D80	20x252	5.52	2.94	3.13	.86	2.12	.405
1	1-1/2	47016E-D84	24x252	5.75	3.42	3.39	.75	2.50	.495
1-1/4	1-1/4	47020E-D80	20x252	6.61	3.02	3.50	1.03	2.12	.405
1-1/4	1-1/4	47020E-D80L47	20x252	6.61	4.70	3.50	1.03	2.12	.405
1-1/4	1-1/4	47020E-D80L60	20x252	6.61	6.00	3.50	1.03	2.12	.405
1-1/4	1-1/2	47020E-D84	24x252	6.61	3.68	3.50	1.03	2.50	.495
1-1/2	1-1/4	47024E-D80	20x252	6.77	3.02	3.38	1.03	2.12	.405
1-1/2	1-1/2	47024E-D84	24x252	7.57	3.68	4.19	1.28	2.50	.495

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

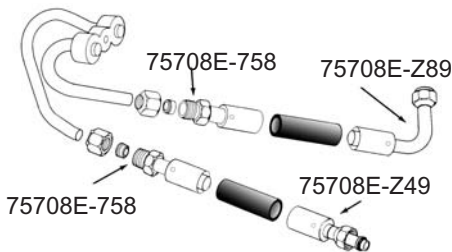
The Coll-O-Crimp® system can be used to make original equipment assemblies using factory replacement ends as listed on pages 117-123. If the required hose end is not found, our **Flareless** hose end can be used. By following the instructions on this page, a new hose assembly can be made by combining Boston Weatherhead's hose end with the original equipment end configuration.



Typical original equipment assembly.



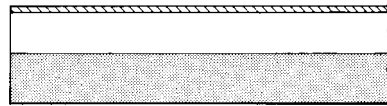
Typical assembly of a Flareless hose end used with an old original equipment end configuration.



Boston Weatherhead replacement assemblies using original equipment tubing with Boston Weatherhead 757 'E' Series hose ends.

Preparation - Flareless Tube Assembly

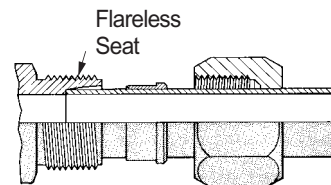
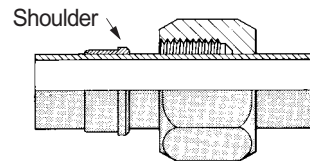
1. Remove the bad tube assembly or if room permits, perform the cutting procedure in place. Cut the tube squarely and as close to the hose connection as possible. Allow an adequate straight area for the flareless nut and sleeve to move freely for installation purposes. Deburr the inside and outside diameters of the tubing.



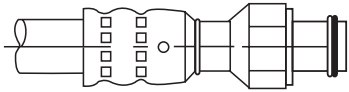
Make Presetting Operation

1. Slide nut and then sleeve onto tube. Shoulder of sleeve must be toward nut.
2. Lubricate threads, seat in hose end and flareless sleeve with a good grade of lubricant. Insert tube into seat of hose end, making sure that tube is bottomed, **TIGHTEN HAND TIGHT** and then tighten an **ADDITIONAL 1 to 1-1/6 turns** with a wrench.

NOTE: Compensate for tubing being removed by adding to the over all length of the replacment hose assembly.



Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.



Hose End Series: 757 'E' Series

Typical Applications: Used with R134a and R12 applications. Ideal for heavy duty truck use as well as industrial and automotive applications.

Pressure: Determined by hose burst pressure. See page 15 for working pressure ratings for hose end configurations.

Material: Carbon steel

Plating: Black; zinc with rust preventive.

Advantages: Wide selection of hose ends which include the flareless ends, allowing use of existing tubing. Steel hose ends handle heavy duty demands.

Assemble With: T-400-1, T-410-1, T-420-1, T-440-1, T-460, T-462, T-465-1, T-475-1, T-480.

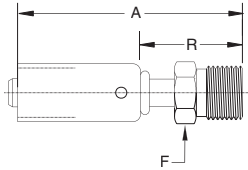
Ordering Information: Order individually by catalog number.

NOTE: Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

Refer to important safety information on pages 1-2.

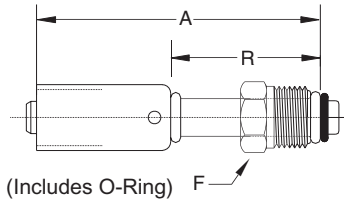
Label Set: **FS-3200**

Bumped Tube O-Ring Male Rigid



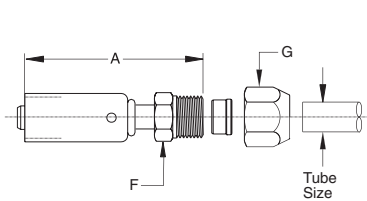
Hose I.D.	Tube Size	Catalog Number	Thread Size	Length A	Run R	Hose Cut-Off Factor†	Hex F
5/16	3/8	75706E-W06	5/8-18	2.94	1.54	1.63	5/8
13/32	1/2	75708E-W08	3/4-16	3.26	1.86	2.00	3/4
1/2	5/8	75710E-W10	7/8-14	3.35	1.95	2.13	7/8
5/8	5/8	75712E-W10	7/8-14	3.56	2.06	2.25	7/8
5/8	3/4	75712E-W12	1-1/16-14	3.56	2.06	2.25	1-1/16

Bumped Tube O-Ring Male Swivel



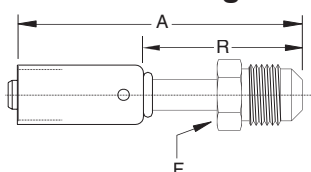
Hose I.D.	Tube Size	Catalog Number	Thread Size	Length A	Run R	Hose Cut-Off Factor†	Hex F	O-Ring
5/16	3/8	75706E-Z06	5/8-18	2.94	1.54	1.63	5/8	ZW74706
5/16	1/2	75706E-Z08	3/4-18	3.15	1.75	1.88	3/4	ZW74708
13/32	1/2	75708E-Z08	3/4-18	3.26	1.86	2.00	3/4	ZW74708
1/2	5/8	75710E-Z10	7/8-18	3.35	1.95	2.13	7/8	ZW74710
1/2	3/4	75710E-Z12	1-1/16-16	3.46	2.06	2.25	1-1/16	ZW74712
5/8	5/8	75712E-Z10	7/8-18	3.56	2.06	2.25	7/8	ZW74710
5/8	3/4	75712E-Z12	1-1/16-16	3.56	2.06	2.25	1-1/16	ZW74712

Flareless Tube Rigid (With Nut and Sleeve)



Hose I.D.	Tube Size	Catalog Number	Thread Size	Length A	Hose Cut-Off Factor†	Hex F	Hex G
5/16	3/8	75706E-756	5/8-18	2.59	1.38	5/8	3/4
5/16	1/2	75706E-758	3/4-16	2.71	1.50	3/4	7/8
13/32	3/8	75708E-756	5/8-18	2.65	1.38	5/8	3/4
13/32	1/2	75708E-758	3/4-16	2.78	1.50	3/4	7/8
13/32	5/8	75708E-760	7/8-14	2.90	1.63	7/8	1-1/16
1/2	1/2	75710E-758	3/4-16	2.84	1.63	3/4	7/8
1/2	5/8	75710E-760	7/8-14	2.90	1.63	7/8	1-1/16
5/8	5/8	75712E-760	7/8-14	3.13	1.75	7/8	1-1/16
5/8	3/4	75712E-762	1-1/16-14	3.25	1.88	1-1/16	1-1/4

SAE 45° Male Rigid

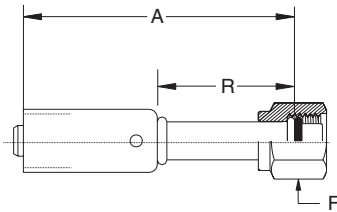


Hose I.D.	Tube Size	Catalog Number	Thread Size	Length A	Run R	Hose Cut-Off Factor†	Hex F
5/16	3/8	75706E-306	5/8-18	3.28	1.88	2.00	5/8
13/32	1/2	75708E-308	3/4-16	3.40	2.00	2.13	3/4
1/2	5/8	75710E-310	7/8-14	3.71	2.31	2.50	7/8
5/8	3/4	75712E-312	1-1/16-14	4.00	2.50	2.75	1-1/16

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of the assembly. All dimensions shown in inches.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

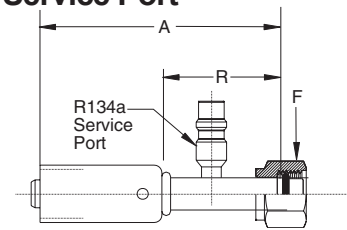
Bumped Tube O-Ring Female Swivel



(Includes O-Ring)

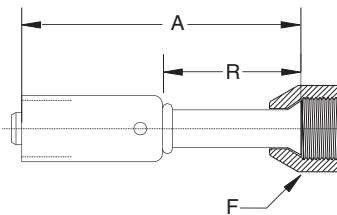
Hose I.D.	Tube Size	Catalog Number	Thread Size	Length A	Run R	Hose Cut-Off Factor†	Hex F	O-Ring
5/16	3/8	75706E-Z47	5/8-18	2.78	1.38	1.50	3/4	ZW74706
5/16	1/2	75706E-Z49	3/4-16	2.90	1.50	1.63	7/8	ZW74708
13/32	1/2	75708E-Z49	3/4-16	3.06	1.66	1.75	7/8	ZW74708
13/32	5/8	75708E-Z51	7/8-14	3.09	1.69	1.88	1-1/16	ZW74710
1/2	5/8	75710E-Z51	7/8-14	3.09	1.69	1.88	1-1/16	ZW74710
1/2	3/4	75710E-Z53	1-1/16-14	3.21	1.81	2.00	1-1/4	ZW74712
5/8	5/8	75712E-Z51	7/8-14	3.31	1.81	2.00	1-1/16	ZW74710
5/8	3/4	75712E-Z53	1-1/16-14	3.31	1.81	2.00	1-1/4	ZW74712

Bumped Tube O-Ring Female Swivel W/R134a Service Port



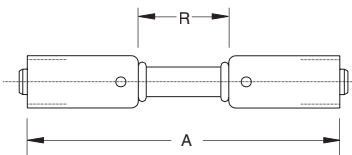
Hose I.D.	Tube Size	Catalog Number	Thread Size	Length A	Run R	Hose Cut-Off Factor†	Hex F	O-Ring
5/16	3/8	75706E-Z57*	5/8-18	4.28	1.88	3.00	3/4	ZW74706
13/32	1/2	75708E-Z59*	3/4-16	4.28	1.88	3.00	7/8	ZW74708
1/2	5/8	75710E-Z61**	7/8-14	4.52	2.12	3.25	1-1/16	ZW74710
5/8	5/8	75712E-Z61**	7/8-14	4.62	3.05	3.25	1-1/16	ZW74710

SAE 45° Flare Female Swivel



Hose I.D.	Tube Size	Catalog Number	Thread Size	Length A	Run R	Hose Cut-Off Factor†	Hex F
5/16	3/8	75706E-406	5/8-18	2.78	1.38	1.50	3/4
5/16	1/2	75706E-408	3/4-16	2.90	1.50	1.75	7/8
13/32	1/2	75708E-408	3/4-16	2.84	1.44	1.56	7/8
1/2	5/8	75710E-410	7/8-14	3.09	1.69	1.81	1-1/16
5/8	5/8	75712E-410	7/8-14	3.25	1.75	2.00	1-1/16
5/8	3/4	75712E-412	1-1/16-14	3.25	1.75	2.00	1-1/4

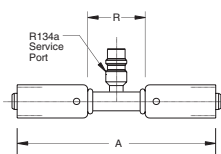
Hose Splicer



For crimping information see page 259-260.

Hose I.D.	Hose I.D.	Catalog Number	Length A	Run R	Hose Cut-Off Factor†
5/16	5/16	75706E-Y36	4.30	1.50	1.50
5/16	13/32	75706E-Y38	4.30	1.50	1.50
13/32	13/32	75708E-Y38	4.30	1.50	1.50
13/32	1/2	75708E-Y40	4.43	1.63	1.63
1/2	1/2	75710E-Y40	4.43	1.63	1.63
1/2	5/8	75710E-Y41	4.65	1.75	1.75
5/8	5/8	75712E-Y41	4.75	1.75	1.75

Hose Splicer W/R134a Service Port



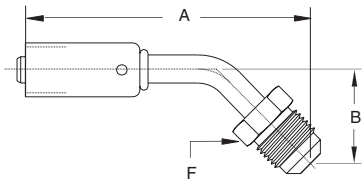
For crimping information see page 259-260.

Hose I.D.	Hose I.D.	Catalog Number	Length A	Run R	Hose Cut-Off Factor†
5/16	5/16	75706E-Y47*	5.42	2.62	1.50
13/32	13/32	75708E-Y48*	5.42	2.62	1.50
1/2	1/2	75710E-Y49**	5.42	2.62	1.63
5/8	5/8	75712E-Y50**	5.62	2.62	1.75

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of the assembly. All dimensions shown in inches.

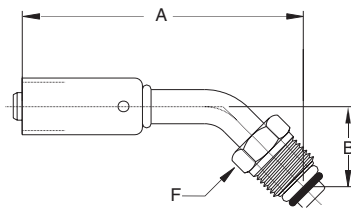
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

SAE 45° Flare Male Rigid 45° Tube Elbow



Hose I.D.	Tube Size	Catalog Number	Thread Size	Length A	Drop B	Hose Cut-Off Factor†	Hex F
13/32	1/2	75708E-388	3/4-16	3.65	1.25	2.50	3/4
1/2	5/8	75710E-390	7/8-14	4.21	1.56	3.00	7/8

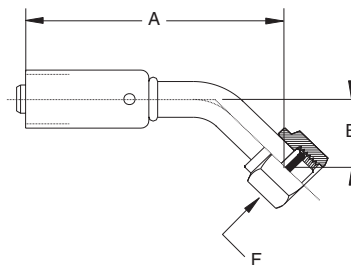
Bumped Tube O-Ring Male Swivel 45° Tube Elbow



(Includes O-Ring)

Hose I.D.	Tube Size	Catalog Number	Thread Size	Length A	Drop B	Hose Cut-Off Factor†	Hex F	O-Ring
5/16	3/8	75706E-Z26	5/8-18	3.09	.88	1.88	5/8	ZW74706
13/32	1/2	75708E-Z28	3/4-18	3.59	1.03	2.38	3/4	ZW74708
1/2	5/8	75710E-Z30	7/8-18	3.71	1.06	2.50	7/8	ZW74710
5/8	5/8	75712E-Z30	7/8-18	4.19	1.19	2.88	7/8	ZW74710
5/8	3/4	75712E-Z32	1-1/16-16	4.19	1.19	2.88	1-1/16	ZW74712

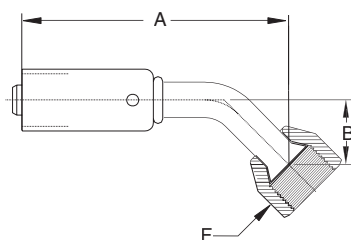
Bumped Tube O-Ring Female Swivel 45° Tube Elbow



(Includes O-Ring)

Hose I.D.	Tube Size	Catalog Number	Thread Size	Length A	Drop B	Hose Cut-Off Factor†	Hex F	O-Ring
5/16	3/8	75706E-W47	5/8-18	3.51	.68	2.25	3/4	ZW74706
13/32	1/2	75708E-W49	3/4-16	3.63	1.05	2.25	7/8	ZW74708
1/2	5/8	75710E-W51	7/8-14	3.65	1.19	2.50	1-1/16	ZW74710
5/8	5/8	75712E-W51	7/8-14	4.00	1.29	2.75	1-1/16	ZW74710
5/8	3/4	75712E-W53	1-1/16-14	3.84	.94	2.50	1-1/4	ZW74712

SAE 45° Flare Female Swivel 45° Tube Elbow

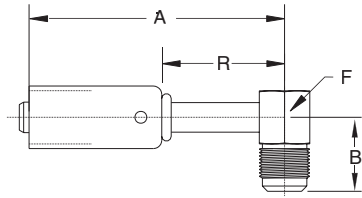


Hose I.D.	Tube Size	Catalog Number	Thread Size	Length A	Drop B	Hose Cut-Off Factor†	Hex F
5/16	3/8	75706E-486	5/8-18	3.42	.55	2.00	3/4
13/32	1/2	75708E-488	3/4-16	3.72	.58	2.50	7/8
1/2	5/8	75710E-490	7/8-14	4.34	.72	3.00	1-1/16
5/8	5/8	75712E-490	7/8-14	5.00	1.00	3.50	1-1/16
5/8	3/4	75712E-492	1-1/16-14	4.44	.72	3.00	1-1/4

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of the assembly. All dimensions shown in inches.

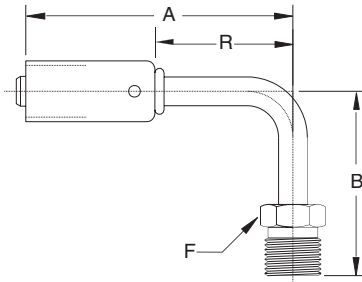
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

SAE 45° Male Rigid 90° Elbow



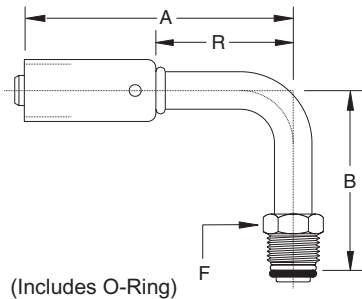
Hose I.D.	Tube Size	Catalog Number	Thread Size	Length A	Run R	Drop B	Hose Cut-Off Factor†	Hex/Square F
5/16	3/8	75706E-X06	5/8-18	4.07	2.67	.91	3.00	5/8
13/32	1/2	75708E-X08	3/4-16	4.14	2.74	1.47	3.00	7/8
1/2	5/8	75710E-X10	7/8-14	4.25	2.85	1.47	3.00	7/8
5/8	3/4	75712E-X12	1-1/16-14	4.45	2.95	1.56	3.00	1-1/16

Bumped Tube O-Ring Male Rigid 90° Tube Elbow



Hose I.D.	Tube Size	Catalog Number	Thread Size	Length A	Run R	Drop B	Hose Cut-Off Factor†	Hex F
5/16	3/8	75706E-W66	5/8-18	4.00	2.60	1.53	2.75	5/8
13/32	1/2	75708E-W68	3/4-16	4.07	2.67	2.12	2.75	3/4
1/2	5/8	75710E-W70	7/8-14	4.15	2.75	2.21	2.88	7/8

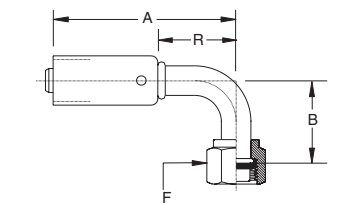
Bumped Tube O-Ring Male Swivel 90° Tube Elbow



(Includes O-Ring)

Hose I.D.	Tube Size	Catalog Number	Thread Size	Length A	Run R	Drop B	Hose Cut-Off Factor†	Hex F	O-Ring
5/16	3/8	75706E-Z66	5/8-18	4.00	2.60	1.53	2.75	5/8	ZW74706
5/16	1/2	75706E-Z68	3/4-18	4.07	2.67	1.53	2.75	3/4	ZW74708
13/32	3/8	75708E-Z66	5/8-18	4.00	2.60	1.77	2.75	5/8	ZW74706
13/32	1/2	75708E-Z68	3/4-18	4.07	2.67	2.12	2.75	3/4	ZW74708
1/2	5/8	75710E-Z70	7/8-18	4.15	2.75	2.21	2.88	7/8	ZW74710
1/2	3/4	75710E-Z72	1-1/16-16	4.25	2.85	2.35	3.00	1-1/16	ZW74712
5/8	5/8	75712E-Z70	7/8-18	4.24	2.74	2.25	2.88	7/8	ZW74710
5/8	3/4	75712E-Z72	1-1/16-16	4.35	2.85	2.87	3.00	1-1/16	ZW74712

Bumped Tube O-Ring Female Swivel 90° Tube Elbow



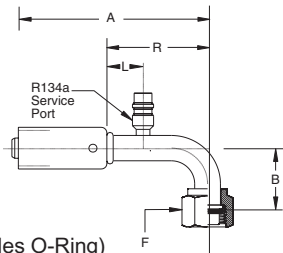
(Includes O-Ring)

Hose I.D.	Tube Size	Catalog Number	Thread Size	Length A	Run R	Drop B	Hose Cut-Off Factor†	Hex F	O-Ring
5/16	3/8	75706E-Z87	5/8-18	4.07	2.67	1.12	2.75	3/4	ZW74706
5/16	1/2	75706E-Z89	3/4-16	4.14	2.74	1.31	2.88	7/8	ZW74708
13/32	3/8	75708E-Z87	5/8-18	4.07	2.67	1.31	2.75	3/4	ZW74706
13/32	1/2	75708E-Z89	3/4-16	4.14	2.74	1.50	2.88	7/8	ZW74708
1/2	5/8	75710E-Z91	7/8-14	4.25	2.85	1.75	3.00	1-1/16	ZW74710
5/8	5/8	75712E-Z91	7/8-14	4.35	2.85	1.75	3.00	1-1/16	ZW74710
5/8	3/4	75712E-Z93	1-1/16-14	4.45	2.95	1.75	3.13	1-1/4	ZW74712

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of the assembly. All dimensions shown in inches.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

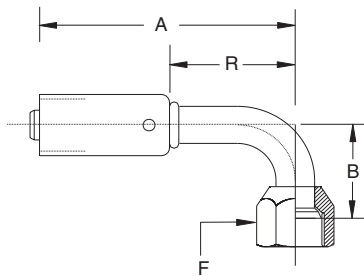
Bumped Tube O-Ring Female Swivel 90° Tube Elbow W/R134a Service Port



(Includes O-Ring)
For crimping information see page 259-260.

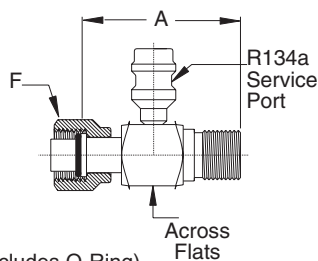
Hose I.D.	Tube Size	Catalog Number	Thread A	Run Size R	Drop B	Hose			O-Ring	
						Cut-Off Factor†	Hex F	Length L		
5/16	3/8	75706E-Z97*	2.52	5/8-18	2.12	1.12	2.75	3/4	1.50	ZW74706
13/32	1/2	75708E-Z99*	4.15	3/4-16	2.75	1.68	2.88	7/8	1.50	ZW74708
1/2	5/8	75710E-Z01**	3.78	7/8-14	2.38	1.50	3.00	1-1/16	1.50	ZW74710
5/8	5/8	75712E-Z01**	4.61	7/8-14	3.11	1.95	3.00	1-1/16	1.50	ZW74710

SAE 45° Flare Female Swivel 90° Tube Elbow



Hose I.D.	Tube Size	Catalog Number	Thread A	Run R	Drop B	Hose		
						Cut-Off Factor†	Hex F	
5/16	3/8	75706E-466	4.07	5/8-18	2.67	1.12	2.75	3/4
13/32	1/2	75708E-468	4.14	3/4-16	2.74	1.31	2.88	7/8
1/2	5/8	75710E-470	4.25	7/8-14	2.85	1.56	3.00	1-1/16
5/8	5/8	75712E-470	4.35	7/8-14	2.85	1.50	3.00	1-1/16
5/8	3/4	75712E-472	4.45	1-1/16-14	2.95	1.75	3.13	1-1/4

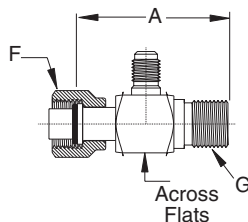
Bumped Tube O-Ring Service Port Adapter W/R134a Service Port



(Includes O-Ring)

Tube Size	Catalog Number	Thread Size	Length A	Across Flats	Hex F	O-Ring
3/8	75701*	5/8-18	2.02	5/8 ¹	3/4	ZW74706
1/2	75702*	3/4-16	2.22	7/8	7/8	ZW74708
5/8	75704**	7/8-14	2.63	7/8	1-1/16	ZW74710
3/4	75706**	1-1/16-14	2.89	1-1/16	1-1/4	ZW74712

Bumped Tube O-Ring Service Port Adapter W/R12 Service Port



(Includes O-Ring)

Tube Size	Catalog Number	Thread Size G	Length A	Across Flats	Hex F	Service Port Thread	O-Ring
3/8	R12-Z56*	5/8-18	2.02	5/8 ¹	3/4	3/8-24	ZW74706
1/2	R12-Z58*	3/4-16	2.22	7/8	7/8	3/8-24	ZW74708
5/8	R12-Z60**	7/8-14	2.63	7/8	1-1/16	3/8-24	ZW74710
3/4	R12-Z62**	1-1/16-14	2.89	1-1/16	1-1/4	7/16-20	ZW74712

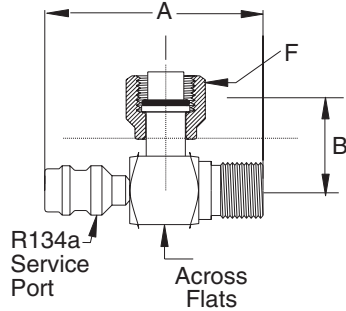
† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of the assembly. All dimensions shown in inches.

*High Side Port **Low Side Port

¹Has body machined from hex stock.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

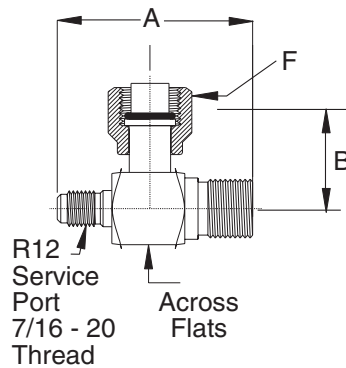
90° Bumped Tube O-Ring R134a Service Port Adapter



(Includes O-Ring)

Tube Size	Catalog Number	Thread Size	Length A	Drop B	Across Flats	Hex F	O-Ring
3/8	75729*	5/8-18	2.40	1.05	5/8 [†]	3/4	ZW74706
1/2	75730*	3/4-16	2.60	1.15	7/8	7/8	ZW74708
5/8	75731**	7/8-14	2.74	1.30	7/8	1-1/16	ZW74710
3/4	75732**	1-1/16-14	3.10	1.39	1-1/16 [†]	1-1/4	ZW74712

90° Bumped Tube O-Ring R12 Service Port Adapter



(Includes O-Ring)

NOTE: 3/8-24 Thread (High Side Port)
7/16-20 Thread (Low Side Port)

Tube Size	Catalog Number	Thread Size	Length A	Drop B	Across Flats	Hex F	O-Ring
3/8	R12-Z96*	5/8-18	2.07	1.05	5/8 [†]	3/4	ZW74706
1/2	R12-Z97*	3/4-16	2.27	1.15	7/8	7/8	ZW74708
5/8	R12-Z98**	7/8-14	2.41	1.30	7/8	1-1/16	ZW74710
3/4	R12-Z99**	1-1/16-16	2.77	1.39	1-1/16 [†]	1-1/4	ZW74712

Replacement O-Rings



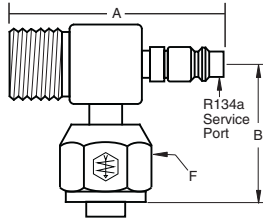
Material: Nitrile, 70 Durometer
Temperature Range: -40°F to +250°F (-40°C to +121°C)
Color: Green

Tube O.D.	Catalog Number
3/8	ZW74706
1/2	ZW74708
5/8	ZW74710
3/4	ZW74712

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of the assembly.
All dimensions shown in inches.

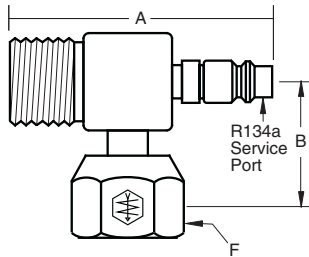
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

Tube-O to Male Bumped Tube O-Ring 90° Elbow with R134a Service



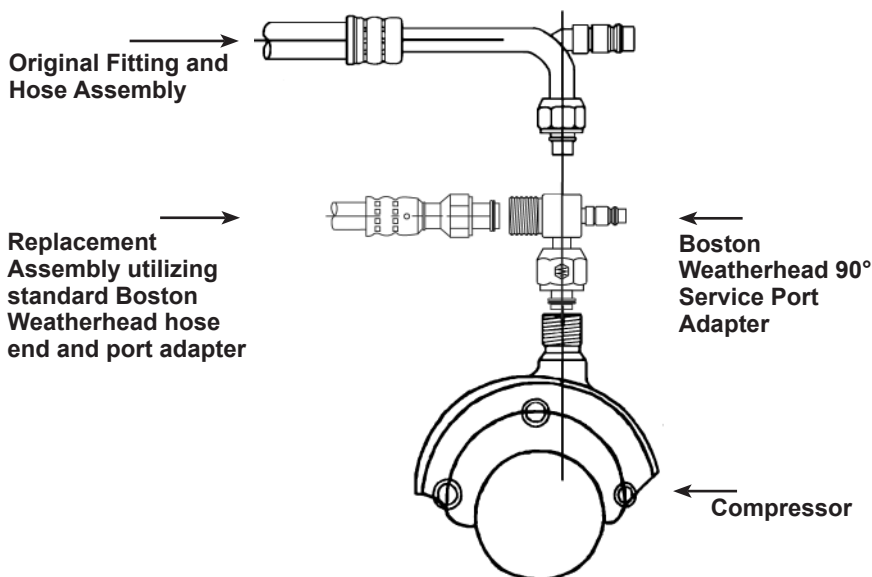
Tube Size	Catalog Number	Length A	Drop B	Tube-O Thread
1/2	75750	2.64	1.15	1-14
5/8	75751	2.78	1.29	1-14

Rotalok to Male Bumped Tube O-Ring 90° Elbow with R134a Service



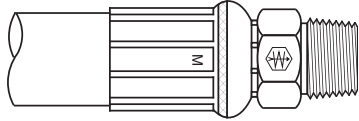
Tube Size	Catalog Number	Length A	Drop B	Rotalok Thread F
1/2	75760	2.64	1.15	1-14
5/8	75761	2.78	1.29	1-14

Service Instructions for Replacement of Damaged O.E. Hose Assemblies



Boston Weatherhead service port adapters offer an alternative to the high cost of replacement and time out of service which can occur when an air conditioning assembly is damaged. By using the Boston Weatherhead adapter, service personnel can remove the damaged end and replace it with a standard Boston Weatherhead 757 'E' series hose end used in conjunction with a Boston Weatherhead service port adapter. This is a welcome solution to get your customer back on the road without special orders and long delays.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.



Hose End Series: 'M' Series

Typical Application: Very high pressure hydraulic lines subjected to pressure surges and flexing. Some applications include mining, construction, farming, and high performance industrial equipment.

Pressure: Determined by maximum working pressure for hose size and hose end configuration whichever is lesser. See page 15 for working pressure ratings for hose end configurations.

Material: Low Carbon Steel

Plating: Zinc; yellow dichromate finish

Advantages: Wide selection of hose and end configurations allowing a diverse number of applications. An ideal series to introduce hydraulics.

Assemble With: T-400-1, T-410-1, T-420-1, T-440-1, T-460, T-462, T-465-1, T-480.

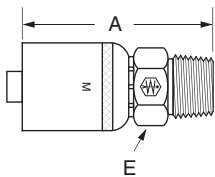
Ordering Information: Order individually by catalog number.

NOTE: Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

Refer to important safety information on pages 1-2.

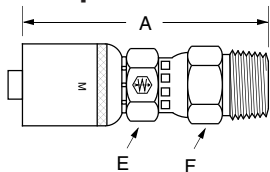
Label Set: 3400

Male Pipe Rigid



Hose I.D.	Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
1/4	1/4	04M-104	1/4-18	2.26	1.00	.16	9/16
3/8	3/8	06M-106	3/8-18	2.38	1.06	.25	11/16
1/2	1/2	08M-108	1/2-14	2.60	1.31	.36	13/16
5/8	1/2	10M-108*	1/2-14	3.09	1.38	.48	15/16
5/8	3/4	10M-112*	3/4-14	3.09	1.38	.48	1-1/16

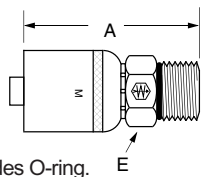
Male Pipe Swivel



NOTE: Swivel for installation purposes only. (Not for temperatures above 212°F.)

Hose I.D.	Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	1/4	04M-J04	1/4-18	3.15	1.88	.16	5/8	13/16
3/8	3/8	06M-J06	3/8-18	3.25	1.94	.25	11/16	7/8
1/2	1/2	08M-J08	1/2-14	3.46	2.19	.36	13/16	7/8

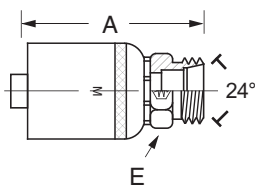
Male Straight Thread O-Ring Rigid



Includes O-ring. (For replacement O-ring, see page 208.)

Hose I.D.	Port Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
5/8	5/8	10M-P10*	7/8-14	2.84	1.13	.48	1
5/8	3/4	10M-P12*	1-1/16-12	2.93	1.25	.48	1-1/4

Male DIN Universal Seat I. Rh. (Light)



Hose I.D.	Tube Size (mm)	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
5/8	18	10M-18A	M26x1.5	2.82	1.13	.48	1-1/16

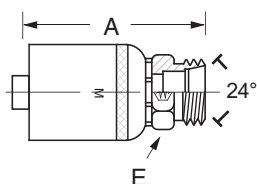
NOTE: Other 'M' Series hose end configurations available upon request.

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

124 *10M-XXX hose ends can only be crimped on T-410-1, T-420-1, T-440-1 and T-480 C-O-C presses.

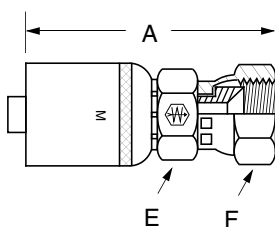
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

Male DIN 24° Seat s. Rh. (Heavy)



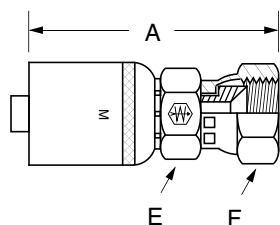
Hose I.D.	Tube Size (mm)	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
5/8	20	10M-20F	M30x2	2.99	1.28	.48	1-1/4

JIC 37° Female Swivel (Refer to Footnotes)



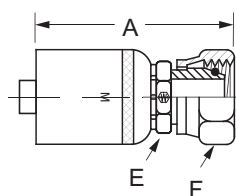
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	1/4	04M-604 ^a	7/16-20	2.38	1.13	.16	9/16	9/16
3/8	3/8	06M-606	9/16-18	2.63	1.31	.25	11/16	11/16
3/8	1/2	06M-608 ^a	3/4-16	2.73	1.44	.25	11/16	7/8
1/2	1/2	08M-608 ^a	3/4-16	2.64	1.38	.36	13/16	7/8
5/8	5/8	10M-610 ^{a*}	7/8-14	3.31	1.63	.48	15/16	1
5/8	3/4	10M-612 [*]	1-1/16-12	3.42	1.75	.48	1-1/8	1-1/4

Female Swivel DIN Universal Seat I.Rh (Light) (DIN 3901/3902)



Hose I.D.	Tube Size (mm)	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
5/8	18	10M-18C	M26x1.5	3.39	1.68	.48	15/16	1-1/4

Female Swivel DIN 24° Seat s.Rh/ DKO (Heavy)



Hose I.D.	Tube Size (mm)	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
5/8	20	10M-70C	M30x2	3.53	1.82	.48	1-1/8	1-7/16

(Includes o-ring.)

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

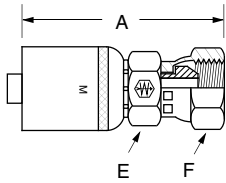
*10M-XXX hose ends can only be crimped on T-410-1, T-420-1, T-440-1 and T-480 C-O-C presses.

^a Swivel nuts are universal – both SAE 37° and 45° connections.

NOTE: Other 'M' Series hose end configurations available upon request.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

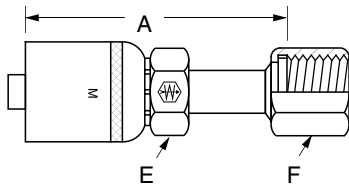
Female Straight Pipe Swivel



NOTE: Connects to male pipe fittings with internal seat.

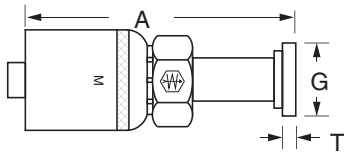
Hose I.D.	Pipe Size	Catalog Number	NPSM Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	1/4	04M-054	1/4-18	2.32	1.06	.16	1/2	11/16
3/8	3/8	06M-056	3/8-18	2.49	1.19	.25	11/16	7/8
1/2	1/2	08M-058	1/2-14	2.71	1.44	.36	13/16	1
5/8	1/2	10M-058	1/2-14	3.24	1.56	.45	15/16	1
5/8	3/4	10M-062	3/4-14	3.45	1.75	.48	1	1-1/4

Female FOR-SEAL Swivel Straight



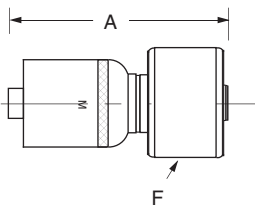
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
5/8	5/8	10M-S70*	1-14	3.54	1.81	.48	15/16	1-1/8
5/8	3/4	10M-S72*	1-3/16-12	3.62	1.94	.48	1	1-3/8

Split Flange Straight Metric (Komatsu, Linkbelt etc.)



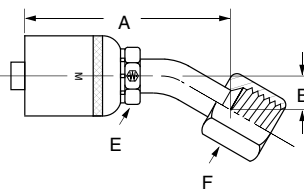
Hose I.D.	Nominal Flange Size mm (Inches)	Catalog Number	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Dia G	T
5/8	16mm (5/8)	10M-G09	3.96	2.25	.46	.94	34mm (1.33)	.265

Pressure Washer



Hose I.D.	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Dia. F
1/4	04M-6PW	M22x1.5	2.40	1.12	.16	1-3/8
3/8	06M-6PW	M22x1.5	2.49	1.19	.25	1-3/8

JIC 37° Female Swivel 30° Tube Elbow



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
5/8	3/4	10M-L22 *	1-1/16-12	4.28	.46	2.56	.48	15/16	1-1/4

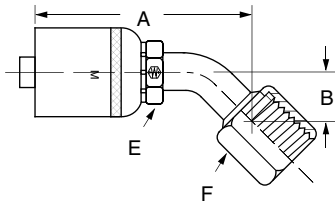
NOTE: Other 'M' Series hose end configurations available upon request.

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

126 *10M-XXX hose ends can only be crimped on T-410-1, T-420-1, T-440-1 and T-480 C-O-C presses.

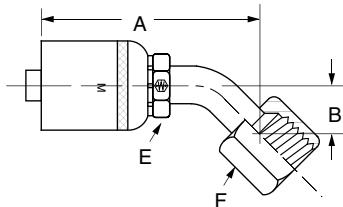
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

Female FOR-SEAL Swivel 45° Tube Elbow



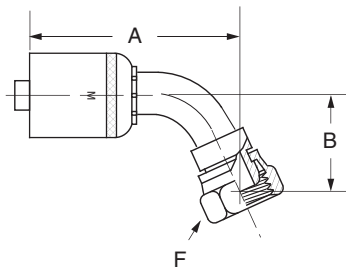
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
5/8	5/8	10M-L70*	1-14	3.86	.68	2.19	.48	15/16	1-1/8
5/8	3/4	10M-L72*	1-3/16-12	4.31	.84	2.63	.48	15/16	1-3/8

JIC 37° Female Swivel 45° Tube Elbow



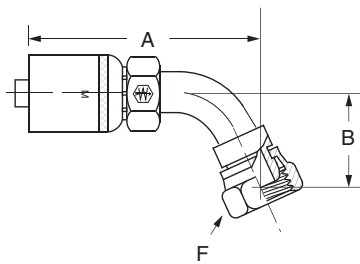
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
5/8	3/4	10M-692	1-1/16-12	4.15	.78	2.44	.48	15/16	1-1/4

Female Swivel DIN Universal 45° Elbow I.Rh (Light)



Hose I.D.	Tube Size (mm)	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
5/8	18	10M-18D	M26x1.5	4.28	1.12	2.57	.46	15/16	1-1/4

Female Swivel DIN 24° Seat 45° Tube Elbow s.Rh. DKO (Heavy)



(Includes o-ring.)

Hose I.D.	Tube Size (mm)	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
5/8	20	10M-20E	M30x2	4.21	1.05	2.50	.46	15/16	17/16

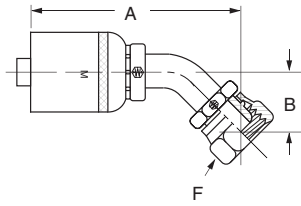
†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

*10M-XXX hose ends can only be crimped on T-410-1, T-420-1, T-440-1 and T-480 C-O-C presses.

NOTE: Other 'M' Series hose end configurations available upon request.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

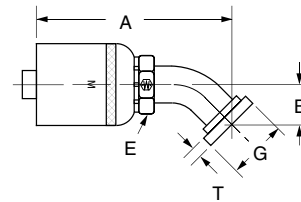
British Standard 60° Cone (BSPP) Female Swivel 45° Tube Elbow



Hose I.D.	BSPP Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F
5/8	5/8	10M-50P*	G-5/8-14#	3.51	.74	1.81	.48	1-1/8

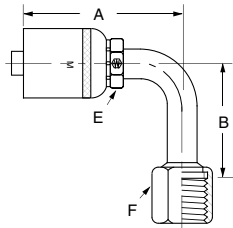
#G As part of thread size is ISO designation for Parallel thread.

Split Flange 45° Tube Elbow (Komatsu, Linkbelt, etc.)



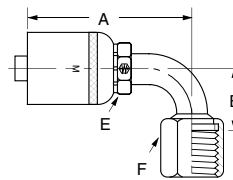
Hose I.D.	Nominal Flange Size	Catalog Number	O-Ring	A	B	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T Nominal
5/8	16mm (5/8)	10M-G69*	10x252	3.78	.94	2.06	.48	11.335 (34mm)	.265

Female FOR-SEAL Swivel Long Drop 90° Tube Elbow



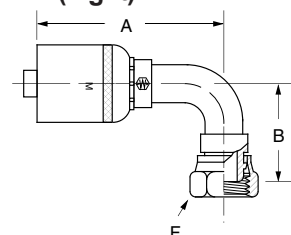
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
5/8	5/8	10M-A70*	1-14	3.70	2.76	2.00	.48	15/16	1-1/8

Female FOR-SEAL Swivel Short Drop 90° Tube Elbow



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
5/8	5/8	10M-A30*	1-14	3.70	1.27	2	.48	15/16	1-1/8
5/8	3/4	10M-A32*	1-3/16-12	4.15	1.88	2.44	.48	15/16	1-3/8

Female Swivel Universal Seat DIN 90° Tube Elbow I. Rh. (Light)



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F
5/8	18mm	10M-68D*	M26x1.5	4.18	2.28	2.50	.48	1-5/16

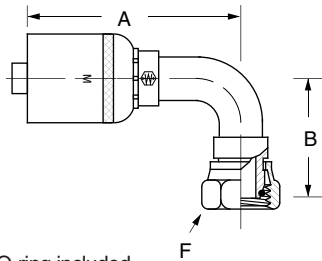
NOTE: Other 'M' Series hose end configurations available upon request.

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

128 *10M-XXX hose ends can only be crimped on T-410-1, T-420-1, T-440-1 and T-480 C-O-C presses.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

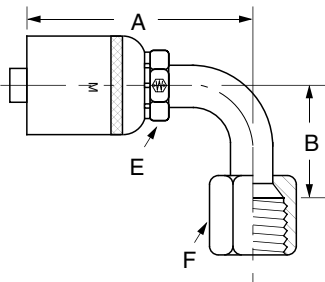
Female 24° Swivel DIN Seat 90° Tube Elbow s. Rh. DKO (Heavy)



O-ring included.

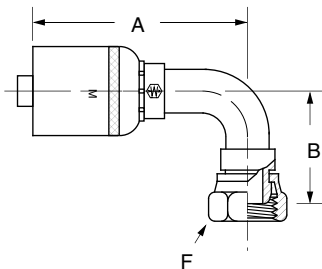
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F
5/8	20mm	10M-70E*	M30x2.0	4.24	2.47	2.50	.48	1-1/2

JIC 37° Female Swivel 90° Tube Elbow (Refer to Footnotes)



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
5/8	5/8	10M-670 a*	7/8-14	4.14	1.23	2.44	.48	15/16	1
5/8	3/4	10M-672*	1-1/16-12	4.74	1.82	3.00	.48	15/16	1-1/4

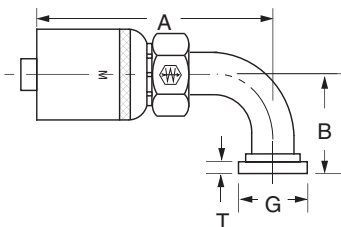
British Standard (BSPP) 60° Cone Female Pipe Swivel 90° Tube Elbow



Hose I.D.	BSPP Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F
5/8	5/8	10M-80P*	G-5/8-14#	3.93	1.60	2.25	.48	1-1/8

#G As part of thread size is ISO designation for Parallel thread.

Split Flange 90° Tube Elbow (Komatsu, Linkbelt etc.)



Hose I.D.	Nominal Flange Size mm (Inches)	Catalog Number	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex E	Dia G	T
5/8	16mm (5/8)	10M-G99	4.04	2.10	2.33	.46	15/16	34mm (1.33)	.265

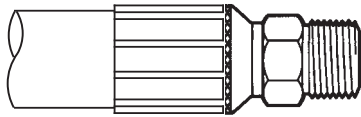
† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

a Swivel nuts are universal – both SAE 37° and 45° connections.

*10M-XXX hose ends can only be crimped on T-410-1, T-420-1, T-440-1 and T-480 C-O-C presses.

NOTE: Other 'M' Series hose end configurations available upon request.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.



Hose End Series: Wolf Series

Typical Application: High Pressure and Temperature applications such as steam, hydrocarbon drain, and hot tar transfer

Compatible Hose: Hot Tar Pumping, Concord 250, Concord 250 O.R. and Hydrocarbon Drain

Pressure: Determined by maximum working pressure for hose size. See page 15 for working pressure ratings for hose end configurations.

Material: Zinc Yellow Dichromate finish.

Advantages: Permanent attach coupling for steam hose service.

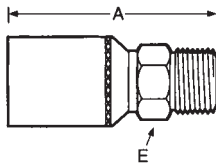
Ordering Information: Order individually by catalog number.

Assembly Instructions: See Hose End & Tool Selector Chart for Boston Weatherhead crimp specifications.

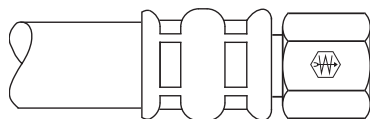
 Refer to important safety information found on pages 1-2 of this catalog.

NOTE: Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

Male Pipe (NPTF) Rigid



Hose I.D.	Catalog Number	Thread Size (NPTF)	A	Hole Dia.	Hex E
1	87-0016-02	1-11-1/2	4.05	.81	1-3/8



Hose End Series: 057 'P' Series

Typical Application: High pressure truck hose for use in transmission oil cooler lines, fuel lines and diesel fuel lines.

Pressure: Determined by hose burst pressure. See page 15 for working pressure ratings for hose end configurations.

Material: CA 360 Brass

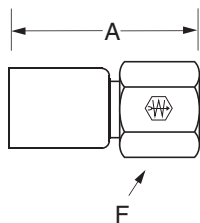
Advantages: For use with hot oil and high temperature petroleum oils.

Assemble With: T-400-1, T-410-1, T-420-1, T-440-1, T-460, T-462, T-465-1, T-480

Ordering Information: Order individually by catalog number.

 Refer to important safety information found on pages 1-2 of this catalog.

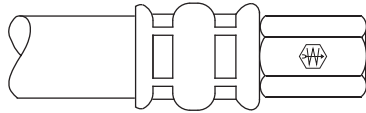
SAE 45° Female Swivel



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex F
1/2	1/2	05708P-408	7/8-14	1.96	.99	.34	7/8
5/8	5/8	05708P-410	3/7-16	1.08	1.10	.44	1

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.



Hose End Series: 229 'P' Series

Typical Application: Medium pressure air, fuel, grease, oil, truck and power steering lines.

Pressure: Determined by maximum working pressure for hose size. See page 15 for working pressure ratings for hose end configurations.

Material: CA360 Brass

Advantages: A permanent hose end saves time and is easy to assemble. Brass material offers excellent resistance against corrosion.

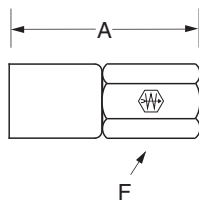
Assemble With: T-400-1, T-410-1, T-420-1, T-440-1, T-460, T-462, T-465-1, T-480

Ordering Information: Order individually by catalog number.

Refer to important safety information found on pages 1-2 of this catalog.

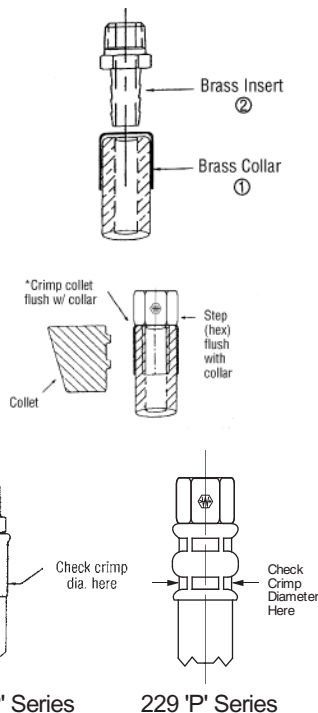
NOTE: Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

SAE 45° Flare Female Swivel



NOTE: Collar is not attached to insert.

Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex F
3/16	1/4	22904P-404	7/16-20	1.69	.75	.13	9/16
5/16	3/8	22906P-406	5/8-18	1.80	.81	.25	3/4
13/32	1/2	22908P-408	3/4-16	1.96	1.00	.34	7/8
1/2	5/8	22910P-410	7/8-14	2.08	1.12	.44	1



265 'P' Series

229 'P' Series

Componentry for 229 'P' & 265 'P' Series Hose Ends

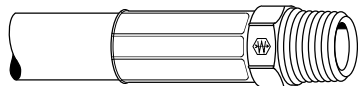
1. Brass Collar
2. Brass Insert. Female SAE 45° Swivel (229 'P'), Male Pipe or Female Pipe (265 'P').

Assembly Instructions for 229 'P' & 265 'P' Series Hose Ends

1. Push collar onto hose until bottomed.
2. Push insert into hose until step on insert (or hex) is flush with collar.
3. Check for bottoming by checking collar movement along insert. Hose is bottomed when collar cannot slide along insert.
4. Position top of collar so that it is flush with the top of the collet. Follow recommended Coll-O-Crimp® operating procedures found in the back of this catalog.

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.



Hose End Series: 265 P Series

Typical Application: General purpose low- pressure air and water lines.

Pressure: Determined by maximum working pressure for hose size.

Material: CA360 Brass

Advantages: One piece construction, easy to assemble, corrosion resistant.

Assemble With: T-400-1, T-410-1, T-420-1, T-440-1, T-460, T-462, T-465-1, T-480.

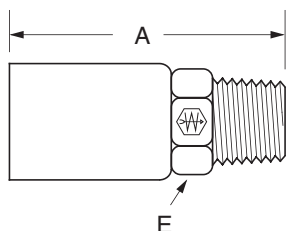
Ordering Information: Order individually by catalog number. To order replacement collar only, use base number followed by "COO" suffix. (Example: 26504P-COO)

NOTE: Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

NOTE: For Assembly Instructions see page 131.

Refer to important safety information found on pages 1-2 of this catalog.

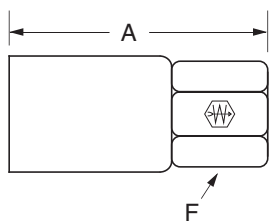
Male Pipe Rigid



NOTE: Collar is not attached to insert.

Hose I.D.	Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
1/4	1/8	26504P-102	1/8-27	1.56	.56	.18	7/16
1/4	1/4	26504P-104	1/4-18	1.63	.63	.18	9/16
1/4	3/8	26504P-106	3/8-18	1.75	.75	.18	11/16
3/8	1/8	26506P-102	1/8-27	1.56	.56	.25	7/16
3/8	1/4	26506P-104	1/4-18	1.75	.75	.31	9/16
3/8	3/8	26506P-106	3/8-18	1.74	.75	.28	11/16
3/8	1/2	26506P-108	1/2-14	1.94	1.00	.28	7/8
1/2	1/4	26508P-104	1/4-18	1.73	.75	.37	9/16
1/2	3/8	26508P-106	3/8-18	1.71	.75	.37	11/16
1/2	1/2	26508P-108	1/2-14	1.94	1.00	.37	7/8
1/2	3/4	26508P-112	3/4-18	1.94	1.00	.37	1-1/8
3/4	1/2	26512P-108	1/2-14	1.94	1.00	.37	1-1/8
3/4	3/4	26512P-112	3/4-14	1.92	1.00	.56	1-1/8

Female Pipe Rigid

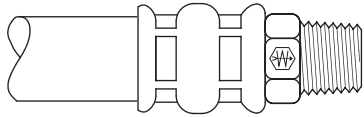


NOTE: Collar is not attached to insert.

Hose I.D.	Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex F
1/4	1/8	26504P-202	1/8-27	1.49	.50	.18	9/16
1/4	1/4	26504P-204	1/4-18	1.60	.63	.18	11/16
3/8	1/8	26506P-202	1/8-27	1.49	.50	.28	9/16
3/8	1/4	26506P-204	1/4-18	1.60	.63	.28	11/16
3/8	3/8	26506P-206	3/8-18	1.66	.69	.28	13/16
1/2	1/4	26508P-204	1/4-18	1.57	.63	.37	11/16
1/2	3/8	26508P-206	3/8-18	1.63	.69	.37	13/16
1/2	1/2	26508P-208	1/2-14	1.85	.88	.37	1

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.



Hose End Series: 338 'P' Series

Typical Application: Air brake hose lines

Pressure: Determined by hose burst pressure. See page 15 for working pressure ratings for hose end configurations.

Material: CA360 Brass

Advantages: A permanent hose end saves time and is easy to assemble. Brass material offers excellent resistance against corrosion.

Assemble With: T-400-1, T-410-1, T-420-1, T-440-1, T-460, T-462, T-465, T-480. (For Field Attachable Ends refer to pages 177-79.)

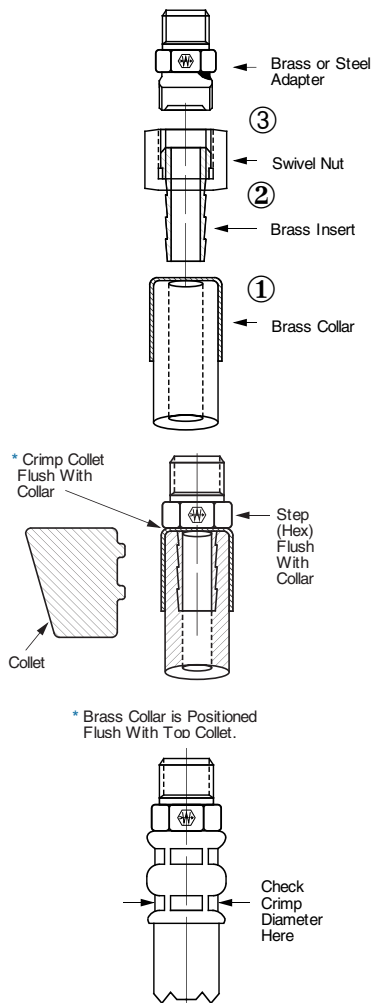
Ordering Information: Order individually by catalog number.

Label Set: FS-2900

NOTE: Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

NOTE: See page 300 for important hose labeling information.

 Refer to important safety information found on pages 1-2 of this catalog.



Componentry

1. Brass Collar
2. Brass Insert. Male pipe or brass swivel insert with brass SAE nut.
3. Brass A.B.S. insert with steel A.B.S. swivel nut.

Assembly Instructions

1. Push collar onto hose until bottomed.
2. Push insert into hose until step on insert (or hex) is flush with collar.

NOTE: Swivel fittings require the use of a mandrel or an assembled adapter to push on the insert for assembly. Adapter can be removed after fitting assembly. Light lubricant may be required to assemble fitting into hose.

3. Check for bottoming by checking collar movement along insert. Hose is bottomed when collar cannot slide along insert.
4. Depending on Coll-O-Crimp system, follow recommended operating procedures.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

Male Pipe Rigid		Hose I.D.	Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
		3/8	1/4	33806P-104	1/4-18	1.71	.75	.28	9/16
		3/8	3/8	33806P-106	3/8-18	1.72	.81	.28	11/16
		3/8	1/2	33806P-108	1/2-14	1.95	1.00	.28	7/8
		1/2	3/8	33808P-106	3/8-18	1.73	.81	.38	11/16
		1/2	1/2	33808P-108	1/2-14	1.94	1.00	.38	7/8

Male Pipe Swivel		Hose I.D.	Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
		3/8	3/8	33806P-J06	3/8-18	1.66	.81	.28	11/16

NOTE: Swivel for installation purposes only.

SAE 45° Female Swivel		Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex F
		3/8	3/8	33806P-406	5/8-18	1.31	1.00	.28	3/4
		1/2	1/2	33808P-408	3/4-16	1.36	1.00	.38	7/8

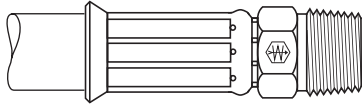
Air Brake Slider Line		Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
		3/8	3/8	33806P-Y66	17/32-24	2.41	1.00	.28	1-1/16	1-1/8
		3/8	1/2	33806P-Y68	11/16-20	2.51	1.00	.28	1-1/16	1-1/8
		1/2	1/2	33808P-Y68	11/16-20	2.69	1.28	.41	7/8	13/16

Air Brake Swivel		Hose I.D.	ABS Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex F
		3/8	3/8	33806P-Y76	3/4-20	1.38	1.00	.28	3/4
		1/2	3/8	33808P-Y76	3/4-20	1.38	1.00	.28	3/4
		1/2	1/2	33808P-Y78	7/8-20	1.44	1.00	.38	1

Adapter		ABS Thread Size	Pipe Size	Catalog Number	Overall Length	ABS Thread Size
		3/8	1/4	1390x6	1.18	3/4-20
		3/8	3/8	1390x6x6	1.18	3/4-20
		3/8	1/2	1390x6x8	1.37	3/4-20
		1/2	3/8	1390x8	1.18	7/8-20
		1/2	1/2	1390x8x8	1.37	7/8-20

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.



Hose End Series: 'S' Series

Typical Application: Low, medium, and high pressure hydraulic applications calling for corrosion resistance. Marine, logging, mining.

Pressure: Determined by the maximum working pressure for hose size and hose end configuration whichever is lesser. See page 15 for working pressure ratings for hose end configurations.

Material: 316 stainless steel

Advantages: Stainless steel protection from the elements.

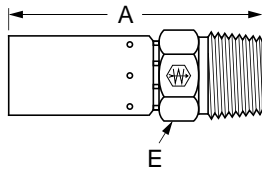
Assemble With: T-400-1, T-410-1, T-420-1, T-440-1, T-460, T-462, T-465-1, T-480.

Ordering Information: Order individually by catalog number.

NOTE: Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

Refer to important safety information on pages 1-2.

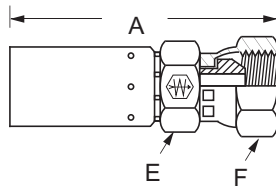
Male Pipe Rigid



Hose I.D.	Pipe Size	Catalog Number	Thread Size NPTF	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
1/4	1/4	04S-104	1/4-18	2.49	1.00	.16	5/8
3/8	3/8	06S-106	3/8-18	2.52	1.00	.25	3/4
1/2	1/2	08S-108	1/2-14	2.75	1.31	.36	7/8
3/4	3/4	12S-112	3/4-14	3.61	1.44	.61	1-1/8
1	1	16S-116	1-11-1/2	4.23	2.00	.81	1-3/8
1-1/4	1-1/4	*20S-120	1-1/4-11-1/2	4.61	2.31	1.02	1-11/16

*Part number will crimp in Coll-O-Crimp® T-410-1, T-420-1, T-440-1, and T-480-1 presses only.

JIC 37° Female Swivel (Refer to Footnotes)



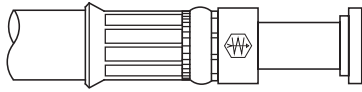
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	1/4	04S-604 ^a	7/16-20	2.61	1.13	.16	9/16	9/16
3/8	3/8	06S-606	9/16-18	2.77	1.31	.25	11/16	11/16
1/2	1/2	08S-608 ^a	3/4-16	2.79	1.38	.36	13/16	7/8
1/2	5/8	08S-610 ^a	7/8-14	3.00	1.56	.36	13/16	1
3/4	3/4	12S-612	1-1/16-12	3.86	1.69	.61	1	1-1/4
1	1	16S-616	1-5/16-12	4.46	2.25	.81	1-1/4	1-1/2
1-1/4	1-1/4	*20S-620	1-5/8-12	4.90	2.63	1.02	1-11/16	2

*Part number will crimp in Coll-O-Crimp® T-410-1, T-420-1, T-440-1, and T-480-1 presses only.

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

^a Swivel nuts are universal – both SAE 45° and 37° connections.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.



(Stainless Steel one piece stem.)

Hose End Series: 570 'S' Series

Typical Application: Very high pressure hydraulic lines subjected to extreme pressure surges and flexing. Some applications include mining, construction, forestry, farming and high performance industrial equipment.

Pressure: Determined by maximum working pressure for hose size and hose end configuration which ever is lesser. See page 15 for working pressure ratings for hose end configurations.

Material: Stainless steel one piece stem, high strength and ductility steel collar.

Advantages: SAE Code 62 High Pressure Series hose ends. Thicker tube wall for greater mechanical load bearing, stainless insert eliminates corrosion problems, tapered flange head design offers superior stress resistance.

Assemble With: T-410-1 Coll-O-Crimp® II, T-440-1 Coll-O-Crimp® II Plus, T-420-1 Coll-O-Crimp® Super I or T-480.

WARNING - 57032S ends can ONLY be crimped on the T-440.

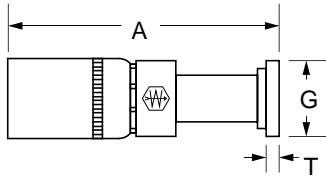
Ordering Information: Order individually by catalog number; reference individual hose end listings for details. For split flange kits, reference page 253.

NOTE: Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

Label Set: FS-1800

Refer to important safety information on pages 1-2.

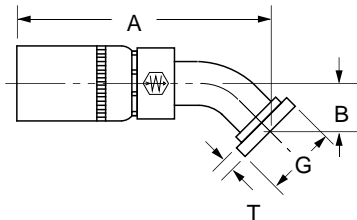
Split Flange Straight (SAE Code 62)



(For Split Flange Kits, see page 253.)

Hose I.D.	Nominal Flange Size	Replacement Catalog Number	Replacement O-Ring (Not Included)	A	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T Nominal
3/4	3/4	57012S-D12	12x252	5.21	3.19	.59	1.62	.345
3/4	1	57012S-D16	16x252	5.34	3.31	.59	1.88	.375
1	1	57016S-D16	16x252	5.70	3.38	.78	1.88	.375
1	1-1/4	57016S-D20	20x252	5.88	3.50	.78	2.12	.405
1-1/4	1-1/4	57020S-D20	20x252	6.33	3.19	.98	2.12	.405
1-1/4	1-1/2	57020S-D24	24x252	6.52	3.38	.98	2.50	.495
1-1/2	1-1/2	57024S-D24	24x252	7.45	4.06	1.17	2.50	.495
2	2	57032S-D32	32x252	9.05	5.25	1.56	3.12	.495

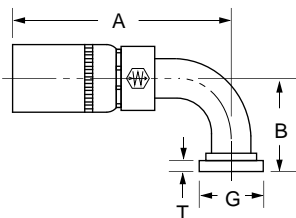
Split Flange 45° Tube Elbow (SAE Code 62)



(For Split Flange Kits, see page 253.)

Hose I.D.	Nominal Flange Size	Replacement Catalog Number	Replacement O-Ring (Not Included)	A	B	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T Nom.
3/4	3/4	57012S-D42	12x252	5.24	1.08	3.19	.59	1.62	.345
3/4	1	57012S-D46	16x252	5.33	1.17	3.25	.59	1.88	.375
1	1	57016S-D46	16x252	6.01	1.32	3.63	.78	1.88	.375
1	1-1/4	57016S-D50	20x252	6.14	1.45	3.75	.78	2.12	.405
1-1/4	1-1/4	57020S-D50	20x252	7.31	1.56	4.19	.98	2.12	.405
1-1/4	1-1/2	57020S-D54	24x252	7.44	1.69	4.31	.98	2.50	.495
1-1/2	1-1/2	57024S-D54	24x252	8.24	1.79	4.81	1.17	2.50	.495
2	2	57032S-D62	32x252	9.62	2.26	5.88	1.56	3.12	.495

Split Flange 90° Tube Elbow (SAE Code 62)



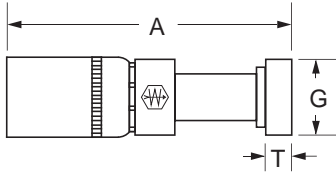
(For Split Flange Kits, see page 253.)

Hose I.D.	Nominal Flange Size	Replacement Catalog Number	Replacement O-Ring (Not Included)	A	B	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T Nominal
3/4	3/4	57012S-D72	12x252	4.79	2.34	2.75	.59	1.62	.345
3/4	1	57012S-D76	16x252	4.79	2.47	2.75	.59	1.88	.375
1	1	57016S-D76	16x252	5.57	2.81	3.19	.78	1.88	.375
1	1-1/4	57016S-D80	20x252	5.57	2.99	3.19	.78	2.12	.405
1-1/4	1-1/4	57020S-D80	20x252	6.63	3.60	3.50	.98	2.12	.405
1-1/4	1-1/2	57020S-D84	24x252	6.63	3.79	3.50	.98	2.50	.495
1-1/2	1-1/2	57024S-D84	24x252	7.62	4.15	4.19	1.17	2.50	.495
2	2	57032S-D92	32x252	8.97	5.49	5.25	1.56	3.12	.495

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

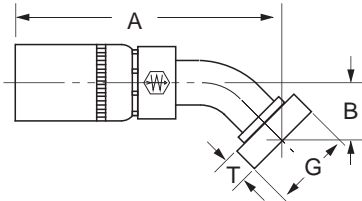
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

**Split Flange Straight
(SAE Code 62)
THICK-FLANGE™**



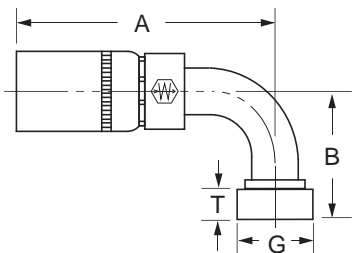
Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	Hose Cut-Off Factor†	Hole Dia.	Thick-Flange Dia. E	T Nominal
3/4	3/4	57012S-K12	12x252	5.43	3.38	.59	1.62	.570
3/4	1	57012S-K16	16x252	5.53	3.50	.59	1.88	.570
1	1	57016S-K16	16x252	5.89	3.50	.78	1.88	.570
1	1-1/4	57016S-K20	20x252	6.04	3.69	.78	2.12	.570
1-1/4	1-1/4	57020S-K20	20x252	6.49	3.31	.98	2.12	.570
1-1/4	1-1/2	57020S-K24	24x252	6.59	3.44	.98	2.50	.570
1-1/2	1-1/2	57024S-K24	24x252	7.52	4.13	1.17	2.50	.570
2	2	57032S-K32	32x252	9.12	5.31	1.56	3.12	.570

**Split Flange 45° Tube
Elbow (SAE Code 62)
THICK-FLANGE™**



Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	B	Hose Cut-Off Factor†	Hole Dia.	Thick-Flange Dia. G	T Nominal
3/4	3/4	57012S-K42	12x252	5.39	1.23	3.31	.59	1.62	.570
3/4	1	57012S-K46	16x252	5.46	1.30	3.44	.59	1.88	.570
1	1	57016S-K46	16x252	6.14	1.45	3.75	.78	1.88	.570
1	1-1/4	57016S-K50	20x252	6.25	1.56	3.88	.78	2.12	.570
1-1/4	1-1/4	57020S-K50	20x252	7.42	1.67	4.25	.98	2.12	.570
1-1/4	1-1/2	57020S-K54	24x252	7.49	1.74	4.31	.98	2.50	.570
1-1/2	1-1/2	57024S-K54	24x252	8.29	1.84	4.88	1.17	2.50	.570
2	2	57032S-K62	32x252	9.67	2.31	5.88	1.56	3.12	.570

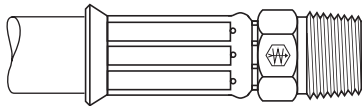
**Split Flange 90° Tube
Elbow (SAE Code 62)
THICK-FLANGE™**



Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	B	Hose Cut-Off Factor†	Hole Dia.	Thick-Flange Dia. G	T Nominal
3/4	3/4	57012S-K72	12x252	4.79	2.56	2.75	.59	1.62	.570
3/4	1	57012S-K76	16x252	4.79	2.70	2.75	.59	1.88	.570
1	1	57016S-K76	16x252	5.57	3.00	3.19	.78	1.88	.570
1	1-1/4	57016S-K80	20x252	5.57	3.15	3.19	.78	2.12	.570
1-1/4	1-1/4	57020S-K80	20x252	6.63	3.76	3.50	.98	2.12	.570
1-1/4	1-1/2	57020S-K84	24x252	6.63	3.86	3.50	.98	2.50	.570
1-1/2	1-1/2	57024S-K84	24x252	7.62	4.22	4.19	1.17	2.50	.570
2	2	57032S-K92	32x252	8.97	5.56	5.19	1.56	3.12	.570

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.



Hose End Series: 'U' Series

Typical Application: General purpose low, medium, and high pressure hydraulic.

Pressure: Determined by maximum working pressure for hose size and hose end configuration whichever is lesser. See page 15 for working pressure ratings for hose end configurations.

Material: Low Carbon Steel

Plating: Zinc; yellow dichromate finish

Advantages: Wide selection of hose and end configurations allowing a diverse number of applications. An ideal series to introduce hydraulics.

Assemble With: T-400-1, T-410-1, T-420-1, T-440, T-460, T-462, T-465 and T-480.

Ordering Information: Order individually by catalog number. O-rings not supplied with flange hose ends. Order o-rings by catalog number; reference individual listings for details. For split flange kits, refer to pages 252-253.

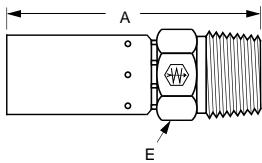
NOTE: Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

Label Set: FS-1100



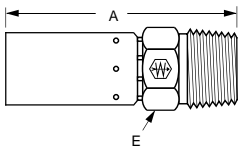
Refer to important safety information on pages 1-2.

Male Pipe Rigid



Hose I.D.	Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
1/4	1/8	04U-102	1/8-27	2.31	.75	.16	9/16
1/4	1/4	04U-104	1/4-18	2.49	.94	.16	9/16
1/4	3/8	04U-106	3/8-18	2.52	1.00	.16	11/16
1/4	1/2	04U-108	1/2-14	2.77	1.06	.16	7/8
3/8	1/4	06U-104	1/4-18	2.52	1.00	.25	11/16
3/8	3/8	06U-106	3/8-18	2.52	1.00	.25	11/16
3/8	1/2	06U-108	1/2-14	2.77	1.25	.25	7/8
1/2	1/4	08U-104	1/4-18	2.56	.88	.28	13/16
1/2	3/8	08U-106	3/8-18	2.57	1.14	.36	3/4
1/2	1/2	08U-108	1/2-14	2.75	1.31	.36	13/16
1/2	3/4	08U-112	3/4-14	2.83	1.28	.36	1-1/16
5/8	3/8	10U-106	3/8-18	3.12	1.13	.48	15/16
5/8	1/2	10U-108	1/2-14	3.31	1.38	.48	15/16
5/8	3/4	10U-112	3/4-14	3.31	1.30	.48	1-1/16
3/4	1/2	12U-108	1/2-14	3.62	1.44	.61	1
3/4	3/4	12U-112	3/4-14	3.61	1.44	.61	1-1/16
3/4	1	12U-116	1-11-1/2	3.84	1.69	.61	1-3/8
1	3/4	16U-112	3/4-14	4.23	1.88	.81	1-1/4
1	1	16U-116	1-11-1/2	3.90	1.69	.81	1-3/8
1-1/4	1-1/4	20U-120	1-1/4-11-1/2	4.61	2.31	1.02	1-11/16

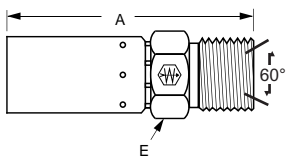
British Standard Tapered Male Pipe (BSPT/JIS) Rigid



Hose I.D.	BSPT Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
1/4	1/4	04U-154	R-1/4-19*	2.51	1.00	.16	3/4
3/8	3/8	06U-156	R-3/8-19*	2.54	1.06	.25	11/16
1/2	1/2	08U-158	R-1/2-14*	2.78	1.31	.36	7/8
3/4	3/4	12U-162	R-3/4-14*	3.62	1.44	.61	1-1/8
1	1	16U-166	R-1-11*	4.23	2.00	.81	1-3/8

*R As Part of Thread Size is ISO Designation for Tapered Thread.

British Standard 60° (BSPP) Cone Male Pipe Rigid



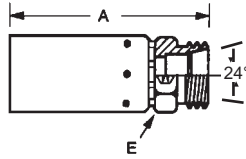
Hose I.D.	BSPP Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
1/4	1/4	04U-P54	G-1/4-19**	2.38	.88	.16	11/16
3/8	3/8	06U-P56	G-3/8-19**	2.48	.94	.25	3/4
3/8	1/2	06U-P58	G-1/2-14**	2.62	1.06	.25	1
1/2	3/8	08U-P56	G-3/8-19**	2.54	1.13	.32	13/16
1/2	1/2	08U-P58	G-1/2-14**	2.62	1.19	.36	1
5/8	5/8	10U-P60	G-5/8-14**	3.25	1.31	.48	1-1/8
3/4	3/4	12U-P62	G-3/4-14**	3.65	1.50	.61	1-1/8
1	1	16U-P66	G-1-11**	3.91	1.69	.81	1-3/8
1-1/4	1-1/4	20U-P67	G-1-1/4-11**	4.41	2.13	1.02	1-3/4

**G As Part of Thread Size is ISO Designation for Parallel Thread.

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

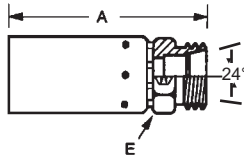
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

Male DIN Universal Seat l. Rh. (Light)



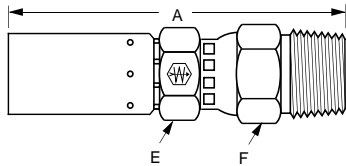
Hose I.D.	Tube Size (mm)	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
1/4	8	04U-08A	M14x1.5	2.27	.81	.16	9/16
1/4	10	04U-10A	M16x1.5	2.36	.88	.16	11/16
3/8	10	06U-10A	M16x1.5	2.36	.94	.25	11/16
3/8	12	06U-12A	M18x1.5	2.36	.94	.25	3/4
1/2	15	08U-15A	M22x1.5	2.42	1.00	.36	7/8
5/8	18	10U-18A	M26x1.5	2.99	1.06	.48	1-1/16
3/4	22	12U-22A	M30x2.0	3.45	1.31	.61	1-1/4
1	28	16U-28A	M36x2.0	3.73	1.50	.81	1-1/2

Male DIN 24° Seat s. Rh. (Heavy)



Hose I.D.	Tube Size (mm)	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
1/4	8	04U-08F	M16x1.5	2.39	.88	.16	11/16
1/2	10	04U-10F	M18x1.5	2.40	.88	.16	3/4
3/8	10	06U-10F	M18x1.5	2.40	.94	.25	3/4
3/8	12	06U-12F	M20x1.5	2.42	1.00	.25	13/16
3/8	14	06U-14F	M22x1.5	2.50	1.06	.25	7/8
1/2	16	08U-16F	M24x1.5	2.57	1.13	.36	1
5/8	20	10U-20F	M30x2	3.21	1.28	.48	1-1/4
3/4	20	12U-20F	M30x2	3.53	1.38	.61	1-1/4
3/4	25	12U-25F	M36x2	3.71	1.56	.61	1-1/2
1	30	16U-30F	M42x2	3.98	1.75	.81	1-11/16

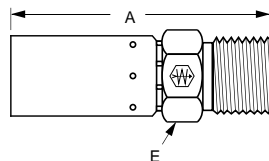
Male Pipe Swivel



NOTE: Swivel for installation purposes only.
(Not for temperatures above 212°F.)

Hose I.D.	Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	1/4	04U-J04	1/4-18	3.38	1.88	.16	5/8	13/16
3/8	1/4	06U-J04	1/4-18	3.40	1.94	.25	11/16	13/16
3/8	3/8	06U-J06	3/8-18	3.38	1.94	.25	11/16	7/8
3/8	1/2	06U-J08	1/2-14	3.60	2.13	.25	3/4	7/8
1/2	3/8	08U-J06	3/8-18	3.45	2.00	.36	13/16	7/8
1/2	1/2	08U-J08	1/2-14	3.60	2.19	.36	13/16	7/8
3/4	3/4	12U-J12	3/4-14	4.73	2.56	.61	1	1-1/4
1	1	16U-J16	1-11/12	5.20	3.00	.80	1-1/4	1-3/8

FOR-SEAL® Male Rigid



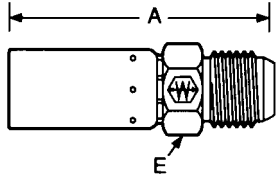
(Does not include O-ring. See page 217 for O-ring.)

Hose I.D.	Tube Size	Catalog Number	Thread Size	O-Ring	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
1/4	1/4	04U-E64	9/16-18	4629x4	2.34	.88	.16	5/8
3/8	3/8	06U-E66	11/16-16	4629x6	2.43	1.00	.25	13/16
3/8	1/2	06U-E68	13/16-16	4629x8	2.54	1.13	.38	7/8
1/2	1/2	08U-E68	13/16-16	4629x8	2.54	1.13	.36	7/8
1/2	5/8	08U-E70	1-14	4629x10	2.78	1.35	.36	1-1/16
1/2	3/4	08U-E72	1-3/16-12	4629x12	2.76	1.31	.36	1-1/4
5/8	5/8	10U-E70	1-14	4629x10	3.20	1.25	.48	1-1/16
5/8	3/4	10U-E72	1-3/16-12	4629x12	3.45	1.50	.48	1-1/4
3/4	3/4	12U-E72	1-3/16-12	4629x12	3.58	1.44	.61	1-1/4
3/4	1	12U-E76	1-7/16-12	4629x16	3.60	1.44	.61	1-1/2
1	1	16U-E76	1-7/16-12	4629x16	3.73	1.50	.81	1-1/2
1-1/4	1-1/4	20U-E80	1-11/16-12	4629x20	4.10	1.81	1.02	1-3/4

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

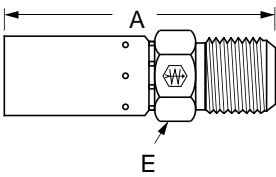
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

JIC 37° Male Rigid



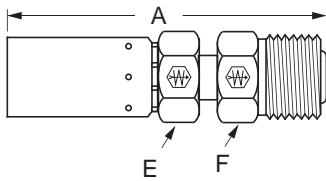
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
1/4	1/4	04U-504	7/16-20	2.48	1.00	.16	1/2
1/4	5/16	04U-505	1/2-20	2.51	1.00	.16	9/16
1/4	3/8	04U-506	9/16-18	2.55	1.00	.16	5/8
3/8	3/8	06U-506	9/16-18	2.54	1.00	.25	11/16
3/8	1/2	06U-508	3/4-16	2.67	1.25	.25	13/16
3/8	5/8	06U-510	7/8-14	2.83	1.31	.25	15/16
1/2	1/2	08U-508	3/4-16	2.70	1.19	.38	13/16
1/2	5/8	08U-510	7/8-14	2.83	1.31	.36	15/16
1/2	3/4	08U-512	1-1/16-12	2.87	1.44	.36	1-1/8
5/8	1/2	10U-508	3/4-16	3.22	1.31	.39	15/16
5/8	5/8	10U-510	7/8-14	3.32	1.38	.48	15/16
5/8	3/4	10U-512	1-1/16-12	3.42	1.44	.48	1-1/8
3/4	5/8	12U-510	7/8-14	3.64	1.44	.43	1
3/4	3/4	12U-512	1-1/16-12	3.74	1.56	.61	1-1/16
3/4	7/8	12U-514	1-3/16-12	3.81	1.63	.61	1-1/4
3/4	1	12U-516	1-5/16-12	3.81	1.63	.61	1-3/8
1	7/8	16U-514	1-3/16-12	4.18	1.94	.72	1-1/4
1	1	16U-516	1-5/16-12	4.20	2.00	.81	1-3/8
1	1-1/4	16U-520	1-5/8-12	4.02	1.81	.81	1-11/16
1-1/4	1-1/4	20U-520	1-5/8-12	4.60	2.31	1.02	1-11/16

SAE 45° Flare Male Rigid



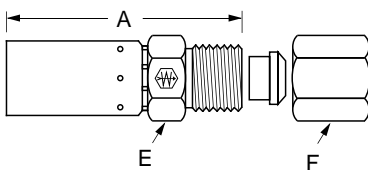
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
3/8	3/8	06U-306	5/8-18	2.60	1.13	.28	11/16
3/4	3/4	12U-312	1-1/16-14	3.87	1.69	.61	1-1/8

Inverted Male Swivel Straight



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	3/16	04U-B03	3/8-24	3.75	2.25	.12	9/16	3/8
1/4	1/4	04U-B04	7/16-24	3.14	1.69	.16	9/16	7/16
1/4	5/16	04U-B05	1/2-20	3.13	1.63	.21	9/16	1/2
3/8	1/4	06U-B04	7/16-24	3.13	1.69	.16	11/16	7/16
3/8	5/16	06U-B05	1/2-20	3.16	1.75	.21	11/16	1/2
3/8	3/8	06U-B06	5/8-18	3.33	1.94	.24	11/16	5/8
3/8	7/16	06U-B07	1-1/16-18	3.33	1.94	.24	11/16	11/16
1/2	1/2	08U-B08	3/4-18	3.69	2.25	.33	13/16	3/4
1/2	5/8	08U-B10	7/8-18	3.43	2.00	.33	13/16	7/8

Flareless Tube Rigid Ermeto® 7000 Series (With Nut and Sleeve)



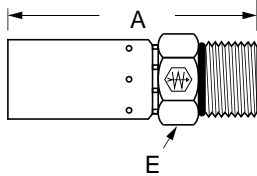
(For replacement Ermeto® Nuts and Sleeves, see page 237.)

Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	1/4	04U-754	7/16-20	2.38	.94	.16	9/16	9/16
1/4	5/16	04U-755	1/2-20	2.41	.93	.16	11/16	5/8
3/8	1/4	06U-754	7/16-20	2.40	1.00	.20	11/16	9/16
3/8	5/16	06U-755	1/2-20	2.40	1.00	.23	11/16	5/8
3/8	3/8	06U-756	9/16-18	2.42	1.00	.25	11/16	11/16
1/2	1/2	08U-758	3/4-16	2.51	1.13	.36	13/16	7/8
1/2	5/8	08U-760	7/8-14	2.64	1.25	.36	15/16	1
3/4	3/4	12U-762	1-1/16-12	3.55	1.38	.61	1-1/8	1-1/4
1	1	16U-766	1-5/16-12	3.98	1.75	.81	1-3/8	1-1/2
1-1/4	1-1/4	20U-770	1-5/8-12	4.35	2.00	1.02	1-11/16	2

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

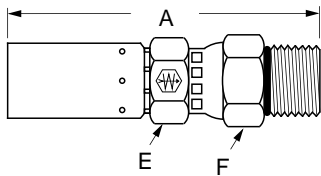
Male Straight Thread O-Ring Rigid



(Includes O-ring. For replacement O-ring, see page 208.)

Hose I.D.	Port Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
1/4	1/4	04U-P04	7/16-20	2.29	.81	.16	9/16
1/4	5/16	04U-P05	1/2-20	2.32	.88	.16	5/8
1/4	3/8	04U-P06	9/16-18	2.35	.88	.16	11/16
3/8	3/8	06U-P06	9/16-18	2.35	.94	.25	11/16
3/8	1/2	06U-P08	3/4-16	2.46	1.06	.25	7/8
3/8	5/8	06U-P10	7/8-14	2.57	1.13	.25	1
1/2	1/2	08U-P08	3/4-16	2.46	1.06	.36	7/8
1/2	5/8	08U-P10	7/8-14	2.55	1.13	.36	1
1/2	3/4	08U-P12	1-1/16-12	2.66	1.25	.36	1-1/4
5/8	1/2	10U-P08	3/4-16	3.00	1.13	.48	15/16
5/8	5/8	10U-P10	7/8-14	3.06	1.13	.48	1
5/8	3/4	10U-P12	1-1/16-12	3.15	1.25	.48	1-1/4
3/4	5/8	12U-P10	7/8-14	3.36	1.19	.50	1
3/4	3/4	12U-P12	1-1/16-12	3.49	1.31	.61	1-1/4
3/4	1	12U-P16	1-5/16-12	3.50	1.31	.61	1-1/2
1	1	16U-P16	1-5/16-12	3.63	1.44	.81	1-1/2
1-1/4	1-1/4	20U-P20	1-5/8-12	4.23	1.94	1.02	1-7/8

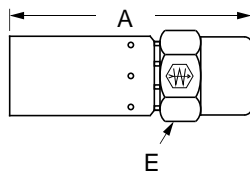
Male Straight Thread O-Ring Swivel



(Includes O-ring. For replacement O-ring, see page 208.)
NOTE: Swivel for installation purposes only. (Not for temperatures above 212°F.)

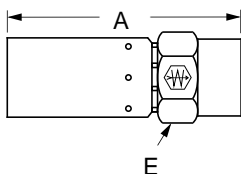
Hose I.D.	Port Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	1/4	04U-R04	7/16-20	3.33	1.81	.16	5/8	13/16
3/8	3/8	06U-R06	9/16-18	3.29	1.86	.25	11/16	7/8
3/8	1/2	06U-R08	3/4-16	3.25	1.75	.25	11/16	7/8
1/2	1/2	08U-R08	3/4-16	3.27	1.81	.36	13/16	7/8
1/2	5/8	08U-R10	7/8-14	3.41	2.00	.36	13/16	1-1/8
1/2	3/4	08U-R12	1-1/16-12	3.57	2.06	.36	13/16	1-1/4
5/8	1/2	10U-R08	3/4-16	3.96	1.88	.42	15/16	1-1/8
3/4	5/8	12U-R10	7/8-14	4.23	2.06	.50	1	1-1/8

Female Grease Tap



Hose I.D.	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
1/4	04U-C34	.511-27	2.45	.90	.16	3/4
3/8	06U-C36	.511-27	2.44	.90	.25	3/4

Female Pipe Rigid

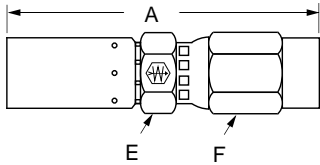


Hose I.D.	Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
1/4	1/8	04U-202	1/8-27	2.20	.75	.16	5/8
1/4	1/4	04U-204	1/4-18	2.43	.94	.16	3/4
3/8	1/4	06U-204	1/4-18	2.46	1.06	.25	3/4
3/8	3/8	06U-206	3/8-18	2.57	1.13	.25	7/8
1/2	1/2	08U-208	1/2-14	2.82	1.38	.36	1-1/8
3/4	3/4	12U-212	3/4-14	3.71	1.56	.61	1-3/8

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

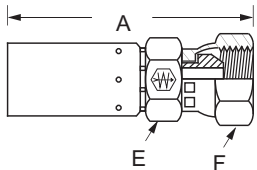
Female Pipe Swivel



NOTE: Swivel for installation purposes only. (Not for temperatures above 212°F.)

Hose I.D.	Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	1/4	04U-254	1/4-18	3.52	2.06	.20	5/8	13/16
3/8	3/8	06U-256	3/8-18	3.61	2.19	.32	11/16	7/8
1/2	1/2	08U-258	1/2-14	3.85	2.38	.43	13/16	1-1/8
3/4	3/4	12U-262	3/4-14	4.81	2.63	.61	1	1-3/8
1	1	16U-266	1-11-1/2	5.26	3.06	.80	1-1/4	1-5/8

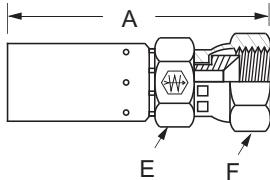
Female Straight Pipe Swivel (NPSM)



(Connects to male pipe fitting with internal seat.)

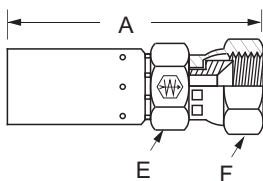
Hose I.D.	Pipe Size	Catalog Number	NPSM Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	1/4	04U-054	1/4-18	2.55	1.06	.16	1/2	11/16
3/8	3/8	06U-056	3/8-18	2.65	1.19	.27	11/16	7/8
1/2	1/2	08U-058	1/2-14	2.85	1.44	.36	13/16	1
3/4	3/4	12U-062	3/4-14	3.77	1.63	.61	1	1-1/4
1	1	16U-066	1-11-1/2	4.34	2.13	.81	1-1/4	1-1/2
1-1/4	1-1/4	20U-070	1-1/4-11-1/2	4.76	2.44	1.08	1-11/16	1-7/8

JIC 37° Female Swivel (Exceptions Noted for 45° Flare, Refer to Footnotes)



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	1/4	04U-604 ^a	7/16-20	2.61	1.13	.16	9/16	9/16
1/4	5/16	04U-605 ^a	1/2-20	2.67	1.18	.16	9/16	5/8
1/4	3/8	04U-606	9/16-18	2.72	1.25	.16	9/16	11/16
3/8	1/4	06U-604 ^a	7/16-20	2.66	1.25	.16	11/16	9/16
3/8	3/8	06U-606	9/16-18	2.77	1.31	.25	11/16	11/16
3/8	1/2	06U-608 ^a	3/4-16	2.86	1.44	.25	11/16	7/8
3/8	5/8	06U-610 ^a	7/8-14	3.00	1.56	.25	7/8	1
3/8	3/4	06U-612	1-1/16-12	3.15	1.69	.25	1	1-1/4
1/2	3/8	08U-606	9/16-18	2.68	1.25	.30	13/16	11/16
1/2	1/2	08U-608 ^a	3/4-16	2.79	1.38	.36	13/16	7/8
1/2	5/8	08U-610 ^a	7/8-14	3.00	1.56	.36	13/16	1
1/2	3/4	08U-612	1-1/16-12	3.12	1.44	.36	1	1-1/4
1/2	1	08U-616	1-5/16-12	3.17	1.75	.36	1-1/4	1-1/2
5/8	1/2	10U-608 ^a	3/4-16	3.48	1.56	.39	15/16	7/8
5/8	5/8	10U-610 ^a	7/8-14	3.53	1.63	.48	15/16	1
5/8	3/4	10U-612	1-1/16-12	3.64	1.75	.48	1	1-1/4
3/4	5/8	12U-610 ^a	7/8-14	3.75	1.56	.48	1	1
3/4	3/4	12U-612	1-1/16-12	3.86	1.69	.61	1	1-1/4
3/4	7/8	12U-614	1-3/16-12	3.88	1.69	.61	1-1/8	1-3/8
3/4	1	12U-616	1-5/16-12	4.07	1.88	.61	1-1/4	1-1/2
1	3/4	16U-612	1-1/16-12	4.37	2.13	.61	1-1/4	1-1/4
1	7/8	16U-614	1-3/16-12	4.35	2.13	.72	1-1/4	1-3/8
1	1	16U-616	1-5/16-12	4.46	2.25	.81	1-1/4	1-1/2
1	1-1/4	16U-620	1-5/8-12	4.30	2.19	.81	1-5/8	2
1-1/4	1-1/4	20U-620	1-5/8-12	4.90	2.63	1.02	1-11/16	2

SAE 45° Female Swivel



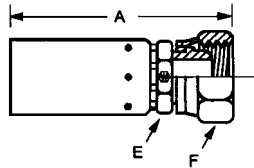
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
3/8	3/8	06U-406	5/8-18	2.68	1.25	.25	11/16	3/4
3/4	3/4	12U-412	1-1/16-14	3.86	1.69	.61	1	1-1/4

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

^a Swivel nuts are universal – both SAE 37° and 45° connections.

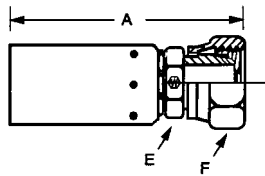
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

**Female Swivel DIN
Universal Seat
I. Rh. (Light) (DIN 3901/3902)**



Hose I.D.	Tube Size (mm)	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	6	04U-06C	M12x1.5	2.73	1.25	.16	9/16	11/16
1/4	8	04U-08C	M14x1.5	2.76	1.25	.16	9/16	11/16
1/4	10	04U-10C	M16x1.5	2.82	1.38	.16	9/16	3/4
3/8	10	06U-10C	M16x1.5	2.78	1.38	.25	11/16	3/4
3/8	12	06U-12C	M18x1.5	2.93	1.50	.25	11/16	7/8
1/2	15	08U-15C	M22x1.5	2.98	1.56	.36	13/16	1-1/16
5/8	18	10U-18C	M26x1.5	3.61	1.69	.48	15/16	1-1/4
3/4	22	12U-22C	M30x2.0	4.03	1.88	.61	1-1/8	1-7/16
1	28	16U-28C	M36x2.0	4.47	2.25	.78	1-1/4	1-5/8
1-1/4	35	20U-35C	M45x2.0	4.61	2.25	1.02	1-3/4	2-1/8

**Female Swivel DIN 24°
Seat
s. Rh. DKO (Heavy)**

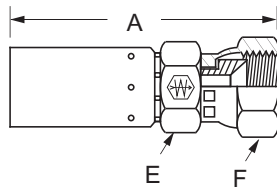


Hose I.D.	Tube Size (mm)	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	8	04U-58C	M16x1.5	2.88	1.40	.16	9/16	3/4
1/4	10	04U-60C	M18x1.5	2.78	1.31	.16	5/8	7/8
1/4	12	04U-62C	M20x1.5	2.67	1.19	.16	3/4	1
3/8	10	06U-60C	M18x1.5	2.78	1.38	.22	3/4	7/8
3/8	12	06U-62C	M20x1.5	2.87	1.44	.25	3/4	1
3/8	14	06U-64C	M22x1.5	2.92	1.50	.25	3/4	1-1/16
1/2	16	08U-66C	M24x1.5	3.06	1.63	.36	7/8	1-1/8
5/8	20	10U-70C	M30x2.0	3.46	1.69	.48	1-1/8	1-7/16
3/4	20	12U-70C	M30x2.0	3.91	1.75	.48	1-1/8	1-7/16
3/4	25	12U-75C	M36x2.0	4.24	2.06	.61	1-1/4	1-5/8
1	30	16U-80C	M42x2.0	4.34	2.13	.81	1-5/8	2
1-1/4	38	20U-88C*	M52x2.0	4.80	2.50	1.02	2	2-3/8

(Includes O-ring.)

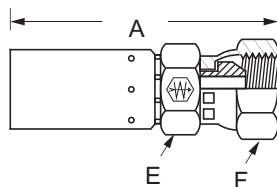
*20U-88C for use with H42520 only. Crimp on Super I, COC II or COC II Plus only.

**Female Swivel 30° Flare
(Komatsu, Linkbelt.)**



Hose I.D.	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	04U-14K	M14x1.5	2.89	1.19	.18	9/16	3/4
3/8	06U-18K	M18x1.5	2.86	1.44	.31	11/16	7/8
1/2	08U-22K	M22x1.5	2.99	1.56	.39	13/16	1
5/8	10U-24K	M24x1.5	3.64	1.69	.50	1	1-1/4
3/4	12U-30K	M30x1.5	3.86	1.69	.61	1-1/8	1-3/8
1	16U-33K	M33x1.5	4.53	2.31	.81	1-1/4	1-5/8
1-1/4	20U-36K	M36x1.5	5.24	2.94	.92	1-5/8	1-3/4

**British Standard (BSPP)
60° Cone Female Pipe
Swivel**



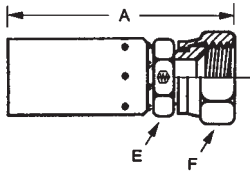
Hose I.D.	BSPP Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	1/4	04U-354	G-1/4-19*	2.75	1.25	.16	9/16	3/4
1/4	3/8	04U-356	G-3/8-19*	2.84	1.38	.16	3/4	7/8
3/8	3/8	06U-356	G-3/8-19*	2.84	1.44	.25	3/4	7/8
3/8	1/2	06U-358	G-1/2-14*	2.97	1.56	.25	7/8	1-1/16
1/2	1/2	08U-358	G-1/2-14*	3.05	1.63	.36	13/16	1-1/16
1/2	5/8	08U-360	G-5/8-14*	2.96	1.56	.36	13/16	1-3/16
5/8	5/8	10U-360	G-5/8-14*	3.71	1.75	.48	15/16	1-3/16
3/4	3/4	12U-362	G-3/4-14*	3.87	1.75	.61	1	1-1/4
1	1	16U-366	G-1-11*	4.47	2.25	.81	1-1/4	1-1/2
1-1/4	1-1/4	20U-370	G-1-1/4-11*	4.81	2.50	1.02	1-5/8	1-7/8

*G As Part of Thread Size is ISO Designation for Parallel Thread.

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

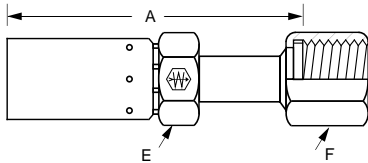
Female JIS 30° Flare Parallel Pipe Swivel



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	1/4	04U-04L	G-1/4-19	2.73	1.25	.16	9/16	3/4
3/8	3/8	06U-06L	G-3/8-19	2.84	1.38	.25	11/16	7/8
1/2	1/2	08U-08L	G-1/2-14	3.02	1.56	.36	13/16	1-1/16
5/8	3/4	10U-12L	G-3/4-14	3.52	1.56	.48	1	1-5/16
3/4	3/4	12U-12L	G-3/4-14	3.85	1.75	.61	1	1-1/4
1	1	16U-16L	G-1-11	4.13	1.94	.81	1-1/4	1-1/2

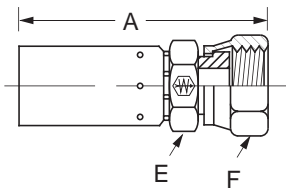
*G As Part of Thread Size is ISO Designation for Parallel Thread.

Female FOR-SEAL® Swivel Straight



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	1/4	04U-S64	9/16-18	2.82	1.34	.16	9/16	11/16
1/4	3/8	04U-S66	11/16-16	2.85	1.37	.26	9/16	13/16
1/4	1/2	04U-S68	13/16-16	3.19	1.75	.36	11/16	15/16
3/8	1/4	06U-S64	9/16-18	2.81	1.38	.16	11/16	5/8
3/8	3/8	06U-S66	11/16-16	2.87	1.54	.26	11/16	13/16
3/8	1/2	06U-S68	13/16-16	3.22	1.79	.28	11/16	15/16
1/2	3/8	08U-S66	11/16-16	2.91	1.50	.26	13/16	13/16
1/2	1/2	08U-S68	13/16-16	3.15	1.74	.36	13/16	15/16
1/2	5/8	08U-S70	1-14	3.30	1.87	.46	13/16	1-1/8
1/2	3/4	08U-S72	1-3/16-12	3.38	1.94	.36	1	1-3/8
5/8	5/8	10U-S70	1-14	3.61	1.68	.46	15/16	1-1/8
5/8	3/4	10U-S72	1-3/16-12	3.84	1.94	.55	1	1-3/8
3/4	5/8	12U-S70	1-14	4.12	1.94	.46	1	1-1/8
3/4	3/4	12U-S72	1-3/16-12	4.20	2.06	.55	1	1-3/8
3/4	1	12U-S76	1-7/16-12	4.78	2.81	.61	1-1/4	1-5/8
1	3/4	16U-S72	1-3/16-12	4.36	2.16	.55	1-1/4	1-3/8
1	1	16U-S76	1-7/16-12	4.88	2.69	.78	1-1/4	1-5/8
1	1-1/4	16U-S80	1-11/16-12	4.53	2.31	.81	1-1/2	1-7/8
1-1/4	1-1/4	20U-S80	1-11/16-12	4.54	2.25	1.04	1-5/8	1-7/8

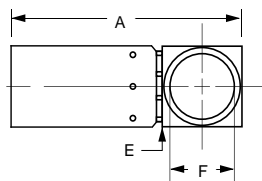
BSPP Flat Face Female Swivel (HIAB Cranes-Swedish)



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
3/8	3/8	06U-06P	G-3/8-19*	2.90	1.50	.25	11/16	7/8
3/8	1/2	06U-08P	G-1/2-14*	2.96	1.50	.25	3/4	1-1/16
1/2	1/2	08U-08P	G-1/2-14*	3.02	1.56	.36	13/16	1-1/16
1/2	3/4	08U-12P	G-3/4-14*	3.06	1.63	.36	1	1-1/4
3/4	3/4	12U-12P	G-3/4-14*	3.92	1.75	.61	1	1-1/4

*G As Part of Thread Size is ISO Designation for Parallel Thread.

Banjo (Ford Tractor)

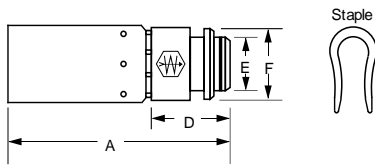


Hose I.D.	Catalog Number	A	Hose Cut-Off Factor†	Square E	Hole Dia. F
3/8	06U-L06	2.56	.69	7/8	.62

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

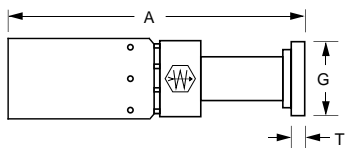
READY LOK® Male Connector (For Deep Mining Markets)



O-ring and backup ring included.
(See page 251 for READY-LOK® Staple and O-ring.)

Hose I.D.	Connect. Size	Catalog Number	A	Hose Cut-Off Factor†	Hole Dia.	Length D	Dia. E	Dia. F
1/4	1/4	04U-04S	2.82	1.31	.16	1.13	.39	.59
3/8	3/8	06U-06S	2.84	1.31	.26	1.13	.54	.78
1/2	1/2	08U-08S	2.82	1.31	.36	1.13	.70	.94
3/4	3/4	12U-12S	3.64	1.50	.61	1.13	.94	1.14
1	1	16U-16S	3.94	1.75	.81	1.34	1.22	1.53
1-1/4	1-1/4	20U-20S	4.06	1.75	1.02	1.34	1.49	1.80

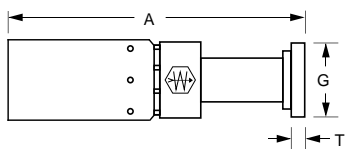
Split Flange Straight (SAE Code 61)



(See page 252 for Code 61 Split Flange Kits.)

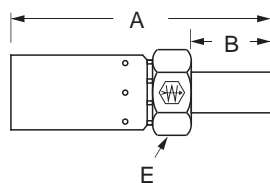
Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T
1/2	1/2	08U-G08	8x252	3.94	2.50	.33	1.19 (30mm)	.265
3/4	3/4	12U-G12	12x252	4.40	2.25	.58	1.50 (38mm)	.265
3/4	1	12U-G16	16x252	4.40	2.25	.58	1.75 (44mm)	.315
1	1	16U-G16	16x252	4.58	2.38	.77	1.75 (44mm)	.315
1	1-1/4	16U-G20	20x252	4.58	2.38	.77	2.00 (51mm)	.315
1-1/4	1-1/4	20U-G20	20x252	5.04	2.75	1.02	2.00 (51mm)	.315
1-1/4	1-1/2	20U-G24	24x252	5.12	2.81	1.02	2.38 (60mm)	.315

Split Flange Straight - Metric (Komatsu, Linkbelt, etc.)



Hose I.D.	Nominal Flange Size mm (inches)	Catalog Number	Replacement O-Ring (Not Included)	A	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T
5/8	16mm (5/8)	10U-G09	10x252	4.18	2.25	.46	34mm (1.325)	.265

Standpipe Straight Tube



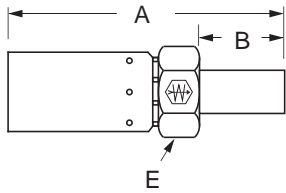
(See page 237 for Ermeto® Nuts and Sleeves.)

Hose I.D.	Tube O.D.	Catalog Number	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex E
1/4	1/4	04U-T04	3.16	1.10	1.69	.15	9/16
3/8	3/8	06U-T06	3.36	1.30	1.94	.25	11/16
1/2	1/2	08U-T08	3.70	1.58	2.25	.33	3/4
5/8	5/8	10U-T10	3.92	1.34	2.00	.46	15/16
3/4	3/4	12U-T12	4.11	1.17	1.94	.58	1
1	1	16U-T16	4.48	1.30	2.31	.76	1-1/4

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

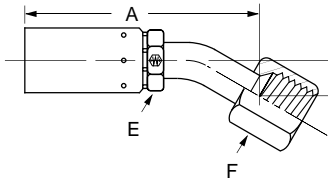
Metric Standpipe Straight Tube



(See page 228 for Metric Nuts and Sleeves.)

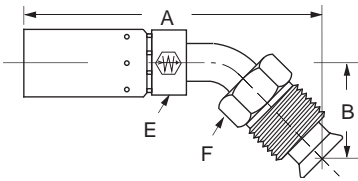
Hose I.D.	Tube O.D. (mm)	Catalog Number	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex E
1/4	8	04U-38T	3.06	1.00	1.56	.15	5/8
1/4	10	04U-40T	3.10	1.04	1.63	.15	5/8
3/8	10	06U-40T	3.10	1.04	1.63	.24	13/16
3/8	12	06U-42T	3.10	1.04	1.63	.24	13/16
3/8	14	06U-44T	3.28	1.22	1.81	.24	13/16
1/2	15	08U-45T	3.12	1.00	1.69	.35	7/8
1/2	16	08U-46T	3.34	1.22	1.91	.35	7/8
5/8	18	10U-48T	3.64	1.06	1.75	.48	1-15/16
5/8	20	10U-50T	4.00	1.42	2.06	.48	1-15/16
3/4	22	12U-52T	4.13	1.19	1.88	.61	1
3/4	25	12U-55T	4.53	1.59	2.25	.61	1
1	28	16U-58T	4.43	1.25	2.25	.81	1-1/2
1	30	16U-60T	4.89	1.71	2.69	.81	1-1/2

SAE 37° Female Swivel 30° Tube Elbow



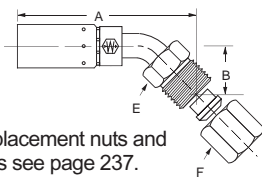
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hex E	Hex F
5/8	3/4	10U-L22	1-1/16-12	4.50	.46	2.56	15/16	1-1/4

Inverted Male Swivel 45° Tube Elbow



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F
1/4	3/16	04U-B43	3/8-24	3.48	.69	2.00	.12	3/8
1/4	1/4	04U-B44	7/16-24	3.61	.93	2.13	.15	7/16
1/4	5/16	04U-B45	1/2-20	3.98	1.14	2.50	.21	1/2
3/8	1/4	06U-B44	7/16-24	3.59	.93	2.19	.15	7/16
3/8	5/16	06U-B45	1/2-20	4.02	1.14	2.56	.21	1/2
3/8	3/8	06U-B46	5/8-18	4.05	1.34	2.63	.24	5/8
3/8	7/16	06U-B47	11/16-18	4.05	1.34	2.63	.24	11/16
1/2	1/2	08U-B48	3/4-18	4.85	1.58	3.44	.33	3/4

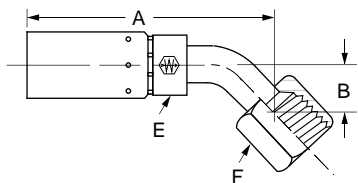
Flareless 45° Tube Elbow 7000 Ermeto® Series



For replacement nuts and sleeves see page 237.

Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
3/8	3/8	06U-956	9/16-18	4.08	.88	2.65	.28	11/16	11/16

JIC 37° Female Swivel 45° Tube Elbow (Exceptions Noted, Refer to Footnotes)



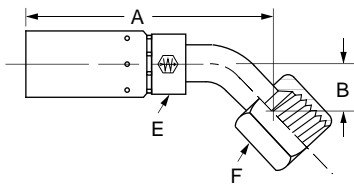
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex/ Dia. E	Hex F
1/4	1/4	04U-684 ^a	7/16-20	2.98	.33	1.50	.15	9/16	9/16
1/4	5/16	04U-685 ^a	1/2-20	3.14	.36	1.69	.21	9/16	5/8
3/8	1/4	06U-684 ^a	7/16-20	3.08	.33	1.69	.15	11/16	9/16
3/8	3/8	06U-686	9/16-18	3.17	.39	1.75	.25	11/16	11/16
3/8	1/2	06U-688 ^a	3/4-16	3.51	.55	2.08	.25	3/4	7/8
1/2	1/2	08U-688 ^a	3/4-16	3.51	.55	2.08	.35	13/16	7/8
1/2	5/8	08U-690 ^a	7/8-14	3.76	.63	2.31	.36	13/16	1
5/8	5/8	10U-690	7/8-14	4.22	.63	2.22	.48	15/16	1
5/8	3/4	10U-692	1-1/16-12	4.37	.78	2.44	.48	15/16	1-1/4
3/4	3/4	12U-692	1-1/16-12	4.79	.78	2.64	.59	1	1-1/4
3/4	1	12U-696	1-5/16-12	5.18	1.10	3.00	.61	1-1/4	1-1/2
1	1	16U-696	1-5/16-12	5.28	1.10	3.06	.76	1-1/4	1-1/2

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

^a Swivel nuts are universal – both SAE 37° and 45° connections.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

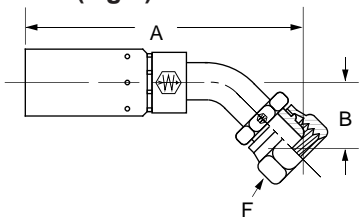
SAE 45° Female Swivel 45° Tube Elbow



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex Dia. E	Hex F
3/8	3/8	06U-486	5/8-18	3.18	.39	1.75	.21	11/16	3/4

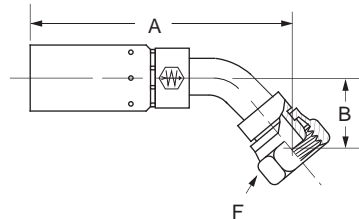
Female Swivel DIN Universal Seat 45° Tube Elbow

I. Rh. (Light)



Hose I.D.	Tube Size (mm)	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F
1/4	8	04U-08D	M14x1.5	3.08	.73	1.63	.16	11/16
1/4	10	04U-10D	M16x1.5	3.21	.79	1.75	.16	3/4
3/8	10	06U-10D	M16x1.5	3.90	.96	2.47	.25	3/4
3/8	12	06U-12D	M18x1.5	3.93	.96	2.50	.25	7/8
1/2	15	08U-15D	M22x1.5	3.48	.91	2.06	.36	1-1/16
5/8	18	10U-18D	M26x1.5	4.40	1.08	2.50	.48	1-5/16
3/4	22	12U-22D	M30x2.0	4.62	1.19	2.44	.61	1-7/16
1	28	16U-28D	M36x2.0	5.41	1.56	3.25	.81	1-5/8

British Standard 60° Cone (BSPP) Female Swivel 45° Tube Elbow

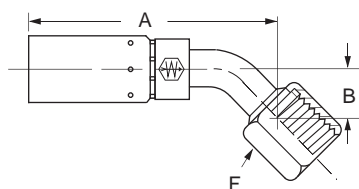


Hose I.D.	BSPP Pipe Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F
1/4	1/4	04U-44P	G-1/4-19*	3.69	.91	2.25	.15	3/4
3/8	3/8	06U-46P	G-3/8-19*	3.85	.90	2.44	.25	7/8
1/2	1/2	08U-48P	G-1/2-14*	3.88	.87	2.44	.33	1-1/16
5/8	5/8	10U-50P	G-5/8-14*	4.38	.98	2.44	.46	1-3/16
3/4	3/4	12U-52P	G-3/4-14*	5.53	1.31	3.38	.61	1-1/4
1	1	16U-56P	G-1-11*	5.34	1.44	3.13	.76	1-1/2
1-1/4	1-1/4	20U-60P*	G-1 1/4-11*	5.10	1.12	2.75	1.02	1-7/8

*Part number will crimp in COC T-410-1, T-420-1 and T-440-1 presses only.

*G As Part of Thread Size is ISO Designation for Parallel Thread.

Female FOR-SEAL® Swivel 45° Tube Elbow

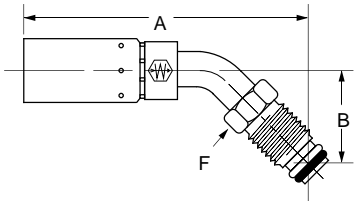


Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F
1/4	1/4	04U-L64	9/16-18	3.14	.41	1.68	.16	11/16
1/4	3/8	04U-L66	11/16-16	3.24	.43	1.75	.16	13/16
3/8	3/8	06U-L66	11/16-16	3.26	.43	1.81	.26	13/16
3/8	1/2	06U-L68	13/16-16	3.58	.60	2.15	.26	15/16
1/2	3/8	08U-L66	11/16-16	3.32	.43	1.88	.26	13/16
1/2	1/2	08U-L68	13/16-16	3.56	.60	2.13	.36	15/16
1/2	5/8	08U-L70	1-14	3.67	.65	2.25	.36	1-1/8
5/8	5/8	10U-L70	1-14	4.13	.65	2.19	.46	1-1/8
5/8	3/4	10U-L72	1-3/16-12	4.53	.84	2.63	.48	1-3/8
3/4	5/8	12U-L70	1-14	4.49	.65	2.31	.46	1-1/8
3/4	3/4	12U-L72	1-3/16-12	4.96	.84	2.81	.59	1-3/8
3/4	1	12U-L76	1-7/16-12	5.29	.94	3.13	.76	1-5/8
1	3/4	16U-L72	1-3/16-12	4.99	.83	2.79	.56	1-3/8
1	1	16U-L76	1-7/16-12	5.29	.95	3.06	.76	1-5/8
1	1-1/4	16U-L80	1-11/16-12	5.00	1.07	2.81	.81	1-7/8
1-1/4	1-1/4	20U-L80	1-11/16-12	5.07	1.07	2.75	1.01	1-7/8

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

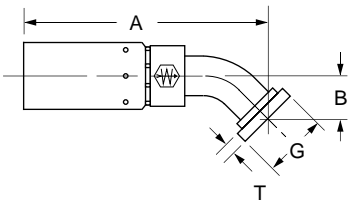
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

Male Swivel 45° Tube Elbow O-Ring Port



Hose I.D.	Tube O.D.	Catalog Number	O-Ring	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F
1/2	5/8	08U-L50	7629x7	7/8-14	4.75	1.84	3.38	.36	7/8

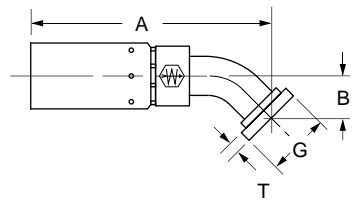
Split Flange 45° Tube Elbow (SAE Code 61)



(See page 252 for Code 61 Split Flange Kits.)

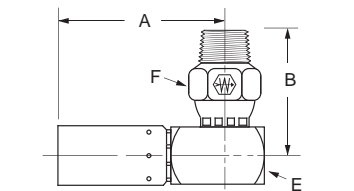
Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	B	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T Nominal
1/2	1/2	08U-G41	8x252	3.68	.78	2.25	.41	1.19 (30mm)	.265
3/4	3/4	12U-G42	12x252	5.00	1.00	2.88	.58	1.50 (38mm)	.265
3/4	1	12U-G46	16x252	5.00	1.00	2.88	.58	1.75 (44mm)	.315
1	1	16U-G46	16x252	4.95	1.06	2.75	.77	1.75 (44mm)	.315
1	1-1/4	16U-G50	20x252	5.00	1.06	2.80	.77	2.00 (51mm)	.315
1-1/4	1-1/4	20U-G50	20x252	5.15	1.15	2.81	1.02	2.00 (51mm)	.315

Split Flange 45° Tube Elbow - Metric (Komatsu, Linkbelt, etc.)



Hose I.D.	Nominal Flange Size mm (inches)	Catalog Number	Replacement O-Ring (Not Included)	A	B	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T Nominal
5/8	16mm (5/8)	10U-G69	10x252	4.21	.94	2.25	.46	34mm (1.335)	.265

Male Pipe Swivel 90° Elbow



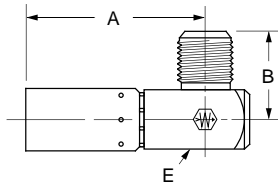
NOTE: Swivel for installation purposes only. (Not for temperatures above 212°F.)

Hose I.D.	Pipe Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Square E	Hex F
1/4	1/4	04U-M04	1/4-18	2.43	1.79	1.00	.15	11/16	13/16
3/8	1/4	06U-M04	1/4-18	2.50	1.83	1.06	.24	11/16	13/16
3/8	3/8	06U-M06	3/8-18	2.50	1.84	1.06	.24	11/16	7/8
1/2	1/2	08U-M08	1/2-14	2.75	1.96	1.31	.35	3/4	7/8
3/4	3/4	12U-M12	3/4-14	4.15	2.46	2.00	.61	1-1/8	1-1/4

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

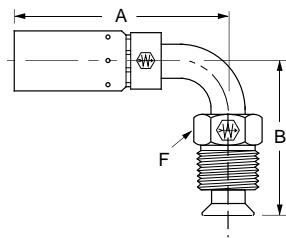
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

SAE 37° Male Rigid 90° Elbow



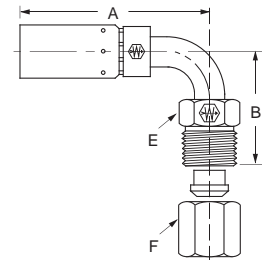
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Square E
3/8	5/8	06U-X60	7/8-14	2.50	1.10	1.06	.36	11/16
1/2	5/8	08U-X60	7/8-14	2.75	1.13	1.31	.36	3/4
3/4	5/8	12U-X60	7/8-14	4.15	1.32	2.00	.48	1-1/8

Inverted Male Swivel 90° Tube Elbow



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F
1/4	3/16	04U-B63	3/8-24	2.85	1.06	1.38	.12	3/8
1/4	1/4	04U-B64	7/16-24	2.89	1.36	1.38	.15	7/16
1/4	5/16	04U-B65	1/2-20	3.08	1.61	1.63	.21	1/2
3/8	1/4	06U-B64	7/16-24	2.89	1.36	1.44	.15	7/16
3/8	5/16	06U-B65	1/2-20	3.08	1.61	1.50	.21	1/2
3/8	3/8	06U-B66	5/8-18	3.40	1.97	1.88	.24	5/8
3/8	7/16	06U-B67	11/16-18	3.40	1.97	2.00	.24	11/16
1/2	1/2	08U-B68	3/4-18	3.50	2.32	2.06	.35	3/4

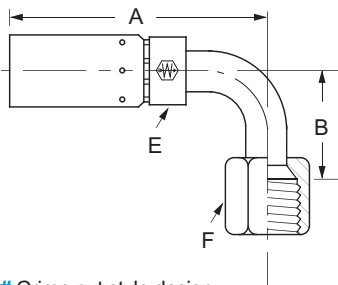
Flareless 90° Tube 7000 Ermeto® Series



For replacement nuts and sleeves see page 237.

Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
3/8	3/8	06U-976	9/16-18	3.14	1.54	1.69	.28	5/8	11/16

JIC 37° Female Swivel 90° Tube Elbow (Exceptions Noted, Refer to Footnotes)



Crimp nut style design.

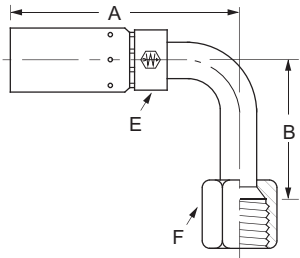
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F
1/4	1/4	04U-664 ^a	7/16-20	2.90	.68	1.44	.15	9/16
1/4	5/16	04U-665 ^a	1/2-20	3.09	.77	1.63	.21	5/8
1/4	3/8	04U-666	9/16-18	3.16	.85	1.63	.25	11/16
3/8	1/4	06U-664 ^a	7/16-20	2.85	.68	1.44	.15	9/16
3/8	3/8	06U-666	9/16-18	3.20	.85	1.75	.25	11/16
3/8	1/2	06U-668 ^a	3/4-16	3.27	1.09	1.75	.33	7/8
1/2	1/2	08U-668 ^a	3/4-16	3.33	1.09	1.88	.33	7/8
1/2	5/8	08U-670 ^a	7/8-14	3.92	1.23	2.50	.36	1
5/8	5/8	10U-670 ^a	7/8-14	4.36	1.23	2.44	.46	1
5/8	3/4	10U-672	1-1/16-12	4.96	1.82	3.00	.48	1-1/4
3/4	5/8	12U-670 ^a	7/8-14	4.29	1.23	2.14	.46	1
3/4	3/4	12U-672	1-1/16-12	4.76	1.82	2.63	.58	1-1/4
1	1	16U-676	1-5/16-12	5.03	2.14	2.81	.76	1-1/2
1-1/4	1-1/4	20U-677 #	1-5/8-12	5.31	3.31	3.00	1.01	2

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

^a Swivel nuts are universal – both SAE 37° and 45° connections.

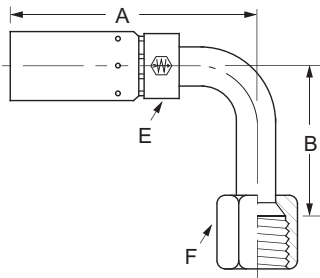
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

JIC 37° Female Swivel Long Drop 90° Tube Elbow (Exceptions Noted, Refer to Footnotes)



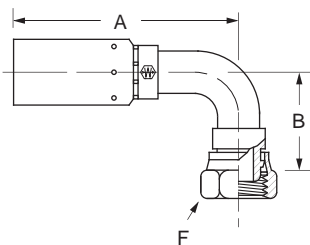
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F
1/4	1/4	04U-644^a	7/16-20	2.95	1.80	1.50	.15	9/16
3/8	1/4	06U-644^a	7/16-20	2.89	1.80	1.44	.15	9/16
3/8	3/8	06U-646	9/16-18	3.18	2.18	1.75	.24	11/16
1/2	1/2	08U-648^a	3/4-16	3.33	2.43	1.88	.35	7/8
1/2	5/8	08U-650^a	7/8-14	3.45	2.57	2.00	.36	1
3/4	3/4	12U-652	1-1/16-12	4.81	3.73	2.63	.58	1-1/4
1	1	16U-656L33	1-5/16-12	5.18	3.37	3.00	.76	1-1/2

SAE 45° Female Swivel Long Drop 90° Tube Elbow



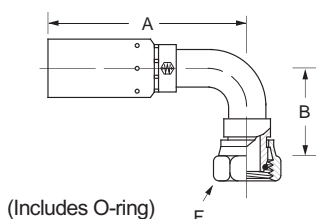
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F
3/8	3/8	06U-446	5/8-18	3.19	2.18	1.75	.24	3/4

Female Swivel Universal Seat DIN 90° Tube Elbow l. Rh. (Light)



Hose I.D.	Tube Size (mm)	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F
1/4	8	04U-58D	M14x1.5	2.99	1.48	1.50	.16	11/16
1/4	10	04U-60D	M16x1.5	3.31	1.65	1.81	.16	3/4
3/8	10	06U-60D	M16x1.5	3.29	1.65	1.88	.25	3/4
3/8	12	06U-62D	M18x1.5	3.31	1.65	1.88	.25	7/8
1/2	15	08U-65D	M22x1.5	3.73	1.93	2.31	.36	1-1/16
5/8	18	10U-68D	M26x1.5	4.42	2.28	2.50	.48	1-1/4
3/4	22	12U-72D	M30x2.0	4.97	2.59	2.81	.61	1-7/16
1	28	16U-78D	M36x2.0	5.10	3.11	2.88	.81	1-5/8
1-1/4	35	20U-85D	M45x2.0	5.40	3.12	3.06	1.02	2-3/16

Female 24° Swivel DIN 90° Tube Elbow s. Rh. DKO (Heavy)



Hose I.D.	Tube Size (mm)	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F
3/8	12	06U-62E	M20x1.5	3.25	1.53	1.82	.25	1
3/8	14	06U-64E	M22x1.5	3.61	1.63	2.19	.25	1-1/16
1/2	16	08U-66E	M24x1.5	3.69	1.95	2.25	.33	1-1/8
5/8	20	10U-70E	M30x2.0	4.46	2.47	2.50	.48	1-7/16
3/4	25	12U-75E*	M36x2.0	5.27	2.90	3.13	.61	1-5/8
1	30	16U-80E*	M42x2.0	5.19	2.79	3.00	.77	2

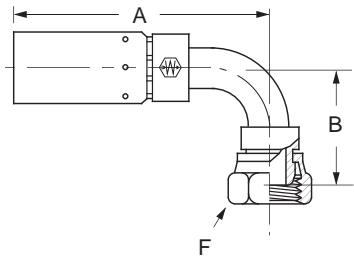
*Part number will crimp in COC T-410, T-420 and T-440 presses only.

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

^a Swivel nuts are universal – both SAE 37° and 45° connections.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

British Standard (BSPP) 60° Cone Female Pipe Swivel 90° Tube Elbow

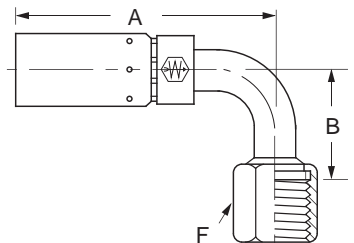


*Part number will crimp in COC T-410-1, T-420-1 and T-440-1 presses only

Hose I.D.	BSPP Pipe Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F
1/4	1/4	04U-74P	G-1/4-19*	2.99	1.50	1.50	.16	3/4
3/8	3/8	06U-76P	G-3/8-19*	3.26	1.60	1.83	.25	7/8
3/8	1/2	06U-78P	G-1/2-14*	3.06	1.67	1.63	.25	1-1/16
1/2	1/2	08U-78P	G-1/2-14*	3.96	1.89	2.56	.36	1-1/16
1/2	5/8	08U-80P	G-5/8-14*	3.55	1.44	2.13	.36	1-1/4
5/8	5/8	10U-80P	G-5/8-14*	4.15	1.83	2.25	.49	1-3/16
3/4	3/4	12U-82P	G-3/4-14*	5.02	2.49	2.88	.58	1-1/4
1	1	16U-86P*	G-1-11*	5.23	3.09	3.00	.77	1-1/2
1-1/4	1-1/4	20U-90P*	G-1-1/4-11*	5.56	3.51	3.25	1.51	1-7/8

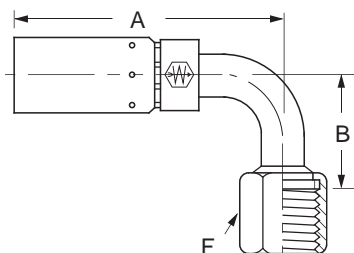
*G As Part of Thread Size is ISO Designation for Parallel Thread.

Female FOR-SEAL® Swivel Short Drop 90° Elbow



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F
1/4	1/4	04U-A24	9/16-18	3.00	.81	1.50	.16	11/16
1/4	3/8	04U-A26	11/16-16	3.13	.90	1.75	.16	13/16
3/8	1/4	06U-A24	9/16-18	3.00	.81	1.56	.16	11/16
3/8	3/8	06U-A26	11/16-16	3.13	.90	1.81	.26	13/16
3/8	1/2	06U-A28	13/16-16	3.33	1.15	1.88	.26	15/16
1/2	3/8	08U-A26	11/16-16	3.13	.90	1.75	.26	13/16
1/2	1/2	08U-A28	13/16-16	3.34	1.15	1.91	.36	15/16
1/2	5/8	08U-A30	1-14	3.46	1.27	2.03	.36	1-1/8
1/2	3/4	08U-A32	1-3/16-12	3.98	1.88	2.56	.36	1-3/8
5/8	5/8	10U-A30	1-14	3.92	1.27	2.00	.46	1-1/8
5/8	3/4	10U-A32	1-3/16-12	4.37	1.88	2.44	.46	1-3/8
3/4	5/8	12U-A30	1-14	4.26	1.27	2.13	.46	1-1/8
3/4	3/4	12U-A32	1-3/16-12	4.86	1.88	2.69	.59	1-3/8
3/4	1	12U-A36	1-7/16-12	5.13	2.21	3.00	.61	1-5/8
1	1	16U-A36	1-7/16-12	5.23	2.21	3.00	.76	1-5/8
1	1-1/4	16U-A40	1-11/16-12	5.24	2.51	3.00	.81	1-7/8
1-1/4	1-1/4	20U-A40	1-11/16-12	5.31	2.51	3.00	1.02	1-7/8
1-1/4	1-1/2	20U-A44	2-12	5.31	2.55	3.00	1.02	2-1/4

Female FOR-SEAL® Swivel Medium Drop 90° Tube Elbow

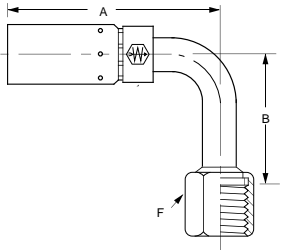


Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F
1/4	1/4	04U-J34	9/16-18	3.07	1.26	1.59	.16	11/16
1/4	3/8	04U-J36	11/16-16	3.13	1.51	1.69	.16	13/16
1/4	1/2	04U-J38	13/16-16	3.37	1.62	1.88	.16	15/16
3/8	3/8	06U-J36	11/16-16	3.20	1.51	1.69	.24	13/16
3/8	1/2	06U-J38	13/16-16	3.36	1.62	1.93	.25	15/16
1/2	3/8	08U-J36	11/16-16	3.20	1.51	1.72	.24	13/16
1/2	1/2	08U-J38	13/16-16	3.37	1.62	1.94	.33	15/16
1/2	3/4	08U-J42	1-3/16-12	4.02	2.28	2.59	.36	1-3/8
5/8	5/8	10U-J40	1-14	4.29	1.85	2.13	.46	1-1/8
3/4	5/8	12U-J40	1-1/4	3.95	1.85	2.00	.46	1-1/8
3/4	3/4	12U-J42	1-3/16-12	4.83	2.28	2.69	.58	1-3/8
1	1	16U-J46	1-7/16-12	5.33	2.78	3.13	.76	1-5/8
1	1-1/4	16U-J50	1-11/16-12	5.24	3.01	3.04	.81	1-7/8
1-1/4	1-1/4	20U-J50	1-11/16-12	5.31	3.09	3.00	1.01	1-7/8

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

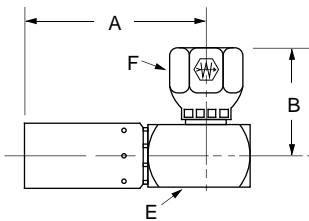
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

Female FOR-SEAL® Swivel Long Drop 90° Tube Elbow



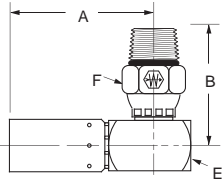
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Dia. F
1/4	1/4	04U-A64	9/16-18	3.14	1.80	1.63	.16	11/16
1/4	3/8	04U-A66	11/16-16	3.31	2.13	1.83	.16	13/16
3/8	3/8	06U-A66	11/16-16	3.34	2.13	1.91	.24	13/16
3/8	1/2	06U-A68	13/16-16	3.37	2.51	1.94	.25	15/16
1/2	1/2	08U-A68	13/16-16	3.28	2.51	1.85	.36	15/16
1/2	5/8	08U-A70	1-14	3.49	2.76	2.00	.36	1-1/8
5/8	5/8	10U-A70	1-14	3.95	2.76	2.06	.46	1-1/8
3/4	3/4	12U-A72	1-3/16-12	4.87	3.78	2.72	.59	1-3/8
1	1	16U-A76	1-7/16-12	5.34	4.50	3.13	.76	1-5/8
1-1/4	1-1/4	20U-A80	1-11/16-12	5.31	5.09	3.00	1.01	1-7/8
1-1/4	1-1/2	20U-A84	2-12	5.31	5.54	3.00	1.01	2-1/4

JIC 37° Female Swivel 90° Elbow



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Square E	Hex F
1/4	1/4	04U-554	7/16-20	2.43	1.06	.95	.16	11/16	9/16
3/8	3/8	06U-556	9/16-18	2.50	1.18	1.06	.25	11/16	11/16
1/2	1/2	08U-558	3/4-16	2.75	1.35	1.31	.36	3/4	7/8
1/2	5/8	08U-560	7/8-14	2.75	1.34	1.31	.36	3/4	1
3/4	5/8	12U-560	7/8-14	4.15	1.54	2.00	.61	1-1/8	1
3/4	3/4	12U-562	1-1/16-12	4.15	1.62	2.00	.61	1-1/8	1-1/4
3/4	7/8	12U-564	1-3/16-12	4.15	1.68	2.00	.61	1-1/8	1-3/8

Male Straight Thread O-Ring Swivel 90° Elbow

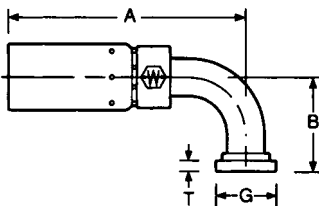


(Includes O-ring. For replacement O-ring, see page 208.)

NOTE: Swivel for installation purposes only. (Not for temperatures above 212°F.)

Hose I.D.	Port Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Square E	Hex F
1/4	3/8	04U-R66	9/16-18	2.43	1.68	.94	.16	11/16	7/8
3/8	3/8	06U-R66	9/16-18	2.50	1.68	1.06	.25	11/16	7/8
3/8	1/2	06U-R68	3/4-16	2.50	1.64	1.06	.25	11/16	7/8
3/8	5/8	06U-R70	7/8-14	2.50	1.80	1.06	.25	11/16	1
1/2	1/2	08U-R68	3/4-16	2.75	1.64	1.31	.36	3/4	7/8
1/2	5/8	08U-R70	7/8-14	2.75	1.79	1.31	.36	3/4	1-1/8
1/2	3/4	08U-R72	1-1/16-12	2.75	1.89	1.31	.36	3/4	1-1/4
3/4	3/4	12U-R72	1-1/16-12	4.15	2.24	2.00	.61	1-1/8	1-7/16

Split Flange 90° Tube Elbow (SAE Code 61)

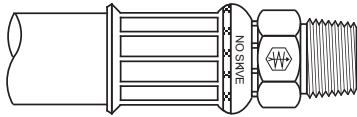


(For Split Flange Kits, see page 252.)

Nominal Hose I.D.	Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	B	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T
1/2	1/2	08U-G71	8x252	3.63	1.63	2.19	.41	1.19	.265
3/4	3/4	12U-G72	12x252	4.75	2.13	2.63	.58	1.50	.265
3/4	1	12U-G76	16x252	4.78	2.13	2.56	.58	1.75	.315
1	1	16U-G76	16x252	5.39	2.38	3.19	.77	1.75	.315
1	1-1/4	16U-G80	20x252	5.39	2.38	3.19	.77	2.00	.315
1-1/4	1-1/4	20U-G80	20x252	5.29	2.62	3.00	1.02	2.00	.315
1-1/4	1-1/2	20U-G84	24x252	5.29	2.68	3.00	1.02	2.38	.315

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.



Hose End Series: 430 'U' Series

Typical Application: Very high pressure hydraulic lines subjected to pressure surges and flexing. Some applications include mining, construction, farming, and high performance industrial equipment.

Pressure: Determined by maximum working pressure for hose size and hose end configuration whichever is lesser. See page 15 for working pressure ratings for hose end configurations.

Material: Low Carbon Steel

Plating: Zinc; yellow dichromate finish

Advantages: Excellent selection of no-skive hose ends. Can be used with Caterpillar, John Deere, and many major manufacturers of heavy equipment.

Assemble With: T-410-1 Coll-O-Crimp® II, T-420-1 Coll-O-Crimp® Super I, T-440-1 Coll-O-Crimp II Plus or T-480.

Ordering Information: Order individually by catalog number. O-rings not supplied with split flange hose ends. Order o-rings by catalog number; reference individual hose end listings for details.

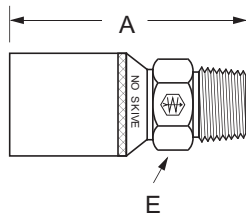
NOTE: Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

Label Set: FS-3100



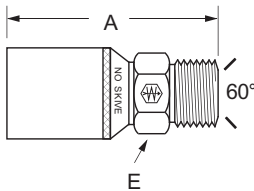
Refer to important safety information on pages 1-2.

Male Pipe (NPTF) Rigid



Hose I.D.	Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
1/2	1/2	43008U-108	1/2-14	3.56	1.69	.34	7/8
1/2	3/4	43008U-112	3/4-14	3.29	1.38	.34	1-1/16
3/4	3/4	43012U-112	3/4-14	3.68	1.69	.61	1-1/16
3/4	1	43012U-116	1-11-1/2	3.77	1.75	.61	1-3/8
1	3/4	43016U-112	3/4-14	3.86	1.81	.71	1-1/4
1	1	43016U-116	1-11-1/2	4.05	2.00	.81	1-3/8
1	1-1/4	43016U-120	1-1/4-11-1/2	4.08	2.06	.81	1-11/16
1-1/4	1-1/4	43020U-120	1-1/4-11-1/2	4.58	2.31	1.02	1-11/16
1-1/2	1-1/2	43024U-124	1-1/2-11-1/2	4.87	2.38	1.25	2
2	2	43032U-132	2-11-1/2	5.51	2.69	1.69	2-1/2

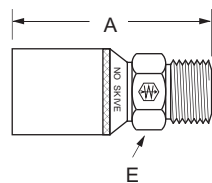
British Standard 60° Cone (BSPP) Male Pipe Rigid



Hose I.D.	BSPP Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
3/4	3/4	43012U-P62	G-3/4-14*	3.56	1.56	.61	1-1/8
1	1	43016U-P66	G-1-11*	3.73	1.69	.81	1-3/8
1-1/4	1-1/4	43020U-P67	G-1-1/4-11*	4.41	2.13	1.02	1-3/4

*G As Part of Thread Size is ISO Designation for Parallel Thread.

FOR-SEAL® Male Rigid



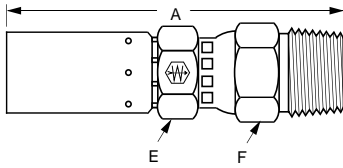
Does not include O-Ring. See page 217 for O-Ring.

Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
1/2	1/2	43008U-E68	13/16-16	3.24	1.31	.34	7/8
3/4	3/4	43012U-E72	1-3/16-12	3.57	1.56	.61	1-1/4
1	1	43016U-E76	1-7/16-12	3.55	1.50	.81	1-1/2
1-1/4	1-1/4	43020U-E80	1-11/16-12	3.90	1.56	1.04	1-3/4

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

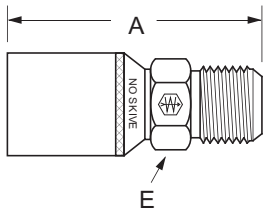
Male Pipe Swivel



NOTE: Swivel for installation purposes only.
(Not for temperatures above 212°F.)

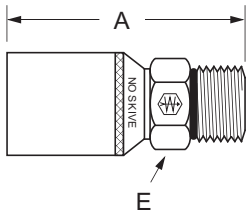
Hose I.D.	Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1	1	43016U-J16	1-11	5.02	3.00	.78	1-1/4	1-3/8

SAE 37° Male Rigid



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
1/2	1/2	43008U-508	3/4-16	3.50	1.63	.34	7/8
1/2	5/8	43008U-510	7/8-14	3.30	1.38	.34	1
3/4	3/4	43012U-512	1-1/16-12	3.74	1.75	.61	1-1/8
3/4	7/8	43012U-514	1-3/16-12	3.81	1.81	.61	1-1/4
3/4	1	43012U-516	1-5/16-12	4.02	2.06	.61	1-3/8
1	1	43016U-516	1-5/16-12	4.02	2	.81	1-3/8
1	1-1/4	43016U-520	1-5/8-12	3.84	1.81	.81	1-11/16
1-1/4	1-1/4	43020U-520	1-5/8-12	4.57	2.31	1.02	1-11/16
1-1/2	1-1/2	43024U-524	1-7/8-12	4.95	2.50	1.25	2
2	2	43032U-532	2-1/2-12	5.57	2.75	1.69	2-5/8

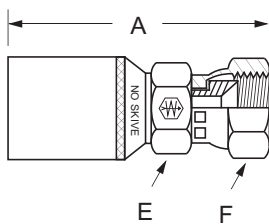
Male Straight Thread O-Ring Rigid



(Includes O-Ring)
For replacement O-Ring see page 206.

Hose I.D.	Port Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
1	1	43016U-P16	1-5/16-12	3.45	1.44	.81	1-1/2

JIC 37° Female Swivel (Refer to Footnotes)



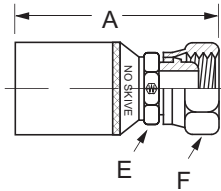
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/2	3/8	43008U-606	9/16-18	3.56	1.69	.34	13/16	11/16
1/2	1/2	43008U-608 ^a	3/4-16	3.67	1.75	.34	13/16	7/8
1/2	5/8	43008U-610 ^a	7/8-14	3.72	1.81	.34	13/16	1
1/2	3/4	43008U-612	1-1/16-12	3.76	1.88	.34	1	1-1/4
3/4	3/4	43012U-612	1-1/16-12	4.08	2.06	.61	1	1-1/4
3/4	7/8	43012U-614	1-3/16-12	3.90	1.88	.61	1-1/4	1-3/8
3/4	1	43012U-616	1-5/16-12	4.01	2.00	.61	1-1/4	1-1/2
1	3/4	43016U-612	1-1/16-12	4.19	2.19	.61	1-1/4	1-1/4
1	1	43016U-616	1-5/16-12	4.28	2.25	.81	1-1/4	1-1/2
1	1-1/4	43016U-620	1-5/8-12	4.12	2.06	.81	1-5/8	2
1-1/4	1-1/4	43020U-620	1-5/8-12	4.87	2.63	1.02	1-11/16	2
1-1/4	1-1/2	43020U-624	1-7/8-12	5.03	2.75	1.02	1-7/8	2-1/4
1-1/2	1-1/2	43024U-624	1-7/8-12	5.29	2.81	1.25	2	2-1/4
2	2	43032U-632	2-1/2-12	6.04	3.25	1.69	2-1/2	3

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

^a Swivel nuts are universal – both SAE 37° and 45° connections.

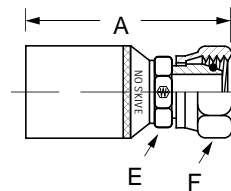
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

**Female Swivel DIN
Universal Seat
I. Rh. (Light) (DIN 3901/3902)**



Hose I.D.	Tube Size (mm)	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
3/4	22	43012U-22C	M30x2.0	4.12	2.13	.61	1-1/8	1-7/16

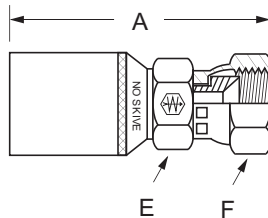
**Female Swivel DIN 24°
Seat
s. Rh. DKO (Heavy)**



(Includes O-Ring)

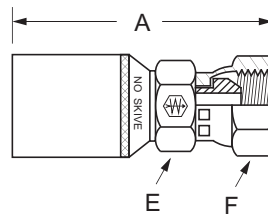
Hose I.D.	Tube Size (mm)	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
3/4	20	43012U-70C	M30x2.0	3.68	1.69	.61	1-1/8	1-7/16
3/4	25	43012U-75C	M36x2.0	4.14	2.13	.61	1-1/4	1-5/8
1	30	43016U-80C	M42x2.0	4.07	2.00	.81	1-5/8	2
1-1/4	30	43020U-80C	M42x2.0	4.32	2.00	1.02	1-5/8	2

**Female Swivel 30° Flare
Metric Thread
(Komatsu, Linkbelt, etc.)**



Hose I.D.	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/2	43008U-22K	M22x1.5	3.72	1.81	.34	7/8	1
3/4	43012U-30K	M30x1.5	3.96	1.94	.61	1-1/8	1-3/8
1	43016U-33K	M33x1.5	4.27	2.25	.81	1-1/4	1-1/2
1-1/4	43020U-36K	M36x1.5	5.19	2.88	.92	1-5/8	1-3/4

**British Standard (BSPP)
60° Cone Female Pipe
Swivel**



Hose I.D.	BSPP Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/2	1/2	43008U-358	G-1/2-14*	3.78	1.88	.34	7/8	1-1/16
3/4	3/4	43012U-362	G-3/4-14*	4.09	2.06	.61	1	1-1/4
1	1	43016U-366	G-1-11*	4.29	2.25	.81	1-1/4	1-1/2
1-1/4	1-1/4	43020U-370	G-1-1/4-11*	4.76	2.50	1.02	1-5/8	1-7/8

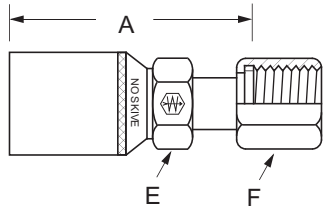
*G As Part of Thread Size is ISO Designated for Parallel Thread.

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.



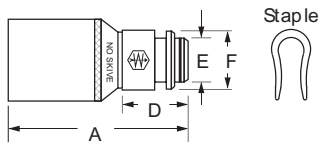
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

Female FOR-SEAL® Swivel Straight



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/2	1/2	43008U-S68	13/16-16	3.75	1.88	.34	13/16	15/16
1/2	5/8	43008U-S70	1-1/4	3.86	2.00	.34	13/16	1-1/8
3/4	5/8	43012U-S70	1-1/4	4.06	2.06	.45	1	1-1/8
3/4	3/4	43012U-S72	1-3/16-12	4.16	2.19	.55	1	1-3/8
3/4	1	43012U-S76	1-7/16-12	4.15	2.13	.55	1	1-5/8
1	1	43016U-S76	1-7/16-12	4.68	2.69	.76	1-1/4	1-5/8
1	1-1/4	43016U-S80	1-11/16-12	4.33	2.31	.81	1-1/2	1-7/8
1-1/4	1-1/4	43020U-S80	1-11/16-12	4.51	2.25	1.02	1-5/8	1-7/8
1-1/2	1-1/2	43024U-S84	2-12	4.77	2.31	1.25	2	2-1/4

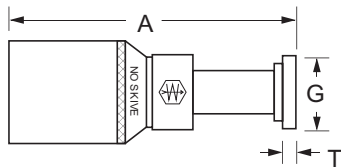
READY LOK® Male Connector (For Deep Mining Markets)



(For Ready-Lok® Staple, O-Ring and backup ring reference page 251.)

Hose I.D.	Connection Size	Catalog Number	A	Hose Cut-Off Factor†	Hole Dia.	Length D	Dia. E	Dia. F
1/2	1/2	43008U-08S	3.31	1.43	.34	.94	.70	.94
3/4	3/4	43012U-12S	3.53	1.50	.61	1.14	.94	1.14
1	1	43016U-16S	3.76	1.75	.81	1.34	1.21	1.53
1-1/4	1-1/4	43020U-20S	4.01	1.75	1.02	1.34	1.49	1.80
1-1/2	1-1/2	43024U-24S	5.06	2.59	1.25	2.51	1.85	2.17

Split Flange Straight (SAE Code 61)



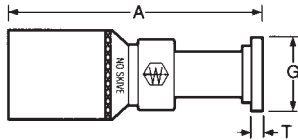
(For Split Flange Kits, see page 252.)

Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T Nominal
1/2	1/2	43008U-G08	8x252	4.18	2.25	.34	1.19	.265
1/2	3/4	43008U-G12	12x252	4.24	2.31	.34	1.50	.265
3/4	3/4	43012U-G12	12x252	4.16	2.13	.56	1.50	.265
3/4	1	43012U-G16	16x252	4.16	2.13	.56	1.75	.315
3/4	1-1/4	43012U-G20	20x252	4.16	2.13	.56	2.00	.315
1	1	43016U-G16	16x252	4.40	2.38	.76	1.75	.315
1	1-1/4	43016U-G20	20x252	4.40	2.38	.76	2.00	.315
1	1-1/2	43016U-G24	24x252	4.46	2.44	.76	2.38	.315
1-1/4	1-1/4	43020U-G20	20x252	5.01	2.75	1.02	2.00	.315
1-1/4	1-1/2	43020U-G24	24x252	5.07	2.81	1.02	2.38	.315
1-1/4	1-1/2	43020U-G24L64	24x252	9.60	7.31	1.01	2.38	.315
1-1/4	2	43020U-G32	32x252	5.13	2.88	1.02	2.81	.375
1-1/2	1-1/2	43024U-G24	24x252	5.63	3.13	1.25	2.38	.315
1-1/2	2	43024U-G32	32x252	5.83	3.31	1.25	2.81	.375
2	1-1/2	43032U-G24	24x252	6.23	3.38	1.56	2.38	.315
2	2	43032U-G32	32x252	6.08	3.25	1.56	2.81	.375

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

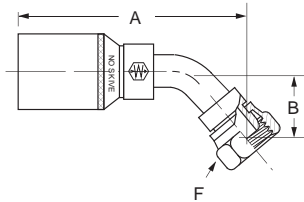
**Split Flange Straight
(SAE Code 62)**



(For Split Flange Kits, see page 253.)

Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T Nominal
1/2	1/2	43008U-D08	8x252	4.25	2.38	.34	1.25 (32mm)	.345
1/2	3/4	43008U-D12	12x252	4.27	2.38	.34	1.62 (41mm)	.345
3/4	3/4	43012U-D12	12x252	4.19	2.19	.56	1.62 (41mm)	.345
3/4	1	43012U-D16	16x252	4.22	2.19	.56	1.88 (48mm)	.375
1	1	43016U-D16	16x252	4.46	2.44	.76	1.88 (48mm)	.375
1	1-1/4	43016U-D20	20x252	4.49	2.44	.76	2.12 (54mm)	.405
1-1/4	1-1/4	43020U-D20	20x252	5.10	2.81	1.02	2.12 (54mm)	.405
1-1/4	1-1/2	43020U-D24	24x252	5.21	2.94	1.02	2.50 (64mm)	.495
1-1/2	1-1/2	43024U-D24	24x252	5.63	3.13	1.25	2.50 (64mm)	.495
2	2	43032U-D32	32x252	7.18	4.38	1.56	3.12 (79mm)	.495

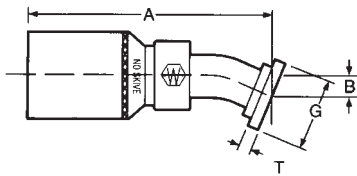
**British Standard 60°
Cone (BSP) Female
Swivel 45° Tube Elbow**



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F
3/4	3/4	43012U-52P	G-3/4-14*	5.33	1.24	3.31	.56	1-1/4
1	1	43016U-56P	G-1-11*	5.08	1.36	3.06	.76	1-1/2

*G As part of Thread is ISO Designation for Parallel Thread.

**Split Flange 22-1/2°
Tube Elbow (SAE Code 61)**



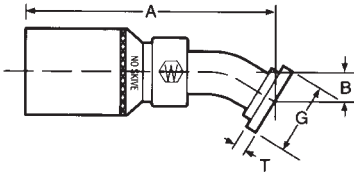
(For Split Flange Kits, see page 252.)

Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	B	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T Nominal
1/2	1/2	43008U-H01	8x252	4.45	.38	2.56	.34	1.19 (30mm)	.265
1/2	3/4	43008U-H02	12x252	4.50	.40	2.63	.34	1.50 (38mm)	.265
3/4	3/4	43012U-H02	12x252	4.81	.44	2.81	.56	1.50 (38mm)	.265
3/4	1	43012U-H03	16x252	4.81	.44	2.81	.56	1.75 (44mm)	.315
1	1	43016U-H03	16x252	5.09	.45	3.06	.76	1.75 (44mm)	.315
1	1-1/4	43016U-H04	20x252	5.09	.45	3.06	.76	2.00 (51mm)	.315
1-1/4	1-1/4	43020U-H04	20x252	5.16	.50	2.88	1.02	2.00 (51mm)	.315
1-1/4	1-1/2	43020U-H05	24x252	5.21	.52	2.94	1.02	2.38 (60mm)	.315
1-1/2	1-1/2	43024U-H05	24x252	6.09	.67	3.63	1.25	2.38 (60mm)	.315
1-1/2	2	43024U-H06	32x252	6.18	.72	3.72	1.25	2.81 (71mm)	.375
2	2	43032U-H06	32x252	7.67	.94	4.88	1.56	2.81 (71mm)	.375

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

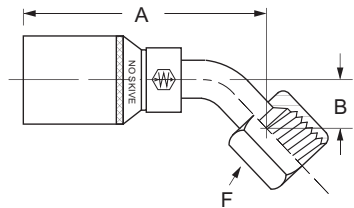
Split Flange 30° Tube Elbow (SAE Code 61)



Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	B	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T Nominal
1/2	1/2	43008U-H21	8x252	4.40	.50	2.50	.34	1.19 (30mm)	.265
1/2	3/4	43008U-H22	12x252	4.45	.53	2.56	.34	1.50 (38mm)	.265
3/4	3/4	43012U-H22	12x252	4.75	.59	2.75	.56	1.50 (38mm)	.265
3/4	1	43012U-H23	16x252	4.75	.59	2.75	.56	1.75 (44mm)	.315
1	1	43016U-H23	16x252	5.09	.64	3.06	.76	1.75 (44mm)	.315
1	1-1/4	43016U-H24	20x252	5.01	.64	3.00	.76	2.00 (51mm)	.315
1-1/4	1-1/4	43020U-H24	20x252	5.33	.72	3.06	1.02	2.00 (51mm)	.315
1-1/4	1-1/2	43020U-H25	24x252	5.38	.75	3.13	1.02	2.38 (60mm)	.315
1-1/2	1-1/2	43024U-H25	24x252	6.33	.91	3.81	1.25	2.38 (60mm)	.315
1-1/2	2	43024U-H26	32x252	6.50	1.01	4.00	1.25	2.81 (71mm)	.375
2	2	43032U-H26	32x252	7.88	1.31	5.44	1.56	2.81 (71mm)	.375

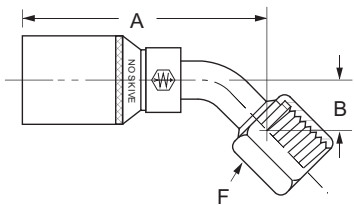
(For Split Flange Kits, see page 252.)

JIC 37° Female Swivel 45° Tube Elbow (Refer to Footnotes)



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F
1/2	1/2	43008U-688 ^a	3/4-16	4.08	.55	2.19	.34	7/8
1/2	5/8	43008U-690 ^a	7/8-14	4.28	.63	2.38	.34	1
3/4	3/4	43012U-692	1-1/16-12	4.70	.78	2.69	.56	1-1/4
1	1	43016U-696	1-5/16-12	5.67	1.53	3.84	.76	1-1/2

Female FOR-SEAL® Swivel 45° Tube Elbow



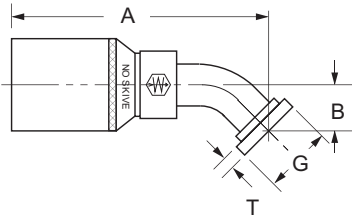
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F
1/2	1/2	43008U-L68	13/16-16	4.16	.59	2.25	.34	15/16
1/2	5/8	43008U-L70	1-14	4.48	.65	2.56	.34	1-1/8
3/4	3/4	43012U-L72	1-3/16-12	4.80	.84	2.81	.56	1-3/8
1	1	43016U-L76	1-7/16-12	5.11	.95	3.06	.76	1-5/8
1-1/4	1-1/4	43020U-L80	1-11/16-12	4.97	1.07	2.75	1.01	1-7/8
1-1/2	1-1/2	43024U-L84	2-12	5.98	1.07	3.50	1.25	2-1/4

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

^a Swivel nuts are universal – both SAE 37° and 45° connections.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

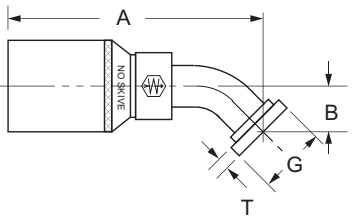
Split Flange 45° Tube Elbow (SAE Code 61)



(For Split Flange Kits, see page 252.)

Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	Hose		Hole Dia.	Dia. G	T Nominal
				A	B			
1/2	1/2	43008U-G41	8x252	4.51	.78	2.63	.34	1.19 (30mm)
1/2	3/4	43008U-G42	12x252	4.55	.82	2.63	.34	1.50 (38mm)
1/2	1	43008U-G46	16x252	4.86	.82	3.00	.34	1.75 (44mm)
3/4	3/4	43012U-G42	12x252	4.92	1.00	2.94	.56	1.50 (38mm)
3/4	1	43012U-G46	16x252	4.92	1.00	2.94	.56	1.75 (44mm)
1	1	43016U-G46	16x252	4.82	1.06	2.81	.76	1.75 (44mm)
1	1-1/4	43016U-G50	20x252	4.82	1.06	2.81	.76	2.00 (51mm)
1-1/4	1-1/4	43020U-G50	20x252	5.10	1.15	2.81	1.01	2.00 (51mm)
1-1/4	1-1/2	43020U-G54	24x252	5.14	1.19	2.88	1.01	2.38 (60mm)
1-1/2	1-1/2	43024U-G54	24x252	6.32	1.41	3.84	1.25	2.38 (60mm)
1-1/2	2	43024U-G62	32x252	6.46	1.55	4.00	1.25	2.81 (71mm)
2	2	43032U-G62	32x252	8.34	2.08	5.50	1.56	2.81 (79mm)

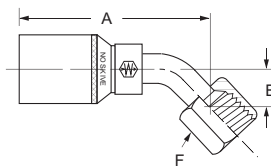
Split Flange 45° Tube Elbow (SAE Code 62)



(For Split Flange Kits, see page 253.)

Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	Hose		Hole Dia.	Dia. G	T Nominal
				A	B			
1/2	1/2	43008U-D41	8x252	4.82	.94	2.94	.34	1.25 (32mm)
1/2	3/4	43008U-D42	12x252	4.82	1.00	2.94	.34	1.62 (41mm)
3/4	3/4	43012U-D42	12x252	5.19	1.27	3.19	.56	1.62 (41mm)
3/4	1	43012U-D46	16x252	5.21	1.29	3.19	.56	1.88 (48mm)
1	1	43016U-D46	16x252	5.57	1.34	3.56	.76	1.88 (48mm)
1	1-1/4	43016U-D50	20x252	5.56	1.44	3.50	.76	2.12 (54mm)
1-1/4	1-1/4	43020U-D50	20x252	6.60	1.68	4.31	1.01	2.12 (54mm)
1-1/4	1-1/2	43020U-D54	24x252	6.67	1.75	4.38	1.01	2.50 (64mm)
1-1/2	1-1/2	43024U-D54	24x252	7.25	1.86	4.75	1.25	2.50 (64mm)
2	2	43032U-D62	32x252	8.74	2.25	5.94	1.56	3.12 (79mm)

JIC 37° Female Swivel 60° Tube Elbow

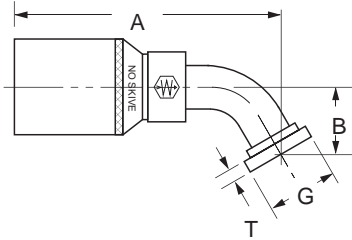


Hose I.D.	Tube Size	Catalog Number	Thread Size	Hose		Hole Dia.	Hex F
				A	B		
1/2	5/8	43008U-C60	7/8-14	4.48	1.00	2.63	1
3/4	3/4	43012U-C62	1-1/16-12	5.12	1.71	3.13	1-1/4
1	1	43016U-C66	1-5/16-12	5.74	1.53	3.69	1-1/2

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

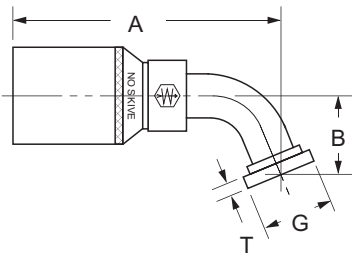
Split Flange 60° Tube Elbow (SAE Code 61)



(For Split Flange Kits, see page 252.)

Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	B	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T Nominal
1/2	1/2	43008U-H51	8x252	4.59	1.05	2.69	.34	1.19 (30mm)	.265
1/2	3/4	43008U-H52	12x252	4.62	1.10	2.75	.34	1.50 (38mm)	.265
3/4	3/4	43012U-H52	12x252	4.98	1.38	2.94	.56	1.50 (38mm)	.265
3/4	1	43012U-H53	16x252	4.98	1.38	2.94	.56	1.75 (44mm)	.315
1	1	43016U-H53	16x252	5.47	1.51	3.44	.76	1.75 (44mm)	.315
1	1-1/4	43016U-H54	20x252	5.58	1.51	3.56	.76	2.00 (51mm)	.315
1-1/4	1-1/4	43020U-H54	20x252	5.57	1.69	3.31	1.01	2.00 (51mm)	.315
1-1/4	1-1/2	43020U-H55	24x252	5.60	1.74	3.31	1.01	2.38 (60mm)	.315
1-1/2	1-1/2	43024U-H55	24x252	6.51	2.08	4.00	1.25	2.38 (60mm)	.315
1-1/2	2	43024U-H56	32x252	6.61	2.25	4.13	1.25	2.81 (71mm)	.375
2	2	43032U-H56	32x252	8.50	3.00	5.69	1.56	2.81 (71mm)	.375

Split Flange 67-1/2° Tube Elbow (SAE Code 61)



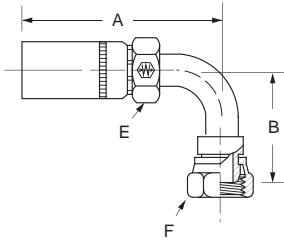
(For Split Flange Kits, see page 252.)

Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	B	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T Nominal
1/2	1/2	43008U-H61	8x252	4.40	1.25	2.50	.34	1.19 (30mm)	.265
1/2	3/4	43008U-H62	12x252	4.46	1.25	2.56	.34	1.50 (38mm)	.265
1/2	1	43008U-H63	16x252	4.69	1.25	2.81	.34	1.75 (44mm)	.315
3/4	3/4	43012U-H62	12x252	4.99	1.59	3.00	.56	1.50 (38mm)	.265
3/4	1	43012U-H63	16x252	4.99	1.59	3.00	.56	1.75 (44mm)	.315
3/4	1-1/4	43012U-H64	20x252	4.99	1.59	3.00	.56	2.00 (51mm)	.315
1	1	43016U-H63	16x252	5.25	1.76	3.19	.76	1.75 (44mm)	.315
1	1-1/4	43016U-H64	20x252	5.25	1.76	3.19	.76	2.00 (51mm)	.315
1-1/4	1-1/4	43020U-H64	20x252	5.55	1.94	3.25	1.01	2.00 (51mm)	.315
1-1/4	1-1/2	43020U-H65	24x252	5.57	2.00	3.30	1.01	2.38 (60mm)	.315
1-1/2	1-1/2	43024U-H65	24x252	6.50	2.40	4.00	1.25	2.38 (60mm)	.315
1-1/2	2	43024U-H66	32x252	6.58	2.58	4.13	1.25	2.81 (71mm)	.375
2	2	43032U-H66	32x252	8.39	3.40	5.56	1.56	2.81 (71mm)	.375

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

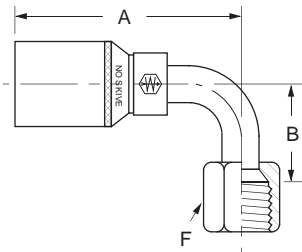
**British Standard (BSPP)
60° Cone Female Pipe
Swivel 90° Elbow**



Hose I.D.	BSPP Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
3/4	3/4	43012U-82P	G-3/4-14*	4.58	2.46	2.97	.56	1-1/8	1-1/4
1	1	43016U-86P	G-1-11*	5.05	3.09	3.03	.76	1-1/4	1-1/2

*G As Part of Thread Size is ISO Designation for Parallel Thread.

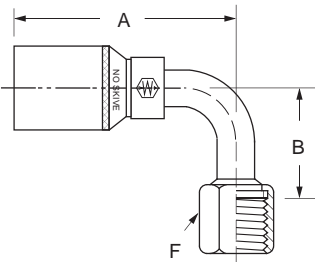
**JIC 37° Female Swivel
90° Tube Elbow
(Refer to Footnotes)**



†Crimp style swivel nut.

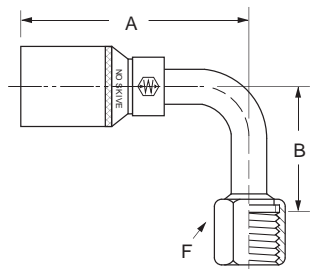
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F
1/2	1/2	43008U-648L36 ^a	3/4-16	4.04	3.60	2.13	.34	7/8
1/2	1/2	43008U-648L45 ^a	3/4-16	4.04	4.50	2.13	.34	7/8
1/2	1/2	43008U-668 ^a	3/4-16	3.85	1.09	1.94	.34	7/8
1/2	5/8	43008U-650 ^a	7/8-14	4.14	2.57	2.25	.34	1
1/2	5/8	43008U-670 ^a	7/8-14	4.11	1.23	2.19	.34	1
3/4	3/4	43012U-652	1-1/16-12	4.65	3.62	2.63	.56	1-1/4
3/4	3/4	43012U-672	1-1/16-12	4.65	2.50	2.63	.56	1-1/4
1	1	43016U-656L33	1-5/16-12	5.00	3.37	3.00	.76	1-1/2
1	1	43016U-656L56	1-5/16-12	5.00	5.62	3.00	.76	1-1/2
1	1	43016U-676	1-5/16-12	5.27	3.00	3.25	.76	1-1/2
1	1	43016U-676L22	1-5/16-12	4.83	2.22	2.81	.76	1-1/2
1-1/4	1-1/4	43020U-677 [†]	1-5/8-12	5.21	3.31	3.00	1.01	2
1-1/2	1-1/2	43024U-678 [†]	1-7/8-12	6.11	3.95	3.62	1.19	2-1/4

**Female FOR-SEAL®
Swivel 90° Short Drop
Tube Elbow**



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F
1/2	1/2	43008U-A28	13/16-16	3.90	1.15	2.00	.34	15/16
1/2	5/8	43008U-A30	1-14	4.21	1.27	2.31	.34	1-1/8
3/4	5/8	43012U-A30	1-14	4.24	1.27	2.25	.46	1-1/8
3/4	3/4	43012U-A32	1-3/16-12	4.78	1.88	2.75	.56	1-3/8
1	1	43016U-A36	1-7/16-12	4.95	2.21	2.93	.76	1-5/8
1-1/4	1-1/4	43020U-A40	1-11/16-12	5.26	2.51	3.00	1.02	1-7/8
1-1/4	1-1/2	43020U-A44	2-12	5.26	2.55	3.00	1.01	2-1/4
1-1/2	1-1/2	43024U-A44	2-12	6.11	2.70	3.63	1.25	2-1/4

**Female FOR-SEAL®
Swivel Long Drop 90°
Tube Elbow**



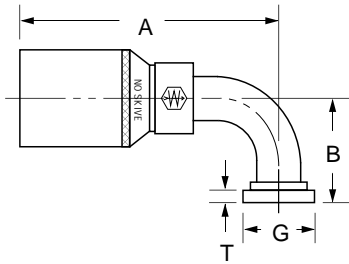
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F
1/2	1/2	43008U-A68	13/16-16	4.32	2.51	2.44	.34	15/16
1/2	5/8	43008U-A70	1-14	4.61	2.76	2.75	.34	1-1/8
3/4	3/4	43012U-A72	1-3/16-12	4.73	3.78	2.75	.56	1-3/8
1	1	43016U-A76	1-7/16-12	5.16	4.50	3.13	.76	1-5/8
1-1/4	1-1/4	43020U-A80	1-11/16-12	5.26	5.09	3.00	1.01	1-7/8
1-1/4	1-1/2	43020U-A84	2-12	5.26	5.54	3.00	1.01	2-1/4
1-1/2	1-1/2	43024U-A84	2-12	6.11	5.54	3.63	1.25	2-1/4

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

^a Swivel nuts are universal – both SAE 37° and 45° connections.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

Split Flange 90° Tube Elbow (SAE Code 61)



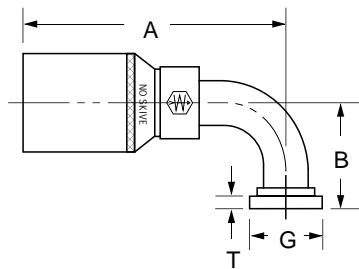
Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	B	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T Nominal
1/2	1/2	43008U-G71	8x252	4.18	1.63	2.25	.34	1.19 (30mm)	.265
1/2	1/2	43008U-G71L32	8x252	4.04	3.20	2.13	.34	1.19 (30mm)	.265
1/2	3/4	43008U-G72	12x252	4.53	1.68	2.63	.34	1.50 (38mm)	.265
1/2	1	43008U-G76	16x252	4.63	1.68	2.75	.34	1.75 (44mm)	.315
3/4	3/4	43012U-G72	12x252	4.65	2.12	2.63	.56	1.50 (38mm)	.265
3/4	3/4	43012U-G72L37	12x252	4.65	3.75	2.63	.56	1.50 (38mm)	.265
3/4	3/4	43012U-G72L50	12x252	4.74	5.00	2.75	.56	1.50 (38mm)	.265
3/4	1	43012U-G76	16x252	4.65	2.12	2.63	.56	1.75 (44mm)	.315
3/4	1	43012U-G76L31	16x252	4.65	3.12	2.63	.56	1.75 (44mm)	.315
3/4	1-1/4	43012U-G80	20x252	5.65	2.12	3.63	.56	2.00 (51mm)	.315
1	1	43016U-G76	16x252	5.21	2.38	3.19	.76	1.75 (44mm)	.315
1	1	43016U-G76L21	16x252	5.06	2.12	3.06	.76	1.75 (44mm)	.315
1	1	43016U-G76L46	16x252	5.15	4.62	3.13	.76	1.75 (44mm)	.315
1	1-1/4	43016U-G80	20x252	5.21	2.38	2.94	.76	2.00 (51mm)	.315
1	1-1/4	43016U-G80L46	20x252	5.12	4.62	3.13	.76	2.00 (51mm)	.315
1	1-1/2	43016U-G84	24x252	5.15	2.44	3.13	.76	2.38 (60mm)	.315
1-1/4	1-1/4	43020U-G80	20x252	5.26	2.62	3.00	1.01	2.00 (51mm)	.315
1-1/4	1-1/4	43020U-G80L31	20x252	5.26	3.12	3.00	1.02	2.00 (51mm)	.315
1-1/4	1-1/4	43020U-G80L40	20x252	5.26	4.00	3.00	1.02	2.00 (51mm)	.315
1-1/4	1-1/4	43020U-G80L51	20x252	5.26	5.12	3.00	1.02	2.00 (51mm)	.315
1-1/4	1-1/4	43020U-G80L66	20x252	5.26	6.62	3.00	1.02	2.00 (51mm)	.315
1-1/4	1-1/2	43020U-G84	24x252	5.51	2.68	3.25	1.01	2.38 (60mm)	.315
1-1/4	1-1/2	43020U-G84L46	24x252	5.26	4.68	3.00	1.02	2.38 (60mm)	.315
1-1/2	1-1/2	43024U-G84	24x252	6.03	3.12	3.56	1.25	2.38 (60mm)	.315
1-1/2	1-1/2	43024U-G84L58	24x252	6.11	5.80	3.63	1.21	2.38 (60mm)	.315
1-1/2	1-1/2	43024U-G84L67	24x252	6.11	6.70	3.63	1.21	2.38 (60mm)	.315
1-1/2	2	43024U-G92	32x252	6.03	3.32	3.56	1.25	2.81 (71mm)	.375
1-1/2	2	43024U-G92L45	32x252	6.11	4.50	3.63	1.21	2.81 (71mm)	.375
1-1/2	2	43024U-G92L67	32x252	6.11	6.70	3.63	1.21	2.81 (71mm)	.375
2	1-1/2	43032U-G84	24x252	6.63	3.12	3.81	1.19	2.38 (60mm)	.315
2	2	43032U-G92	32x252	7.95	4.64	5.13	1.56	2.81 (71mm)	.375
2	2	43032U-G92L65	32x252	7.95	6.50	5.13	1.56	2.81 (71mm)	.375
2	2	43032U-G92L80	32x252	7.95	8.00	5.13	1.56	2.81 (71mm)	.375

(For Split Flange Kits, see page 252.)

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

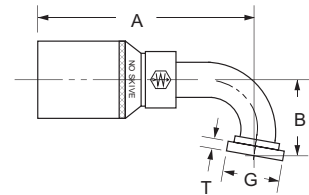
Split Flange 90° Tube Elbow (SAE Code 62)



(For Split Flange Kits, see page 253.)

Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	B	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T Nominal
1/2	1/2	43008U-D71	8x252	4.49	1.72	2.56	.34	1.25 (32mm)	.345
1/2	3/4	43008U-D72	12x252	4.53	1.90	2.63	.34	1.62 (41mm)	.345
3/4	3/4	43012U-D72	12x252	4.84	2.41	2.81	.56	1.62 (41mm)	.345
3/4	1	43012U-D76	16x252	4.84	2.70	2.81	.56	1.88 (48mm)	.375
1	1	43016U-D76	16x252	5.42	2.75	3.38	.76	1.88 (48mm)	.375
1	1-1/4	43016U-D80	20x252	5.31	2.90	3.25	.76	2.12 (54mm)	.405
1-1/4	1-1/4	43020U-D80	20x252	5.79	3.24	3.50	1.01	2.12 (54mm)	.405
1-1/4	1-1/2	43020U-D84	24x252	5.79	3.35	3.50	1.01	2.50 (64mm)	.405
1-1/2	1-1/2	43024U-D84	24x252	6.11	3.70	3.63	1.25	2.50 (64mm)	.495
1-1/2	2	43024U-D92	32x252	6.11	4.26	3.63	1.25	3.12 (79mm)	.495
2	2	43032U-D92	32x252	7.81	4.84	5.00	1.56	3.12 (79mm)	.495

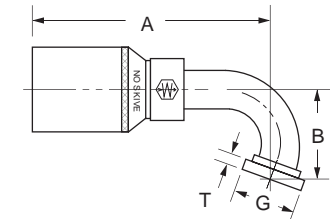
Split Flange 100° Tube Elbow (SAE Code 61)



(For Split Flange Kits, see page 252.)

Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	B	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T Nominal
3/4	3/4	43012U-H72	12x252	4.80	2.33	2.81	.61	1.50 (38mm)	.265
3/4	1	43012U-H73	16x252	4.80	2.33	2.81	.61	1.75 (44mm)	.315

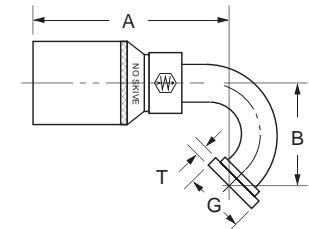
Split Flange 110° Tube Elbow (SAE Code 61)



(For Split Flange Kits, see page 252.)

Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	B	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T Nominal
1	1	43016U-H83	16x252	4.46	2.89	2.44	.76	1.75 (44mm)	.315
1-1/4	1-1/4	43020U-H84	20x252	4.82	3.12	2.56	1.01	2.00 (51mm)	.315
1-1/4	1-1/2	43020U-H85	24x252	5.24	3.17	2.94	1.01	2.38 (60mm)	.315
1-1/2	1-1/2	43024U-H85	24x252	5.49	3.69	3.00	1.25	2.38 (60mm)	.315
2	2	43032U-H86	32x252	7.26	5.65	4.44	1.56	2.81 (71mm)	.375

Split Flange 135° Tube Elbow (SAE Code 61)

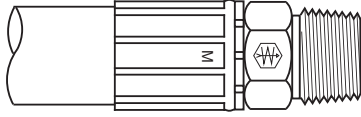


(For Split Flange Kits, see page 252.)

Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	B	Hose Cut-Off Factor†	Hole Dia.	Dia. G	T Nominal
1/2	1/2	43008U-H91	8x252	4.06	2.12	2.19	.34	1.19 (30mm)	.265
3/4	3/4	43012U-H92	12x252	4.04	3.00	2.06	.61	1.50 (38mm)	.265

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.



Hose End Series: 'W' Series

Typical Application: Medium & High pressure hydraulics.

Pressure: Determined by the maximum working pressure for hose size and hose end configuration whichever is lesser. See page 15 for working pressure ratings for hose end configurations.

Material: Low Carbon Steel

Plating: Zinc; yellow dichromate finish

Advantages: Bite the braid design to allow for higher working pressures.

Assemble With: T-400-1*, T-410-1, T-420-1, T-440-1, T-480.

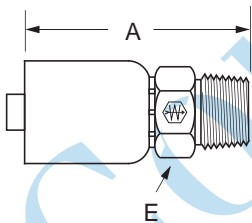
Ordering Information: Order individually by catalog number. O-rings not supplied with flange hose ends. Order o-rings by catalog number, reference individual listings for details. For split-flange kits, refer to pages 252-253.

*Size -16 must be crimped on T-410-1, T-420-1, T-440-1 or T-480.

Label Set: FS-3700

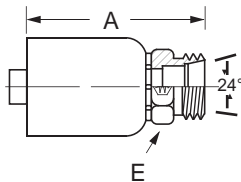
Refer to important safety information on pages 1-2.

Male Pipe Rigid



Hose I.D.	Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
1/4	1/8	04W-102	1/8-27	1.89	.88	.16	7/16
1/4	1/4	04W-104	1/4-18	2.14	1.13	.16	9/16
1/4	3/8	04W-106	3/8-18	2.15	1.14	.16	11/16
3/8	1/4	06W-104	1/4-18	2.18	1.13	.26	5/8
3/8	3/8	06W-106	3/8-18	2.18	1.13	.26	11/16
3/8	1/2	06W-108	1/2-14	2.29	1.24	.26	7/8
1/2	3/8	08W-106	3/8-18	2.35	1.17	.36	11/16
1/2	1/2	08W-108	1/2-14	2.48	1.30	.36	7/8
1/2	3/4	08W-112	3/4-14	2.55	1.37	.36	1-1/16
5/8	1/2	10W-108	1/2-14	2.91	1.53	.49	7/8
3/4	1/2	12W-108	1/2-14	3.07	1.65	.51	1
3/4	3/4	12W-112	3/4-14	2.99	1.57	.60	1-1/16
1	1	16W-116	1-11-1/2	3.32	1.93	.81	1-3/8

Male DIN Universal Seat I. Rh. (Light)

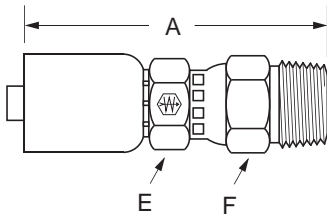


Hose I.D.	Tube Size (mm)	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
3/8	12	06W-12A	M18x1.5	1.98	.93	.26	3/4

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

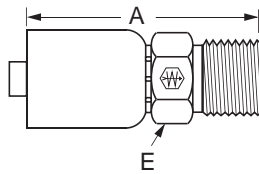
Male Pipe Swivel



NOTE: Swivel for installation purposes only.
(Not for temperatures above 212°F.)

Hose I.D.	Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	1/4	04W-J04	1/4-18	3.18	2.17	.16	9/16	13/16
3/8	1/4	06W-J04	1/4-18	3.23	2.18	.25	9/16	13/16
3/8	3/8	06W-J06	3/8-18	3.32	2.27	.26	5/8	7/8
3/8	1/2	06W-J08	1/2-14	3.35	2.30	.26	5/8	7/8
1/2	1/2	08W-J08	1/2-14	3.58	2.39	.35	11/16	7/8
3/4	3/4	12W-J12	3/4-14	4.10	2.68	.60	1	1-1/4
1	1	16W-J16	1-1-1/2	4.27	2.88	.78	1-1/4	1-3/8

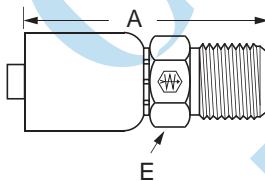
FOR-SEAL® Male Rigid



Does not include o-ring. See page 217 for o-ring.

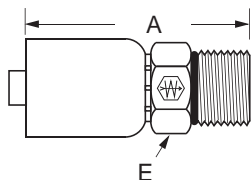
Hose I.D.	Tube Size	Catalog Number	Thread Size	O-Ring	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
1/4	1/4	04W-E64	9/16-18	4629x4	1.89	.88	.16	5/8
3/8	3/8	06W-E66	11/16-16	4629x6	2.09	1.04	.26	3/4
1/2	1/2	08W-E68	13/16-16	4629x8	2.44	1.26	.36	7/8

SAE 37° Male Rigid



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
1/4	1/4	04W-504	7/16-20	2.10	1.09	.16	1/2
1/4	3/8	04W-506	9/16-18	2.04	1.03	.16	5/8
3/8	3/8	06W-506	9/16-18	2.17	1.12	.26	5/8
3/8	1/2	06W-508	3/4-16	2.22	1.17	.26	13/16
1/2	1/2	08W-508	3/4-16	2.48	1.30	.30	13/16
1/2	5/8	08W-510	7/8-14	2.49	1.31	.36	15/16
1/2	3/4	08W-512	1-1/16-12	2.62	1.44	.36	1-1/8
5/8	5/8	10W-510	7/8-14	2.98	1.60	.49	15/16
5/8	3/4	10W-512	1-1/16-12	2.99	1.61	.48	1-1/8
3/4	3/4	12W-512	1-1/16-12	3.10	1.68	.60	1-1/8
3/4	1	12W-516	1-5/16-12	3.17	1.75	.60	1-3/8
1	1	16W-516	1-5/16-12	3.30	1.91	.81	1-3/8

Male Straight Thread O-Ring Rigid



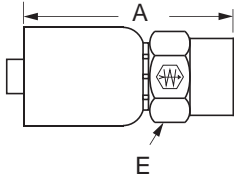
Includes o-ring. For replacement o-ring see page 208.

Hose I.D.	Port Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
1/4	1/4	04W-P04	7/16-20	2.01	1.00	.16	9/16
1/4	3/8	04W-P06	9/16-18	2.07	1.06	.16	11/16
3/8	3/8	06W-P06	9/16-18	2.08	1.03	.26	11/16
3/8	1/2	06W-P08	3/4-16	2.12	1.07	.26	7/8
1/2	1/2	08W-P08	3/4-16	2.39	1.21	.36	7/8
1/2	5/8	08W-P10	7/8-14	2.50	1.32	.36	1
3/4	3/4	12W-P12	1-1/16-12	3.04	1.62	.60	1-1/4

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

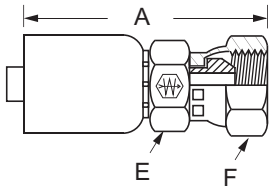
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

Female Pipe Rigid



Hose I.D.	Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
1/4	1/4	04W-204	1/4-18	2.04	1.03	.16	3/4
3/8	3/8	06W-206	3/8-18	2.14	1.09	.26	7/8
1/2	1/2	08W-208	1/2-14	2.62	1.44	.36	1-1/8

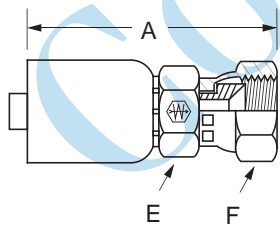
Female Straight Pipe Swivel (NPSM)



Connects to male pipe fitting with internal seat.

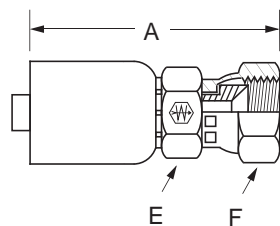
Hose I.D.	Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	1/4	04W-054	1/4-18	2.20	1.19	.16	1/2	11/16
3/8	3/8	06W-056	3/8-18	2.27	1.22	.26	5/8	7/8
1/2	1/2	08W-058	1/2-14	2.77	1.59	.36	13/16	1

JIC 37° Degree Female Swivel (Exceptions Noted for 45° Flare, Refer to Footnotes)



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	1/4	04W-604 ^a	7/16-20	2.18	1.17	.16	7/16	9/16
1/4	5/16	04W-605 ^a	1/2-20	2.31	1.30	.16	1/2	5/8
1/4	3/8	04W-606	9/16-18	2.40	1.39	.16	9/16	11/16
3/8	1/4	06W-604 ^a	7/16-20	2.18	1.13	.17	9/16	9/16
3/8	3/8	06W-606	9/16-18	2.44	1.39	.26	5/8	11/16
3/8	1/2	06W-608 ^a	3/4-16	2.56	1.51	.26	11/16	7/8
3/8	5/8	06W-610 ^a	7/8-14	2.60	1.55	.26	13/16	1
1/2	3/8	08W-606	9/16-18	2.55	1.37	.30	11/16	11/16
1/2	1/2	08W-608 ^a	3/4-16	2.75	1.57	.36	11/16	7/8
1/2	5/8	08W-610 ^a	7/8-14	2.92	1.74	.36	13/16	1
1/2	3/4	08W-612	1-1/16-12	2.90	1.72	.36	1	1-1/4
5/8	5/8	10W-610 ^a	7/8-14	3.12	1.74	.49	7/8	1
5/8	3/4	10W-612	1-1/16-12	3.30	1.92	.49	1	1-1/4
3/4	5/8	12W-610 ^a	7/8-14	3.30	1.88	.48	1	1
3/4	3/4	12W-612	1-1/16-12	3.40	1.98	.60	1	1-1/4
3/4	1	12W-616	1-5/16-12	3.45	2.03	.60	1-1/4	1-1/2
1	1	16W-616	1-5/16-12	3.56	2.17	.81	1-1/4	1-1/2

SAE 45° Degree Female Swivel



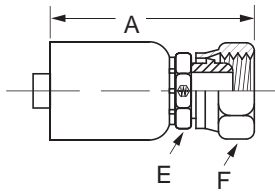
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
3/8	3/8	06W-406	5/8-18	2.36	1.31	.26	7/16	3/4
3/4	3/4	12W-412	1-1/16-14	3.40	1.98	.60	1	1-1/4

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

^aSwivel nuts are universal – both SAE 37° and 45° connections.

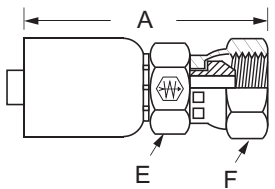
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

Female Swivel DIN Universal Seat I. Rh. (Light) (DIN 3901/3902)



Hose I.D.	Tube Size (mm)	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
3/8	12	06W-12C	M18x1.5	2.49	1.44	.26	5/8	7/8

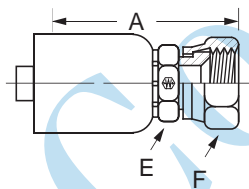
British Standard (BSPP) 60° Cone Female Pipe Swivel



Hose I.D.	BSPP Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	1/4	04W-354	G-1/4-19*	2.37	1.36	.16	1/2	3/4
3/8	3/8	06W-356	G-3/8-19*	2.53	1.48	.26	5/8	7/8
1/2	1/2	08W-358	G-1/2-14*	2.87	1.69	.36	3/4	1-1/16

*G As part of Thread is ISO Designation for Parallel Thread.

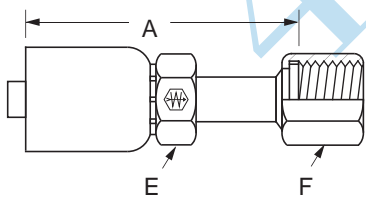
Female JIS 30° Flare Parallel Pipe Swivel



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
3/8	3/8	06W-06L	G-3/8-19*	2.51	1.46	.26	5/8	7/8

*G As part of Thread is ISO Designation for Parallel Thread.

Female FOR-SEAL® Swivel Straight



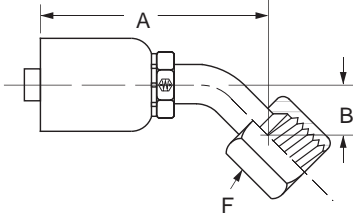
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	1/4	04W-J64*	9/16-18	2.37	1.36	.16	9/16	11/16
1/4	3/8	04W-J66*	11/16-16	2.40	1.39	.16	5/8	13/16
3/8	3/8	06W-J66*	11/16-16	2.44	1.39	.26	5/8	13/16
3/8	1/2	06W-J68*	13/16-16	2.48	1.43	.26	3/4	15/16
1/2	3/8	08W-J66*	11/16-16	2.65	1.47	.26	11/16	13/16
1/2	1/2	08W-J68*	13/16-16	2.78	1.60	.36	3/4	15/16
1/2	5/8	08W-S70	1-14	3.12	1.94	.36	7/8	1-1/8
5/8	5/8	10W-S70	1-14	3.30	1.91	.45	7/8	1-1/8
3/4	3/4	12W-S72	1-3/16-12	3.45	2.03	.55	1	1-3/8
1	1	16W-S76	1-7/16-12	3.92	2.53	.78	1-1/4	1-5/8

*Captive swivel nut design.

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

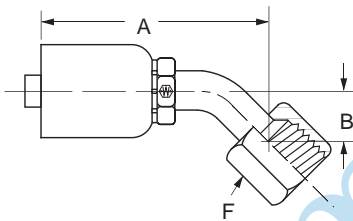
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

JIC 37° Female Swivel 45° Tube Elbow (Exceptions Noted for 45° Flare, Refer to Footnotes)



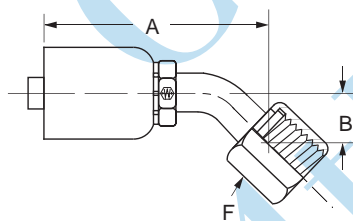
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F
1/4	1/4	04W-684 ^a	7/16-20	2.61	.33	1.60	.15	9/16
3/8	3/8	06W-686	9/16-18	2.79	.39	1.74	.24	11/16
3/8	1/2	06W-688 ^a	3/4-16	3.12	.55	2.07	.26	7/8
1/2	1/2	08W-688 ^a	3/4-16	3.30	.55	2.12	.33	7/8
1/2	5/8	08W-690 ^a	7/8-14	3.54	.63	2.36	.36	1
3/4	3/4	12W-692	1-1/16-12	4.05	.78	2.63	.56	1-1/4
1	1	16W-696	1-5/16-12	4.66	1.10	3.27	.76	1-1/2

SAE 45° Female Swivel 45° Tube Elbow



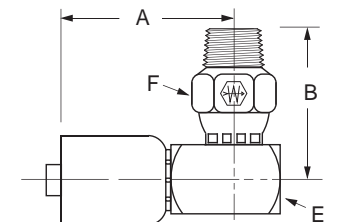
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F
3/8	3/8	06W-486	5/8-18	2.79	.39	1.74	.24	3/4

Female FOR-SEAL® Swivel 45° Tube Elbow



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F
1/4	1/4	04W-L64	9/16-18	2.73	.41	1.72	.16	11/16
1/4	3/8	04W-L66	11/16-16	2.91	.43	1.90	.16	13/16
3/8	3/8	06W-L66	11/16-16	2.87	.43	1.82	.24	13/16
3/8	1/2	06W-L68	13/16-16	3.20	.26	2.15	.26	15/16
1/2	1/2	08W-L68	13/16-16	3.38	.59	2.20	.33	15/16
1/2	5/8	08W-L70	1-14	3.52	.65	2.34	.36	1-1/8
5/8	5/8	10W-L70	1-14	3.71	.65	2.33	.44	1-1/8
3/4	3/4	12W-L72	1-3/16-12	4.11	.84	2.69	.56	1.3/8

Male Pipe Swivel 90° Elbow



Hose I.D.	Pipe Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Sqaure E	Hex F
3/8	3/8	06W-M06	3/8-18	3.11	2.11	2.06	.27	11/16	7/8
1/2	1/2	08W-M08	1/2-14	3.20	2.16	2.02	.36	3/4	7/8

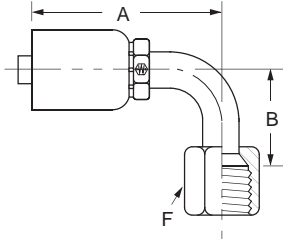
NOTE: Swivel for installation purpose only.
(Not for temperatures above 212°F)

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

^a Swivel nuts are universal – both SAE 37° and 45° connections.

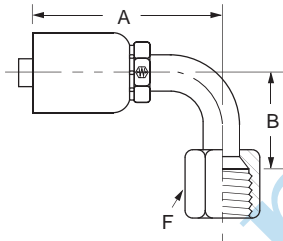
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

**JIC 37° Female Swivel
90° Tube Elbow**
(Exceptions Noted, Refer to
Footnotes)



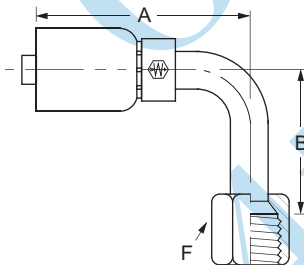
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F
1/4	1/4	04W-664 ^a	7/16-20	2.47	.68	1.46	.15	9/16
1/4	3/8	04W-666	9/16-18	2.76	.85	1.75	.16	11-16
3/8	3/8	06W-666	9/16-18	2.74	.85	1.69	.24	1/16
3/8	1/2	06W-668 ^a	3/4-16	2.92	1.09	1.87	.27	7/8
1/2	1/2	08W-668 ^a	3/4-16	3.10	1.09	1.92	.33	7/8
1/2	5/8	08W-670 ^a	7/8-14	3.73	1.23	2.55	.36	1
3/4	3/4	12W-672	1-1/16-12	4.03	2.50	2.61	.56	1-1/4
1	1	16W-676	1-5/16-12	4.49	2.14	3.10	.76	1-1/2

**SAE 45° Female Swivel
90° Tube Elbow**



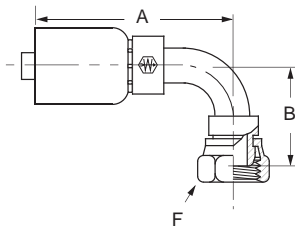
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F
5/8	3/4	10W-672	1-1/16-12	4.02	2.50	2.64	.48	1-1/4

**JIC 37° Female Swivel
Long Drop 90° Tube
Elbow (Exceptions Noted,
Refer to Footnotes)**



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F
3/8	3/8	06W-646	9/16-18	3.14	2.18	2.09	.26	11/16
1/2	5/8	08W-650 ^a	7/8-14	3.39	2.57	2.20	.36	1

**British Standard (BSPP)
60° Cone Female Pipe
Swivel 90° Tube Elbow**



Hose I.D.	BSPP Pipe Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F
3/8	3/8	06W-76P	G-3/8-19*	2.84	1.60	1.79	.24	7/8

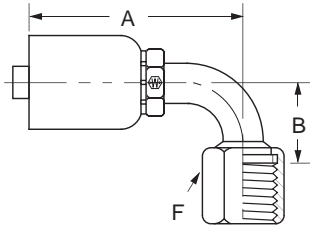
*G As part of Thread is ISO Designation for Parallel Thread.

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

^a Swivel nuts are universal – both SAE 37° and 45° connections.

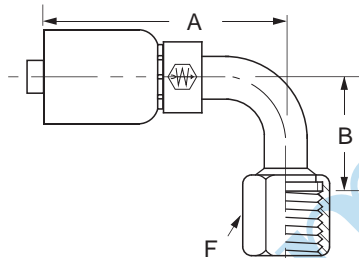
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

Female FOR-SEAL® Swivel Short Drop 90° Tube Elbow



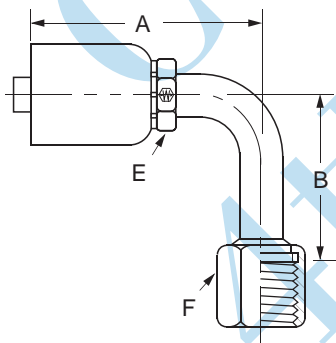
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F
1/4	1/4	04W-A24	9/16-18	2.58	.81	1.56	.16	11/16
1/4	3/8	04W-A26	11/16-16	2.83	.90	1.82	.16	13/16
3/8	3/8	06W-A26	11/16-16	2.79	.90	1.74	.24	13/16
3/8	1/2	06W-A28	13/16-16	2.96	1.15	1.91	.26	15/16
1/2	1/2	08W-A28	13/16-16	3.17	1.15	1.99	.33	15/16
1/2	5/8	08W-A30	1-14	3.41	1.27	2.23	.36	1-1/8
5/8	5/8	10W-A30	1-14	3.60	1.27	2.22	.44	1-1/8
3/4	3/4	12W-A32	1-3/16-12	4.04	1.88	2.62	.56	1
1	1	16W-A36	1-7/16-12	4.43	2.21	3.04	.76	1-5/8

Female FOR-SEAL® Swivel Medium Drop 90° Tube Elbow



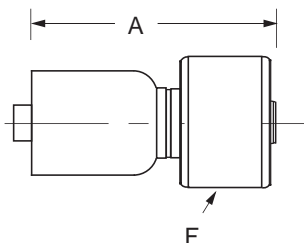
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F	Hex/Dia. E
3/8	3/8	06W-J36	11/16-16	3.05	1.51	2.00	.24	13/16	5/8
1/2	1/2	08W-J38	13/16-16	3.12	1.62	1.94	.33	15/16	11/16
3/4	3/4	12W-J42	1-3/16-12	4.09	2.28	2.67	.56	1-3/8	1

Female FOR-SEAL® Swivel Long Drop 90° Tube Elbow



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex F	Hex/Dia. E
1/4	1/4	04W-A64	9/16-18	2.82	1.80	1.81	.16	11/16	7/16
1/4	3/8	04W-A66	11/16-16	3.33	2.13	2.32	.16	13/16	9/16
3/8	3/8	06W-A66	11/16-16	3.29	2.13	2.24	.24	13/16	5/8
1/2	1/2	08W-A68	13/16-16	3.89	2.51	2.64	.33	13/16	15/16

Pressure Washer



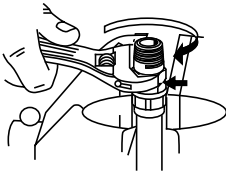
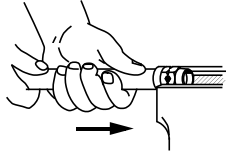
Hose I.D.	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Dia. F
3/8	06W-6PW	M22x1.5	2.18	1.13	.27	1-3/8

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

Field Attachable 009 'B' Series

Hose Ends

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.



Hose End Series: 009 'B' Series

Typical Application: Low pressure air, lube and oil lines.

Compatible Hose: H009

Pressure: Determined by maximum working pressure for hose size. See page 15 for working pressure ratings for hose end configurations.

Material: CA360 brass

Advantages: Reusable and easy to assemble. An excellent fitting where low pressure applications exist and a clamp may get in the way. Good selection of configurations at a reasonable cost.

Ordering Information: Order individually by catalog number.

Assembly Instructions:

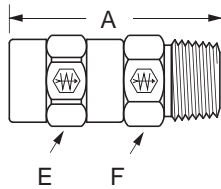
1. Lubricate insert threads and I.D. of hose.
2. Push hose into socket until it bottoms.
3. Screw insert into socket until insert hex touches socket. When assembling swivel ends, leave 1/32" clearance between swivel nut and socket.

NOTE: Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

Label Set: FS-400

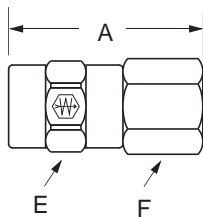
Refer to important safety information on pages 1-2.

Male Pipe Rigid



Hose I.D.	Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	1/8	00904B-102	1/8-27	1.20	.75	.172	5/8	7/16
1/4	1/4	00904B-104	1/4-18	1.39	.94	.172	5/8	9/16

JIC 37° Female Swivel (Refer to Footnotes)



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	1/4	00904B-604 ^a	7/16-20	1.31	.81	.172	5/8	9/16

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

^a Swivel nuts are universal – both SAE 37° and 45° connections.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

Hose End Series: 057 'B' Series

Typical Application: Low pressure air, fuel and oil applications. Generally used for automotive, light truck, and small engine fuel lines.

Compatible Hose: H057, H105*, H115* hose (*H105 and H115 for air applications only.)

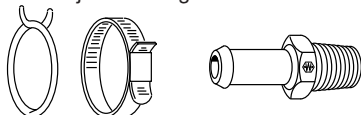
Pressure: Determined by maximum working pressure for hose size. See page 15 for working pressure ratings for hose end configurations.

Material: CA360 brass.

Advantages: Easy to assemble – just push the fitting into the hose and clamp. Good selection of configurations at reasonable cost.

Ordering Information: Order individually by catalog number.

NOTE: Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.



Assembly Instructions:

- Slide clamp over hose.
- Insert barbed end of fitting into hose.
- Locate band clamp in the middle of 057 'B' Series inserts and tighten.

CAUTION: Hose can be cut or damaged if over-tightened.

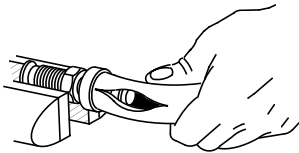
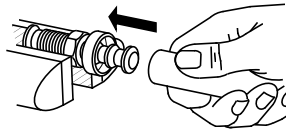
- Position wire clamp behind bump on 057 'B' Series insert with H057 hose only.

Refer to important safety information on pages 1-2.

Male Pipe Rigid				Male Straight Thread Connector			
Hose I.D.	Pipe Size	Catalog Number	Hose I.D.	Thread Size	Catalog Number		
	3/16	1/8	05703B-102	3/8	9/16-24	05706B-1412	
	1/4	1/8	05704B-102	3/8	7/8-20	05706B-1413	
	1/4	1/4	05704B-104	3/8	5/8-20	05706B-1569	
	5/16	1/8	05705B-102				
	5/16	1/4	05705B-104				
	3/8	1/8	05706B-102				
	3/8	1/4	05706B-104				
	3/8	3/8	05706B-106				
	5/8	3/8	05710B-106				
	5/8	1/2	05710B-108				
	3/4	1/2	05712B-108				
Inverted Male Connector				Male Pipe Rigid 90° Elbow			
Hose I.D.	Tube Size	Catalog Number	Hose I.D.	Pipe Size	Catalog Number		
	5/16	1/4	05705B-1598	1/4	1/8	05704B-C02	
	5/16	5/16	05705B-1560	5/16	1/8	05705B-C02	
	5/16	3/8	05705B-1561	5/16	1/4	05705B-C04	
	3/8	5/16	05706B-1568	3/8	1/8	05706B-C02	
	3/8	3/8	05706B-1570	3/8	1/4	05706B-C04	
				3/8	3/8	05706B-C06	
SAE 45° Flare Connector				Inverted Male Swivel 90° Elbow			
Hose I.D.	Tube Size	Catalog Number	Hose I.D.	Tube Size	Catalog Number		
	3/8	5/16	05706B-305	1/4	1/4	05704B-B64	
				1/4	5/16	05704B-B65	
				5/16	5/16	05705B-B65	
Gear Type Hose Clamp				Inverted Male Tee Swivel			
Hose I.D.				Hose I.D.	Tube Size	Catalog Number	
				3/8	5/16	05706B-1414#	
				3/8	3/8	05706B-1415#	
Wire Hose Clamp (For H057 Hose Only)				Gear Type Hose Clamp			
Hose I.D.				Hose I.D.		Catalog Number	
				3/16, 1/4		6202	
				5/16			
				3/8			
SAE 45° Flare Connector				Wire Hose Clamp (For H057 Hose Only)			
Hose I.D.	Tube Size	Catalog Number	Hose I.D.		Catalog Number		
	3/8	5/16	3/16, 1/4		1538		
			5/16		1539		
			3/8		1540		

#Denotes chrome plated.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.



Hose End Series: 100 'B' Series

Typical Application: Low pressure shop or service air lines. Often used for low pressure lube and oil lines.

Compatible Hose: H100, H101, H1201

Pressure: Determined by maximum working pressure for hose size. See page 15 for working pressure ratings for hose end configurations.

Material: CA360 brass

Advantages: Easy to assemble – just push the fitting into the hose. No clamps needed! Low cost and a wide selection of configurations and sizes.

Ordering Information: Order individually by catalog number.

Assembly Instructions:

1. Lubricate insert.
2. Hold hose at angle as shown and push on and up over first barb.
3. Continue to push straight on until hose is seated under protective plastic cap. (Keep hand back from hose end area so that hose can expand.)

Disassembly Instructions:

1. Split hose as shown. Do not cut completely through hose. Sealing edge of barb could be damaged.
2. Bend hose and remove with quick pull.

Refer to important safety information found on pages 1-2 of this catalog.

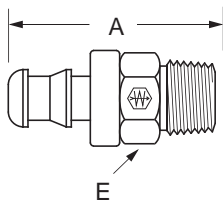
NOTE: Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

ASSEMBLY EQUIPMENT: See page 311 for optional Assembly Tools.

CAUTION: Sealing integrity may be damaged by the use of clamps.

Label Set: **FS-500**

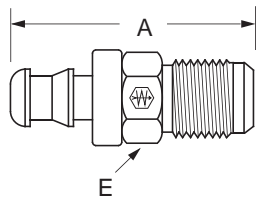
Male Pipe Rigid



NOTE: Drawings may differ from actual parts.

Hose I.D.	Pipe Size	Catalog Number	Pipe Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
1/4	1/8	10004B-102	1/8–27	1.29	.65	.172	7/16
1/4	1/4	10004B-104	1/4–18	1.52	.88	.172	9/16
5/16	1/8	10005B-102	1/8–27	1.36	.69	.234	1/2
5/16	1/4	10005B-104	1/4–18	1.57	.87	.234	9/16
3/8	1/8	10006B-102	1/8–27	1.46	.69	.297	1/2
3/8	1/4	10006B-104	1/4–18	1.65	.88	.297	9/16
3/8	3/8	10006B-106	3/8–18	1.65	.88	.297	11/16
1/2	3/8	10008B-106	3/8–18	1.85	.94	.391	11/16
1/2	1/2	10008B-108	1/2–14	2.10	1.19	.391	7/8
5/8	1/2	10010B-108	1/2–14	2.60	1.19	.484	7/8
3/4	3/4	10012B-112	3/4–14	2.66	1.25	.609	1-1/16

SAE 45° Flare Male Rigid



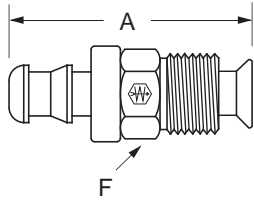
NOTE: Drawings may differ from actual parts.

Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
1/4	1/4	10004B-304	7/16–20	1.45	.81	.172	7/16
1/4	5/16	10004B-305	1/2–20	1.54	.94	.172	1/2
5/16	5/16	10005B-305	1/2–20	1.60	.94	.220	1/2
3/8	3/8	10006B-306	5/8–18	1.73	1.00	.297	5/8

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

Inverted Male Swivel

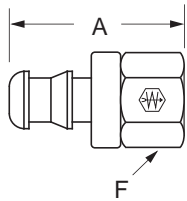


(Steel nut)

NOTE: Drawings may differ from actual parts.

Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex F
1/4	3/16	10004B-B03	3/8-24	1.39	1.13	.109	3/8
1/4	1/4	10004B-B04	7/16-24	1.42	1.13	.172	7/16
1/4	5/16	10004B-B05	1/2-20	1.52	1.19	.188	1/2
5/16	1/4	10005B-B04	7/16-24	1.81	1.11	.184	7/16
5/16	5/16	10005B-B05	1/2-20	1.60	.80	.234	1/2
5/16	3/8	10005B-B06	5/8-18	1.60	1.19	.234	5/8
3/8	5/16	10006B-B05	1/2-20	1.64	1.19	.234	1/2
3/8	3/8	10006B-B06	5/8-18	1.70	.97	.297	5/8
1/2	1/2	10008B-B08	3/4-18	2.24	1.25	.391	3/4

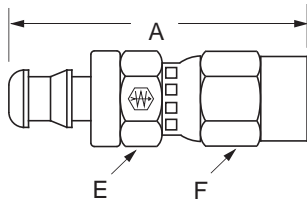
Female Inverted Rigid



NOTE: Drawings may differ from actual parts.

Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex F
1/4	3/16	10004B-A03	3/8-24	1.12	.48	.172	1/2
1/4	1/4	10004B-A04	7/16-24	1.14	.50	.172	9/16
1/4	5/16	10004B-A05	1/2-20	1.18	.56	.172	5/8
5/16	5/16	10005B-A05	1/2-20	1.25	.56	.220	5/8
3/8	5/16	10006B-A05	1/2-20	1.32	.55	.297	5/8
3/8	3/8	10006B-A06	5/8-18	1.35	.63	.297	3/4
1/2	1/2	10008B-A08	3/4-18	1.73	.75	.391	7/8

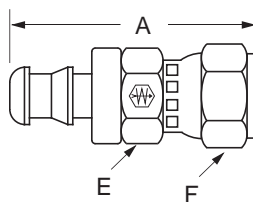
Female Pipe Swivel



NOTE: Drawings may differ from actual parts.

Hose I.D.	Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	1/4	10004B-254	1/4-18	2.42	1.81	.172	3/4	5/8
3/8	3/8	10006B-256	3/8-18	2.77	2.00	.297	7/8	11/16
1/2	1/2	10008B-258	1/2-14	3.29	2.38	.391	1-1/8	7/8

JIC 37° Female Swivel (Refer to Footnotes)



NOTE: Drawings may differ from actual parts.

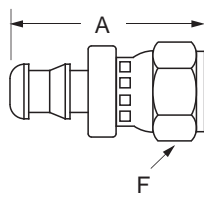
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex E	Hex F
1/4	1/4	10004B-604 ^a	7/16-20	1.38	.74	.172		9/16
1/4	5/16	10004B-605 ^a	1/2-20	1.42	.81	.172		5/8
5/16	5/16	10005B-605 ^a	1/2-20	1.54	.83	.234		11/16
3/8	5/16	10006B-605 ^a	1/2-20	1.60	.88	.297		11/16
3/8	3/8	10006B-606	9/16-18	1.66	.88	.297		11/16
1/2	1/2	10008B-608 ^a	3/4-16	2.06	1.06	.391		7/8
5/8	5/8	10010B-610 ^a	7/8-14	2.67	1.19	.484		1
3/4	5/8	10012B-610 ^a	7/8-14	2.69	1.25	.511		1
3/4	3/4	10012B-612	1-1/16-12	2.69	1.19	.609		1-1/4

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

^a Swivel nuts are universal – both SAE 37° and 45° connections.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

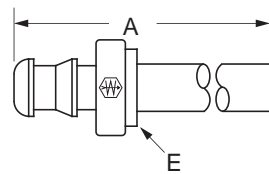
SAE 45° Flare Female Swivel



NOTE: Drawings may differ from actual parts.

Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex F
3/8	3/8	10006B-406	5/8-18	1.73	.88	.297	3/4
3/4	3/4	10012B-412	1-1/16-14	2.66	1.25	.609	1-1/4

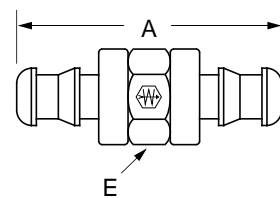
Straight Tube Rigid



NOTE: Drawings may differ from actual parts.

Hose I.D.	Tube Size	Catalog Number	Tube Dia.	A	Hose Cut-Off Factor†	Hole Dia.	Dia. E
1/4	3/16	10004B-X03	.188	1.77	1.13	.172	13/32
1/4	1/4	10004B-X04	.250	1.83	1.19	.172	13/32
1/4	5/16	10004B-X05	.312	1.85	1.25	.172	13/32
5/16	5/16	10005B-X05	.312	1.91	1.25	.228	7/16
3/8	3/8	10006B-X06	.375	2.04	1.27	.297	1/2

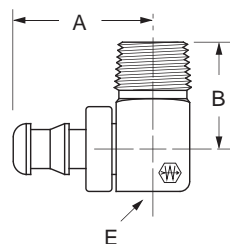
Hose Mender



NOTE: Drawings may differ from actual parts.

Hose I.D.	Catalog Number	A	Hose Cut-Off Factor†	Hole Dia.	Hex E
1/4	10004B-Y04	1.76	.50	.172	1/2
5/16	10005B-Y05	1.85	.44	.234	9/16
3/8	10006B-Y06	1.97	.44	.297	5/8
1/2	10008B-Y08	2.33	.50	.391	3/4

Male Pipe Rigid 90° Elbow

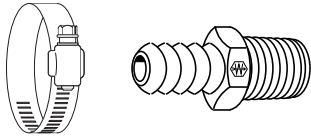


NOTE: Drawings may differ from actual parts.

Hose I.D.	Pipe Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Square E
5/16	1/8	10005B-C02	1/8-27	1.02	.94	.31	.228	1/2
5/16	1/4	10005B-C04	1/4-18	1.09	.94	.38	.228	9/16
3/8	1/8	10006B-C02	1/8-27	1.08	.94	.38	.297	1/2
3/8	1/4	10006B-C04	1/4-18	1.15	.94	.38	.297	9/16

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.



Hose End Series: 105 'B' Series

Typical Application: Low pressure shop or service air lines.

Compatible Hose: H105, H115.

Pressure: Determined by maximum working pressure for hose size. See page 15 for working pressure ratings for hose end configurations.

Material: CA360 brass

Advantages: Easy to assemble – just push the fitting into the hose and clamp. Low cost and a good selection of sizes.

Ordering Information: Order individually by catalog number.

Assembly Instructions:

1. Slide clamp over hose.
2. Insert barbed end of fitting into hose.
3. Locate clamp in middle of insert and tighten. Use 6203/6204 Series clamps only. See page 84.

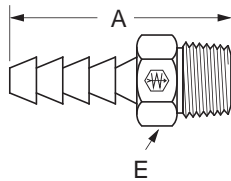
CAUTION: Hose can be damaged if over-tightened.

Refer to important safety information found on pages 1-2 of this catalog.

NOTE: Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

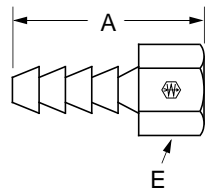
Label Set: FS-500

Male Pipe (PFT Short)



Hose I.D.	Pipe Size	Catalog Number	A	Hex E	Number Of Barbs
1/8	1/8	10502B-102	1.00	7/16	4
3/16	1/8	10503B-102	1.16	7/16	3
3/16	1/4	10503B-104	1.43	9/16	3
1/4	1/8	10504B-102	1.54	7/16	4
1/4	1/4	10504B-104	1.61	9/16	4
1/4	3/8	10504B-106	1.72	11/16	4
5/16	1/8	10505B-102	1.60	7/16	4
5/16	1/4	10505B-104	1.77	9/16	4
3/8	1/8	10506B-102	1.53	7/16	4
3/8	1/4	10506B-104	1.70	9/16	4
3/8	3/8	10506B-106	1.72	11/16	4
3/8	1/2	10506B-108	1.95	7/8	4
1/2	1/4	10508B-104	1.71	9/16	4
1/2	3/8	10508B-106	1.72	11/16	4
1/2	1/2	10508B-108	1.94	7/8	4
1/2	3/4	10508B-112	1.95	1-1/8	4
5/8	3/8	10510B-106	1.72	3/4	4
5/8	1/2	10510B-108	1.95	7/8	4
5/8	3/4	10510B-112	1.91	1-1/8	4
3/4	1/2	10512B-108	1.86	7/8	4
3/4	3/4	10512B-112	1.92	1-1/8	4

Female Pipe (NPTF)

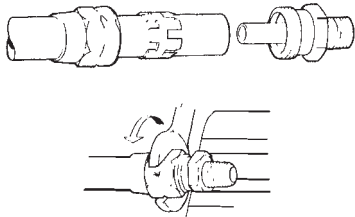


Hose I.D.	Pipe Size	Catalog Number	A	Hex E	Number Of Barbs
1/8	1/8	10502B-202	.97	9/16	4
3/16	1/8	10503B-202	1.19	9/16	3
1/4	1/8	10504B-202	1.47	9/16	4
1/4	1/4	10504B-204	1.58	11/16	4
5/16	1/8	10505B-202	1.47	9/16	4
5/16	1/4	10505B-204	1.58	11/16	4
3/8	1/8	10506B-202	1.47	9/16	4
3/8	1/4	10506B-204	1.58	11/16	4
3/8	3/8	10506B-206	1.64	13/16	4
1/2	1/4	10508B-204	1.58	11/16	4
1/2	3/8	10508B-206	1.64	13/16	4
1/2	1/2	10508B-208	1.86	1	4

Field Attachable 338 'B' Series

Hose Ends

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.



Hose End Series: 338 'B' Series (Parts are stamped with DOT)

Typical Application: Air brake hose lines.

Compatible Hose: H338

Pressure: Determined by maximum working pressure for hose size. See page 15 for working pressure ratings for hose end configurations.

Material: CA360 brass

Advantages: Can be used for nearly any air brake line. Easy to assemble with a good selection of hose end configurations. Brass material offers excellent resistance against corrosion.

Ordering Information: Order individually by catalog number. Complete air brake hose assemblies can be found in the Ready-Made Hose Assemblies section of this catalog. Refer to page 80-81.

Assembly Instructions:

1. Slide nut and sleeve onto hose. Make sure bevel edge of sleeve faces out toward fitting.
2. Push hose into fitting until it bottoms.
3. Screw nut until contact is made with body hex.

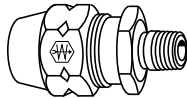
Refer to important safety information found on pages 1-2 of this catalog.

NOTE: Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

Label Set: FS-800

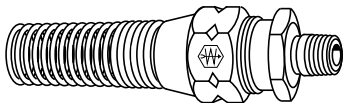
NOTE: Parts stamped with DOT

Male Connector



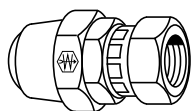
Hose I.D.	Pipe Size	Catalog Number	Overall Length	Hose Cut-Off Factor†
3/8	1/4	33806B-Y24	2.26	.69
3/8	3/8	33806B-Y26	2.35	.81
3/8	1/2	33806B-Y28	2.45	.94
1/2	3/8	33808B-Y26	2.24	.75
1/2	1/2	33808B-Y28	2.40	.94

Male Connector with Spring Guard



Hose I.D.	Pipe Size	Catalog Number	Overall Length	Hose Cut-Off Factor†
3/8	1/4	33806B-Y34	4.72	.75
3/8	3/8	33806B-Y36	4.78	.81
3/8	1/2	33806B-Y38	4.88	.94
1/2	3/8	33808B-Y36	5.12	.75
1/2	1/2	33808B-Y38	4.88	.94

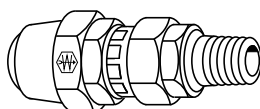
Female Connector



(Steel Nut)

Hose I.D.	ABS Thread Size	Catalog Number	Overall Length	Hose Cut-Off Factor†
3/8	3/4-20	33806B-Y76	2.40	.88
1/2	7/8-20	33808B-Y78	2.37	.88

Female Connector with Adapter



(Steel Nut)

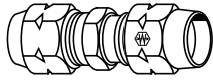
Hose I.D.	Pipe Size	Catalog Number	ABS Swivel Thread	Overall Length	Hose Cut-Off Factor†
3/8	1/4	33806B-Y84	3/4-20	3.33	1.81
3/8	3/8	33806B-Y86	3/4-20	3.33	1.75
1/2	3/8	33808B-Y86	7/8-20	3.30	1.75

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.



Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

Hose Mender



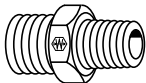
Hose I.D.	Catalog Number	Overall Length
3/8	33806B-Y06	3.28
1/2	33808B-Y08	3.25

Hose Mender (Body Only)



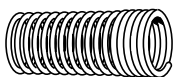
Hose I.D.	Catalog Number	Overall Length
3/8	33806-E	2.55

Adapter



ABS Thread Size	Pipe Size	Catalog Number	Overall Length	ABS Thread Size
3/8	1/4	1390x6	1.18	3/4-20
3/8	3/8	1390x6x6	1.18	3/4-20
3/8	1/2	1390x6x8	1.37	3/4-20
1/2	3/8	1390x8	1.18	7/8-20
1/2	1/2	1390x8x8	1.37	7/8-20

Spring Guard



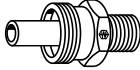

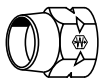
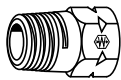
Hose I.D.	Catalog Number
3/8	33806-C
1/2	33808-C

(Steel Nut)

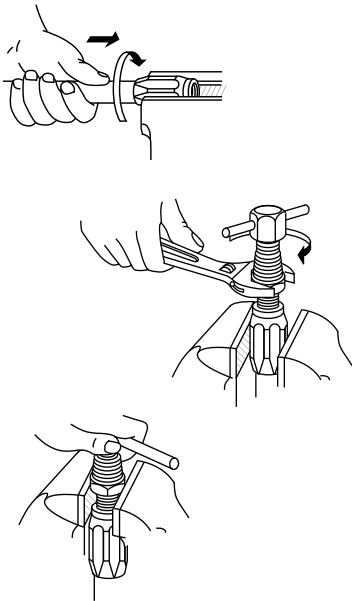
Field Attachable 338 'B' Series

Hose Ends

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

Insert (Body Only) 	<table border="1"> <thead> <tr> <th>Hose I.D.</th> <th>Pipe Size</th> <th>Catalog Number</th> <th>Hole Dia.</th> </tr> </thead> <tbody> <tr> <td>3/8</td> <td>1/4</td> <td>1391x6</td> <td>.281</td> </tr> <tr> <td>3/8</td> <td>3/8</td> <td>1391x6x6</td> <td>.281</td> </tr> <tr> <td>3/8</td> <td>1/2</td> <td>1391x6x8</td> <td>.281</td> </tr> <tr> <td>1/2</td> <td>3/8</td> <td>1391x8</td> <td>.390</td> </tr> <tr> <td>1/2</td> <td>1/2</td> <td>1391x8x8</td> <td>.390</td> </tr> </tbody> </table>	Hose I.D.	Pipe Size	Catalog Number	Hole Dia.	3/8	1/4	1391x6	.281	3/8	3/8	1391x6x6	.281	3/8	1/2	1391x6x8	.281	1/2	3/8	1391x8	.390	1/2	1/2	1391x8x8	.390
Hose I.D.	Pipe Size	Catalog Number	Hole Dia.																						
3/8	1/4	1391x6	.281																						
3/8	3/8	1391x6x6	.281																						
3/8	1/2	1391x6x8	.281																						
1/2	3/8	1391x8	.390																						
1/2	1/2	1391x8x8	.390																						
Sleeve 	<table border="1"> <thead> <tr> <th>Hose I.D.</th> <th>Catalog Number</th> </tr> </thead> <tbody> <tr> <td>3/8</td> <td>33806-A</td> </tr> <tr> <td>1/2</td> <td>33808-A</td> </tr> </tbody> </table>	Hose I.D.	Catalog Number	3/8	33806-A	1/2	33808-A																		
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3/8	33806-A																								
1/2	33808-A																								
Nut 	<table border="1"> <thead> <tr> <th>Hose I.D.</th> <th>Catalog Number</th> </tr> </thead> <tbody> <tr> <td>3/8</td> <td>33806-B</td> </tr> <tr> <td>1/2</td> <td>33808-B</td> </tr> </tbody> </table>	Hose I.D.	Catalog Number	3/8	33806-B	1/2	33808-B																		
Hose I.D.	Catalog Number																								
3/8	33806-B																								
1/2	33808-B																								
Nut For Spring Guard 	<table border="1"> <thead> <tr> <th>Hose I.D.</th> <th>Catalog Number</th> </tr> </thead> <tbody> <tr> <td>3/8</td> <td>33806-D</td> </tr> <tr> <td>1/2</td> <td>33808-D</td> </tr> </tbody> </table>	Hose I.D.	Catalog Number	3/8	33806-D	1/2	33808-D																		
Hose I.D.	Catalog Number																								
3/8	33806-D																								
1/2	33808-D																								

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.



Hose End Series: 069 'D' Series

Typical Application: Medium pressure and high temperature hose lines for a variety of applications including truck, industrial, and small engine where temperature may be a problem.

Compatible Hose: H069, H166, H169, H229, H366.

Pressure: Determined by hose burst pressure. See page 15 for working pressure ratings for hose end configurations.

Material: AISI/SAE 12L14 carbon steel

Plating: Zinc; yellow dichromate finish

Advantages: Very popular in heavy-duty truck markets. Can be used with a variety of hoses allowing for a diverse number of applications.

Ordering Information: Order individually by catalog number. For mandrel, see page 310.

Assembly Instructions:

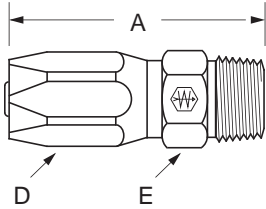
1. Lubricate mandrel, insert threads and I.D. of hose.
2. Screw hose into socket (left-hand thread) until hose bottoms. Back out 1/4 turn.
3. Place insert on mandrel. Screw insert into socket. When assembling swivel ends, leave 1/32" clearance between swivel nut and socket.

Refer to important safety information found on pages 1-2 of this catalog.

NOTE: Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

Label Set: FS-600

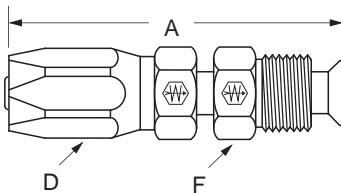
Male Pipe Rigid



*Brass construction.

Hose I.D.	Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex E
3/16	1/8	06904D-102	1/8-27	1.72	1.00	.17	5/8	7/16
3/16	1/4	06904D-104	1/4-18	1.90	1.19	.17	5/8	9/16
1/4	1/4	06905D-104	1/4-18	2.00	1.25	.25	11/16	9/16
5/16	1/4	06906D-104	1/4-18	2.10	1.25	.30	13/16	5/8
13/32	3/8	06908D-106	3/8-18	2.48	1.38	.39	15/16	11/16
13/32	1/2	06908D-108	1/2-14	2.73	1.63	.39	15/16	7/8
1/2	1/2	06910D-108	1/2-14	2.88	1.63	.48	1-1/8	7/8
5/8	3/4	06912D-112	3/4-14	3.25	1.75	.61	1-1/4	1-1/16
7/8	3/4	06916D-112	3/4-14	2.81	1.63	.72	1-7/16	1-1/8
7/8	1	06916D-116	1-11-1/2	3.00	1.81	.81	1-7/16	1-3/8
1-1/8	1-1/4	06920D-120	1-1/4-11-1/2	3.18	1.88	1.05	1-3/4	1-11/16
1-3/8	1-1/2	06924D-124	1-1/2-11-1/2	3.47	2.06	1.28	1-15/16	2
1-13/16	2	06932D-132	2-11-1/2	3.99	2.25	1.75	2-1/2	2-1/2
2-3/8	2-1/2	06940T-140*	2-1/2-8	5.03	3.13	2.20	3-1/8	3
	3	06948T-148*	3-8	5.09	3.19	2.83	3-7/8	3-3/4

Inverted Male Swivel Straight



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex F
3/16	1/4	06904D-B04	7/16-24	2.10	1.38	.17	5/8	7/16
1/4	5/16	06905D-B05	1/2-20	2.40	1.69	.23	11/16	1/2
5/16	3/8	06906D-B06	5/8-18	2.71	1.81	.30	13/16	5/8

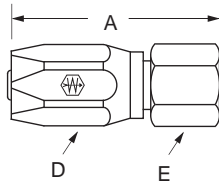
†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

Field Attachable 069 'D' Series

Hose Ends

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

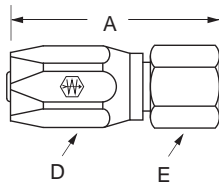
JIC 37° Female Swivel (Exceptions Noted for 45° Flare) (Refer to Footnotes)



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex E
3/16	1/4	06904D-604 ^a	7/16-20	1.74	1.06	.17	5/8	9/16
1/4	5/16	06905D-605 ^a	1/2-20	1.90	1.19	.24	11/16	5/8
5/16	3/8	06906D-606	9/16-18	2.05	1.19	.30	13/16	11/16
13/32	1/2	06908D-608 ^a	3/4-16	2.52	1.44	.39	15/16	7/8
1/2	5/8	06910D-610 ^a	7/8-14	2.79	1.56	.49	1-1/8	1
5/8	3/4	06912D-612	1-1/16-12	3.15	1.63	.61	1-1/4	1-1/4
7/8	1	06916D-616	1-5/16-12	2.81	1.63	.82	1-7/16	1-1/2
1-1/8	1-1/4	06920D-620	1-5/8-12	3.00	1.69	1.05	1-3/4	2
1-3/8	1-1/2	06924D-624	1-7/8-12	3.28	1.88	1.28	1-15/16	2-1/4
1-13/16	2	06932D-632	2-1/2-12	4.02	2.25	1.75	2-1/2	2-7/8
2-3/8	2-1/2	06940T-640*	3-12	4.16	2.25	2.22	3-1/8	3-3/8
3	3	06948T-648*	3-1/2-12	4.28	2.37	2.83	3-7/8	4

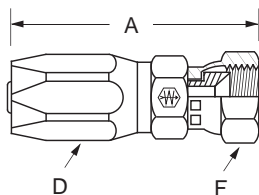
*Brass construction.

SAE 45° Female Swivel



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex E
5/16	3/8	06906D-406	5/8-18	2.05	1.19	.29	13/16	3/4
5/8	3/4	06912D-412	1-1/16-14	3.02	1.44	.61	1-1/4	1-1/4

30° Flare Female Swivel (PTT Thread For Diesel Applications)



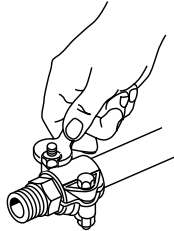
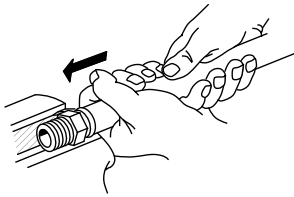
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex F
7/8	1	06916D-X26	1-5/16-14	3.20	1.94	.81	1-7/16	1-1/2

(See page 234 for PTT Thread Adapter.)

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

^a Swivel/nuts universal. Both SAE 37° and 45° connections.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.



Hose End Series: 'K' Series

Typical Application: Low pressure hydraulic applications and suction lines.

Compatible Hose: H039.

Pressure: Determined by maximum working pressure for hose size. See page 15 for working pressure ratings for hose end configurations.

Material: 12L14 carbon steel insert; malleable iron clamp

Plating: Zinc; yellow dichromate finish

Ordering Information: Order as a complete kit or order individual components by catalog number.

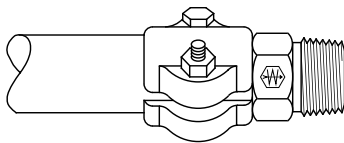
Assembly Instructions:

1. Lubricate insert and hose I.D.
2. Push hose on barbed stand pipe. Be sure hose is bottomed to clamp retainer.
3. After making sure clamp shoulders will lock in recesses of insert, draw clamps together evenly.

⚠ Refer to important safety information found on pages 1-2 of this catalog.

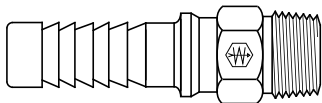
NOTE: Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

Male Pipe Assembly Includes Insert, Clamps, Nuts and Bolts



Hose I.D.	Pipe Size	Catalog Number Complete Assembly	Insert I.D.	Hose Cut-Off Factor†	Insert Only	Clamp Ass'y. Less Insert	Clamp Only	Nut No.	Bolt No.
3/4	3/4	K12N-112	.66	1.44	IKE12N-112	K12	CK12	NK12	BK12
1	1	K16N-116	.91	1.63	IKE16N-116	K16	CK16	NK16	BK16
1-1/4	1-1/4	K20N-120	1.06	1.81	IKE20N-120	K20	CK20	NK20	BK20
1-1/2	1-1/2	K24N-124	1.30	2.06	IKE24N-124	K24	CK24	NK20	BK24
2	2	K32N-132	1.75	2.19	IKE32N-132	K32	CK32	NK32	BK32

Male Connector Insert Only



Hose I.D.	Pipe Size	Catalog Number	Pipe Thread	Overall Length	Hose Cut-Off Factor†	Insert I.D.
3/4	3/4	IKE12N-112	3/4-14	3.03	1.44	.66
1	1	IKE16N-116	1-11-1/2	3.72	1.63	.91
1-1/4	1-1/4	IKE20N-120	1-1/4-11-1/2	4.59	1.88	1.06
1-1/2	1-1/2	IKE24N-124	1-1/2-11-1/2	4.65	2.06	1.30
2	2	IKE32N-132	2-11-1/2	5.19	2.19	1.75

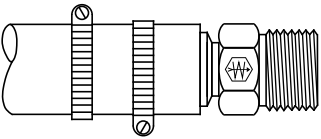
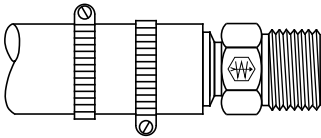
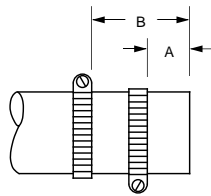
Use with H039 hose only. May be clamped with band or gear-type clamp. Used with suction hose for suction lines or return lines. For low pressure applications only.

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

Field Attachable 039 'K' Series

Hose Ends

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.



Hose End Series: 039 'K' Series

Typical Application: Suction and return lines.

Pressure: Refer to H039 listing on page 37 when used with 039 'K' Series hose ends and 6203 Series clamps.

Material: AISI/SAE 12L14 carbon steel

Plating: Zinc; yellow dichromate finish

Ordering Information: Order individually by catalog number.

NOTE: Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

Assembly Instructions:

1. Cut hose to length. Be sure the cut is square and hose is clean. Trim sharp exposed wire to prevent injury.
2. Slide clamps onto hose.
3. Push fitting into hose. Be sure the hose is bottomed against the atop ring.
4. Position clamps as shown. Secure with a screwdriver or wrench.

Refer to important safety information found on pages 1-2 of this catalog.

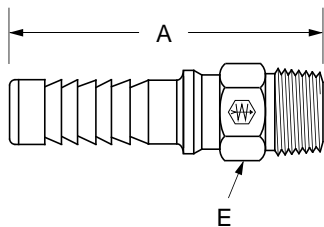
Hose Size	Clamp Part No.	A	B	T Minimum
-12	6203-012	5/8	1-1/4	25 in./lbs.
-16	6203-016	5/8	1-1/4	25 in./lbs.
-20	6203-024	5/8	1-1/4	25 in./lbs.

(Used with H039 hose only.) Used with suction hose for suction or return lines. For low pressure applications.

NOTE: Band-It Clamps may be used in place of worm gear clamps.

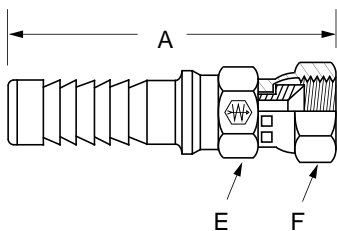
NOTE: Not intended for SAE 100R4 applications.

Male Pipe Rigid



Hose I.D.	Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hex E
3/4	3/4	03912K-112	3/4-14	3.61	1.44	1-1/16
1	1	03916K-116	1-11-1/2	3.90	1.69	1-3/8
1-1/4	1-1/4	03920K-120	1-1/4-11-1/2	4.63	2.31	1-11/16

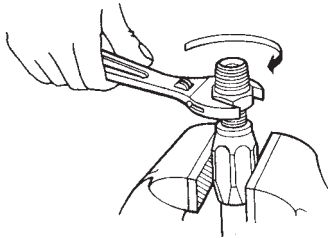
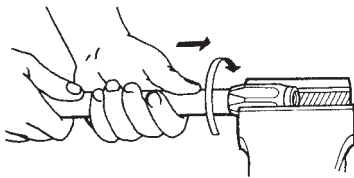
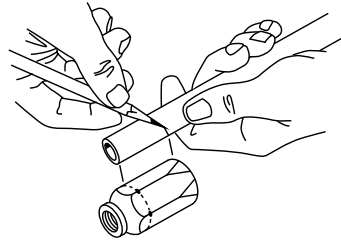
JIC 37° Female Swivel



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hex E	Hex F
3/4	3/4	03912K-612	1-1/16-12	3.86	1.69	1	1-1/4
1	1	03916K-616	1-5/16-12	4.46	2.25	1-1/4	1-1/2
1-1/4	1-1/4	03920K-620	1-5/8-12	4.92	2.56	1-11/16	2

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.



Hose End Series: 104 'N' Series

Typical Application: Medium pressure hydraulic applications such as construction, farm implement and industrial equipment.

Compatible Hose: H104

Pressure: Determined by maximum working pressure for hose size and hose end configuration whichever is lesser. See page 15 for working pressure ratings for hose end configurations.

Material: AISI/SAE 12L14 carbon steel

Plating: Zinc; yellow dichromate finish

Advantages: Good selection of hose ends. Non-mandrel assembly. Wide variety of applications because of its use with H104 hose.

Ordering Information: Order individually by catalog number. Order o-rings by catalog number; reference individual hose listing for details. For split flange kits, refer to pages 252-253.

Assembly Instructions:

Due to the high torque required to assemble larger sizes, it is recommended that 104 'N' Series hose ends be assembled with the T-300 assembly machine (page 310).

1. Lubricate insert threads and I.D. of hose.
2. Measure from end of hose and mark the socket depth. Use notch on socket or see insertion depth chart below.
3. Screw hose into socket (left-hand thread) to the depth marked on hose.
4. Screw insert into socket until insert touches socket.

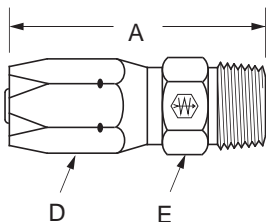
 Refer to important safety information found on pages 1-2 of this catalog.

Insertion Depth

Hose I.D.	Screw Hose Into Socket
1/4	1"
3/8	1-5/32"
1/2	1-3/16"
3/4	1-5/16"
1	1-9/16"

NOTE: Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

Male Pipe Rigid



Hose I.D.	Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex E
1/4	1/8	10404N-102	1/8-27	2.18	1.19	.17	3/4	7/16
1/4	1/4	10404N-104	1/4-18	2.36	1.38	.17	3/4	9/16
3/8	1/4	10406N-104	1/4-18	2.50	1.31	.27	7/8	9/16
3/8	3/8	10406N-106	3/8-18	2.53	1.38	.27	7/8	11/16
1/2	3/8	10408N-106	3/8-18	2.58	1.38	.39	1	11/16
1/2	1/2	10408N-108	1/2-14	2.83	1.63	.39	1	7/8
1/2	3/4	10408N-112	3/4-14	2.86	1.69	.39	1	1-1/16
3/4	3/4	10412N-112	3/4-14	2.98	1.69	.61	1-3/8	1-1/16
1	1	10416N-116	1-11-1/2	3.59	2.00	.81	1-3/4	1-3/8

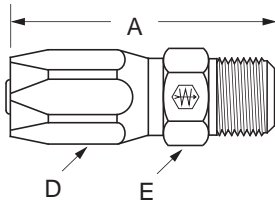
† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

Field Attachable 104 'N' Series

Hose Ends

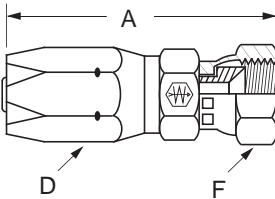
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

JIC 37° Male Rigid



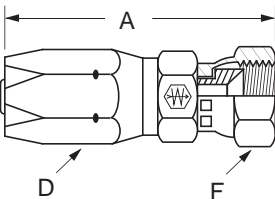
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex E
1/4	1/4	10404N-504	7/16-20	2.35	1.38	.17	3/4	9/16
1/4	5/16	10404N-505	1/2-20	2.35	1.38	.17	3/4	9/16
1/4	3/8	10404N-506	9/16-18	2.39	1.38	.17	3/4	5/8
3/8	3/8	10406N-506	9/16-18	2.53	1.38	.27	7/8	5/8
3/8	1/2	10406N-508	3/4-16	2.69	1.50	.27	7/8	13/16
1/2	1/2	10408N-508	3/4-16	2.74	1.56	.39	1	13/16
1/2	5/8	10408N-510	7/8-14	2.87	1.69	.39	1	15/16
3/4	3/4	10412N-512	1-1/16-12	3.09	1.75	.61	1-3/8	1-1/8
1	1	10416N-516	1-5/16-12	3.56	2.00	.81	1-3/4	1-3/8

JIC 45° Female Swivel (Exceptions Noted for 45° Flare, Refer to Footnotes)



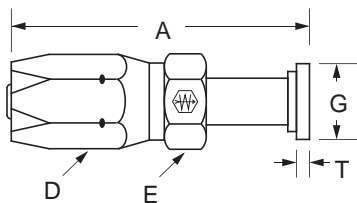
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex F
1/4	1/4	10404N-604 ^a	7/16-20	2.49	1.50	.17	3/4	9/16
1/4	5/16	10404N-605 ^a	1/2-20	2.59	1.56	.17	3/4	5/8
1/4	3/8	10404N-606	9/16-18	2.65	1.63	.17	3/4	11/16
3/8	3/8	10406N-606	9/16-18	2.79	1.63	.27	7/8	11/16
3/8	1/2	10406N-608 ^a	3/4-16	2.96	1.81	.27	7/8	7/8
1/2	1/2	10408N-608 ^a	3/4-16	3.01	1.81	.39	1	7/8
1/2	5/8	10408N-610 ^a	7/8-14	3.02	1.88	.39	1	1
3/4	5/8	10412N-610 ^a	7/8-14	3.14	1.88	.46	1-3/8	1
3/4	3/4	10412N-612	1-1/16-12	3.26	2.00	.61	1-3/8	1-1/4
3/4	7/8	10412N-614	1-3/16-12	3.39	2.06	.61	1-3/8	1-3/8
1	1	10416N-616	1-5/16-12	4.19	2.63	.81	1-3/4	1-1/2

SAE 37° Female Swivel



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex F
3/8	3/8	10406N-406	5/8-18	2.67	1.50	.27	7/8	3/4
3/4	3/4	10412N-412	1-1/16-14	3.27	2.00	.61	1-3/8	1-1/4

Split Flange Straight (SAE Code 61)



(For Split Flange Kits, see page 252.)

Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex E	Flange Dia.	T
3/4	3/4	10412N-G12	12x252	3.79	2.44	.58	1-3/8	15/16	1.500 (38mm)	.265
1	1	10416N-G16	16x252	4.21	2.63	.76	1-3/4	1-1/4	1.750 (44mm)	.315

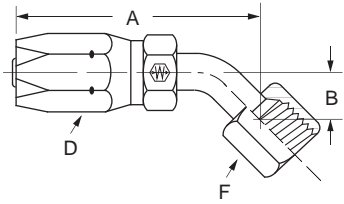
† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

^a Swivel nuts are universal – both SAE 37° and 45° connections.



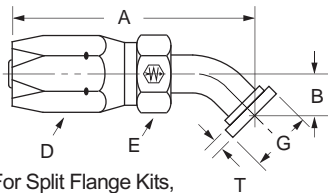
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

JIC 37° Female Swivel 45° Tube Elbow (Refer to Footnotes)



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex F
1/4	1/4	10404N-684 ^a	7/16-20	2.90	.33	1.88	.15	3/4	9/16
3/8	3/8	10406N-686	9/16-18	3.22	.39	2.00	.24	7/8	11/16
1/2	1/2	10408N-688 ^a	3/4-16	3.61	.55	2.44	.33	1	7/8
1/2	5/8	10408N-690 ^a	7/8-14	3.67	.63	2.50	.39	1	1
3/4	3/4	10412N-692	1-1/16-12	4.20	.78	2.81	.58	1-3/8	1-1/4
1	1	10416N-696	1-5/16-12	5.42	1.10	3.88	.81	1-3/4	1-1/2

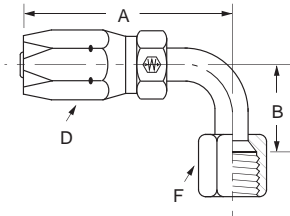
Split Flange 45° Tube Elbow (SAE Code 61)



(For Split Flange Kits, see page 252.)

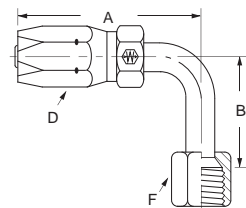
Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex E	Flange Dia.	T
3/4	3/4	10412N-G42	12x252	4.43	.99	3.13	.58	1-3/8	15/16	1.500	.265 (38mm)
1	1	10416N-G46	16x252	4.99	1.06	3.44	.76	1-3/4	1-1/4	1.750	.315 (44mm)

JIC 37° Female Swivel 90° Tube Elbow (Refer to Footnotes)



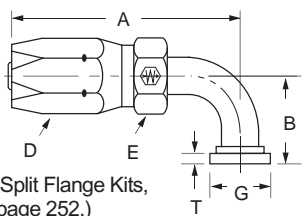
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex F
1/4	1/4	10404N-664 ^a	7/16-20	2.80	.68	1.81	.15	3/4	9/16
3/8	3/8	10406N-666	9/16-18	3.15	.85	2.00	.24	7/8	11/16
1/2	1/2	10408N-668 ^a	3/4-16	3.44	1.09	2.25	.33	1	7/8
1/2	5/8	10408N-670 ^a	7/8-14	3.75	1.23	2.56	.39	1	1
3/4	3/4	10412N-672	1-1/16-12	4.07	1.82	2.75	.58	1-3/8	1-1/4
1	1	10416N-676	1-5/16-12	5.27	2.14	3.75	.81	1-3/4	1-1/2

JIC 37° Female Swivel Long Drop 90° Tube Elbow (Refer to Footnotes)



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex F
1/4	1/4	10404N-644 ^a	7/16-20	2.83	1.80	1.81	.15	3/4	9/16
3/8	3/8	10406N-646	9/16-18	3.20	2.18	2.00	.24	7/8	11/16
1/2	1/2	10408N-648 ^a	3/4-16	3.44	2.43	2.25	.33	1	7/8
3/4	3/4	10412N-652	1-1/16-12	4.10	3.73	2.75	.58	1-3/8	1-1/4

Split Flange 90° Tube Elbow (SAE Code 61)



(For Split Flange Kits, see page 252.)

Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex E	Flange Dia.	T
3/4	3/4	10412N-G72	12x252	4.08	2.13	2.75	.58	1-3/8	15/16	1.500	.265 (38mm)
3/4	1	10412N-G76	16x252	4.08	2.13	2.75	.83	1-3/8	15/16	1.750	.315 (44mm)
1	1	10416N-G76	16x252	4.81	2.38	3.25	.83	1-3/4	1-1/4	1.750	.315 (44mm)

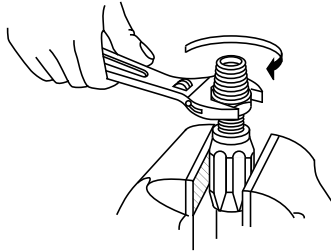
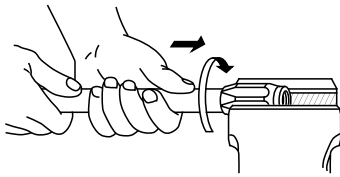
†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

^a Swivel nuts are universal – both SAE 37° and 45° connections.

Field Attachable 213 'N' Series

Hose Ends

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.



Hose End Series: 213 'N' Series

Typical Application: Medium pressure and high temperature hose lines for a variety of applications including truck, industrial, and small engines where high temperatures exist.

Compatible Hose: H213

Pressure: Determined by maximum working pressure for hose size and hose end configuration whichever is lesser. See page 15 for working pressure ratings for hose end configurations.

Material: AISI/SAE 12L14 carbon steel

Plating: Zinc; yellow dichromate finish

Advantages: Very popular in heavy-duty truck markets. Good selection of hose ends, including brass. Non-mandrel assembly.

Ordering Information: Order individually by catalog number.

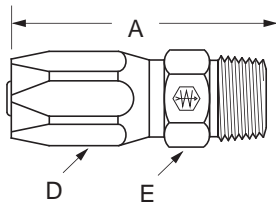
Assembly Instructions:

1. Lubricate insert threads and I.D. of hose.
2. Screw hose into socket (left-hand thread) until hose bottoms. Back out 1/4 turn.
3. Screw insert into socket until insert touches socket.

⚠ Refer to important safety information found on pages 1-2 of this catalog.

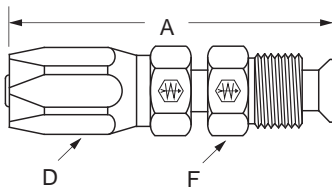
NOTE: Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

Male Pipe Rigid



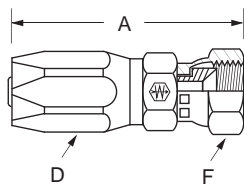
Hose I.D.	Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex E
3/16	1/8	21304N-102	1/8-27	1.59	.94	.12	9/16	7/16
3/16	1/4	21304N-104	1/4-18	1.78	1.13	.12	9/16	9/16
1/4	1/4	21305N-104	1/4-18	1.80	1.06	.17	5/8	9/16
5/16	3/8	21306N-106	3/8-18	1.96	1.19	.23	3/4	11/16
13/32	1/2	21308N-108	1/2-14	2.36	1.44	.33	7/8	7/8
1/2	1/2	21310N-108	1/2-14	2.45	1.44	.42	1	7/8
5/8	3/4	21312N-112	3/4-14	2.56	1.50	.55	1-1/8	1-1/16
7/8	1	21316N-116	1-11-1/2	2.71	1.69	.80	1-3/8	1-3/8

Inverted Male Swivel Straight



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex F
3/16	1/4	21304N-B04	7/16-24	2.43	1.69	.15	9/16	7/16
1/4	5/16	21305N-B05	1/2-20	2.47	1.75	.21	5/8	1/2
5/16	1/4	21306N-B04	7/16-24	2.50	1.63	.15	3/4	7/16
5/16	5/16	21306N-B05	1/2-20	2.57	1.75	.21	3/4	1/2
5/16	3/8	21306N-B06	5/8-18	2.74	1.88	.25	3/4	5/8
13/32	1/2	21308N-B08	3/4-18	3.26	2.25	.33	7/8	3/4

JIC 37° Female Swivel (Exceptions Noted for 45° Flare, Refer to Footnotes)



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex F
3/16	1/4	21304N-604 ^a	7/16-20	1.92	1.25	.15	9/16	9/16
1/4	5/16	21305N-605 ^a	1/2-20	2.01	1.25	.20	5/8	5/8
5/16	3/8	21306N-606	9/16-18	2.20	1.38	.26	3/4	11/16
13/32	1/2	21308N-608 ^a	3/4-16	2.49	1.50	.36	7/8	7/8
1/2	5/8	21310N-610 ^a	7/8-14	2.69	1.63	.45	1	1
5/8	3/4	21312N-612	1-1/16-12	2.91	1.75	.57	1-1/8	1-1/4
7/8	1	21316N-616	1-5/16-12	2.95	1.88	.82	1-3/8	1-1/2

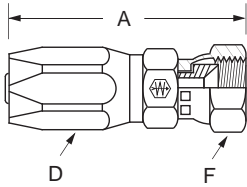
† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

^a Swivel nuts are universal – both SAE 37° and 45° connections.



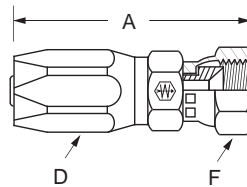
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

SAE 45° Female Swivel (Exceptions Noted for 45° Flare, Refer to Footnotes)



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex F
5/16	3/8	21306N-406	5/8-18	2.14	1.38	.26	3/4	3/4
5/8	3/4	21312N-412	1-1/16-14	2.85	1.75	.57	1-1/8	1-1/4

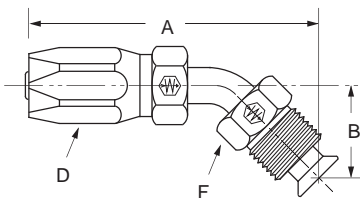
30° Flare Female Swivel (PTT Thread For Diesel Applications)



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex F
7/8	1	21316N-X26	1-5/16-14	2.78	1.69	.81	1-3/8	1-1/2

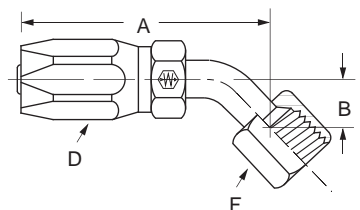
(See page 234 for PTT Thread Adapter.)

Inverted Male Swivel 45° Tube Elbow



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex F
3/16	1/4	21304N-E44	7/16-24	2.91	.93	2.19	.15	9/16	7/16
1/4	5/16	21305N-E45	1/2-20	3.30	1.14	2.63	.21	5/8	1/2
5/16	1/4	21306N-E44	7/16-24	3.10	.93	2.25	.15	3/4	7/16
5/16	5/16	21306N-E45	1/2-20	3.40	1.14	2.63	.21	3/4	1/2
5/16	3/8	21306N-E46	5/8-18	3.26	.94	2.38	.25	3/4	5/8
13/32	1/2	21308N-E48	3/4-18	3.70	.94	2.69	.33	7/8	3/4

SAE 37° Female Swivel 45° Tube Elbow (Exceptions Noted for 45° Flare, Refer to Footnotes)



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex F
3/16	1/4	21304N-684 ^a	7/16-20	2.34	.33	1.63	.15	9/16	9/16
1/4	5/16	21305N-685 ^a	1/2-20	2.44	.36	1.69	.21	5/8	5/8
5/16	3/8	21306N-686	9/16-18	2.61	.39	1.75	.25	3/4	5/8
13/32	1/2	21308N-688 ^a	3/4-16	3.13	.55	2.13	.33	7/8	7/8

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

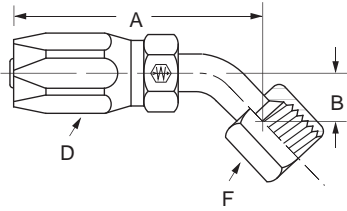
^a Swivel nuts are universal – both SAE 37° and 45° connections.

Field Attachable 213 'N' Series

Hose Ends

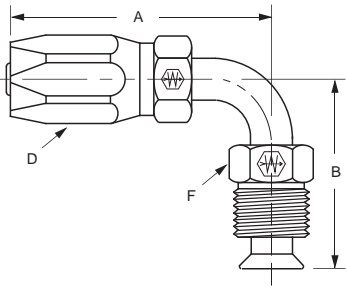
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

SAE 45° Female Swivel 45° Tube Elbow



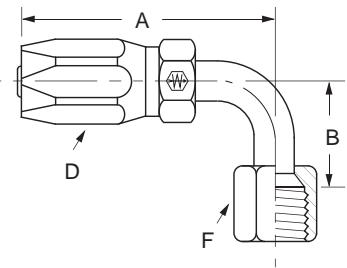
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex F
5/16	3/8	21306N-486	5/8-18	2.85	.39	1.81	.25	3/4	3/4

Inverted Male Swivel 90° Tube Elbow



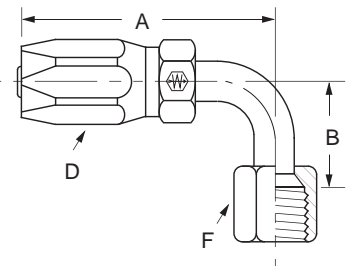
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex F
3/16	1/4	21304N-E04	7/16-24	1.69	1.36	1.50	.13	9/16	7/16
3/16	5/16	21304N-E05	1/2-20	2.30	1.61	1.56	.13	9/16	1/2
1/4	5/16	21305N-E05	1/2-20	2.49	1.61	1.75	.17	5/8	1/2
5/16	1/4	21306N-E04	7/16-24	2.58	1.65	1.75	.15	3/4	7/16
5/16	5/16	21306N-E05	1/2-20	2.50	1.61	1.63	.21	3/4	1/2
5/16	3/8	21306N-E06	5/8-18	2.82	1.97	2.00	.24	3/4	5/8
13/32	1/2	21308N-E08	3/4-18	2.78	1.69	1.81	.33	7/8	3/4

JIC 37° Female Swivel 90° Tube Elbow (Exceptions Noted for 45° Flare, Refer to Footnotes)



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex F
3/16	1/4	21304N-664 ^a	7/16-20	2.16	.68	1.44	.13	9/16	9/16
1/4	5/16	21305N-665 ^a	1/2-20	2.46	.77	1.75	.17	5/8	5/8
5/16	3/8	21306N-666	9/16-18	2.61	.85	1.81	.24	3/4	11/16
13/32	1/2	21308N-668 ^a	3/4-16	2.91	1.09	1.94	.33	7/8	7/8

SAE 45° Female Swivel 90° Tube Elbow



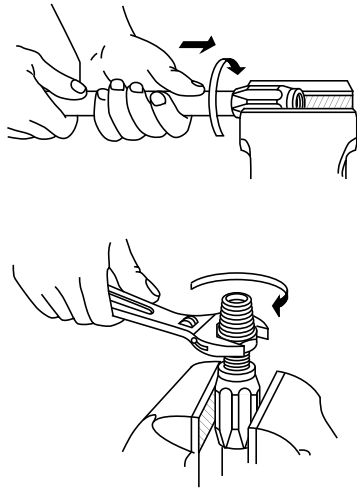
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex F
5/16	3/8	21306N-466	5/8-18	2.48	.85	1.63	.24	3/4	3/4

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

^a Swivel nuts are universal – both SAE 37° and 45° connections.



Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.



Hose End Series: 247 'N' Series

Typical Application: Medium pressure and high temperature hose lines for a variety of applications including truck, industrial, and small engine where temperature may be a problem.

Compatible Hose: H059, H069, H166, H169, H229, H366, H56906, H56908, H56910, H56912

Pressure: Determined by maximum working pressure for hose size and hose end configuration whichever is lesser. See page 15 for working pressure ratings for hose end configurations.

Material: AISI/SAE 12L14 carbon steel

Plating: Zinc; yellow dichromate finish

Advantages: Very popular in heavy-duty truck markets. Good selection of hose ends. Compatible with a wide variety of hose types allowing for a diverse number of applications. Non-mandrel assembly.

Ordering Information: Order individually by catalog number.

Assembly Instructions:

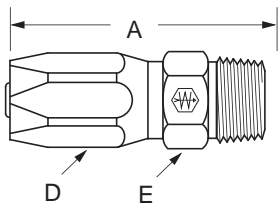
1. Lubricate insert threads and I.D. of hose.
2. Screw hose into socket (left-hand thread) until hose bottoms. Back out 1/4 turn.
3. Screw insert into socket until insert touches socket.

Refer to important safety information found on pages 1-2 of this catalog.

NOTE: Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

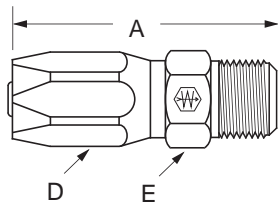
Label Set: FS-600

Male Pipe Rigid



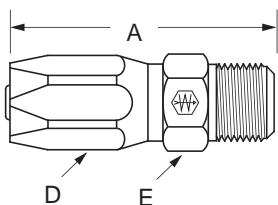
Hose I.D.	Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex E
3/16	1/8	24704N-102	1/8-27	1.71	1	.12	5/8	7/16
3/16	1/4	24704N-104	1/4-18	1.91	1.19	.12	5/8	9/16
1/4	1/4	24705N-104	1/4-18	1.96	1.25	.18	11/16	9/16
5/16	1/4	24706N-104	1/4-18	2.08	1.25	.25	13/16	9/16
5/16	3/8	24706N-106	3/8-18	2.11	1.25	.25	13/16	11/16
13/32	3/8	24708N-106	3/8-18	2.48	1.38	.36	15/16	11/16
13/32	1/2	24708N-108	1/2-14	2.71	1.63	.36	15/16	7/8
1/2	1/2	24710N-108	1/2-14	2.88	1.63	.45	1-1/8	7/8
1/2	3/4	24710N-112	3/4-14	2.94	1.69	.45	1-1/8	1-1/8
5/8	3/4	24712N-112	3/4-14	3.23	1.75	.55	1-1/4	1-1/4

JIC 37° Male Rigid



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex E
3/16	1/4	24704N-504	7/16-20	1.91	1.19	.12	5/8	1/2
1/4	5/16	24705N-505	1/2-20	2.01	1.19	.18	11/16	9/16
5/16	3/8	24706N-506	9/16-18	2.13	1.25	.25	13/16	5/8
13/32	1/2	24708N-508	3/4-16	2.64	1.56	.36	15/16	13/16
1/2	5/8	24710N-510	7/8-14	2.92	1.69	.45	1-1/8	15/16
5/8	3/4	24712N-512	1-1/16-12	3.32	1.81	.55	1-1/4	1-1/8
7/8	1	24716N-516	1-5/16-12	2.97	1.81	.81	1-7/16	1-3/8

SAE 45° Flare Male Rigid



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex E
3/16	1/4	24704N-304	7/16-20	1.84	1.13	.12	5/8	1/2
1/4	5/16	24705N-305	1/2-20	2.00	1.25	.18	11/16	9/16
5/16	3/8	24706N-306	5/8-18	2.19	1.25	.25	13/16	11/16
13/32	1/2	24708N-308	3/4-16	2.67	1.50	.36	15/16	13/16
1/2	5/8	24710N-310	7/8-14	3.01	1.75	.45	1-1/8	15/16
5/8	3/4	24712N-312	1-1/16-14	3.46	1.88	.55	1-1/4	1-1/8

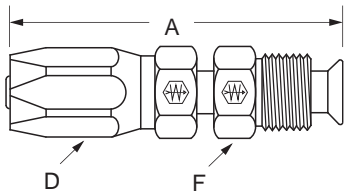
† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

Field Attachable 247 'N' Series

Hose Ends

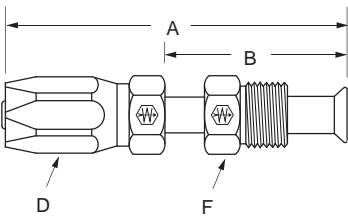
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

Inverted Male Swivel Straight



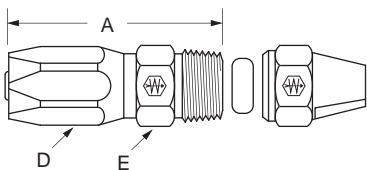
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex F
3/16	1/4	24704N-B04	7/16-24	2.54	1.81	.18	5/8	7/16
1/4	5/16	24705N-B05	1/2-20	2.75	2.00	.21	11/16	1/2
5/16	3/8	24706N-B06	5/8-18	2.91	2.00	.31	13/16	5/8
13/32	1/2	24708N-B08	3/4-18	3.63	2.50	.43	15/16	3/4

Inverted Male Swivel - Extended



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex F
5/16	1/4	24706N-B24	7/16-24	7.62	6.00	6.75	.15	13/16	7/16
5/16	5/16	24706N-B25	1/2-20	7.62	6.00	6.75	.21	13/16	1/2
5/16	3/8	24706N-B26	5/8-18	7.62	6.00	6.75	.24	13/16	5/8

Air Brake Connection (Hose to Copper/Nylon Tubing) (For 150 PSI Air Pressure Max.)

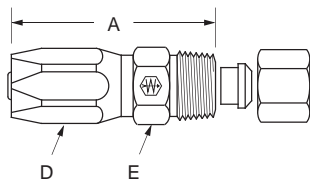


Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex E
13/32	3/8	24708B-Y56	17/32-24	2.36	1.25	.361	15/16	7/8
1/2	1/2	24710B-Y58	11/16-20	2.66	1.38	.453	1-1/8	7/8
1/2	5/8	24710B-Y60	13/16-18	2.72	1.44	.453	1-1/8	7/8
5/8	3/4	24712B-Y62	1-18	3.14	1.56	.549	1-1/4	1

Tube Size	Hose to Copper Tubing		Hose to Nylon Tubing		
	Catalog Number Sleeve	Catalog Number Nut	Catalog Number Sleeve	Catalog Number Nut	Catalog Number Insert
3/8	1360x6	1361x6	1460x6	1461x6	1484x6
1/2	1360x8	1361x8	1460x8	1461x8	1484x8
5/8	1360x10	1361x10	1460x10	1461x10	1484x10
3/4	1360x12	1361x12	1460x12	1461x12	1484x12

(Nut and Sleeve not included.)

Flareless Tube Rigid Ermeto® 7000 Series (With Nut and Sleeve)



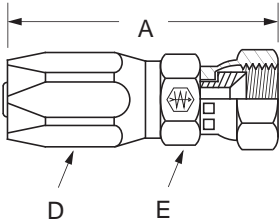
(For replacement Nuts and Sleeves, see page 237.)

Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex E
5/16	1/4	24706N-754	7/16-20	2.02	1.13	.20	13/16	5/8
5/16	5/16	24706N-755	1/2-20	1.96	1.13	.23	13/16	5/8
5/16	3/8	24706N-756	9/16-18	1.98	1.13	.28	13/16	11/16
5/16	1/2	24706N-758	3/4-16	2.12	1.25	.28	13/16	13/16

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

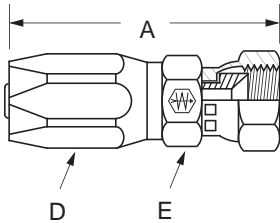
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

JIC 37° Female Swivel (Exceptions Noted, Refer to Footnotes)



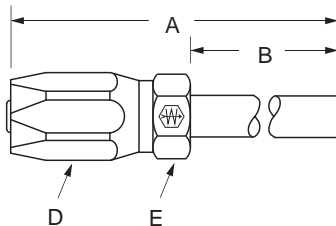
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex E
3/16	1/4	24704N-604 ^a	7/16-20	2.01	1.31	.13	5/8	9/16
1/4	5/16	24705N-605 ^a	1/2-20	2.19	1.50	.18	11/16	5/8
5/16	1/4	24706N-604 ^a	7/16-20	2.19	1.31	.17	13/16	9/16
5/16	5/16	24706N-605 ^a	1/2-20	2.38	1.50	.25	13/16	5/8
5/16	3/8	24706N-606	9/16-18	2.35	1.50	.25	13/16	11/16
5/16	1/2	24706N-608 ^a	3/4-16	2.45	1.56	.39	13/16	7/8
13/32	1/2	24708N-608 ^a	3/4-16	2.82	1.75	.36	15/16	7/8
1/2	1/2	24710N-608 ^a	3/4-16	3.04	1.75	.39	1-1/8	7/8
1/2	5/8	24710N-610 ^a	7/8-14	3.04	1.75	.45	1-1/8	1
5/8	3/4	24712N-612	1-1/16-12	3.46	1.94	.55	1-1/4	1-1/4
7/8	1	24716N-616	1-5/16-12	3.21	2.00	.81	1-7/16	1-1/2

SAE 45° Flare Female Swivel



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex F
5/16	3/8	24706N-406	5/8-18	2.28	1.38	.25	13/16	3/4
13/32	3/8	24708N-406	5/8-18	2.65	1.56	.28	15/16	3/4
5/8	3/4	24712N-412	1-1/16-14	3.54	2.00	.55	1-1/4	1-1/4

Straight Tube – Extended



Hose I.D.	Tube Size	Catalog Number	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex E
3/16	1/4	24704N-T54	5.22	3.75	4.50	.12	5/8	1/2
1/4	5/16	24705N-T55	6.33	4.80	5.56	.18	11/16	1/2
5/16	3/8	24706N-T56	7.42	5.80	6.50	.25	13/16	1/2
13/32	1/2	24708N-T58	8.78	6.69	7.63	.36	15/16	3/4
1/2	5/8	24710N-T60	9.91	7.69	8.63	.45	1-1/8	7/8

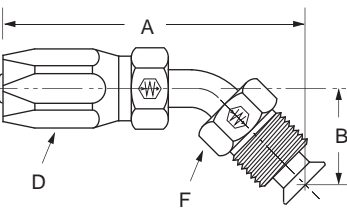
Hose to Copper Tubing

Tube Size	Catalog Number Sleeve	Catalog Number Nut
3/8	1360x6	1361x6
1/2	1360x8	1361x8
5/8	1360x10	1361x10
3/4	1360x12	1361x12

Hose to Nylon Tubing

Catalog Number Sleeve	Catalog Number Nut	Catalog Number Insert
1460x6	1461x6	1484x6
1460x8	1461x8	1484x8
1460x10	1461x10	1484x10
1460x12	1461x12	1484x12

Inverted Male Swivel 45° Tube Elbow



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex F
1/4	5/16	24705N-E45	1/2-20	3.42	1.14	2.63	.18	11/16	1/2

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

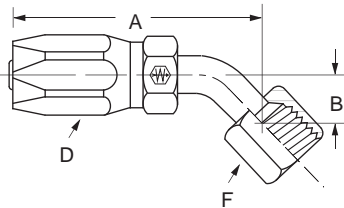
^a Swivel nuts are universal – both SAE 37° and 45° flare.

Field Attachable 247 'N' Series

Hose Ends

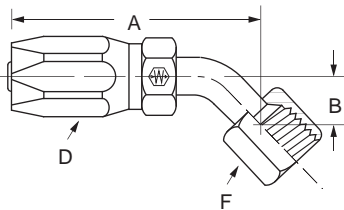
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

JIC 37° Female Swivel 45° Tube Elbow (Exceptions Noted for 45° Flare, Refer to Footnotes)



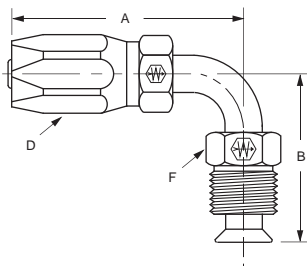
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex F
3/16	1/4	24704N-684 ^a	7/16-20	2.45	.33	1.75	.12	5/8	9/16
1/4	5/16	24705N-685 ^a	1/2-20	2.60	.36	1.88	.18	11/16	5/8
5/16	3/8	24706N-686	9/16-18	2.78	.39	1.88	.25	13/16	11/16
13/32	1/2	24708N-688 ^a	3/4-16	3.46	.55	2.31	.33	15/16	7/8
1/2	5/8	24710N-690 ^a	7/8-14	3.86	.63	2.63	.45	1-1/8	1
5/8	3/4	24712N-692	1-1/16-12	4.39	.78	2.88	.55	1-1/4	1-1/4
7/8	1	24716N-696	1-5/16-12	5.21	1.10	3.94	.76	1-7/16	1-7/16

SAE 45° Female Swivel 45° Tube Elbow



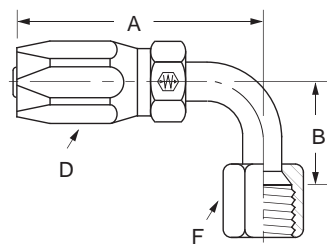
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex F
5/16	1/4	24706N-484	7/16-20	2.61	.33	1.75	.25	13/16	5/8
5/16	3/8	24706N-486	5/8-18	2.82	.39	1.94	.25	13/16	3/4
5/8	3/4	24712N-492	1-1/16-14	4.45	.78	2.94	.55	1-1/4	1-1/4

Inverted Male Swivel 90° Tube Elbow



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex F
3/16	1/4	24704N-E04	7/16-24	2.26	1.36	1.56	.18	5/8	7/16
1/4	5/16	24705N-E05	1/2-20	2.59	1.61	1.88	.24	11/16	1/2
5/16	1/4	24706N-E04	7/16-24	2.41	1.36	1.50	.18	7/8	7/16
5/16	5/16	24706N-E05	1/2-20	2.74	1.61	1.88	.24	7/8	1/2
5/16	3/8	24706N-E06	5/8-18	3.03	1.97	2.13	.30	7/8	5/8

JIC 37° Female Swivel 90° Tube Elbow (Exceptions Noted, Refer to Footnotes)



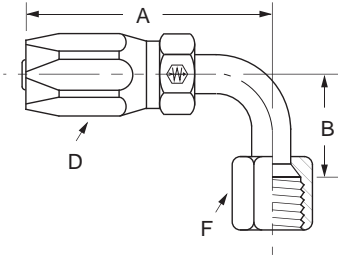
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex F
3/16	1/4	24704N-664 ^a	7/16-20	2.28	.68	1.50	.12	5/8	9/16
1/4	5/16	24705N-665 ^a	1/2-20	2.60	.77	1.88	.18	11/16	5/8
5/16	3/8	24706N-666	9/16-18	2.78	.85	2.88	.25	13/16	11/16
13/32	1/2	24708N-668 ^a	3/4-16	3.20	1.09	2.13	.36	15/16	7/8
1/2	1/2	24710N-668 ^a	3/4-16	3.45	1.09	2.13	.45	15/16	7/8
1/2	5/8	24710N-670 ^a	7/8-14	3.63	1.23	2.50	.45	1-1/8	1
5/8	3/4	24712N-672	1-1/16-12	4.29	1.82	2.81	.55	1-1/4	1-1/4
7/8	1	24716N-676	1-5/16-12	4.51	2.14	2.81	.81	1-7/16	1-1/2

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

^a Swivel nuts are universal – both SAE 37° and 45° flare.

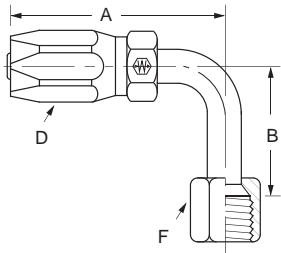
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

SAE 45° Female Swivel 90° Tube Elbow



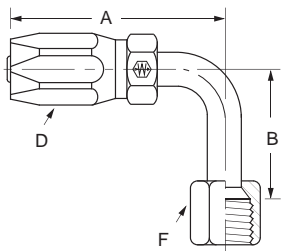
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex F
5/16	3/8	24706N-466	5/8-18	2.74	.85	1.88	.25	13/16	3/4
5/8	3/4	24712N-472	1-1/16-14	4.33	1.82	2.75	.55	1-1/4	1-1/4

JIC 37° Female Swivel Long Drop 90° Tube Elbow (Exceptions Noted, Refer to Footnotes)



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex F
3/16	1/4	24704N-644 ^a	7/16-20	2.35	1.80	1.69	.15	5/8	9/16
1/4	5/16	24705N-645 ^a	1/2-20	2.54	1.80	1.88	.21	11/16	5/8
5/16	3/8	24706N-646	9/16-18	2.83	2.18	2.00	.24	13/16	11/16
13/32	1/2	24708N-648 ^a	3/4-16	3.31	2.43	2.25	.33	15/16	7/8
1/2	5/8	24710N-650 ^a	7/8-14	3.56	2.57	2.31	.46	1-1/8	1
5/8	3/4	24712N-652	1-1/16-12	4.43	3.73	3.00	.58	1-1/4	1-1/4
7/8	1	24716N-656	1-5/16-12	4.39	4.33	3.19	.76	1-7/16	1-1/2

SAE 45° Female Swivel Long Drop 90° Tube Elbow



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex F
5/16	1/4	24706N-444	7/16-20	2.54	1.80	1.63	.15	13/16	5/8
5/16	3/8	24706N-446	5/8-18	2.82	2.18	1.88	.24	13/16	3/4
5/8	3/4	24712N-452	1-1/16-14	4.39	3.73	2.81	.58	1-1/4	1-1/4

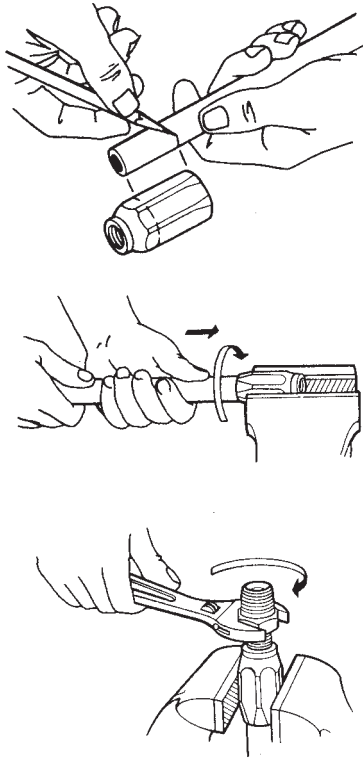
† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

^a Swivel nuts are universal – both SAE 37° and 45° flare.

Field Attachable 425 'N' Series

Hose Ends

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.



Hose End Series: 425 'N' Series

Typical Application: High pressure hydraulic applications such as construction, farm implement and industrial equipment.

Compatible Hose: H425

Pressure: Determined by maximum working pressure for hose size. See page 15 for working pressure ratings for hose end configurations.

Material: AISI/SAE 12L14 carbon steel

Plating: Zinc; yellow dichromate finish

Advantages: Good selection of hose ends. Non-mandrel assembly. Wide variety of applications because of its use with H425 hose.

Ordering Information: Order individually by catalog number. Order o-rings by catalog number; reference individual hose listing for details. For split flange kits, reference pages 252-253.

Assembly Instructions:

Due to the high torque required to assemble larger sizes, it is recommended that 425 'N' Series hose ends be assembled with the T-300 assembly machine (page 310).

1. Lubricate insert threads and I.D. of hose.
2. Measure from end of hose and mark the socket depth. Use notch on socket or see insertion depth chart below.
3. Screw hose into socket (left-hand thread) to the depth marked on hose.
4. Screw insert into socket until insert touches socket.

Label Set: FS-1200

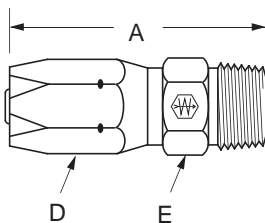
Refer to important safety information found on pages 1-2 of this catalog.

Insertion Depth

Hose I.D.	Screw Hose Into Socket
1/4	1"
3/8	1-5/32"
1/2	1-3/16"
3/4	1-5/16"
1	1-9/16"
1-1/4	1-7/8"
1-1/2	2"
2	1-15/16"

NOTE: Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

Male Pipe Rigid



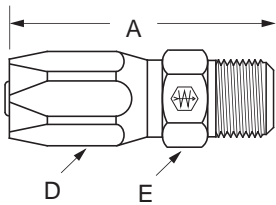
Hose I.D.	Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex E
1/4	1/8	42504N-102	1/8-27	2.18	1.19	.17	13/16	7/16
1/4	1/4	42504N-104	1/4-18	2.36	1.38	.17	13/16	9/16
3/8	1/4	42506N-104	1/4-18	2.50	1.31	.27	15/16	9/16
3/8	3/8	42506N-106	3/8-18	2.53	1.38	.27	15/16	11/16
1/2	3/8	42508N-106	3/8-18	2.58	1.38	.39	1-1/16	11/16
1/2	1/2	42508N-108	1/2-14	2.83	1.63	.39	1-1/16	7/8
1/2	3/4	42508N-112	3/4-14	2.86	1.69	.39	1-1/16	1-1/16
3/4	3/4	42512N-112	3/4-14	2.98	1.69	.61	1-3/8	1-1/16
1	1	42512N-116	1-11-1/2	3.59	2.00	.81	1-3/4	1-3/8
1-1/4	1-1/4	42520N-120	1-1/4-11-1/2	4.37	2.44	1.05	2-1/4	1-11/16
1-1/2	1-1/2	42524N-124	1-1/2-11-1/2	4.71	2.69	1.28	2-1/2	2
2	2	42532N-132	2-11-1/2	4.86	2.88	1.83	3	2-1/2

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.



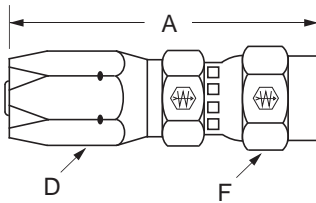
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

JIC 37° Male Rigid



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex E
1/4	1/4	42504N-504	7/16-20	2.35	1.38	.17	13/16	9/16
1/4	5/16	42504N-505	1/2-20	2.35	1.38	.17	13/16	9/16
1/4	3/8	42504N-506	9/16-18	2.39	1.38	.17	13/16	5/8
3/8	3/8	42506N-506	9/16-18	2.53	1.38	.27	15/16	5/8
3/8	1/2	42506N-508	3/4-16	2.69	1.50	.27	15/16	13/16
1/2	1/2	42508N-508	3/4-16	2.74	1.56	.39	1-1/16	13/16
1/2	5/8	42508N-510	7/8-14	2.87	1.69	.39	1-1/16	15/16
3/4	3/4	42512N-512	1-1/16-12	3.09	1.75	.61	1-3/8	1-1/8
1	1	42516N-516	1-5/16-12	3.56	1.94	.81	1-3/4	1-3/8

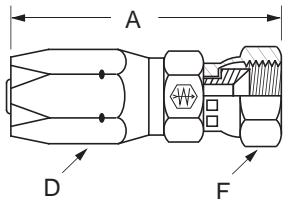
Female Pipe Swivel



Hose I.D.	Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex F
1/2	1/2	42508N-258	1/2-14	3.89	2.75	.39	1-1/16	1-1/8
3/4	3/4	42512N-262	3/4-14	4.09	2.81	.61	1-3/8	1-3/8

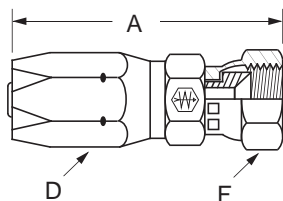
NOTE: Swivel for installation purposes only. (Not for temperatures above 200°F.)

JIC 37° Female Swivel (Exceptions Noted, Refer to Footnotes)



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex F
1/4	1/4	42504N-604 ^a	7/16-20	2.49	1.50	.17	13/16	9/16
1/4	5/16	42504N-605 ^a	1/2-20	2.59	1.56	.17	13/16	5/8
1/4	3/8	42504N-606	9/16-18	2.65	1.63	.17	13/16	11/16
3/8	3/8	42506N-606	9/16-18	2.79	1.63	.27	15/16	11/16
3/8	1/2	42506N-608 ^a	3/4-16	2.96	1.81	.27	15/16	7/8
1/2	1/2	42508N-608 ^a	3/4-16	3.01	1.81	.39	1-1/16	7/8
1/2	5/8	42508N-610 ^a	7/8-14	3.02	1.88	.39	1-1/16	1
3/4	5/8	42512N-610 ^a	7/8-14	3.14	1.88	.48	1-3/8	1
3/4	3/4	42512N-612	1-1/16-12	3.26	2.00	.61	1-3/8	1-1/4
3/4	7/8	42512N-614	1-3/16-12	3.38	2.06	.61	1-3/8	1-3/8
1	1	42516N-616	1-5/16-12	4.19	2.63	.81	1-3/4	1-1/2
1-1/4	1-1/4	42520N-620	1-5/8-12	4.76	2.75	1.08	2-1/4	2
1-1/2	1-1/2	42524N-624	1-7/8-12	5.04	3.00	1.28	2-1/2	2-1/4
2	2	42532N-632	2-1/2-12	5.80	3.88	1.73	3	3

SAE 45° Female Swivel



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex F
3/8	3/8	42506N-406	5/8-18	2.67	1.50	.27	15/16	3/4
3/4	3/4	42512N-412	1-1/16-14	3.27	2.00	.61	1-3/8	1-1/4

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

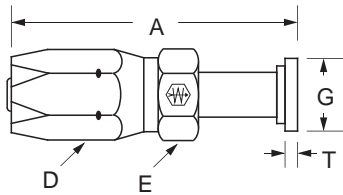
^a Swivel nuts are universal – both SAE 37° and 45° connections.

Field Attachable 425 'N' Series

Hose Ends

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

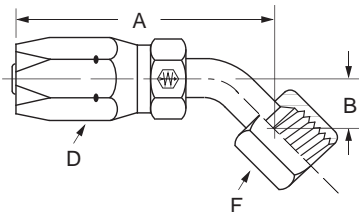
Split Flange Straight (SAE Code 61)



(For Split Flange Kits, see page 252.)

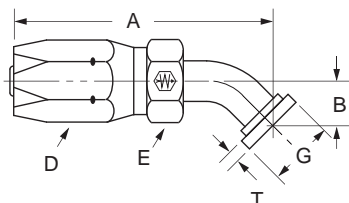
Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex E	G	T
3/4	3/4	42512N-G12	12x252	3.81	2.50	.58	1-3/8	1-15/16	1.50	.265 (38mm)
1	1	42516N-G16	16x252	4.02	2.50	.76	1-3/4	1-1/4	1.75	.315 (44mm)
1-1/4	1-1/4	42520N-G20	20x252	5.32	3.50	1.01	2-1/4	1-5/8	2.00	.315 (51mm)

JIC 37° Female Swivel 45° Tube Elbow (Refer to Footnotes)



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex F
1/4	1/4	42504N-684 ^a	7/16-20	2.86	.33	1.81	.15	13/16	9/16
3/8	3/8	42506N-686	9/16-18	3.15	.39	2.00	.25	15/16	11/16
1/2	1/2	42508N-688 ^a	3/4-16	3.46	.56	2.25	.36	1-1/16	7/8
1/2	5/8	42508N-690 ^a	7/8-14	3.92	.64	2.50	.36	1-1/16	1
3/4	3/4	42512N-692	1-1/16-12	4.17	.73	2.88	.55	1-3/8	1-1/4
1	1	42516N-696	1-5/16-12	5.42	1.10	3.75	.76	1-3/4	1-1/2

Split Flange 45° Tube Elbow (SAE Code 61)



(For Split Flange Kits, see page 252.)

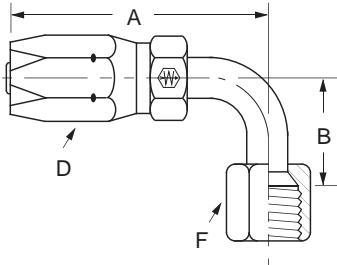
Hose I.D.	Nominal Flange Size	Catalog Number	Replacement O-Ring (Not Included)	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex E	G	T
3/4	3/4	42512N-G42	12x252	4.47	1.00	3.13	.58	1-3/8	15/16	1.50	.265 (38mm)
1	1	42516N-G46	16x252	5.15	1.06	3.56	.76	1-3/4	1-1/4	1.75	.315 (44mm)
1-1/4	1-1/4	42520N-G50	20x252	5.32	1.15	3.44	1.01	2-1/4	1-5/8	2.00	.315 (51mm)

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

^a Swivel nuts are universal – both SAE 37° and 45° connections.

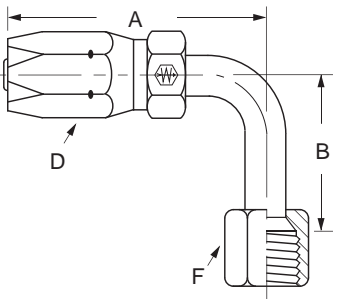
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

JIC 37° Female Swivel 90° Tube Elbow (Refer to Footnotes)



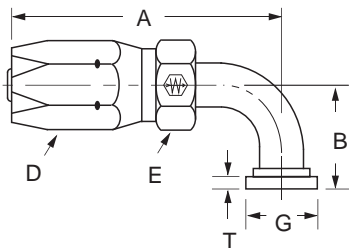
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex F
1/4	1/4	42504N-664 ^a	7/16-20	2.71	.68	1.69	.15	13/16	9/16
3/8	3/8	42506N-666	9/16-18	3.12	.85	1.94	.24	15/16	11/16
1/2	1/2	42508N-668 ^a	3/4-16	3.33	1.09	2.13	.33	1-1/16	7/8
1/2	5/8	42508N-670 ^a	7/8-14	3.57	1.23	2.38	.39	1-1/16	1
3/4	3/4	42512N-672	1-1/16-12	4.26	1.85	2.94	.58	1-3/8	1-1/4
1	1	42516N-676	1-5/16-12	5.14	2.14	3.56	.81	1-3/4	1-1/2

JIC 37° Female Swivel Long Drop 90° Tube Elbow (Refer to Footnotes)



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex F
1/4	1/4	42504N-644 ^a	7/16-20	2.76	1.80	1.75	.15	13/16	9/16
3/8	3/8	42506N-646	9/16-18	3.17	2.18	2.00	.24	15/16	11/16
1/2	1/2	42508N-648 ^a	3/4-16	3.40	2.45	2.19	.33	1-1/16	7/8
3/4	3/4	42512N-652	1-1/16-12	4.08	3.75	2.75	.58	1-3/8	1-1/4

Split Flange 90° Tube Elbow (SAE Code 61)



Hose I.D.	Nominal Flange Size	Replacement Catalog Number	O-Ring (Not Included)	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex E	G	T
3/4	3/4 (38mm)	42512N-G72	12x252	3.95	2.13	2.75	.58	1-3/8	15/16	1.50	.265
3/4	1 (44mm)	42512N-G76	16x252	4.06	2.13	2.75	.58	1-3/8	15/16	1.75	.315
1	1 (44mm)	42516N-G76	16x252	4.81	2.38	3.25	.88	1-3/4	1-1/4	1.75	.315
1-1/4	1-1/4 (51mm)	42520N-G80	20x252	5.47	2.62	3.56	1.03	2-1/4	1-5/8	2.00	.315
1-1/4	1-1/2 (60mm)	42520N-G84	24x252	5.49	2.75	3.63	1.05	2-1/4	1-7/8	2.37	.315

(For Split Flange Kits, see page 252.)

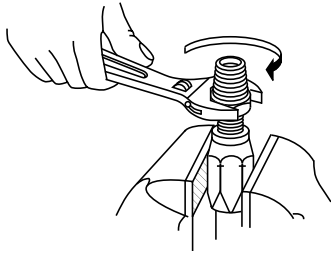
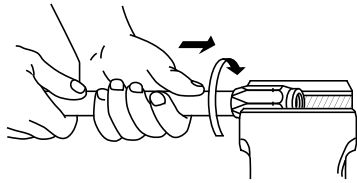
† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

^a Swivel nuts are universal – both SAE 37° and 45° connections.

Field Attachable 436 'N' Series

Hose Ends

Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.



Hose End Series: 436 'N' Series

Typical Application: Medium pressure hydraulic applications where compatibility may be a problem or where shock hazards exist.

Compatible Hose: H435, H436, H435 and H436 Tinline

Pressure: Determined by maximum working pressure for hose size and hose end configuration whichever is lesser. See page 12 for working pressure ratings for hose end configurations.

Material: AISI/SAE 12L14 carbon steel

Plating: Zinc; yellow dichromate finish

Advantages: Good selection of hose ends. Non-mandrel assembly.

Ordering Information: Order individually by catalog number.

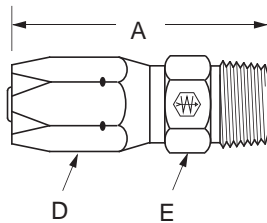
Assembly Instructions:

1. Lubricate insert threads and I.D. of hose.
2. Screw hose into socket (left-hand thread) until hose bottoms. Back out 1/4 turn.
3. Screw insert into socket until insert touches socket.

Refer to important safety information found on pages 1-2 of this catalog.

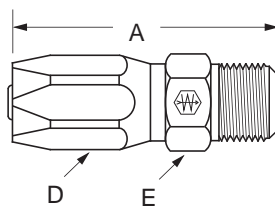
NOTE: Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

Male Pipe Rigid



Hose I.D.	Pipe Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex E
1/4	1/4	43604N-104	1/4-18	1.96	1.13	.18	5/8	9/16
3/8	1/4	43606N-104	1/4-18	2.50	1.31	.27	7/8	9/16
3/8	3/8	43606N-106	3/8-18	2.53	1.38	.27	7/8	11/16
1/2	3/8	43608N-106	3/8-18	2.58	1.31	.39	1-1/16	11/16
1/2	1/2	43608N-108	1/2-14	2.83	1.56	.39	1-1/16	7/8
3/4	3/4	43612N-112	3/4-14	2.98	1.63	.61	1-3/8	1-1/16
1	1	43616N-116	1-11-1/2	3.59	1.94	.81	1-11/16	1-3/8

JIC 37° Male Rigid

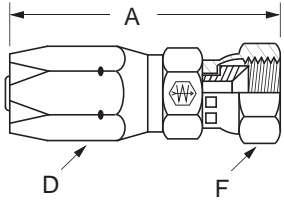


Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex E
1/4	1/4	43604N-504	7/16-20	1.99	1.19	.17	5/8	1/2
1/4	5/16	43604N-505	1/2-20	1.96	1.19	.18	5/8	9/16
3/8	3/8	43606N-506	9/16-18	2.53	1.38	.27	7/8	5/8
3/8	1/2	43606N-508	3/4-16	2.69	1.50	.27	7/8	13/16
1/2	1/2	43608N-508	3/4-16	2.74	1.50	.39	1-1/16	13/16
1/2	5/8	43608N-510	7/8-14	2.87	1.63	.39	1-1/16	15/16

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

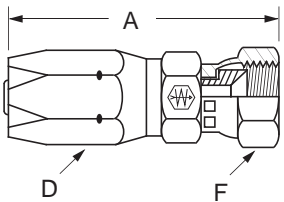
Refer to Hose Section, pages 30-65 or the Boston Weatherhead Hose End and Tool Selector Chart for Qualified Hose Ends.

SAE 37° Female Swivel (Exceptions Noted, Refer to Footnotes)



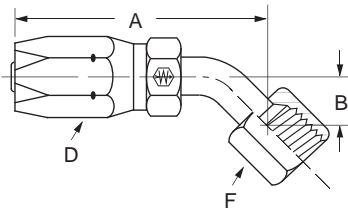
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex F
1/4	1/4	43604N-604 ^a	7/16-20	2.13	1.31	.17	5/8	9/16
1/4	5/16	43604N-605 ^a	1/2-20	2.23	1.44	.18	5/8	5/8
1/4	3/8	43604N-606	9/16-18	2.24	1.44	.18	5/8	11/16
3/8	3/8	43606N-606	9/16-18	2.79	1.63	.27	7/8	11/16
3/8	1/2	43606N-608 ^a	3/4-16	2.96	1.81	.27	7/8	7/8
1/2	1/2	43608N-608 ^a	3/4-16	3.01	1.75	.39	1-1/16	7/8
1/2	5/8	43608N-610 ^a	7/8-14	3.02	1.75	.39	1-1/16	1
3/4	3/4	43612N-612	1-1/16-12	3.27	1.88	.61	1-3/8	1-1/4
1	1	43616N-616	1-5/16-12	3.83	2.19	.81	1-11/16	1-1/2

SAE 45° Female Swivel



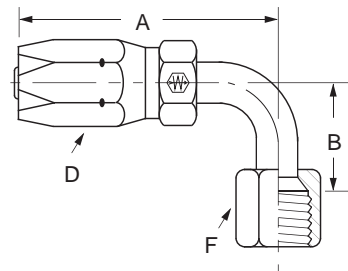
Hose I.D.	Tube Size	Catalog Number	Thread Size	A	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex F
3/8	3/8	43606N-406	5/8-18	2.67	1.50	.27	7/8	3/4

JIC 37° Female Swivel 45° Tube Elbow (Refer to Footnotes)



Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex F
1/4	1/4	43604N-684 ^a	7/16-20	2.49	.33	1.69	.18	5/8	9/16

JIC 37° Female Swivel 90° Tube Elbow (Refer to Footnotes)





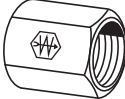
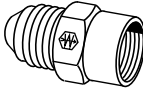
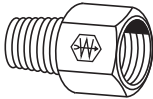
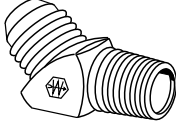
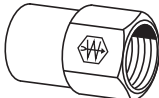
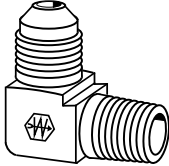

Hose I.D.	Tube Size	Catalog Number	Thread Size	A	B	Hose Cut-Off Factor†	Hole Dia.	Hex D	Hex F
1/4	1/4	43604N-664 ^a	7/16-20	2.42	.68	1.63	.18	5/8	9/16
3/8	3/8	43606N-666	9/16-18	3.02	.85	1.88	.24	7/8	11/16
1/2	1/2	43608N-668 ^a	3/4-16	3.28	1.09	2.00	.33	1-1/16	7/8

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

^a Swivel nuts are universal – both SAE 37° and 45° connections.


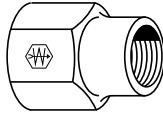
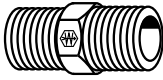
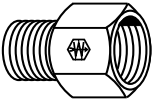
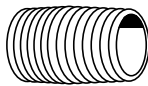

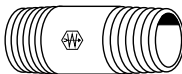
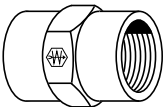
Brass Adapters

Steel Fittings

Inverted Flare Tube Nut (Ref. SAE No. 040110) 	O.D. Tube 1/8 3/16 1/4 5/16 3/8 3/8 7/16 1/2 5/8 3/4 7/8 1	Steel Catalog Number 105x2 105x3 105x4 105x5 105x6 105x6x7* 105x7 105x8 105x10 105x12 105x14 105x16	Brass Catalog Number – 100x3 100x4 100x5 100x6 – – 100x8 – – – –	SAE 45° Flare Male Connector (Ref. SAE No. 010102) 	Tube O.D. 1/8 3/16 1/4 1/4 5/16 1/8 3/8 1/4 3/8 3/8 3/8 7/16 1/2 1/2 1/2 5/8 5/8 3/4 3/4	Male Pipe Thread 1/8 1/8 1/8 1/4 1/8 1/4 1/8 1/4 3/8 1/4 3/8 1/2 1/4 1/4 1/2 3/8 1/2 1/2 3/4	Catalog Number 48x2 48x3 48x4 48x4x4 48x5 48x5x4 48x6x2 48x6 48x6x6 48x6x8 48x7 48x8x4 48x8 48x8x8 48x10x6 48x10 48x12 48x12x12
	Inverted Flare Union (Ref. SAE No. 040101) 	Tube O.D. 1/8 3/16 1/4 5/16 3/8 1/2			Catalog Number 302x2 302x3 302x4 302x5 302x6 302x8	SAE 45° Flare Female Connector (Ref. SAE No. 010103) 	Tube O.D. 3/16 1/4 1/4 5/16 5/16 3/8 3/8 3/8 3/8 1/2 1/2 1/2 5/8 5/8
Inverted Flare Male Connector (Ref. SAE No. 040102) 	Tube O.D. 1/8 3/16 1/4 1/4 5/16 5/16 3/8 3/8 3/8 3/8 1/2 1/2 1/2 5/8 3/4 1	Male Pipe Thread 1/8 1/8 1/8 1/4 1/8 1/4 1/8 1/4 3/8 1/2 1/4 3/8 1/2 1/2 1/2 3/4 1	Catalog Number 202x2 202x3 202x4 202x4x4 202x5 202x5x4 202x6x2 202x6 202x6x6 202x8x4 202x8 202x8x8 202x10 202x12 202x16	SAE 45° Flare 45° Male Elbow (Ref. SAE No. 010302) 	Tube O.D. 1/4 1/4 5/16 3/8 1/2 1/2 5/8 5/8		Male Pipe Thread 1/8 1/4 1/8 1/4 3/8 1/2 1/2 1/2 3/8
Inverted Flare Female Connector (Ref. SAE No. 040103) 	Tube O.D. 3/16 1/4 5/16	Fem. Pipe Thread 3/16 1/8 1/8	Catalog Number 252x3 252x4 252x5		SAE 45° Flare 90° Male Elbow (Ref. SAE No. 010202) 	Tube O.D. 1/8 3/16 1/4 1/4 5/16 5/16 3/8 3/8 3/8 3/8 7/16 1/2 1/2 1/2 5/8 5/8 3/4 3/4	Male Pipe Thread 1/8 1/8 1/8 1/4 1/8 1/4 1/8 1/4 3/8 1/2 1/4 1/4 1/2 1/2 3/8 1/2 1/2 3/4 3/4
SAE 45° Flare Union (Ref. SAE No. 010101) 	Tube O.D. 1/8 3/16 1/4 5/16 3/8 1/2 5/8		Catalog Number 42x2 42x3 42x4 42x5 42x6 42x8 42x10				

RELATED PROD

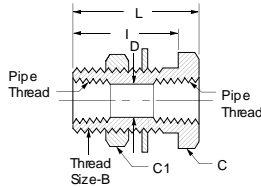
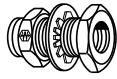


Cap	Fem. Pipe Thread	Catalog Number	Reducing Coupling (Ref. SAE No. 130138)	Fem. Pipe Thread	Fem. Pipe Thread	Catalog Number	
	1/8* 1/4* 3/8*	3129x2 3129x4 3129x6		1/4 3/8 3/8 1/2	1/8 1/8 1/4 3/8	3300x4x2 3300x6x2 3300x6x4 3300x8x2	
*PTF Short Thread			Hex Nipple (Ref. SAE No. 130137)	Male Pipe Thread	Male Pipe Thread	Catalog Number	
Adapter (Ref. SAE No. 130139)	Fem. Pipe Thread	Male Pipe Thread	Catalog Number		1/16 1/8 1/8 1/8 1/4 1/4 3/8 3/8 3/8 1/2 1/2 3/4 3/4	1/16 1/16 1/8 1/8 1/8 1/4 1/4 1/8 1/8 3/8 3/8 1/4 1/2 1/2 3/4 3/4	3325x1 3325x2x1 3325x2 3325x4x2 3325x4 3325x6x2 3325x6x4 3325x6 3325x8 3325x12
	1/8 1/4 1/4 3/8 3/8 1/2 3/4 3/4	1/8 1/8 1/4 1/4 3/8 3/8 3/8 1/2 1/2	3200x2 3200x4x2 3200x4 3200x6x4 3200x6 3200x8x6 3200x12x6 3200x12x8	Close Nipple	Male Pipe Thread	Length	Catalog Number
Bushing (Ref. SAE No. 130140)	Male Pipe Thread	Fem. Pipe Thread	Catalog Number		1/8 1/4 3/8 1/2 3/4	3/4 7/8 1 1-1/8 1-3/8	3326x2 3326x4 3326x6 3326x8 3326x12
	1/4 3/8 3/8 1/2 1/2 1/2 3/4 3/4	1/8 1/8 1/4 1/8 1/4 3/8 3/8 1/2	3220x4x2* 3220x6x2 3220x6x4* 3220x8x2* 3220x8x4* 3220x8x6 3220x12x6* 3220x12x8*	Long Nipple	Male Pipe Thread	Length	Catalog Number
*PTF Short Thread					1/8 1/4 3/8 1/8 1/4 3/8 1/2 1/2 1/8 1/4 3/8 1/2 3/4 1/8 1/4 3/8 1/2	1-1/2 1-1/2 1-1/2 2 2 2 2 2 2-1/2 2-1/2 2-1/2 2-1/2 2-1/2 2-1/2 3 3 3 3	3327x2 3327x4 3327x6 3328x2 3328x4 3328x6 3328x8 3328x8 3329x6 3329x4 3329x6 3329x8 3329x12 3330x2 3330x4 3330x6 3330x8
Coupling (Ref. SAE No. 130138)		Fem. Pipe Thread	Catalog Number				
		1/16 1/8 1/4 3/8 1/2 3/4	3300x1 3300x2 3300x4 3300x6 3300x8 3300x12				

Bulkhead Couplings

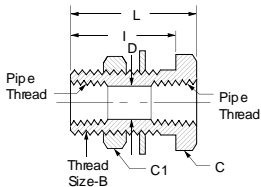
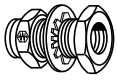
Brass & Steel Fittings

Bulkhead Coupling (Steel)



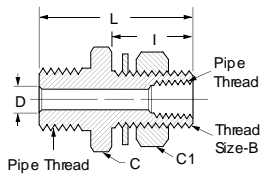
Fem. Pipe Thread	Catalog Number	Thread Size B	Hex C	Hex C1	D	I	L
1/4	W05465	3/4-16	1	1-1/16	.422	1.25	1.50
1/4	W21204	3/4-16	1	1-1/16	.422	.69	.94
3/8	W17709	1-14	1-1/8	1-3/8	.563	1.06	1.31

Bulkhead Coupling (Brass)



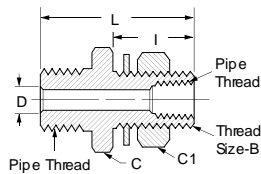
Fem. Pipe Thread	Catalog Number	Thread Size B	Hex C	Hex C1	D	I	L
1/4	1344	3/4-16	1	1-1/16	.422	1.25	1.50
1/4	1345	3/4-16	1	1-1/16	.422	.69	.94
3/8	1346	1-14	1-1/8	1-3/8	.563	1.06	1.31
1/2	1351	1-1/8-14	1-1/4	1-3/8	.703	1.19	1.50

Bulkhead Coupling (Steel)



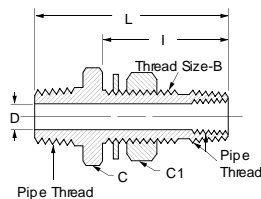
Male Pipe Thread	Fem. Pipe Thread	Catalog Number	Thread Size B	Hex C	Hex C1	D	I	L
1/2	1/4	W05498	3/4-16	1-1/4	1-1/16	.312	1.13	2.16
1/2	1/4	W05499	3/4-16	1-1/4	1-1/16	.312	1.53	2.53

Bulkhead Coupling (Brass)



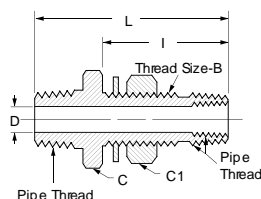
Male Pipe Thread	Fem. Pipe Thread	Catalog Number	Thread Size B	Hex C	Hex C1	D	I	L
1/2	1/4	1340	3/4-16	1-1/4	1-1/16	.312	1.13	2.16
1/2	1/4	1341	3/4-16	1-1/4	1-1/16	.312	1.53	2.53

Bulkhead Coupling (Steel)



Male Pipe Thread	Fem. Pipe Thread	Catalog Number	Thread Size B	Hex C	Hex C1	D	I	L
1/2	1/4	W05730	1-14	1-1/4	1-3/8	.375	1.88	2.94
1/2	1/4	W23464	1-14	1-1/4	1-3/8	.375	2.88	3.94

Bulkhead Coupling (Brass)



Male Pipe Thread	Fem. Pipe Thread	Catalog Number	Thread Size B	Hex C	Hex C1	D	I	L
1/2	1/4	1342	1-14	1-1/4	1-3/8	.375	1.88	2.94
1/2	1/4	1343	1-14	1-1/4	1-3/8	.375	2.88	3.94

RELATED PROD

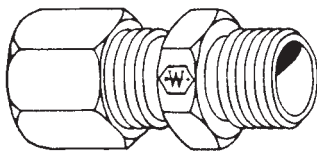
Materials

All Weatherhead Fittings are available in a variety of alloys on special order.

Carbon Steel Fittings – are precision machined from AISI 12L14 carbon steel. Shaped fittings such as elbows and tees with a “C” prefix are made from hi-density forgings. Shaped fittings with a “TF” prefix are brazed. Straight fittings made from bar stock.

Stainless Steel Fittings – are made from type 316 stainless. Standard Ermeto® flareless sleeves are made from 17-4PH precipitation hardened stainless.

Finishes



Weathercote™ – is an exclusive Boston Weatherhead® trademark for a protective coating that far exceeds the minimum requirements of the SAE specifications for a corrosion resistant finish for use with petroleum-based, synthetic, and water-based hydraulic fluids. It is readily identified by its dark appearance. Weathercote™ is an amorphous phosphate coating

covered with a soluble rust-proof film resulting in a coating of .0002” thick, yet providing full protection against electrolytic action, thread seizure or corrosive action of hydraulic fluids.

The lubricity of the rust-proof solvent film measurably reduces the amount of torque required to make leak-proof connections.

Zinc Plated – Weatherhead® fittings are given an Electrolytic coating .0002” thick minimum.

Stainless Steel – fittings are supplied with natural surface finish except tube nuts which are coated with a bonded dry-film lubricant (black) to reduce assembly torque and prevent galling of threads. All Weatherhead® Stainless Steel Fittings are passivated to remove microscopic foreign particles from the surface of stainless steel as required. Process also leaves a film of corrosion protection.

Hydraulic Fluids

Modern hydraulic systems in use today employ a wide variety of high quality hydraulic fluids. There are three principle types in general use today – each best suited for particular conditions. They are discussed here briefly to clarify the fitting finishes compatible with each type.

Petroleum or Mineral Oil Based Hydraulic Fluids – are good general purpose fluids available in a full range of viscosity specified as SAE 10, 20, 30, etc. These fluids are not fire resistant making them unsuitable for use where there is a potential source of ignition. ALL Weatherhead® fittings and O-rings can be used with these fluids.

Straight Synthetic Hydraulic Fluids – is a general term applied to such products as Pydraul, Lindol, Cellulubes 90, 150, 180, 220, etc. where fire hazards are high. Weathercote™ finish fittings are recommended for this type of fluid. O-rings MUST be made of a “Butyl” compound, or they will “swell” when contacted by synthetic fluids.

Water-Based Hydraulic Fluids – consist generally of a mixture of water and poly-glycols. They are non-flammable and serve the same purpose as the synthetic types. **Only Weathercote™ finish fittings are recommended for this type of fluid.** Zinc plate finishes will be dissolved by water-based fluids and damage to expensive components may result. These water-based fluids are usually less expensive than synthetic fluids and have little or no detrimental effects on Buna-N compounds used in o-rings.

O-Ring Compound and Application Chart

O-Ring Catalog Number	Base Material of Compound	Petroleum & Mineral Oil-Based Hydraulic Fluids	Straight Synthetic Hydraulic Fluids	Water-Based Hydraulic Fluids (Poly-glycols)	Air	Water	Lubricating Oils	Durometer Hardness	Temperature Range °F
_x252*	Buna-N	Excellent	Unsuitable	Good	Excellent	Good	Excellent	90	-40° to +250°
2018x*	Buna-N	Excellent	Unsuitable	Good	Excellent	Good	Excellent	90	-40° to +250°
4629x*	Buna-N	Excellent	Unsuitable	Good	Excellent	Good	Excellent	90	-40° to +250°
7629x*	Buna-N	Excellent	Unsuitable	Good	Excellent	Good	Excellent	90	-40° to +250°
MB7629x*	Buna-N	Excellent	Unsuitable	Good	Excellent	Good	Excellent	90	-40° to +250°
M7629x*	Buna-N	Excellent	Unsuitable	Good	Excellent	Good	Excellent	90	-40° to +250°
ZW747x*	Buna-N	Excellent	Unsuitable	Good	Excellent	Good	Excellent	70	-40° to +250°

*Standard O-ring complies with SAE J-515 Type CH and ASTM specifications D2000. All standard Weatherhead® straight thread fittings are supplied with this type O-ring, unless otherwise specified. (Viton O-Rings are available as special order items only).

Adapters

Steel Fittings

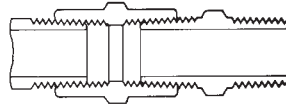
Steel Pipe

Typical Application: Grease, instrumentation and most hydraulic systems.

Pressure: See chart below.

Vibration Rating: Fair resistance.

Material: Carbon steel – AISI/SAE 12L14
Stainless steel – Type 316



Plating: Zinc; yellow dichromate finish.

Temperature: -65°F to +400°F.

Advantages: Dryseal pipe threads (NPTF), zinc plate, compact size, and broad selection of styles and sizes.

Conformance: Meets SAE specifications.

Ordering Information: Each fitting is ordered individually by catalog number.

NOTE: See page 302 for new hydraulic o-ring assortment.

LABEL SET: FS-2000 (Adhesive)

Forged Fittings and Adaptors

Pipe Fittings 3000 Series Pressure Rating Chart


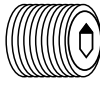
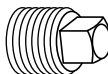
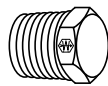
Connection Type	End Size									
	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	
Male Pipe (NPTF)	6000	5000	5000	4000	4000	4000	3000	2500	2500	
Female Pipe (NPTF)	5000	5000	4000	3000	2500	2000	1500	1500	1000	

Brazed Fittings (TF)

Pipe Fittings 3000 Series Pressure Rating Chart

Connection Type	End Size									
	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	
Male Pipe (NPTF)	5000	5000	4000	3000	2500	2000	1150	1000	1000	
Female Pipe (NPTF)	5000	5000	4000	3000	2500	2000	1150	1000	1000	

Pipe Size	1/16	1/8	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Thread Size	1/16-27	1/8-27	1/4-18	3/8-18	1/2-14	3/4-14	1-11 1/2	1 1/4-11 1/2	1 1/2-11 1/2	2-11 1/2

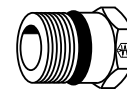
Seal-Nut For Male Pipe Thread 	Pipe Thread		Catalog Number
	1/8		C3059x2
	1/4		C3059x4
	3/8		C3059x6
	1/2		C3059x8
	3/4		C3059x12
Hex Socket Pipe Plug 	Male Pipe Thread		Catalog Number
	1/16		C3169x1
	1/8		C3169x2
	1/4		C3169x4
Square Head Plug Pipe Thread 	Male Pipe Thread		Catalog Number
	1/8		C3179x2
	1/4		C3179x4
	3/8		C3179x6
	1/2		C3179x8
	3/4		C3179x12
Hex Head Pipe Plug 	Male Pipe Thread		Catalog Number
	1/8		C3159x2+
	1/4		C3159x4+
	3/8		C3159x6+
	1/2		C3159x8+
	3/4		C3159x12
	1		C3159x16
	1-1/4		C3159x20
	1-1/2		C3159x24
	2		C3159x32

Pipe Bushing (Ref. SAE No. 140140)



*3121x

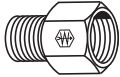
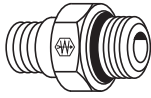

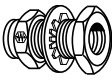


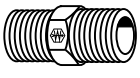

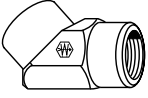
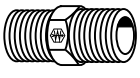

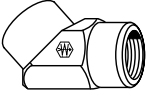
Straight Thread O-Ring To Female Pipe Adapter



	Male Pipe Thread	Fem. Pipe Thread	Catalog Number
Pipe Bushing (Ref. SAE No. 140140)	1/4	1/8	C3109x4x2+
	3/8	1/8	C3109x6x2+
	3/8	1/4	C3109x6x4+
	1/2	1/8	C3109x8x2+
	1/2	1/4	C3109x8x4+
	1/2	3/8	C3109x8x6+
	3/4	1/4	C3109x12x4+
	3/4	3/8	C3109x12x6+
	3/4	1/2	C3109x12x8+
	1	3/8	C3109x16x6
	1	1/2	C3109x16x8+
	1	3/4	C3109x16x12+
	1-1/4	1/2	C3109x20x8
	1-1/4	3/4	C3109x20x12+
	1-1/4	1	C3109x20x16+
	1-1/2	3/4	C3109x24x12
	1-1/2	1	C3109x24x16
1-1/2	1-1/4	C3109x24x20	
2	1-1/4	C3109x32x20	
2	1-1/2	C3109x32x24	
Straight Thread O-Ring To Female Pipe Adapter	1/4	1/8	C3269x4x2
	1/4	1/4	C3269x4x4
	5/16	1/8	C3269x5x2
	3/8	1/4	C3269x6x4
	3/8	3/8	C3269x6x6
	3/8	1/2	C3269x6x8
	1/2	1/4	C3269x8x4
	1/2	3/8	C3269x8x6
	1/2	1/2	C3269x8x8
	5/8	1/4	C3269x10x4
	5/8	3/8	C3269x10x6
	5/8	1/2	C3269x10x8
	5/8	3/4	C3269x10x12
	3/4	1/2	C3269x12x8
	3/4	3/4	C3269x12x12
	7/8	3/4	C3269x14x12
	1	1/2	C3269x16x8
1	3/4	C3269x16x12	
1	1	C3269x16x16	
1-1/4	1	C3269x20x16	
1-1/4	1-1/4	C3269x20x20	
1-1/2	1-1/2	C3269x24x24	
2	2	C3269x32x32	

*Stainless Steel Catalog number

+ Available in Stainless Steel.

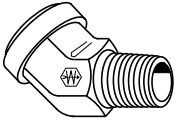
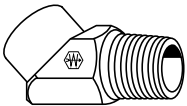
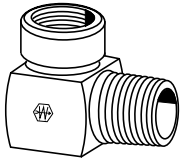

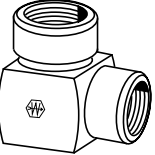
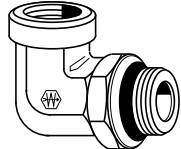

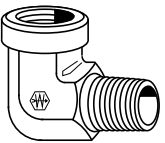
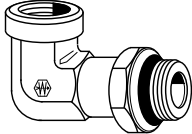
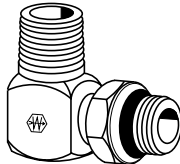
Pipe Adapter (Ref. SAE No. 140139)  *3221x	Fem. Pipe Thread 1/4 3/8 1/2 1/2 1/2 3/4 3/4 1 1 1-1/4 1-1/2 2	Male Pipe Thread 1/8 1/4 1/8 1/4 3/8 1/4 1/2 1/2 3/4 1 1-1/4 1-1/2	Catalog Number C3209x4x2+ C3209x6x4+ C3209x8x2+ C3209x8x4+ C3209x8x6+ C3209x12x4+ C3209x12x8+ C3209x16x8+ C3209x16x12+ C3209x20x16 C3209x24x20 C3209x32x24	Male Straight Thread O-Ring To Male Pipe Adapter 	Male Port Size 1/4 3/8 1/2 1/2 5/8 3/4 1 1-1/4 1-1/2 2	Male Pipe Thread 1/8 1/4 3/8 1/2 1/2 3/4 1 1-1/4 1-1/2 2	Catalog Number C3249x4x2 C3249x6x4 C3249x8x6 C3249x8x8 C3249x10x8 C3249x12x12 C3249x16x16 C3249x20x20 C3249x24x24 C3249x32x32
	Female Straight Thread O-Ring To Male Pipe Adapter 	Fem. Port Size 3/8 3/8 1/2 1/2 5/8	Male Pipe Thread 3/8 1/2 3/8 1/2 1/2		Catalog Number C3239x6x6 C3239x6x8 C3239x8x6 C3239x8x8 C3239x10x8	Bulkhead Coupling  See page 164 for dimensions.	Fem. Pipe Thread 1/4 1/4 3/8
Pipe Coupling (Ref. SAE No. 140138)  *3321x	Fem. Pipe Thread 1/8 1/4 1/4 3/8 3/8 1/2 1/2 1/2 3/4 3/4 1 1 1-1/4 1-1/2 2	Fem. Pipe Thread 1/8 1/8 1/4 1/4 3/8 3/8 1/4 3/8 1/2 1/2 3/4 3/4 3/4 1 1-1/4 1-1/2 2	Catalog Number C3309x2+ C3309x4x2+ C3309x4+ C3309x6x4+ C3309x6+ C3309x8x4+ C3309x8x6+ C3309x8+ C3309x12x8 C3309x12+ C3309x16x12 C3309x16+ C3309x20 C3309x24 C3309x32	Bulkhead Coupling  See page 164 for dimensions.	Male Pipe Thread 1/2 1/2	Fem. Pipe Thread 1/4 1/4	Catalog Number W05498 W05499
	Hex Pipe Nipple (Ref. SAE No. 140137)  *3081x	Male Pipe Thread 1/16 1/8 1/8 1/4 1/4 3/8 3/8 3/8 3/8 1/2 1/2 1/2 3/4 3/4 1 1 1-1/4 1-1/2 2	Male Pipe Thread 1/16 1/16 1/8 1/8 1/4 1/4 1/8 1/4 3/8 3/8 1/4 1/4 3/8 1/2 1/2 3/4 3/4 1 1 1-1/4 1-1/2 2		Catalog Number C3069x1 C3069x2x1 C3069x2+ C3069x4x2+ C3069x4+ C3069x6x2+ C3069x6x4+ C3069x6+ C3069x8x4+ C3069x8x6+ C3069x8+ C3069x12x8+ C3069x12+ C3069x16x12 C3069x16+ C3069x20 C3069x24 C3069x32	45° Pipe Elbow (Ref. SAE No. 140338)  	Male Pipe Thread 1/2 1/2
Hex Pipe Nipple (Ref. SAE No. 140137)  *3081x		Male Pipe Thread 1/16 1/8 1/8 1/4 1/4 3/8 3/8 3/8 3/8 1/2 1/2 1/2 3/4 3/4 1 1 1-1/4 1-1/2 2	Male Pipe Thread 1/16 1/16 1/8 1/8 1/4 1/4 1/8 1/4 3/8 3/8 1/4 1/4 3/8 1/2 1/2 3/4 3/4 1 1 1-1/4 1-1/2 2	Catalog Number C3069x1 C3069x2x1 C3069x2+ C3069x4x2+ C3069x4+ C3069x6x2+ C3069x6x4+ C3069x6+ C3069x8x4+ C3069x8x6+ C3069x8+ C3069x12x8+ C3069x12+ C3069x16x12 C3069x16+ C3069x20 C3069x24 C3069x32	45° Pipe Elbow (Ref. SAE No. 140338)  		Fem. Pipe Thread 3/8 1/2 3/4 1 1/4

*Stainless Steel Catalog number.

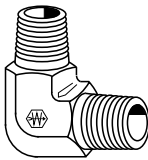


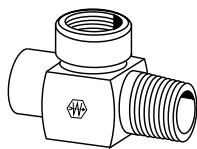

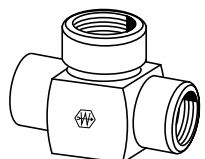
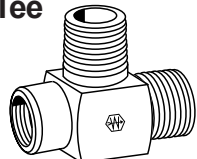
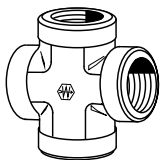
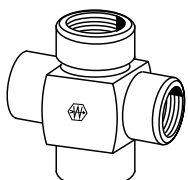
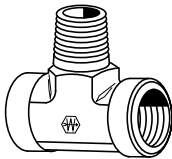
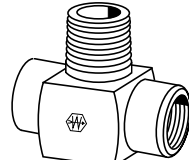

+ Available in Stainless Steel.

Adapters

**Steel
Fittings**

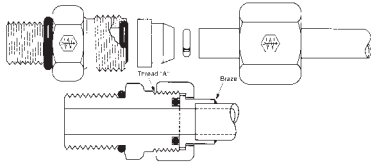
Pipe Thread 45° Street Elbow (Ref. SAE No. 140339)   *Special order only. *3371x	Fem. Pipe Thread 1/8 1/4 3/8 1/2 3/4 1 1-1/4 1-1/2 2	Male Pipe Thread 1/8 1/4 3/8 1/2 3/4 1 1-1/4 1-1/2 2	Catalog Number C3359x2+ C3359x4+ C3359x6+ C3359x8+ C3359x12+ C3359x16+ C3359x20 ¹ C3359x24 ¹ C3359x32 ¹	Pipe Thread 90° Street Elbow (Continued)  *3421x	Fem. Pipe Thread 1/8 1/4 1/8 1/4 3/8 1/4 3/8 3/8 1/2 3/8 1/2 3/4 3/4 1 1-1/4 1-1/2	Male Pipe Thread 1/8 1/8 1/8 1/4 1/4 1/4 3/8 3/8 1/2 3/4 3/4 1 1-1/4 1-1/2	Catalog Number TF3409x2 TF3409x2x4 TF3409x4x2 TF3409x4 TF3409x4x6 TF3409x6x4 TF3409x6 TF3409x6x8 TF3409x8x6 TF3409x8 TF3409x8x12 TF3409x12x8 TF3409x12 TF3409x16 TF3409x20 TF3409x24
	90° Pipe Elbow (Ref. SAE No. 140238)   *3521x	Fem. Pipe Thread 1/8 1/4 3/8 1/2 3/4 1 1-1/4 2	Fem. Pipe Thread 1/8 1/4 3/8 1/2 3/4 1 1-1/4 2		Catalog Number C3509x2+ C3509x4+ C3509x6+ C3509x8+ C3509x12+ C3509x16 C3509x20 C3509x32	90° Straight Thread O-Ring Male Elbow  	Male Port Size 1/2 5/8 3/4 1
Pipe Thread 90° Street Elbow  *Special order only. *3421x	Fem. Pipe Thread 1/8 1/4 3/8 1/2 3/4 1 1-1/4 1-1/2 2	Male Pipe Thread 1/8 1/4 3/8 1/2 3/4 1 1-1/4 1-1/2 2	Catalog Number C3409x2+ C3409x4+ C3409x6+ C3409x8+ C3409x12+ C3409x16+ C3409x20 C3409x24 ¹ C3409x32 (Continued top of next column)	90° Male Straight Thread O-Ring to Female Pipe Elbow Long 	Fem. Pipe Thread 3/8 1/2 3/4 1		Male Port Size 1/2 5/8 3/4 1
	90° Straight Thread O-Ring Male Elbow To Male Pipe 	Male Port Thread 1/4 5/16 3/8 1/2 5/8 3/4 7/8 1 1-1/4 1-1/2 2	Male Pipe Size 1/8 1/8 1/4 3/8 1/2 3/4 3/4 1 1-1/4 1-1/2 2		Catalog Number TF3569x4 TF3569x5 TF3569x6 TF3569x8 TF3569x10 TF3569x12 TF3569x14 TF3569x16 TF3569x20 TF3569x24 TF3569x32		

*Stainless Steel Catalog number.
+ Available in Stainless Steel.

90° Male Pipe Elbow   *3541x 1Special order only.	Male Pipe Thread 1/8 1/4 3/8 1/2 3/4 1	Male Pipe Thread 1/8 1/4 3/8 1/2 3/4 1	Catalog Number C3529x2+ C3529x4+ C3529x6+ C3529x8 C3529x12 C3529x16 ¹	Pipe Thread Male Run Tee (Ref. SAE No. 140424)   *3771x	Fem. Pipe Thread 1/8 1/4 3/8 1/2 3/4 1	Male Pipe Thread 1/8 1/4 3/8 1/2 3/4 1	Catalog Number C3759x2+ C3759x4+ C3759x6+ C3759x8+ C3759x12 C3759x16
	1/8 1/4 3/8 3/8 1/2 1/2 3/4 3/4 1 1 1-1/4 1-1/2	1/8 1/4 3/8 1/2 3/8 1/2 3/4 1/2 1 1 1-1/4 1-1/2	TF3529x2 TF3529x4 TF3529x6x4 TF3529x6 TF3529x8x6 TF3529x8 TF3529x12x8 TF3529x12 TF3529x16x12 TF3529x16 TF3529x20 TF3529x24		1/8 1/4 3/8 1/2 3/4 1 1-1/4 1-1/2 2	1/8 1/4 3/8 1/2 3/4 1 1-1/4 1-1/2 2	TF3759x2 TF3759x4 TF3759x6 TF3759x8 TF3759x12 TF3759x16 TF3759x20 TF3759x24 TF3759x32
Pipe Tee (Ref. SAE No. 140438)   *3721x	Fem. Pipe Thread 1/8 1/4 3/8 1/2 3/4 1 1-1/4		Catalog Number C3709x2+ C3709x4+ C3709x6+ C3709x8+ C3709x12+ C3709x16+ C3709x20	Pipe Thread Female Run Tee  Pipe Cross   1Special order only.	1/8 1/4 3/8 1/2 3/4 1 1-1/4 1-1/2	1/8 1/4 3/8 1/2 3/4 1 1-1/4 1-1/2 2	TF3805x2 TF3805x4 TF3805x6 TF3805x8 TF3805x12 TF3805x16 TF3805x20 TF3805x24
	1/8 1/4 3/8 1/2 3/4 1 1-1/4 1-1/2 2		TF3709x2 TF3709x4 TF3709x6 TF3709x8 TF3709x12 TF3709x16 TF3709x20 TF3709x24 TF3709x32		1/8 1/4 3/8 1/2 3/4 1 1-1/4 1-1/2 2	C3959x2 ¹ C3959x4 ¹ C3959x6 C3959x8 C3959x12 C3959x16 ¹	TF3959x2 TF3959x4 TF3959x6 TF3959x8 TF3959x12 TF3959x16 TF3959x20 TF3959x24 TF3959x32
Pipe Thread Male Branch Tee (Ref. SAE No. 140425)   1Special order only. *3621x	Male Pipe Thread 1/8 1/4 3/8 1/2 3/4 1	Fem. Pipe Thread 1/8 1/4 3/8 1/2 3/4 1	Catalog Number C3609x2 C3609x4+ C3609x6 ¹ C3609x8 ¹ C3609x12 ¹ C3609x16	Straight Thread O-Ring  Material: Buna-N, 90 Durometer Temperature Range: -40°F to +250°F (-40°C to +121°C) Standard O-ring complies with SAE specification SAE J515 Type CH. (see page 204 for O-ring compound and application chart)	Port Size 1/16 1/8 3/16 1/4 5/16 3/8 7/16 1/2 5/8 3/4 7/8 1 1-1/4 1-1/2 2		Catalog Number 7629x1 7629x2 7629x3 7629x4 7629x5 7629x6 7629x7 7629x8 7629x10 7629x12 7629x14 7629x16 7629x20 7629x24 7629x32
	1/8 1/4 3/8 1/2 3/4 1 1-1/4 1-1/2	1/8 1/4 3/8 1/2 3/4 1 1-1/4 1-1/2	TF3609x2 TF3609x4 TF3609x6 TF3609x8 TF3609x12 TF3609x16 TF3609x20 TF3609x24				

*Stainless Steel Catalog number.

+ Available in Stainless Steel.



Typical Application: High pressure, hydraulic, pneumatic and chemical processing.

Pressure*: Working pressure to 6000 PSI (1-1/4" and 1-1/2"; maximum 4000 PSI).

Sealing Method: O-ring.

Vibration Rating: Excellent resistance.

Material: 12L14 steel

Plating: All fittings are zinc-plated, except brazed parts which are oil dipped.

Used With: Steel tubing (tubing for brazing must be non-coated).

Advantages: Tubing is brazed for permanent leakproof connection.

Conformance: An exclusive item with Weatherhead®, meets SAE J1453.

Ordering Information: Use catalog number.

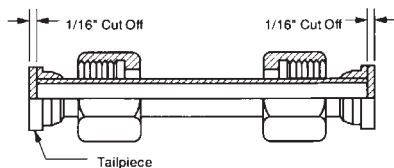
Label Set: FS-2400

NOTE: See page 302 for new hydraulic o-ring assortment.

Tube O.D.	1/4	3/8	1/2	5/8	3/4
Thread	9/16-18	11/16-16	13/16-16	1-14	1 3/16-12

Tube O.D.	7/8	1	1-1/4	1-1/2
Thread	1 3/16-12	1 7/16-12	1 11/16-12	2-12

Tube Preparation And Cleaning



NOTE: Subtract 1/16" from tube length for each connection.

Figure 1

1. Establish the length of tubing required allowing 1/16" cut-off factor for each connection. (See Fig. 1)



2. Cut the tubing to proper length keeping ends reasonably square. A fine tooth hack saw or cut-off saw works well for this job. The use of a tubing cutter is not recommended due to possible collapse of the tube end, retarding the capillary action required for proper braze flow.



3. Clean the end of the tube with an alkaline cleaner to remove all traces of oil or grease. Deburr the end of the tube with a file and polish the outside of the tube down to bare metal with clean emery paper. Oil and grease residue must be removed first to avoid working the oily residue into the tube surface.



4. After polishing, wipe off any metal particles using a clean solvent if necessary. Avoid touching the tube end after final cleaning as this may leave greasy spots which will braze poorly.

Clean the tailpiece with an alkaline cleaner.

* Pressure ratings shown are the pressure ratings for the fitting and are not necessarily the pressure rating applicable in an assembly with hydraulic hose. The applicable pressure rating for an assembly with hydraulic hose is the lower value specified for the hose and the fitting.

Fluxing and Brazing Cleanup

Flux may be cleaned up using hot water and wire brush, using care not to scratch the tailpiece sealing surface.



1. Assemble proper size braze ring into counterbore of tailpiece. The correct size braze ring will be slightly smaller than the inside diameter of the counterbore.



2. Clamp the tube securely in a vise, slide nut on tube, with threads pointing outward. Coat the tube end with flux and several inches of the tube outside diameter.



3. Coat the tailpiece liberally with flux including the counterbore and braze ring.



4. In a well ventilated area, apply heat uniformly to the tailpiece and the tube end. Watch the flux. The flux becomes completely clear when it is close to the proper brazing temperature. When ring melts, the tailpiece will settle down onto the end.

NOTE: General working knowledge of Acetylene torch brazing techniques is recommended.



5. Remove tube assembly from vise and check braze joint.



6. The braze alloy will flow down through the joint and should form a continuous fillet at the tube to tailpiece joint.

NOTE: Do not overheat. Excessive heat will only cause scaling and charred flux and make the parts more difficult to clean up.

Torque Requirements

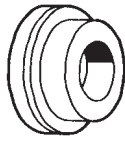
Tube O.D.	1/4	3/8	1/2	5/8	3/4	1	1-1/4	1-1/2
Torque Ft-Lb. For-Seal SW. Nut	10-12	18-20	32-35	46-50	65-70	92 100	125 140	150 165
Torque Ft-Lb O-Ring Boss Straight Thread O-Ring Locknut Torque	14-16	24-26	50-60	72-80	125 135	200 220	210 280	270 360

Thread Chart

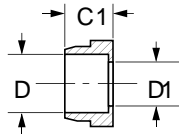
Rated pressures are for low surge, static type applications.

Tube O.D.	1/4	3/8	1/2	5/8	3/4	1	1-1/4	1-1/2
For-Seal Thread	9/16-18	11/16-16	13/16-16	1-14	1-3/16-12	1-7/16-12	1-11/16-12	2-12
Maximum PSI	6000	6000	6000	6000	6000	6000	4000	4000
Adjustable Fittings PSI	6000	6000	6000	6000	6000	5000	4000	3000

Tailpiece Silver Braze (Ref. SAE No. 520115)

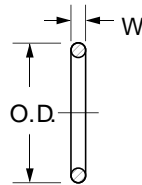


Oil Dipped



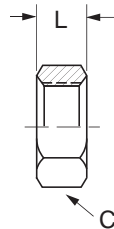
Tube O.D.	Catalog Number	D	D1	C1
1/4	4165x4	.256	.172	.374
3/8	4165x6	.381	.264	.374
1/2	4165x8	.506	.378	.374
5/8	4165x10	.631	.484	.413
3/4	4165x12	.757	.609	.551
1	4165x16	1.007	.811	.610
1-1/4	4165x20	1.257	1.024	.610
1-1/2	4165x24	1.507	1.260	.610

For-Seal® Cadmium Free Braze Ring



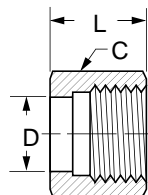
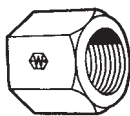
Tube O.D.	Catalog Number	Wire Dia.	O.D.
1/4	4640x4	.046	.250
3/8	4640x6	.046	.375
1/2	4640x8	.046	.500
5/8	4640x10	.046	.625
3/4	4640x12	.062	.750
1	4640x16	.062	1.000
1-1/4	4640x20	.062	1.250
1-1/2	4640x24	.062	1.500

Bulkhead Nut (Ref. SAE No. 520118)



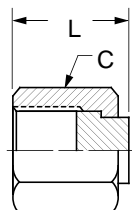
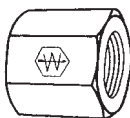
Tube O.D. A	Catalog Number	Hex C	L
1/4	4924x4	13/16	.27
3/8	4924x6	1	.31
1/2	4924x8	1-1/8	.35
5/8	4924x10	1-5/16	.41
3/4	4924x12	1-1/2	.41
1	4924x16	1-3/4	.41
1-1/4	4924x20	2	.41
1-1/2	4924x24	2-3/8	.41

Nut (Ref. SAE No. 520110)



Tube O.D.	Catalog Number	Hex C	D	L
1/4	4105x4	11/16	.412	.58
3/8	4105x6	13/16	.531	.67
1/2	4105x8	15/16	.652	.83
5/8	4105x10	1-1/8	.829	.93
3/4	4105x12	1-3/8	.950	1.02
1	4105x16	1-5/8	1.144	1.10
1-1/4	4105x20	1-7/8	1.415	1.10
1-1/2	4105x24	2-1/4	1.727	1.10

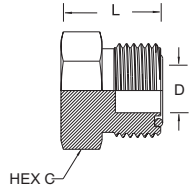
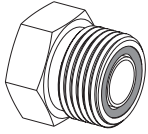
Cap (Ref. SAE No. 520112)



Tube O.D.	Catalog Number	Hex C	L
1/4	4129x4	11/16	.67
3/8	4129x6	13/16	.75
1/2	4129x8	15/16	.90
5/8	4129x10	1-1/8	1.00
3/4	4129x12	1-3/8	1.10
1	4129x16	1-5/8	1.17
1-1/4	4129x20	1-7/8	1.17
1-1/2	4129x24	2-1/4	1.17

RELATED PRODUCT

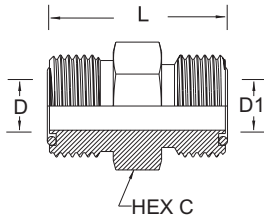
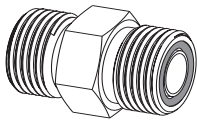
Plug
(Ref. SAE No. 520109)



FOR-SEAL o-ring included.

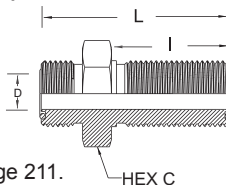
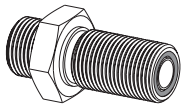
Tube O.D.	Catalog Number	Hex C	D	L
1/4	4229x4	5/8	.172	.659
3/8	4229x6	3/4	.264	.751
1/2	4229x8	7/8	.378	.854
5/8	4229x10	1-1/16	.484	1.020
3/4	4229x12	1-1/4	.609	1.080
1	4229x16	1-1/2	.811	1.100
1-1/4	4229x20	1-3/4	1.024	1.100
1-1/2	4229x24	2-1/8	1.260	1.100

Union
(Ref. SAE No. 520101)



Tube O.D.	Tube O.D.	Catalog Number	Hex C	D	D1	L
1/4	1/4	4305x4	5/8	.172	.172	1.08
3/8	1/4	4305x6x4	3/4	.264	.172	1.17
3/8	3/8	4305x6	3/4	.264	.264	1.22
1/2	3/8	4305x8x6	7/8	.378	.264	1.33
1/2	1/2	4305x8	7/8	.378	.378	1.39
5/8	1/2	4305x10x8	1-1/16	.484	.378	1.57
5/8	5/8	4305x10	1-1/16	.484	.484	1.68
3/4	1/2	4305x12x8	1-1/4	.609	.378	1.69
3/4	5/8	4305x12x10	1-1/4	.609	.484	1.80
3/4	3/4	4305x12	1-1/4	.609	.609	1.86
1	3/4	4305x16x12	1-1/2	.812	.609	1.92
1	1	4305x16	1-1/2	.811	.811	1.94
1-1/4	1-1/4	4305x20	1-3/4	1.024	1.024	2.02
1-1/2	1-1/2	4305x24	2-1/8	1.260	1.260	2.09

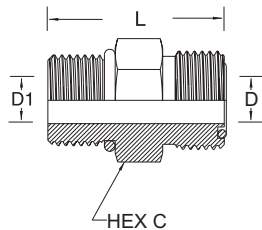
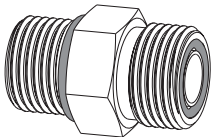
Bulkhead Union
(Ref. SAE No. 520601)



For bulkhead nut, see page 211.

Male Tube O.D.	Catalog Number	Hex C	D	I	L
3/8	4325x6	1	.264	1.34	2.09
1/2	4325x8	1-1/8	.378	1.44	2.30
3/4	4325x12	1-1/2	.609	1.64	2.72
1	4325x16	1-3/4	.812	1.66	2.76
1-1/4	4325x20	2	1.024	1.66	2.76
1-1/2	4325x24	2-3/8	1.260	1.66	2.76

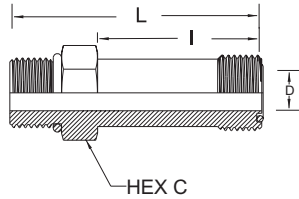
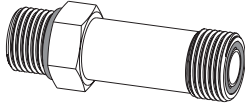
Straight Thread O-Ring Connector
(Ref. SAE No. 520120)



For replacement Straight Thread O-ring, see page 208.

Male Tube O.D.	Male Port Size	Catalog Number	Hex C	D	D1	L
1/4	1/4	4315x4	5/8	.172	.172	1.133
1/4	3/8	4315x4x6	11/16	.172	.172	1.202
3/8	5/8	4315x6x10	1-1/16	.264	.484	1.530
3/8	1/4	4315x6x4	3/4	.264	.172	1.343
3/8	3/8	4315x6	3/4	.264	.264	1.252
3/8	1/2	4315x6x8	7/8	.378	.264	1.378
1/2	3/8	4315x8x6	7/8	.378	.264	1.472
1/2	1/2	4315x8	7/8	.378	.378	1.441
1/2	5/8	4315x8x10	1	.378	.484	1.590
1/2	3/4	4315x8x12	1-1/4	.378	.609	1.748
5/8	5/8	4315x10	1-1/16	.484	.484	1.700
3/4	3/4	4315x12	1-1/4	.609	.609	1.918
3/4	1	4315x12x16	1-1/2	.609	.609	1.960
1	3/4	4315x16x12	1-1/2	.812	.609	2.138
1	1	4315x16	1-1/2	.811	.811	1.978
1	1-1/4	4315x16x20	1-7/8	.812	1.709	2.058
1-1/4	1	4315x20x16	1-3/4	1.024	.843	2.278
1-1/4	1-1/4	4315x20	1-7/8	1.024	1.024	2.058
1-1/2	1-1/2	4315x24	2-1/8	1.260	1.260	2.125

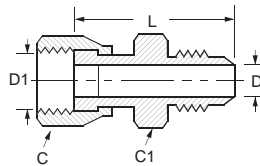
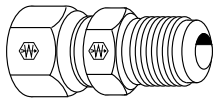
Straight Thread O-Ring Extended (Ref. SAE No. 520122)



For replacement Straight Thread O-ring, see page 208.

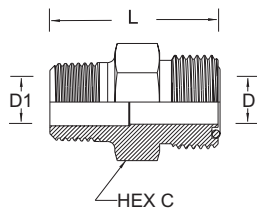
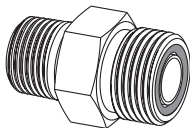
Male Tube O.D.	Male Port Size	Catalog Number	Hex C	D	I	L
3/8	3/8	4316x6	3/4	.264	1.46	2.27
1/2	1/2	4316x8	7/8	.378	1.75	2.67
3/4	3/4	4316x12	1-1/4	.609	2.52	3.76
1	1	4316x16	1-1/2	.811	2.87	4.14
1-1/4	1-1/4	4316x20	1-7/8	1.024	3.41	4.76
1-1/2	1-1/2	4316x24	2-1/8	1.260	3.82	5.26

Male 37° to Female For-Seal®



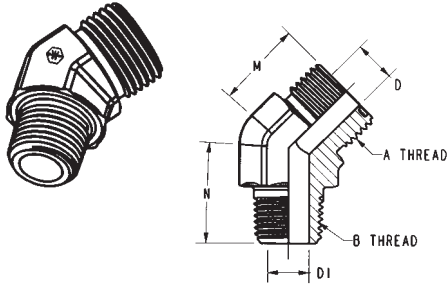
Female Tube O.D.	Male Tube Size	Catalog Number	Hex C	Hex C1	D	L
1/4	1/4	4213x4	11/16	5/8	.172	1.50
3/8	3/8	4213x6	13/16	3/4	.297	1.62
1/2	1/2	4213x8	15/16	7/8	.392	1.90
5/8	5/8	4213x10	1-1/8	1-1/16	.484	2.25
3/4	3/4	4213x12	1-3/8	1-1/4	.609	2.48
1	1	4213x16	1-5/8	1-1/2	.811	2.84

Male For-Seal® Male Pipe Adapter



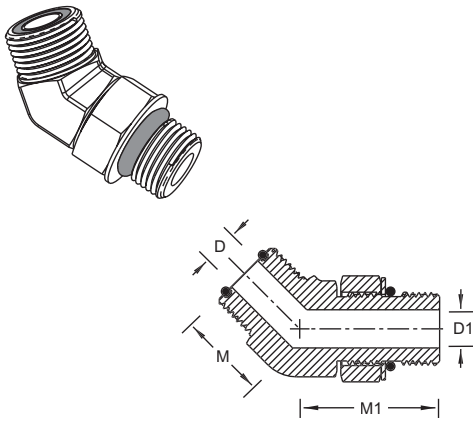
Tube O.D.	Male Pipe Size	Catalog Number	Hex C	D	D1	L
3/8	3/8	4205x6x6	3/4	.264	.406	1.30
1/2	3/8	4205x8	7/8	.378	.406	1.45
1/2	1/2	4205x8x8	7/8	.378	.484	1.64
5/8	1/2	4205x10	1-1/16	.484	.531	1.82
3/4	1/2	4205x12x8	1-1/4	.406	.484	1.87
3/4	3/4	4205x12	1-1/4	.609	.719	1.94
3/4	1	4205x12x16	1-3/8	.609	.938	1.87
1	1	4205x16	1-1/2	.811	.938	2.19
1-1/4	1-1/4	4205x20	1-3/4	1.024	1.250	2.30

45° Male Elbow



Male Tube O.D.	Male Pipe Thread	Catalog Number	D	D1	M	N	Across Flats
1/4	1/8	4355x4	.172	.188	.63	.64	9/16
3/8	1/4	4355x6	.264	.281	.74	.86	3/4
1/2	3/8	4355x8	.378	.406	.80	.95	7/8
5/8	1/2	4355x10	.484	.531	.92	1.17	1-1/16
3/4	3/4	4355x12	.609	.719	1.02	1.20	1-5/16
1	1	4355x16	.812	.939	1.18	1.48	1-5/8
1-1/4	1-1/4	4355x20	1.026	1.252	1.26	1.67	1-5/8
1-1/2	1-1/2	4355x24	1.262	1.502	1.45	1.77	1-7/8

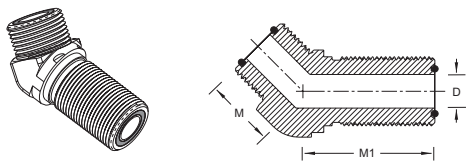
Straight Thread O-Ring Connector 45° Elbow
(Ref. SAE No. 520320)



For replacement straight thread O-ring, see page 208.

Male Tube O.D.	Male Port Size	Catalog Number	D	D1	M	M1	Across Flats
1/4	1/4	4365x4	.172	.172	.63	1.18	9/16
1/4	3/8	4365x4x6	.172	.264	.68	1.30	3/4
3/8	1/4	4365x6x4	.264	.172	.74	1.22	3/4
3/8	3/8	4365x6	.264	.264	.74	1.30	3/4
3/8	1/2	4365x6x8	.264	.390	.74	1.43	3/4
1/2	3/8	4365x8x6	.378	.264	.80	1.27	3/4
1/2	1/2	4365x8	.378	.390	.80	1.43	3/4
1/2	5/8	4365x8x10	.378	.484	.82	1.76	1-1/16
1/2	3/4	4365x8x12	.378	.609	.87	1.97	1-3/16
5/8	1/2	4365x10x8	.484	.390	.92	1.59	1-1/16
5/8	5/8	4365x10	.484	.484	.92	1.76	1-1/16
5/8	3/4	4365x10x12	.484	.609	.94	1.97	1-3/16
3/4	5/8	4365x12x10	.609	.484	1.02	1.81	1-3/16
3/4	3/4	4365x12	.609	.609	1.02	1.97	1-5/16
3/4	1	4365x12x16	.609	.811	1.16	2.06	1-5/16
1	3/4	4365x16x12	.811	.609	1.12	2.03	1-7/16
1	1	4365x16	.812	.811	1.18	2.06	1-1/2
1	1-1/4	4365x16x20	.811	1.081	1.26	2.11	1-5/8
1-1/4	1-1/4	4365x20	1.024	1.081	1.26	2.11	1-5/8
1-1/2	1-1/2	4365x24	1.260	1.312	1.45	2.11	1-7/8

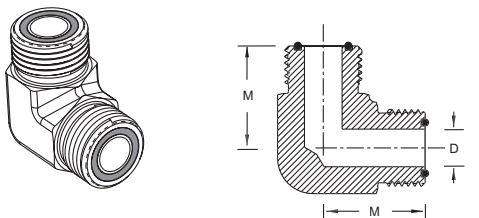
45° Bulkhead Elbow
(Ref. SAE No. 520201)



For Bulkhead Nut, see page 211.

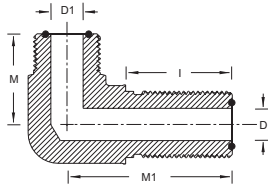
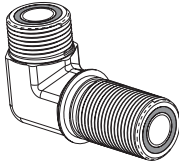
Male Tube O.D.	Catalog Number	D	M	M1	Across Flats
1/4	4375x4	.172	.63	1.73	9/16
3/8	4375x6	.264	.74	1.91	3/4
1/2	4375x8	.378	.80	2.01	3/4
5/8	4375x10	.484	.92	2.23	1-1/16
3/4	4375x12	.609	1.02	2.39	1-3/16
1	4375x16	.811	1.18	2.57	1-7/16
1-1/4	4375x20	1.045	1.26	2.64	1-11/16
1-1/2	4375x24	1.312	1.45	2.64	1-7/8

Union 90° Elbow
(Ref. SAE No. 520201)



Male Tube O.D.	Catalog Number	D	M	Across Flats
1/4	4505x4	.172	.85	9/16
3/8	4505x6	.264	.98	3/4
1/2	4505x8	.378	1.10	3/4
5/8	4505x10	.484	1.31	1-1/16
3/4	4505x12	.609	1.47	1-3/16
1	4505x16	.811	1.64	1-7/16
1-1/4	4505x20	1.045	1.76	1-5/8
1-1/2	4505x24	1.312	1.92	1-7/8
2	4505x32	-	-	-

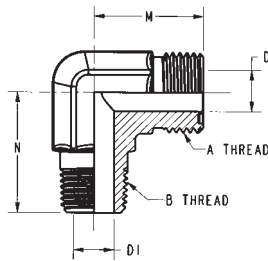
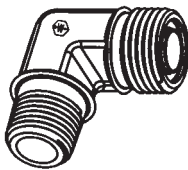
Bulkhead Union 90° Elbow (Ref. SAE No. 520701)



For bulkhead nut, see page 211.

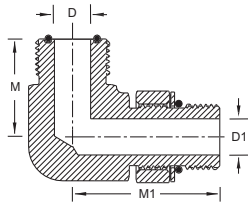
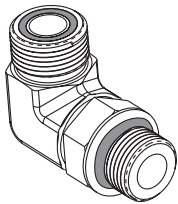
Male Tube O.D.	Port Size	Catalog Number	D	D1	M	M1	I	Across Flats
1/4	1/4	4525x4	.172	.172	.89	1.85	1.24	9/16
3/8	3/8	4525x6	.264	.264	1.02	2.05	1.34	3/4
1/2	1/2	4525x8	.378	.378	1.14	2.18	1.44	7/8
5/8	5/8	4525x10	.484	.484	1.36	1.36	1.44	1-1/16
3/4	3/4	4525x12	.609	.609	1.52	2.64	1.60	1-5/16
1	1	4525x16	.811	.811	1.67	2.80	1.64	1-5/8
1-1/4	1-1/4	4525x20	1.024	1.024	1.79	2.97	1.66	1-7/8
1-1/2	1-1/2	4525x24	1.260	1.260	1.95	3.13	1.66	1-7/8

90° Male Elbow



Male Tube O.D.	Port Size	Catalog Number	D	D1	M	N	Across Flats
1/4	1/8	4405x4	.172	.188	.85	.78	9/16
3/8	1/4	4405x6	.264	.281	.80	1.09	3/4
1/2	3/8	4405x8	.378	.406	1.10	1.22	3/4
5/8	1/2	4405x10	.484	.531	1.31	1.47	1-1/16
3/4	3/4	4405x12	.609	.719	1.47	1.59	1-5/16
1	1	4405x16	.812	.939	1.64	1.97	1-5/8
1-1/4	1-1/4	4405x20	1.026	1.252	1.76	2.38	1-5/8
1-1/2	1-1/2	4405x24	1.262	1.502	1.92	2.64	1-7/8

Straight Thread O-Ring 90° Elbow (Ref. SAE No. 520220)

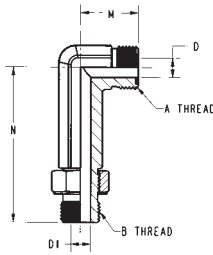
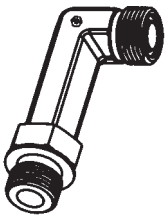


For replacement straight thread O-ring, see page 148.

Male Tube O.D.	Port Size	Catalog Number	D	D1	M	M1	Across Flats
1/4	1/4	4515x4	.172	.172	.85	1.29	9/16
1/4	5/16	4515x4x5	.172	.234	.85	1.29	9/16
1/4	3/8	4515x4x6	.172	.264	.92	1.45	3/4
1/4	1/2	4515x4x8	.172	.390	.97	1.60	3/4
3/8	5/8	4515x6x10	.264	.484	1.15	1.97	3/4
3/8	3/4	4515x6x12	.264	.609	1.25	2.17	1-3/16
3/8	1/4	4515x6x4	.264	.172	.98	1.37	3/4
3/8	5/16	4515x6x5	.264	.234	.98	1.37	3/4
3/8	3/8	4515x6	.264	.264	.98	1.45	3/4
3/8	1/2	4515x6x8	.264	.390	1.04	1.60	3/4
1/2	5/8	4515x8x10	.378	.484	1.21	1.97	1-1/16
1/2	3/4	4515x8x12	.378	.484	1.32	2.17	1-1/16
1/2	3/8	4515x8x6	.378	.264	1.10	1.44	3/4
1/2	1/2	4515x8	.378	.390	1.10	1.60	3/4
5/8	5/8	4515x10	.484	.484	1.31	1.97	1-1/16
5/8	3/4	4515x10x12	.484	.609	1.41	2.17	1-3/16
5/8	1/2	4515x10x8	.484	.390	1.31	1.80	1-1/16
3/4	5/8	4515x12x10	.609	.484	1.47	2.01	1-5/16
3/4	3/4	4515x12	.609	.609	1.47	2.17	1-5/16
3/4	1	4515x12x16	.609	.811	1.62	2.35	1-5/16
3/4	1/2	4515x12x8	.609	.390	1.47	1.84	1-3/16
1	3/4	4515x16x12	.811	.609	1.64	2.32	1-5/8
1	7/8	4515x16x14	.811	.609	1.64	2.32	1-5/8
1	1	4515x16	.811	.811	1.64	2.35	1-5/8
1	1-1/4	4515x16x20	.811	1.081	1.76	2.45	1-5/8
1-1/4	1	4515x20x16	1.024	.811	1.76	2.42	1-5/8
1-1/4	1-1/4	4515x20	1.024	1.081	1.76	2.45	1-7/8
1-1/4	1-1/2	4515x20x24	1.024	1.312	1.92	2.59	1-7/8
1-1/2	1-1/4	4515x24x20	1.312	1.081	1.92	2.59	1-7/8
1-1/2	1-1/2	4515x24	1.312	1.312	1.92	2.59	1-7/8

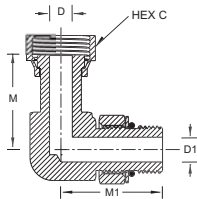
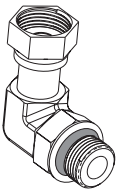
RELATED PRODUCT

90° Elbow Straight Thread Swivel - Long



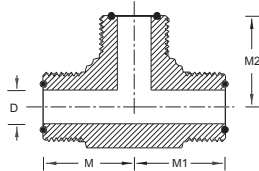
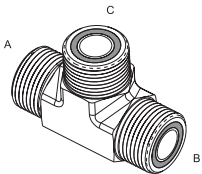
Male Tube O.D.	Male Port Size	Catalog Number	D	D1	M	N	Across Flats
1/4	1/4	4515x4L	.172	.180	.85	2.23	9/16
3/8	3/8	4515x6L	.264	.300	.98	2.61	3/4
1/2	1/2	4515x8L	.378	.398	1.10	2.95	3/4
5/8	5/8	4515x10L	.484	.498	1.31	3.51	1-1/16
3/4	3/4	4515x12L	.609	.616	1.47	3.97	1-3/16
1	1	4515x16L	.812	.852	1.64	4.51	1-7/16
1-1/4	1-1/4	4515x20L	1.026	1.090	1.76	4.98	1-5/8
1-1/2	1-1/2	4515x24L	1.262	1.326	1.92	5.48	1-7/8

90° Straight Thread Swivel
(Ref. SAE No. 520281)



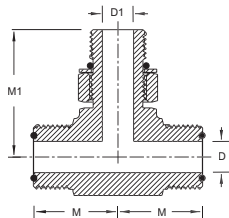
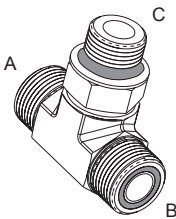
Female Tube O.D.	Port Size	Catalog Number	D	D1	M	M1	Hex C	Across Flats
1/4	1/4	4535x4	.165	.180	1.04	1.29	11/16	9/16
3/8	3/8	4535x6	.264	.300	1.15	1.45	13/16	3/4
1/2	1/2	4535x8	.258	.398	1.49	1.60	15/16	7/8
5/8	5/8	4535x10	.453	.498	1.62	1.97	1-1/8	1-1/16
3/4	3/4	4535x12	.547	.616	1.82	2.17	1-3/8	1-3/8
1	1	4535x16	.783	.852	2.10	2.35	1-5/8	1-5/8
1-1/4	1-1/4	4535x20	1.026	1.090	2.29	2.45	1-7/8	1-5/8
1-1/2	1-1/2	4535x24	1.262	1.326	2.41	2.59	2-1/4	1-7/8

Union Tee
(Ref. SAE No. 520401)



Male Tube O.D. A	Male Tube O.D. B	Male Tube O.D. C	Catalog Number	D	D1	M	M1	M2	Across Flats
1/4	1/4	1/4	4705x4	.172	.172	.85	.85	.85	9/16
3/8	3/8	3/8	4705x6	.264	.264	.98	.98	.98	3/4
3/8	3/8	1/2	4705x6x6x8	.264	.378	1.04	1.04	1.10	3/4
1/2	3/8	1/2	4705x8x6x8	.264	.378	.98	.98	1.10	3/4
1/2	1/2	1/2	4705x8	.378	.378	1.10	1.10	1.10	3/4
5/8	5/8	5/8	4705x10	.484	.484	1.31	1.31	1.31	1-1/16
3/4	3/4	3/4	4705x12	.609	.609	1.47	1.47	1.47	1-3/16
1	1	1	4705x16	.811	.811	1.64	1.64	1.64	1-5/8
1-1/4	1-1/4	1-1/4	4705x20	1.024	1.024	1.76	1.76	1.76	1-5/8
1-1/2	1-1/2	1-1/2	4705x24	1.260	1.260	1.92	1.92	1.92	1-7/8

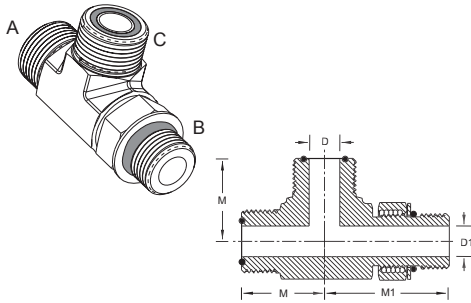
Straight Thread Branch Tee
(Ref. SAE No. 520429)



Tube O.D.	Port Size	Catalog Number	D	D1	M	M1	Across Flats
1/4	1/4	4715x4	.172	.172	.85	1.29	9/16
3/8	3/8	4715x6	.264	.264	.98	1.45	3/4
3/8	1/2	4715x6x8	.264	.391	1.04	1.60	7/8
1/2	3/8	4715x8x6	.378	.264	1.10	1.44	3/4
1/2	1/2	4715x8	.378	.390	1.10	1.60	3/4
5/8	5/8	4715x10	.484	.484	1.31	1.97	1-1/16
3/4	3/4	4715x12	.609	.609	1.47	2.17	1-3/16
3/4	1	4715x12x16	.609	.812	1.62	2.35	1-5/8
1	1	4715x16	.811	.845	1.64	2.35	1-5/8
1-1/4	1	4715x20x16	1.046	.845	1.76	2.45	1-15/16
1-1/4	1-1/4	4715x20	1.046	1.081	1.76	2.45	1-7/8
1-1/2	1-1/2	4715x24	1.260	1.313	1.92	2.59	1-7/8

For replacement straight thread O-ring, see page 208.

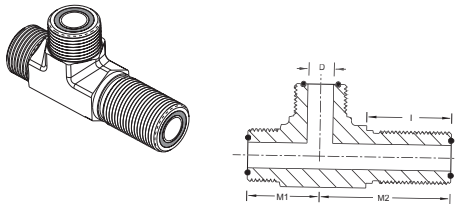
Straight Thread Run Tee (Ref. SAE No. 520428)



For replacement straight thread O-ring, see page 208.

Tube O.D. A	Port Size B	Tube O.D. C	Catalog Number	D	D1	M	M1	Across Flats
1/4	1/4	1/4	4716x4	.172	.172	.85	1.29	9/16
1/4	1/4	3/8	4716x4x6	.172	.264	1.39	1.45	3/4
3/8	3/8	3/8	4716x6	.264	.264	.98	1.45	3/4
1/2	1/2	1/2	4716x8	.378	.391	1.10	1.60	7/8
5/8	5/8	5/8	4716x10	.484	.484	1.31	1.97	1-1/16
3/4	3/4	3/4	4716x12	.609	.609	1.47	2.17	1-3/16
3/4	3/4	1	4716x12x16	.609	.812	1.62	2.32	1-7/16
3/4	1	3/4	4716x12x16x12	.609	.812	1.62	2.35	1-7/16
1	1	3/4	4716x16x12	.812	.609	1.64	2.35	1-7/16
1	1	1	4716x16	.812	.845	1.64	2.35	1-7/16
1-1/4	1-1/4	1-1/4	4716x20	1.046	1.081	1.76	2.45	1-7/8
1-1/2	1-1/2	1-1/2	4716x24	1.313	1.313	1.92	2.59	1-7/8

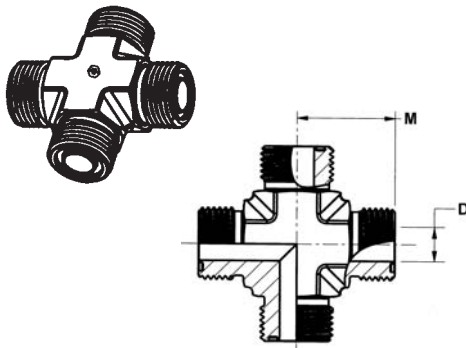
Bulkhead Run Tee (Ref. SAE No. 520958)



For Bulkhead Nut, see page 211.

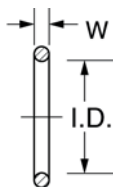
Tube O.D.	Catalog Number	D	I	M	M1	M2	Across Flats
1/4	4726x4	.172	1.24	.89	.89	1.85	9/16
3/8	4726x6	.264	1.34	1.02	1.02	2.05	3/4
1/2	4726x8	.378	1.44	1.14	1.14	2.18	3/4
5/8	4726x10	.484	1.60	1.36	1.36	2.48	1-1/16
3/4	4726x12	.609	1.64	1.52	1.52	2.65	1-3/16
1	4726x16	.812	1.66	1.67	1.67	2.80	1-7/16
1-1/4	4726x20	1.024	1.66	1.79	1.79	2.97	1-5/8
1-1/2	4726x24	1.260	1.66	1.95	1.95	3.13	1-7/8

Male For-Seal® Cross



Tube O.D.	Catalog Number	D	M	Across Flats
1/4	4955x4	.172	.89	9/16
3/8	4955x6	.264	1.02	3/4
1/2	4955x8	.378	1.14	7/8
5/8	4955x10	.484	1.36	1-1/16
3/4	4955x12	.609	1.52	1-5/16
1	4955x16	.812	1.67	1-5/8
1-1/4	4955x20	1.026	1.79	1-5/8
1-1/2	4955x24	1.262	1.95	1-7/8

O-Ring, For-Seal®



Material: Buna N, 90 Durometer
Temperature: -40°F to +250°F (-40°C to +121°C)
 Standard o-ring complies with SAE specification SAE J515 Type CH

Tube O.D.	Catalog Number	W	I.D.
1/4	4629x4	.070 ± .005	.301 ± .005
3/8	4629x6	.070 ± .005	.364 ± .005
1/2	4629x8	.070 ± .005	.489 ± .005
5/8	4629x10	.070 ± .005	.614 ± .005
3/4	4629x12	.070 ± .005	.739 ± .005
1	4629x16	.070 ± .006	.926 ± .006
1-1/4	4629x20	.070 ± .006	1.176 ± .006
1-1/2	4629x24	.070 ± .010	1.489 ± .010

RELATED PROD

Typical Application: Hydraulic, instrumentation and chemical processing systems.

Pressure: See chart.

Sealing Method: 37° flare; 2- or 3-piece assembly.

Vibration Rating: Good resistance.

Material: Carbon steel – AISI/SAE 12L14
Stainless steel – Type 316

Plating: Zinc; yellow dichromate finish.

Used With: Copper, brass, steel, aluminum, and other tubing that can be flared.

Advantages: Zinc plate. Choice of 2- or 3-piece design. Broad selection of styles and sizes. Interchangeable with all sources.

Identifying Characteristics: 2-piece flare has long nut. 3-piece flare has a short nut with the sleeve protruding. Material is generally steel or stainless steel.

Conformance: Meets ASA, ASME, SAE.

Ordering Information: To order a 3-piece assembly – Prefix the catalog number with a "3." Example: To order a male connector C5205x4 with nut and sleeve assembled, order C35205x4. Order bodies, nuts, and sleeves separately by catalog number.

Label Set: FS-200

NOTE: See page 302 for new hydraulic o-ring assortment.

Forged Fittings and Adaptors

5000 Series Pressure Rating Chart

Connection Type	End Size												
	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1-1/4"	1-1/2"	2"
SAE Fittings	6000	5000	5000	5000	5000	4000	4000	4000	4000	4000	3000	3000	3000
W/Adjustable Straight Thread O-Ring	5000	5000	4500	4000	4000	4000	3000	3000	2500	2500	2000	1500	1125
With Male Pipe	6000		5000		5000	4000		4000		4000	3000	2500	2500
With Female Pipe	5000		5000		4000	3000		2500		2000	1500	1500	1000

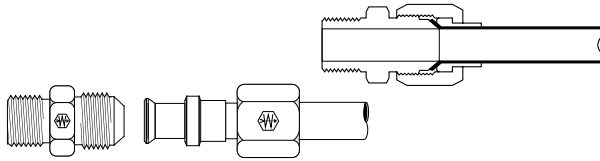
Brazed Fittings (TF)/SAE


5000 Series Pressure Rating Chart

Connection Type	End Size												
	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1-1/4"	1-1/2"	2"
SAE Fittings	5000	5000	5000	5000	5000	4500	3500	3500	3000	3000	2500	2000	1500
W/Adjustable Straight Thread O-Ring	5000	5000	4500	4000	4000	4000	3000	3000	2500	2500	2000	1500	1125
With Male or Female Pipe	5000	5000	5000	5000	4000	3000	3000	2500	2500	2000	1150	1000	1000


Tube O.D.	1/8	3/16	1/4	5/16	3/8	1/2	5/8
Thread	5/16-24	3/8-24	7/16-20	1/2-20	9/16-18	3/4-16	7/8-14

Tube O.D.	3/4	7/8	1	1-1/4	1-1/2	2
Thread	1-1/16-12	1-3/16-12	1-5/16-12	1-5/8-12	1-7/8-12	2-1/2-12

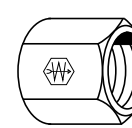


Sleeve 3-Piece (Ref. SAE No. 070115)	Tube O.D.		Catalog Number
		1/8	
3/16			C5165x3+
1/4			C5165x4+
5/16			C5165x5+
3/8			C5165x6+
1/2			C5165x8+
5/8			C5165x10+
3/4			C5165x12+
7/8			C5165x14
1			C5165x16+
1-1/4			C5165x20+
1-1/2			C5165x24+
2		C5165x32+	

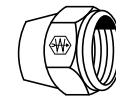
*5177x

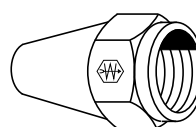
Sleeve 3-Piece Metric (Ref. SAE No. 070115)	Tube O.D. (Inch Size)	Tube O.D. (Metric Size)	Catalog Number
		1/4	6MM
5/16		8MM	C5165x5x8MM
3/8		10MM	C5165x6x10MM
1/2		12MM	C5165x8x12MM
5/8		14MM	C5165x10x14MM
5/8		15MM	C5165x10x15MM
5/8		16MM	C5165x10x16MM
3/4		18MM	C5165x12x18MM
7/8		20MM	C5165x14x20MM
7/8		22mm	C5165x14x22MM
1		25MM	C5165x16x25MM
1-1/4		30MM	C5165x20x30MM
1-1/4	32MM	C5165x20x32MM	
1-1/2	38MM	C5165x24x38MM	

Adapts standard SAE Flare-Twin® Fittings for use with Metric Tubing.

Nut 3-Piece (Ref. SAE No. 070110)	Tube O.D.		Catalog Number
		1/8	
3/16			C5105x3+
1/4			C5105x4+
5/16			C5105x5+
3/8			C5105x6+
1/2			C5105x8+
5/8			C5105x10+
3/4			C5105x12+
7/8			C5105x14
1			C5105x16+
1-1/4			C5105x20+
1-1/2			C5105x24+
2		C5105x32+	

*5117x

2-Piece Nut (Short)	Tube O.D.		Catalog Number
		1/4	
5/16			C5125x5
3/8			C5125x6
1/2			C5125x8
5/8			C5125x10
3/4			C5125x12

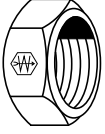
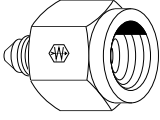
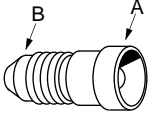

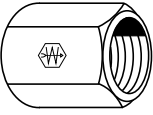

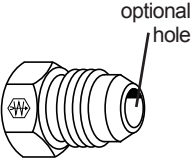

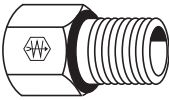
2-Piece Nut (Ref. SAE No. 070111)	Tube O.D.		Catalog Number
		1/4	
5/16			C5115x5
3/8			C5115x6
1/2			C5115x8
5/8			C5115x10
3/4			C5115x12
7/8			C5115x14
1			C5115x16
1-1/4			C5115x20
1-1/2			C5115x24

*Stainless steel catalog number.

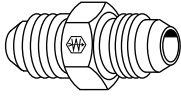
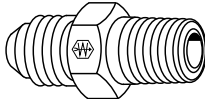
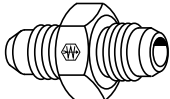
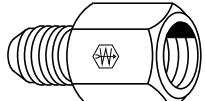
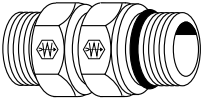
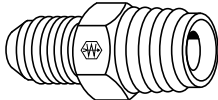
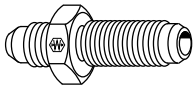
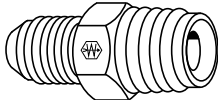
+ Available in Stainless Steel.

JIC 37° Flare-Twin®

Steel Fittings

Bulkhead Nut (Ref. SAE No. 070118)  *7936x	Tube O.D. 1/8 3/16 1/4 5/16 3/8 1/2 5/8 3/4 7/8 1 1-1/4 1-1/2 2	Catalog Number C5924x2 C5924x3 C5924x4+ C5924x5 C5924x6+ C5924x8+ C5924x10 C5924x12+ C5924x14 C5924x16+ C5924x20 C5924x24 C5924x32	Reducer (Ref. SAE No. 070123) Assembly No. C35015x, etc. (# one-piece design)   (two-piece design) Note: Order 3-piece nut C5105X to use reducer. No sleeve necessary. *5027x	Tube Reduction A 3/8 1/2 1/2 5/8 5/8 3/4 3/4 3/4 3/4 7/8 7/8 7/8 1 1 1 1-1/4 1-1/4 1-1/2 2	Tube Reduction B 1/4 1/4 3/8 1/4 3/8 1/2 1/4 3/8 1/2 5/8 3/8 1/2 5/8 3/4 1/2 5/8 3/4 1 3/4 7/8 3/4 1 1-1/4 1-1/4 1-1/2 1-1/2	Catalog Number C5015x6x4+ C5015x8x4+ C5015x8x6+ C5015x10x4#+ C5015x10x6#+ C5015x10x8#+ C5015x12x4+ C5015x12x6+ C5015x12x8+ C5015x12x10# C5015x14x6# C5015x14x8# C5015x14x10# C5015x14x12# C5015x16x8# C5015x16x10# C5015x16x12+ C5015x16x14# C5015x20x12 C5015x20x16# C5015x24x20# C5015x32x24#
	Seal-Nut For Male Pipe Thread 	Pipe Thread 1/8 1/4 3/8 1/2 3/4 1		Catalog Number C3059x2 C3059x4 C3059x6 C3059x8 C3059x12 C3059x16		
Cap (Ref. SAE No. 070112)  *5141x	Tube O.D. 1/8 3/16 1/4 5/16 3/8 1/2 5/8 3/4 1 1-1/4 1-1/2 2	Catalog Number C5129x2 C5129x3 C5129x4+ C5129x5+ C5129x6+ C5129x8+ C5129x10+ C5129x12+ C5129x16+ C5129x20+ C5129x24 C5129x32	Male Straight Thread O-Ring Hex Socket Plug (Ref. SAE No. 090109B)  NOTE: Parts furnished with zinc plate.	Port Size 1/8 3/16 1/4 5/16 3/8 1/2 5/8 3/4 7/8 1 1-1/4	Catalog Number 7238x2 7238x3 7238x4 7238x5 7238x6 7238x8 7238x10 7238x12 7238x14 7238x16 7238x20	
	Plug (Ref. SAE No. 070109)  optional hole *5241x • 5241x2, 5241x3x	Tube O.D. 1/4 5/16 3/8 1/2 5/8 3/4 7/8 1 1-1/4 1-1/2 2		Catalog Number C5229x4+ C5229x5+ C5229x6+ C5229x8+ C5229x10+ C5229x12+ C5229x14 C5229x16+ C5229x20 C5229x24 C5229x32		
Plug (Ref. SAE No. 080109) (O-ring included)  *7241x	Tube O.D. 1/8 1/4 5/16 3/8 1/2 5/8 3/4 1	Catalog Number 7229x2 7229x4 7229x5 7229x6 7229x8 7229x10 7229x12 7229x16	Male Straight Thread/Female Straight Thread O-Ring Boss  NOTE: Parts furnished with zinc plate.	Male Port Size 1/2 5/8 3/4 7/8 1 1 1-1/4 1-1/2 2	Female Port Size 3/8 1/2 1/2 3/4 1/2 3/4 3/4 1-1/4 1-1/4 1-1/2	Catalog Number 7033x8x6 7033x10x8 7033x12x8 7033x14x12 7033x16x8 7033x16x12 7033x20x12 7033x24x20 7033x32x24

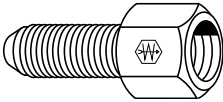

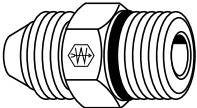
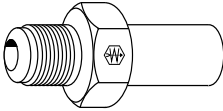
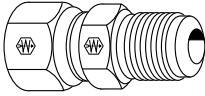
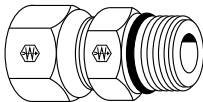
*Stainless steel catalog number.
 + Available in Stainless Steel.
 • Available in Stainless Steel Only.

Small Hex Union (Ref. SAE No. 070101) Assembly Number C35305x4, etc. 	Tube O.D.	Tube O.D.	Catalog Number	Male Connector (Ref. SAE No. 070102) Assembly Number C35205x4, etc. 	Tube O.D.	Male Pipe Thread	Catalog Number
	1/8 3/16 1/4 5/16 5/16 3/8 3/8 3/8 1/2 1/2 5/8 5/8 3/4 3/4 3/4 7/8 1 1 1-1/4 1-1/2 2	1/8 3/16 1/4 1/4 5/16 5/16 1/4 5/16 3/8 3/8 3/8 1/2 1/2 5/8 5/8 1/2 5/8 3/4 3/4 3/4 7/8 1 1 1-1/4 1-1/2 2	C5305x2 C5305x3 C5305x4+ C5305x5x4 C5305x5+ C5305x6x4 C5305x6+ C5305x6+ C5305x8x6 C5305x8+ C5305x10x8 C5305x10+ C5305x12x8 C5305x12x10 C5305x12+ C5305x14 C5305x16x12 C5305x16+ C5305x20 C5305x24 C5305x32		1/8 3/16 1/4 1/4 1/4 3/8 1/2 5/16 5/16 1/4 3/8 3/8 1/4 3/8 3/8 1/2 1/4 1/2 3/8 1/2 1/2 3/4 5/8 5/8 3/4 3/4 3/4 3/4 1 7/8 1 1 1 1-1/4 1-1/4 1-1/2 1-1/2 2	1/8 1/8 1/8 1/4 1/4 3/8 1/2 1/8 1/4 3/8 1/4 3/8 3/8 1/2 1/4 3/8 1/2 1/4 3/8 3/8 1/2 3/4 3/8 3/4 3/4 3/4 1 3/4 3/4 1 1 1-1/4 1 1-1/4 1-1/4 1-1/2 1-1/2 2 2	C5205x2+ C5205x3 C5205x4+ C5205x4x4+ C5205x4x6 C5205x4x8 C5205x5 C5205x5x4+ C5205x5x6 C5205x6x2+ C5205x6+ C5205x6x6+ C5205x6x8+ C5205x8x4+ C5205x8+ C5205x8x8+ C5205x8x12+ C5205x10x6 C5205x10+ C5205x10x12 C5205x12x8+ C5205x12+ C5205x12x16 C5205x14 C5205x16x12 C5205x16+ C5205x16x20 C5205x20x16 C5205x20 C5205x24x20 C5205x24 C5205x32
Large Hex Union (Ref. SAE No. 070119) Assembly Number C35306x4, etc. 	Tube O.D.		Catalog Number	Female Connector (Ref. SAE No. 070103) Assembly Number C35255x4, etc. 	Tube O.D.	Fem. Pipe Thread	Catalog Number
	1/4 5/16 3/8 1/2 5/8 3/4 1 1-1/4 1-1/2				C5306x4+ C5306x5+ C5306x6+ C5306x8+ C5306x10+ C5306x12+ C5306x16+ C5306x20 C5306x24	1/8 3/16 1/4 1/4 5/16 5/16 3/8 3/8 1/2 1/2 1/2 3/8 3/8 1/2 1/2 3/4 3/4 3/4 7/8 1 1-1/4 1-1/2 2	1/8 1/8 1/8 1/4 1/4 1/8 1/4 1/4 3/8 3/8 1/2 3/8 1/2 1/2 3/8 3/8 1/2 3/4 3/4 3/4 1 1 1-1/4 1-1/2 2
Male Straight Thread O-Ring Union 	Port Size		Catalog Number	Adapter 	Tube O.D.	Inverted Thread	Catalog Number
	1/4 3/8 1/2 5/8 3/4 1 1-1/4 1-1/2 2				C5314x4x4 C5314x6x6 C5314x8x8 C5314x10x10 C5314x12x12 C5314x16x16 C5314x20x20 C5314x24x24 C5314x32x32	1/4 5/16 3/8 1/2 3/4 1 1-1/4 1-1/2 2	7/16-24 1/2-20 5/8-18 3/4-18
Bulkhead Union (Ref. SAE No. 070601) Assembly Number C35325x4, etc. 	Tube O.D.		Catalog Number	Adapter 	Tube O.D.	Inverted Thread	Catalog Number
	3/16 1/4 5/16 3/8 1/2 5/8 3/4 3/4 1 1-1/4				C5325x3 C5325x4+ C5325x5 C5325x6+ C5325x8+ C5325x10+ C5325x12+ C5325x12BN+ C5325x16 C5325x20	1/4 5/16 3/8 1/2	7/16-24 1/2-20 5/8-18 3/4-18

*Stainless steel catalog number. ♦Standard part is bagged and includes nut.
 + Available in Stainless Steel. • Available in Stainless Steel Only.

JIC 37° Flare-Twin®

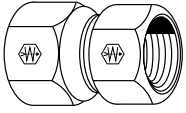
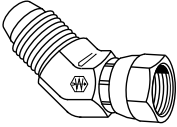
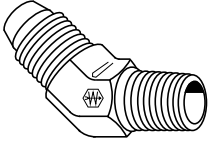
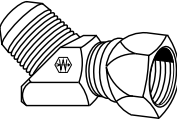
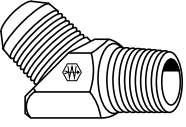
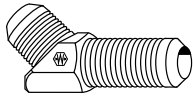
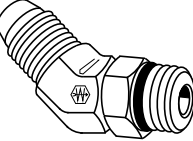
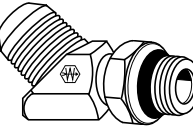
**Steel
Fittings**

Female Bulkhead Connector Assembly Number C35725x4, etc.	Tube O.D.	Female Pipe Thread	Catalog Number	Straight Thread O-Ring Extended Connector (Ref. SAE No. 070122) Assembly Number C35316x4, etc.	Tube O.D.	Port Size	Catalog Number							
 <p>For bulkhead nut see page 219. Included with assembly.</p>	1/4	1/8	C5275x4		1/4	1/4	C5316x4							
	3/8	1/4	C5275x6		3/8	3/8	C5316x6							
	1/2	3/8	C5275x8		1/2	1/2	C5316x8							
	5/8	1/2	C5275x10		1/2	3/8	C5316x8x6							
	3/4	3/4	C5275x12		5/8	5/8	C5316x10							
	1	1	C5275x16		3/4	3/4	C5316x12							
Straight Thread O-Ring Connector (Ref. SAE No. 070120) Assembly Number C35315x4, etc.				Male 37° JIC to Male Metric Standpipe		Tube O.D. Tube O.D. (MM)	Catalog Number							
		1/8	1/8					C5315x2+	1/4	6MM	MC5019x4x6			
		3/16	3/16					C5315x3	1/4	8MM	MC5019x4x8			
		1/4	1/4					C5315x4+	3/8	10MM	MC5019x6x10			
		1/4	5/16					C5315x4x5+	1/2	12MM	MC5019x8x12			
		1/4	3/8					C5315x4x6	1/2	14MM	MC5019x8x14			
		1/4	1/2					C5315x4x8	5/8	15MM	MC5019x10x15			
		5/16	1/4					C5315x5x4	5/8	16MM	MC5019x10x16			
		5/16	5/16					C5315x5	3/4	16MM	MC5019x12x16			
		5/16	3/8					C5315x5x6	3/4	18MM	MC5019x12x18			
		3/8	1/4					C5315x6x4	3/4	20MM	MC5019x12x20			
		3/8	5/16					C5315x6x5	1	22MM	MC5019x16x22			
		3/8	3/8					C5315x6+	1	25MM	MC5019x16x25			
		3/8	1/2					C5315x6x8+	(See page 228 for sleeves and nuts.)					
		3/8	5/8					C5315x6x10						
		1/2	3/8					C5315x8x6						
		1/2	1/2					C5315x8+						
		1/2	5/8					C5315x8x10+						
		1/2	3/4					C5315x8x12+						
		5/8	1/2					C5315x10x8						
		5/8	5/8					C5315x10+						
		5/8	3/4					C5315x10x12						
		5/8	1					C5315x10x16						
		3/4	1/2					C5315x12x8						
		3/4	5/8					C5315x12x10						
		3/4	3/4					C5315x12+						
		3/4	7/8					C5315x12x14						
3/4	1	C5315x12x16												
3/4	1-1/4	C5315x12x20												
7/8	7/8	C5315x14												
1	5/8	C5315x16x10												
1	3/4	C5315x16x12												
1	1	C5315x16+												
1	1-1/4	C5315x16x20												
1-1/4	1	C5315x20x16												
1-1/4	1-1/4	C5315x20												
1-1/4	1-1/2	C5315x20x24												
1-1/2	1-1/4	C5315x24x20												
1-1/2	1-1/2	C5315x24												
1-1/2	2	C5315x24x32												
2	1-1/2	C5315x32x24												
2	2	C5315x32												
*5327x														
				Male 37° JIC to Female FOR-SEAL®		Tube O.D. Tube O.D.	Catalog Number							
								1/4	1/4	4213x4				
								3/8	3/8	4213x6				
								1/2	1/2	4213x8				
								5/8	5/8	4213x10				
								3/4	3/4	4213x12				
								1	1	4213x16				
								37° JIC Female Swivel to Male Straight Thread O-Ring		Tube O.D. Port Size	Catalog Number			
												1/4	1/4	C5216x4x4
												1/4	3/8	C5216x4x6
												3/8	3/8	C5216x6x6
				3/8	1/2	C5216x6x8								
				1/2	3/8	C5216x8x6								
				1/2	1/2	C5216x8x8								
				5/8	5/8	C5216x10x10								
				3/4	3/4	C5216x12x12								
				1	1	C5216x16x16								
				1-1/4	1-1/4	C5216x20x20								
				1-1/2	1-1/2	C5216x24x24								
				2	2	C5216x32x32								

*Stainless steel catalog number.
 + Available in Stainless Steel.



RELATED PRODUCTS

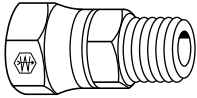
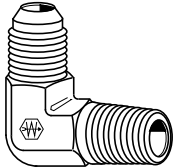
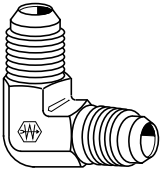


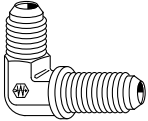
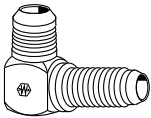
Female 37° JIC Swivel to Female Pipe 	Tube O.D.	Pipe Size	Catalog Number	Swivel Nut 45° Elbow (Ref. SAE No. 070321) Assembly Number C35356x4, etc. 	Tube O.D.		Catalog Number
	1/4 3/8 1/2 3/4 1	1/4 3/8 1/2 3/4 1	C5256x4x4 C5256x6x6 C5256x8x8 C5256x12 C5256x16		1/4 5/16 3/8 1/2 5/8 3/4 7/8 1 1-1/4 1-1/2		C5356x4 C5356x5 C5356x6+ C5356x8+ C5356x10 C5356x12 C5356x14 C5356x16 C5356x20 ¹ C5356x24
45° Male Elbow (Ref. SAE No. 070302) Assembly Number C35355x4, etc. 	Tube O.D.	Male Pipe Thread	Catalog Number	 *5368x ¹ Special order only.	Tube O.D.		Catalog Number
	1/8 3/16 1/4 1/4 5/16 5/16 3/8 3/8 3/8 3/8 1/2 1/2 1/2 1/2 5/8 5/8 3/4 3/4 1 1 1-1/4 1-1/2 2	1/8 1/8 1/8 1/4 1/8 1/4 1/8 1/4 3/8 1/2 3/8 1/2 3/8 1/2 3/8 1/2 3/4 3/4 1 1 1-1/4 1-1/2 2	C5355x2 C5355x3 C5355x4+ C5355x4x4+ C5355x5 C5355x5x4 C5355x6x2 C5355x6+ C5355x6x6 C5355x6x8 C5355x8x4 C5355x8+ C5355x8x8+ C5355x10x6 C5355x10 C5355x12x8 C5355x12+ C5355x16x12 C5355x16 C5355x20 ¹ C5355x24 C5355x32		1/4 5/16 3/8 1/2 5/8 3/4 7/8 1 1-1/4 1-1/2 2		TF5356x4 TF5356x5 TF5356x6 TF5356x8 TF5356x10 TF5356x12 TF5356x16 TF5356x20 TF5356x24 TF5356x32
 *5367x ¹ Special order only.	Tube O.D.	Male Pipe Thread	Catalog Number	45° Bulkhead Union Elbow  For bulkhead nut see page 211. Included with assembly.	Tube O.D.		Catalog Number
	1/8 1/4 1/4 5/16 5/16 3/8 3/8 3/8 3/8 1/2 1/2 1/2 1/2 5/8 5/8 3/4 3/4 1 1 1-1/4 1-1/2 2	1/8 1/8 1/4 1/8 1/4 1/8 1/4 3/8 1/2 3/8 1/2 3/8 1/2 3/8 1/2 3/4 3/4 1 1 1-1/4 1-1/2 2	TF5355x2 TF5355x4 TF5355x4x4 TF5355x5 TF5355x5x4 TF5355x6x2 TF5355x6 TF5355x6x6 TF5355x6x8 TF5355x8x4 TF5355x8 TF5355x8x8 TF5355x8x8 TF5355x10x6 TF5355x10 TF5355x10x12 TF5355x12x8 TF5355x12 TF5355x12x16 TF5355x16x12 TF5355x16 TF5355x20 TF5355x24 TF5355x32		1/4 5/16 3/8 1/2 5/8 3/4 7/8 1 1-1/4 1-1/2		TF5375x4 TF5375x5 TF5375x6 TF5375x8 TF5375x10 TF5375x12 TF5375x16
Straight Thread O-Ring 45° Elbow (Ref. SAE No. 070320) Assembly Number C35365x4, etc.  *5377x ¹ Special order only.	Tube O.D.	Port Size	Catalog Number	 *5377x ¹ Special order only.	Tube O.D.	Port Size	Catalog Number
	1/4 5/16 3/8 1/2 1/2 5/8 3/4 3/4 1 1-1/4 1-1/2	1/4 5/16 3/8 1/2 5/8 3/4 7/8 1 1-1/4 1-1/2	C5365x4 C5365x5 ¹ C5365x6 C5365x8 C5365x8x10 C5365x10 C5365x12x10 C5365x12 C5365x16 C5365x20 C5365x24 ¹		1/4 5/16 3/8 1/2 5/8 3/4 7/8 1 1-1/4 1-1/2		1/4 5/16 3/8 1/2 5/8 3/4 7/8 1 1-1/4 1-1/2 2

*Stainless Steel Catalog number.

+ Available in Stainless Steel.

JIC 37° Flare-Twin®

Steel Fittings

Female 37° JIC Swivel to Male Pipe Adapter	Tube O.D.	Male Pipe Thread	Catalog Number	90° Male Elbow (Ref. SAE No. 070202) Assembly Number C35405x4, etc.	Tube O.D.	Male Pipe Thread	Catalog Number
	1/4	1/4	9100x4x4		1/8	1/8	C5405x2+
	5/16	1/4	9100x5x4		3/16	1/8	C5405x3
	3/8	1/4	9100x6x4		1/4	1/8	C5405x4+
	3/8	3/8	9100x6x6		1/4	1/4	C5405x4x4+
	1/2	3/8	9100x8x6		5/16	1/8	C5405x5
	1/2	1/2	9100x8x8		5/16	1/4	C5405x5x4+
	5/8	3/8	9100x10x6		3/8	1/8	C5405x6x2+
	5/8	1/2	9100x10x8		3/8	1/4	C5405x6+
	3/4	1/2	9100x12x8		3/8	3/8	C5405x6x6+
	3/4	3/4	9100x12x12		3/8	1/2	C5405x6x8+
	1	3/4	9100x16x12		1/2	1/4	C5405x8x4+
	1	1	9100x16x16		1/2	3/8	C5405x8+
	1-1/4	1-1/4	9100x20x20		1/2	1/2	C5405x8x8+
90° Union Elbow (Ref. SAE No. 070201) Assembly Number C35505x4, etc.   *5517x †Special order only.	Tube O.D.		Catalog Number		1/4	1/8	TF5405x4
	1/4		C5505x4+		1/4	1/4	TF5405x4x4
	5/16		C5505x5 ¹		1/4	3/8	TF5405x4x6
	3/8		C5505x6+		1/4	1/2	TF5405x4x8
	1/2		C5505x8+		5/16	1/8	TF5405x5
	5/8		C5505x10+		5/16	1/4	TF5405x5x4
	3/4		C5505x12+		5/16	3/8	TF5405x5x6
	1		C5505x16+		3/8	1/4	TF5405x6
	1-1/4		C5505x20 ¹		3/8	1/8	TF5405x6x2
	1-1/2		C5505x24 ¹		3/8	3/8	TF5405x6x6
	1/4		TF5505x4		3/8	1/2	TF5405x6x8
	5/16		TF5505x5		3/8	3/4	TF5405x6x12
	3/8		TF5505x6		1/2	1/4	TF5405x8x4
1/2		TF5505x8	1/2	3/8	TF5405x8		
5/8		TF5505x10	1/2	1/2	TF5405x8x8		
3/4		TF5505x12	1/2	3/4	TF5405x8x12		
7/8		TF5505x14	5/8	3/8	TF5405x10x6		
1		TF5505x16	5/8	1/2	TF5405x10		
1-1/4		TF5505x20	5/8	3/4	TF5405x10x12		
1-1/2		TF5505x24	3/4	1/2	TF5405x12x8		
2		TF5505x32	3/4	3/4	TF5405x12		
90° Bulkhead Union Elbow (Ref. SAE No. 070701) Assembly Number C35525x4, etc.   For bulkhead nut see page 211. Included with assembly. *5537x †Special order only.	Tube O.D.		Catalog Number	*5417x †Special order only.	1/4	1/8	TF5405x12x16
	1/4		C5525x4+		7/8	3/4	TF5405x14
	5/16		C5525x5 ¹		1	3/4	TF5405x16x12
	3/8		C5525x6+		1	1	TF5405x16
	1/2		C5525x8		1-1/4	1-1/4	TF5405x16x20
	5/8		C5525x10 ¹		1-1/4	1	TF5405x20x16
	3/4		C5525x12+		1-1/4	1-1/4	TF5405x20
	1		C5525x16		1-1/4	1-1/2	TF5405x20x24
	1-1/4		C5525x20		1-1/2	1-1/4	TF5405x24x20
	1/4		TF5525x4		1-1/2	1-1/2	TF5405x24
	5/16		TF5525x5		2	2	TF5405x32
	3/8		TF5525x6				
	1/2		TF5525x8				
5/8		TF5525x10					
3/4		TF5525x12					
1		TF5525x16					

*Stainless Steel Catalog number.
 † Available in Stainless Steel.

90° Male Elbow Long (Ref. SAE No. 071502) Assembly Number C35425x4, etc.	Tube O.D. 1/4 3/8 1/2 3/4	Male Pipe Thread 1/4 1/4 3/8 3/4	Catalog Number C5425x4x4 ¹ C5425x6 C5425x8 ¹ C5425x12 C5425x14 ¹	90° Female Elbow (Ref. SAE No. 070203) Assembly Number C35455x4, etc.	Tube O.D. 1/4 1/4 5/16 3/8 3/8 3/8 1/2 1/2 1/2 5/8 3/4 3/4 7/8 1 1-1/4 1-1/2	Fem. Pipe Thread 1/8 1/4 1/8 1/8 1/4 3/8 3/8 1/4 3/8 1/2 1/2 3/4 3/4 7/8 1 1-1/4 1-1/2 2	Catalog Number C5455x4 + C5455x4x4 ¹ C5455x5 ¹ C5455x6x2 C5455x6 + C5455x6x6 + C5455x8x4 C5455x8 + C5455x8x8 + C5455x10 C5455x12x8 C5455x12 + C5455x14 C5455x16 + C5455x20 ¹
	1/4 1/4 5/16 3/8 3/8 1/2 1/2 1/2 5/8 3/4 3/4 7/8 7/8 1 1-1/4 1-1/2	1/8 1/4 1/4 1/4 1/4 3/8 3/8 1/2 1/2 3/4 3/4 3/4 3/4 1 1-1/4 1-1/2	TF5425x4 TF5425x4x4 TF5425x5x4 TF5425x6 TF5425x6x6 TF5425x8 TF5425x8x8 TF5425x8x12 TF5425x10 TF5425x12 TF5425x14 TF5425x14x12 TF5425x16 TF5425x20 TF5425x24		1/4 1/4 5/16 3/8 3/8 1/2 1/2 5/8 3/4 3/4 7/8 1 1-1/4 1-1/2 2	1/8 1/4 1/8 1/4 1/4 3/8 3/8 1/2 1/2 1/2 3/4 3/4 7/8 1 1-1/4 1-1/2 2	TF5455x4 TF5455x4x4 TF5455x5 TF5455x5x4 TF5455x6 TF5455x6x6 TF5455x8 TF5455x8x8 TF5455x10 TF5455x12 TF5455x14 TF5455x16 TF5455x20 TF5455x24 TF5455x32
90° Male Elbow Extra Long (Ref. SAE No. 071602) Assembly Number C35435x4, etc.	Tube O.D. 1/4 1/4 5/16 5/16 3/8 3/8 1/2 1/2 5/8 3/4 7/8 1 1-1/4	Male Pipe Thread 1/8 1/4 1/8 1/4 3/8 3/8 3/8 1/2 1/2 1/2 3/4 3/4 1 1-1/4	Catalog Number TF5435x4 TF5435x4x4 TF5435x5 TF5435x5x4 TF5435x6 TF5435x6x6 TF5435x8 TF5435x8x8 TF5435x10 TF5435x12 TF5435x14 TF5435x16 TF5435x20	Swivel Nut 90° Elbow (Ref. SAE No. 070221) Assembly Number C35506x4, etc.	Tube O.D. 1/4 5/16 3/8 1/2 5/8 3/4 7/8 1 1-1/4	Catalog Number C5506x4 + C5506x5 C5506x6 + C5506x8 + C5506x10 C5506x12 + C5506x14 ¹ C5506x16 + C5506x20	
	1/4 1/4 5/16 5/16 3/8 3/8 1/2 1/2 5/8 3/4 7/8 1 1-1/4	1/8 1/4 1/8 1/4 3/8 3/8 3/8 1/2 1/2 1/2 3/4 3/4 1 1-1/4	TF5506x4 TF5506x5 TF5506x6 TF5506x8 TF5506x10 TF5506x12 TF5506x14 TF5506x16 TF5506x20 TF5506x24 TF5506x32		1/4 5/16 3/8 1/2 5/8 3/4 7/8 1 1-1/4 1-1/2 2	1/8 1/4 1/8 1/4 3/8 3/8 3/8 1/2 1/2 1/2 3/4 3/4 1 1-1/4	TF5406x4 TF5406x6 TF5406x8 TF5406x10 TF5406x12 TF5406x16 TF5406x20 TF5406x24 TF5406x32
90° Male Pipe To JIC 37° Swivel Assembly Number TF35406x4, etc.	Tube O.D. 1/4 3/8 1/2 5/8 3/4 1 1-1/4 1-1/2 2	Male Pipe Thread 1/8 1/4 3/8 1/2 3/4 1 1-1/4 1-1/2 2	Catalog Number TF5406x4 TF5406x6 TF5406x8 TF5406x10 TF5406x12 TF5406x16 TF5406x20 TF5406x24 TF5406x32	90° Male Pipe To JIC 37° Swivel Assembly Number TF35406x4, etc.	Tube O.D. 1/4 3/8 1/2 5/8 3/4 1 1-1/4 1-1/2 2	Male Pipe Thread 1/8 1/4 3/8 1/2 3/4 1 1-1/4 1-1/2 2	Catalog Number TF5406x4 TF5406x6 TF5406x8 TF5406x10 TF5406x12 TF5406x16 TF5406x20 TF5406x24 TF5406x32

¹Special order only.

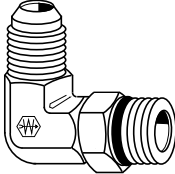
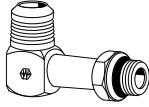
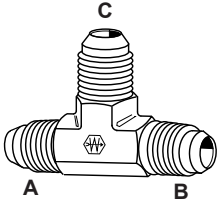
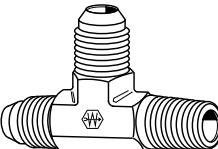
*5467x
¹Special order only.

*5518x
¹Special order only.

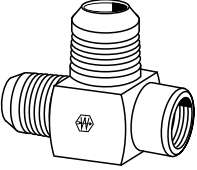
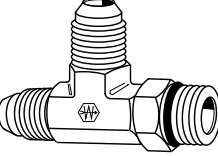
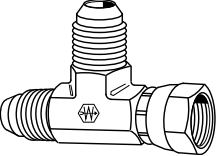
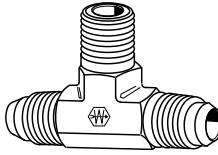
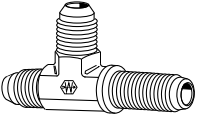
*Stainless Steel Catalog number.
 + Available in Stainless Steel.

JIC 37° Flare-Twin®

Steel Fittings

Straight Thread O-Ring 90° Elbow (Ref. SAE No. 070220) Assembly Number C35515x4, etc.	Tube O.D.	Port Size	Catalog Number	Straight Thread O-Ring 90° Elbow Extra Long (Ref. SAE No. 071620)	Tube O.D.	Port Size	Catalog Number		
	3/16	3/16	C5515x3		3/8	3/8	TF5515x6LL		
	1/4	1/4	C5515x4+		1/2	1/2	TF5515x8LL		
	5/16	5/16	C5515x5+		5/8	5/8	TF5515x10LL		
	3/8	3/8	C5515x6+		3/4	3/4	TF5515x12LL		
	3/8	1/2	C5515x6x8						
	1/2	3/8	C5515x8x6						
	1/2	1/2	C5515x8+						
	1/2	5/8	C5515x8x10						
	5/8	5/8	C5515x10						
	3/4	5/8	C5515x12x10						
	3/4	3/4	C5515x12+						
	7/8	7/8	C5515x14						
	1	3/4	C5515x16x12						
	1	1	C5515x16						
	1-1/4	1-1/4	C5515x20						
	1-1/2	1-1/2	C5515x24						
	1/4	1/4	TF5515x4		Union Tee (Ref. SAE No. 070401) Assembly Number C35705x4, etc.	Tube O.D. A	Tube O.D. B	Tube O.D. C	Catalog Number
	1/4	5/16	TF5515x4x5		1/8	1/8	1/8	C5705x2	
	1/4	3/8	TF5515x4x6		3/16	3/16	3/16	C5705x3	
	5/16	1/4	TF5515x5x4		1/4	1/4	1/4	C5705x4+	
	5/16	5/16	TF5515x5		5/16	5/16	5/16	C5705x5 ¹	
	5/16	3/8	TF5515x5x6		3/8	3/8	3/8	C5705x6+	
	3/8	1/4	TF5515x6x4		1/2	1/2	1/2	C5705x8+	
	3/8	5/16	TF5515x6x5		5/8	5/8	5/8	C5705x10+	
3/8	3/8	TF5515x6	3/4		3/4	3/4	C5705x12+		
3/8	1/2	TF5515x6x8	7/8		7/8	7/8	C5705x14		
3/8	5/8	TF5515x6x10	1		1	1	C5705x16		
1/2	3/8	TF5515x8x6	1-1/4		1-1/4	1-1/4	C5705x20		
1/2	1/2	TF5515x8	1-1/2		1-1/2	1-1/2	C5705x24		
1/2	5/8	TF5515x8x10	1/4		1/4	1/4	TF5705x4		
1/2	3/4	TF5515x8x12	5/16		5/16	5/16	TF5705x5		
5/8	1/2	TF5515x10x8	3/8		3/8	3/8	TF5705x6		
5/8	5/8	TF5515x10	1/2		1/2	1/2	TF5705x8		
5/8	3/4	TF5515x10x12	5/8		1/2	1/2	TF5705x10x8x8		
3/4	1/2	TF5515x12x8	5/8		5/8	5/8	TF5705x10		
3/4	5/8	TF5515x12x10	5/8		5/8	1/2	TF5705x10x10x8		
3/4	3/4	TF5515x12	3/4		3/4	3/4	TF5705x12		
3/4	7/8	TF5515x12x14	7/8		7/8	7/8	TF5705x14		
1	1	TF5515x12x16	1		1	1	TF5705x16		
1	3/4	TF5515x16x12	1-1/4		1-1/4	1-1/4	TF5705x20		
1	7/8	TF5515x16x14	1-1/2	1-1/2	1-1/2	TF5705x24			
1	1	TF5515x16	2	2	2	TF5705x32			
1	1-1/4	TF5515x16x20							
1-1/4	1	TF5515x20x16							
1-1/4	1-1/4	TF5515x20							
1-1/2	1-1/4	TF5515x24x20							
1-1/2	1-1/2	TF5515x24							
2	2	TF5515x32							
*5527x									
Straight Thread O-Ring 90° Elbow Long (Ref. SAE No. 071620)	3/8	3/8	TF5515x6L		Male Run Tee (Ref. SAE No. 070424) Assembly Number C35755x4, etc.	Tube O.D.	Male Pipe Thread	Catalog Number	
	1/2	1/2	TF5515x8L		1/4	1/8	C5755x4+		
	5/8	5/8	TF5515x10L		1/4	1/4	C5755x4x4x4 ¹		
	3/4	3/4	TF5515x12L		3/8	1/4	C5755x6 ¹ +		
					1/2	3/8	C5755x8+		
					1/2	1/2	C5755x8x8 ¹		
					5/8	1/2	C5755x10		
					3/4	3/4	C5755x12		
					1	1	C5755x16		
					1-1/4	1-1/4	TF5755x4		
					1-1/2	1-1/2	TF5755x4x4x4		
					2	2	TF5755x5		
					TF5755x6				
					TF5755x6x6x6				
					TF5755x8				
					TF5755x8x8x8				
					TF5755x10				
					TF5755x12				
					TF5755x14				
					TF5755x16				
					TF5755x20				
					TF5755x24				
					TF5755x32				

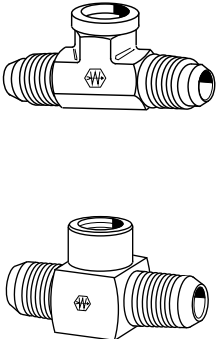
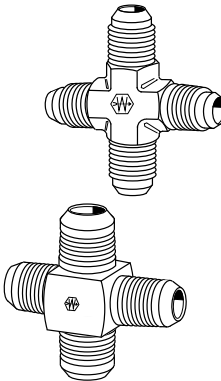
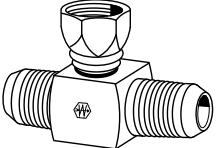

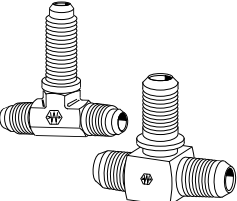
*Stainless Steel Catalog number.
+ Available in Stainless Steel.

Female Run Tee (Ref. SAE No. 070426) 	Tube O.D.	Fem. Pipe Thread	Catalog Number	Straight Thread O-Ring Run Tee (Ref. SAE No. 070428) Assembly Number C35716x4, etc. 	Tube O.D.	Port Size	Catalog Number
	1/4	1/8	TF5805x4		1/4	1/4	C5716x4
	3/8	1/4	TF5805x6		5/16	5/16	C5716x5
	1/2	3/8	TF5805x8		3/8	3/8	C5716x6
	5/8	1/2	TF5805x10		1/2	1/2	C5716x8
	3/4	3/4	TF5805x12		5/8	5/8	C5716x10
	7/8	3/4	TF5805x14		3/4	3/4	C5716x12
	1	1	TF5805x16		1	1	C5716x16
					1-1/4	1-1/4	C5716x20
					1/4	1/4	TF5716x4
					5/16	5/16	TF5716x5
					3/8	3/8	TF5716x6
					1/2	1/2	TF5716x8
					5/8	5/8	TF5716x10
					3/4	3/4	TF5716x12
					7/8	7/8	TF5716x14
					1	1	TF5716x16
					1-1/4	1-1/4	TF5716x20
					1-1/2	1-1/2	TF5716x24
				Replacement O-rings page 208.			
Swivel Nut Run Tee (Ref. SAE No. 070432) Assembly Number C35706x4, etc. 	Tube O.D.		Catalog Number	Male Branch Tee (Ref. SAE No. 070425) Assembly Number C35605x4, etc. 	Tube O.D.	Male Pipe Thread	Catalog Number
	1/4		C5706x4+		1/4	1/8	C5605x4+
	5/16		C5706x5		1/4	1/4	C5605x4x4x4
	3/8		C5706x6+		5/16	1/8	C5605x5
	1/2		C5706x8+		3/8	1/4	C5605x6+
	5/8		C5706x10		1/2	3/8	C5605x8
	3/4		C5706x12+		5/8	1/2	C5605x10
	1		C5706x16		3/4	3/4	C5605x12
	1-1/4		C5706x20		7/8	3/4	C5605x14 ¹
					1	1	C5605x16
					1-1/4	1-1/4	C5605x20 ¹
					1/4	1/8	TF5605x4
					1/4	1/4	TF5605x4x4x4
					5/16	1/8	TF5605x5
					3/8	1/4	TF5605x6
					3/8	3/8	TF5605x6x6x6
					1/2	3/8	TF5605x8
					1/2	1/2	TF5605x8x8x8
					5/8	1/2	TF5605x10
					3/4	3/4	TF5605x12
					7/8	3/4	TF5605x14
					1	1	TF5605x16
					1-1/4	1-1/4	TF5605x20
					1-1/2	1-1/2	TF5605x24
					2	2	TF5605x32
				*5617x ¹ Special order only.			
Bulkhead Run Tee (Ref. SAE No. 070958) Assembly Number C35726x4, etc. 	Tube O.D.		Catalog Number				
	3/8		C5726x6				
	1/2		C5726x8 ¹				
	1/2		TF5726x8				
For bulkhead nut see page 219. Included with assembly. ¹ Special order only.							

*Stainless Steel Catalog number.
+ Available in Stainless Steel.

JIC 37° Flare-Twin®

Steel Fittings

Female Branch Tee (Ref. SAE No. 070427) Assembly Number C35655x4, etc.	Tube O.D.	Fem. Pipe Thread	Catalog Number	Straight Thread O-Ring Branch Tee (Ref. SAE No. 070429) Assembly Number C35715x4, etc.	Tube O.D.	Port Size	Catalog Number
 <p>*5667x ¹Special order only.</p>	1/4	1/8	C5655x4+	 <p>#Stainless steel construction.</p>	1/4	1/4	C5715x4
	3/8	1/4	C5655x6¹+		5/16	5/16	C5715x5
	1/2	3/8	C5655x8¹+		3/8	3/8	C5715x6
	5/8	1/2	C5655x10		1/2	1/2	C5715x8
	3/4	3/4	C5655x12		5/8	5/8	C5715x10
	1	1	C5655x16¹		3/4	3/4	C5715x12
	1/4	1/8	TF5655x4		1	1	C5715x16
	1/4	1/4	TF5655x4x4x4		1-1/4	1-1/4	TF5715x4
	5/16	1/8	TF5655x5		1-1/2	1-1/2	TF5715x5
	3/8	1/4	TF5655x6		2	2	TF5715x6
	3/8	3/8	TF5655x6x6x6				TF5715x8
	1/2	3/8	TF5655x8				TF5715x10
	1/2	1/2	TF5655x8x8x8				TF5715x12
	5/8	1/2	TF5655x10				TF5715x14
	3/4	3/4	TF5655x12				TF5715x16
	7/8	3/4	TF5655x14				TF5715x20
	1	1	TF5655x16				TF5715x24
	1-1/4	1-1/4	TF5655x20				
	1-1/2	1-1/2	TF5655x24				
	2	2	TF5655x32				
Swivel Nut Branch Tee (Ref. SAE No. 070433) Assembly Number C35707x4, etc.  <p>*5719x ¹Special order only.</p>	Tube O.D.		Catalog Number	 <p>Straight Thread O-Ring</p> <p>Material: Buna-N 90 Durometer Temperature Range: -40°F to +250°F (-40°C to +121°C) Standard O-ring complies with SAE specification SAE J515 Type CH. (See page 204 for O-ring compound and application chart)</p>	Tube O.D.		Catalog Number
	1/4		TF5707x4		1/4		5967x4#
	5/16		TF5707x5		3/8		5967x6#
	3/8		TF5707x6		1/2		5967x8#
	1/2		TF5707x8		1/4		TF5955x4
	5/8		TF5707x10		5/16		TF5955x5
	3/4		TF5707x12		3/8		TF5955x6
	7/8		TF5707x14		1/2		TF5955x8
	1		TF5707x16		5/8		TF5955x10
	1-1/4		TF5707x20		3/4		TF5955x12
	1-1/2		TF5707x24		7/8		TF5955x14
	2		TF5707x32		1		TF5955x16
					1-1/4		TF5955x20
			1-1/2		TF5955x24		
Bulkhead Branch Tee (Ref. SAE No. 070959)  <p>#Stainless steel construction. For bulkhead nut see page 211. Included with assembly.</p>	Tube O.D.		Catalog Number	Port Size	Catalog Number		
	1/4		5737x4#	1/16	7629x1		
	3/8		5737x6#	1/8	7629x2		
	1/4		TF5725x4	3/16	7629x3		
	3/8		TF5725x6	1/4	7629x4		
	1/2		TF5725x8	5/16	7629x5		
	5/8		TF5725x10	3/8	7629x6		
	3/4		TF5725x12	7/16	7629x7		
	1		TF5725x16	1/2	7629x8		
				5/8	7629x10		
			3/4	7629x12			
			7/8	7629x14			
			1	7629x16			
			1-1/4	7629x20			
			1-1/2	7629x24			
			2	7629x32			

*Stainless Steel Catalog number.

➤ Available in Stainless Steel.

Typical Application: Used in applications to adapt connections made to DIN (Deutsche Industrie Norme) specifications to male SAE 37° flare.

Sealing Method: 3-piece flareless bite type or 60° cone, or 37° flare.

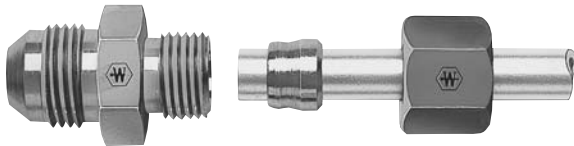
Vibration Rating: Fair resistance.

Material: Carbon steel – SAE 12L14

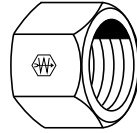
Plating: Bodies and sleeves – Zinc and Yellow Dichromate finish.
Nuts – Phosphate coating.

Advantages: Provides an adapter to convert a metric hose assembly to 37° SAE allowing the use of standard hose and end fittings. Can also be used in the repair of metric tubing.

Assembly: See page 315 for metric preset tool.

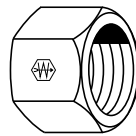


Metric Flareless Nut Light Series (DIN 3901/3902L)



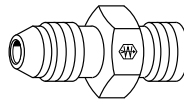
Tube O.D. (mm)	Metric Thread Size	Catalog Number
6	M12x1.5	ML7105x6
8	M14x1.5	ML7105x8
10	M16x1.5	ML7105x10
12	M18x1.5	ML7105x12
15	M22x1.5	ML7105x15
18	M26x1.5	ML7105x18
22	M30x2.0	ML7105x22
28	M36x2.0	ML7105x28

Metric Flareless Nut Heavy Series (DIN 3901/3902S)



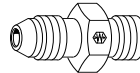
Tube O.D. (mm)	Metric Thread Size	Catalog Number
6	M14x1.5	MH7105x6
8	M16x1.5	MH7105x8
10	M18x1.5	MH7105x10
12	M20x1.5	MH7105x12
14	M22x1.5	MH7105x14
16	M24x1.5	MH7105x16
20	M30x2.0	MH7105x20
25	M36x2.0	MH7105x25
30	M42x2.0	MH7105x30
38	M52x2.0	MH7105x38

Male JIC 37° To 24° Metric Tube Seat (DIN 3901/3902L)



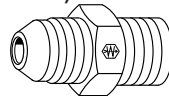
Tube O.D.	Metric Thread	Catalog Number
1/4	M12x1.5	MC5206x4x6
3/8	M14x1.5	MC5206x6x8
1/2	M16x1.5	MC5206x8x10
1/2	M18x1.5	MC5206x8x12
5/8	M22x1.5	MC5206x10x15
3/4	M26x1.5	MC5206x12x18

Male JIC 37° To 24° Metric Tube Seat (DIN 3901/3902S)



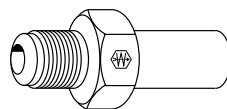
Tube O.D.	Metric Thread	Catalog Number
3/8	M14x1.5	MC5208x6x6
1/2	M18x1.5	MC5208x8x10
5/8	M22x1.5	MC5208x10x14
3/4	M24x1.5	MC5208x12x16

Male JIC 37° To 60° Metric Tube Seat (DIN 7631)



Tube O.D.	Metric Thread	Catalog Number
1/4	M12x1.5	MC5207x4x6
3/8	M14x1.5	MC5207x6x8
3/8	M16x1.5	MC5207x6x10
1/2	M18x1.5	MC5207x8x12
5/8	M22x1.5	MC5207x10x15
3/4	M26x1.5	MC5207x12x18

Male JIC 37° to Male Metric Standpipe

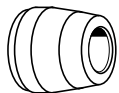


Tube O.D.	Tube O.D. (MM)	Catalog Number
1/4	6MM	MC5019x4x6
1/4	8MM	MC5019x4x8
3/8	10MM	MC5019x6x10
1/2	12MM	MC5019x8x12
1/2	14MM	MC5019x8x14
5/8	15MM	MC5019x10x15
5/8	16MM	MC5019x10x16
3/4	16MM	MC5019x12x16
3/4	18MM	MC5019x12x18
3/4	20MM	MC5019x12x20
1	22MM	MC5019x16x22
1	25MM	MC5019x16x25

Metric Tube O.D.	6	8	10	12	14	15	16
Light	M12x1.5	M14x1.5	M16x1.5	M18x1.5	–	M22x1.5	–
Heavy	M14x1.5	M16x1.5	M18x1.5	M20x1.5	M22x1.5	–	M24x1.5

Metric Tube O.D.	18	20	22	25	28	30
Light	M26x1.5	–	M30x2.0	–	M36x2.0	–
Heavy	–	M30x2.0	–	M36x2.0	–	M42x2.0

Metric Flareless Sleeve	Tube O.D. (mm)	Catalog Number
	6	7165x6MM
	8	7165x8MM
	10	7165x10MM
	12	7165x12MM
	14	7165x14MM
	15	7165x15MM
	16	7165x16MM
	18	7165x18MM
	20	7165x20MM
	22	7165x22MM
	25	7165x25MM
	28	7165x28MM
	30	7165x30MM
	38	7165x38MM



NOTE: Multiply millimeters (mm) by 0.03937 to obtain inches.

Metric

Steel Fittings

Typical Application: Used in applications to adapt connections and tubing to male swivel SAE 37° flare.

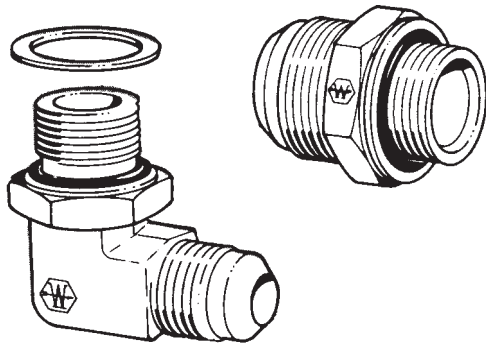
Sealing Method: Metric Tapered pipe thread, or o-ring or 37° flare.

Vibration Rating: Fair resistance.

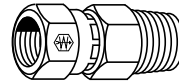
Material: Carbon steel – SAE 12L14

Plating: Zinc with yellow dichromate finish.

Advantages: Provides an adapter to convert metric ports to 37° allowing the use of standard hose and end fittings. Also metric tubing that can be flared can be adapted to a standard 37° SAE connection.

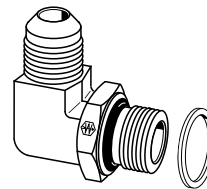


Female JIC 37° Swivel To Male JIS Metric Taper Pipe Thread



Tube O.D.	JIS Taper Pipe Thread	Catalog Number
1/4	M10x1.0	M9700x4x6
5/16	M12x1.5	M9700x5x8
3/8	M14x1.5	M9700x6x10
1/2	M16x1.5	M9700x8x12
5/8	M20x1.5	M9700x10x14
3/4	M24x1.5	M9700x12x20
1	M27x2.0	M9700x16x25
1-1/4	M36x2.0	M9700x20x32

Male JIC 37° To Male Metric Straight Thread 90° Elbow



Tube O.D.	Male Metric Thread	Catalog Number
1/4	M10x1.0	MC5515x4x10
1/4	M12x1.5	MC5515x4x12
3/8	M14x1.5	MC5515x6x14
3/8	M16x1.5	MC5515x6x16
1/2	M18x1.5	MC5515x8x18
1/2	M22x1.5	MC5515x8x22
5/8	M18x1.5	MC5515x10x18
5/8	M20x1.5	MC5515x10x20
5/8	M22x1.5	MC5515x10x22
3/4	M22x1.5	MC5515x12x22
3/4	M27x2.0	MC5515x12x27
1	M33x2.0	MC5515x16x33

Sleeve 3-Piece Metric (Ref. SAE No. 070115)	Tube O.D. (Inch Size)	Tube O.D. (Metric Size)	Catalog Number
 Adapts standard JIC Flare-Twin® fittings for use with metric tubing.	1/4	6MM	C5165x4x6MM
	5/16	8MM	C5165x5x8MM
	3/8	10MM	C5165x6x10MM
	1/2	12MM	C5165x8x12MM
	5/8	14MM	C5165x10x14MM
	5/8	15MM	C5165x10x15MM
	5/8	16MM	C5165x10x16MM
	3/4	18MM	C5165x12x18MM
	7/8	20MM	C5165x14x20MM
	7/8	22MM	C5165x14x22MM
	1	25MM	C5165x16x25MM
	1-1/4	30MM	C5165x20x30MM
	1-1/4	32MM	C5165x20x32MM
	1-1/2	38MM	C5165x24x38MM

Metric Retaining Ring



Material: Steel

Metric Thread O.D. (mm)	Catalog Number
10	M7630x10
12	M7630x12
14	M7630x14
16	M7630x16
18	M7630x18
22	M7630x22
27	M7630x27
33	M7630x33
42	M7630x42

Male JIC 37° To Male Metric Straight Thread Connector	Tube O.D.	Male Metric Thread	Catalog Number
 Material: Steel	1/4	M10x1.0	MC5315x4x10
	1/4	M12x1.5	MC5315x4x12
	1/4	M14x1.5	MC5315x4x14
	3/8	M14x1.5	MC5315x6x14
	3/8	M16x1.5	MC5315x6x16
	1/2	M18x1.5	MC5315x8x18
	1/2	M22x1.5	MC5315x8x22
	5/8	M20x1.5	MC5315x10x20
	3/4	M22x1.5	MC5315x12x22
	3/4	M27x2.0	MC5315x12x27
	1	M33x2.0	MC5315x16x33
	1-1/4	M42x2.0	MC5315x20x42

Metric O-Ring

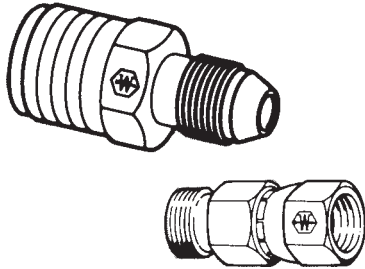


Material: Buna-N
90 Durometer
Temperature Range:
-40°F to +250°F
(-40°C to +121°C)
(See page 204 for O-ring compound and application chart)

Metric Thread O.D. (mm)	Catalog Number
10	M7629x10
12	M7629x12
14	M7629x14
16	M7629x16
18	M7629x18
20	M7629x20
22	M7629x22
27	M7629x27
33	M7629x33
42	M7629x42

NOTE: Multiply millimeters (mm) by 0.03937 to obtain inches.

RELATED PROD



Typical Application: Used in applications to adapt connections made to BSP (British Standard Pipe) specifications to male or female swivel SAE 37° flare.

Sealing Method: Tapered (BSPT) or Parallel Pipe Thread (BSPP), o-ring or JIC 37° flare.

Vibration Rating: Fair resistance.

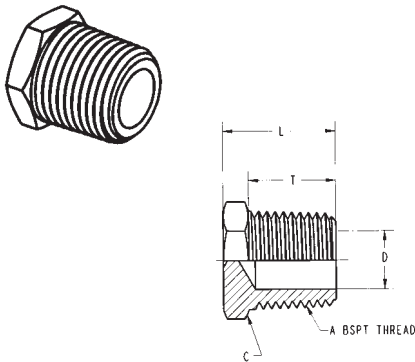
Material: Carbon steel – SAE 12L14

Plating: Zinc with yellow dichromate finish.

Advantages: Provides an adapter to convert BSP ports to 37° allowing the use of standard hose and end fittings.

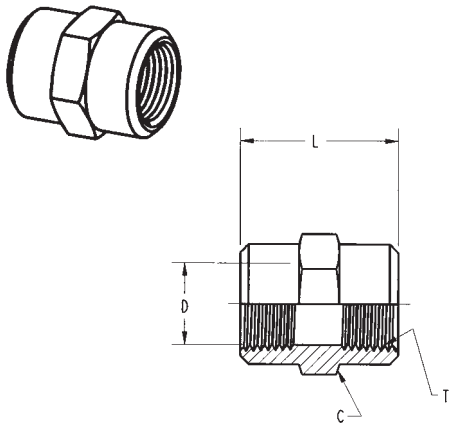
Pipe Size	1/8	1/4	3/8	1/2	5/8	3/4	1	1-1/4
Thread Size	1/8-28	1/4-19	3/8-19	1/2-14	5/8-14	3/4-14	1-11	1-1/4-11

Hex Head Plug



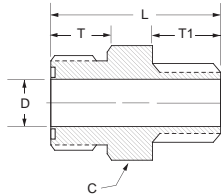
BSPT Pipe Size	Catalog Number	Hex C (mm)	L	T	D Opt. Dia.
1/8	MC3159x2	11	.58	.385	.16
1/4	MC3159x4	14	.76	.577	.25
3/8	MC3159x6	17	.80	.577	.38
1/2	MC3159x8	22	.98	.765	.50
3/4	MC3159x12	27	1.11	.796	.69
1	MC3159x16	36	1.27	.943	.88

Coupling



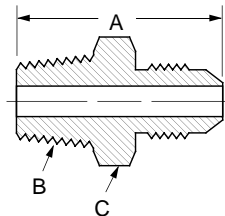
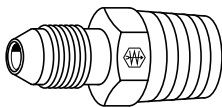
BSPT Pipe Size	Catalog Number	Hex C (mm)	L	D Opt. Dia.
1/8	MC3309x2	17	.75	.337
1/4	MC3309x4	19	1.13	.450
3/8	MC3309x6	22	1.13	.588
1/2	MC3309x8	30	1.50	.733
3/4	MC3309x12	36	1.53	.949
1	MC3309x16	41	1.89	1.192

Hex Nipple



BSPT Pipe Size A	BSPT Pipe Size A1	Catalog Number	Hex C (mm)	L	T	T1	D	D1
1/8	1/8	MC3069x2x2	11	1.06	.395	.395	.188	.188
1/4	1/8	MC3069x4x2	17	1.26	.575	.395	.281	.188
1/4	1/4	MC3069x4x4	17	1.45	.575	.575	.281	.281
3/8	1/4	MC3069x6x4	19	1.45	.575	.575	.406	.281
3/8	3/8	MC3069x6x6	19	1.45	.575	.575	.406	.406
1/2	3/8	MC3069x8x6	22	1.70	.765	.575	.531	.406
1/2	1/2	MC3069x8x8	22	1.89	.765	.765	.531	.531
3/4	1/2	MC3069x12x8	30	1.99	.795	.765	.719	.531
3/4	3/4	MC3069x12x12	30	2.02	.795	.795	.719	.719
1	3/4	MC3069x16x12	36	2.18	.955	.795	.939	.719
1	1	MC3069x16x16	36	2.34	.955	.955	.939	.939
1-1/4	1	MC3069x20x16	46	2.51	1.045	.955	1.252	.939
1-1/4	1-1/4	MC3069x20x20	46	2.60	1.045	1.045	1.252	1.252
1-1/2	1-1/4	MC3069x24x20	50	2.67	1.045	1.045	1.502	1.252
1-1/2	1-1/2	MC3069x24x24	50	2.67	1.045	1.045	1.502	1.502
2	1-1/2	MC3069x32x24	65	2.98	1.205	1.045	1.940	1.502
2	2	MC3069x32x32	65	3.14	1.205	1.205	1.940	1.940

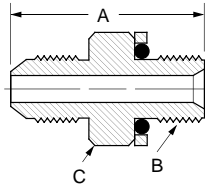
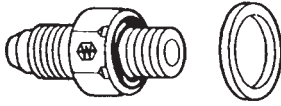
Male Connector



Tube O.D.	BSPT Pipe Size	Catalog Number	BSPT Thread B	A	Hex C	D	D1
1/4	1/8	MC5205x4x2	1/8-28	1.22	1/2	.172	.281
1/4	1/4	MC5205x4x4	1/4-19	1.42	9/16	.172	.188
1/4	3/8	MC5205x4x6	1/4-19	1.42	1/2	.172	.406
5/16	1/4	MC5205x5x4	1/4-19	1.22	9/16	.234	.281
5/16	3/8	MC5205x5x6	3/8-19	1.42	47/64	.234	.406
3/8	1/4	MC5205x6x4	1/4-19	1.21	5/8	.297	.406
3/8	3/8	MC5205x6x6	3/8-19	1.29	3/4	.297	.281
3/8	1/2	MC5205x6x8	1/2-14	1.69	55/64	.297	.531
3/8	3/4	MC5205x6x12	3/4-14	1.78	1-5/32	.297	.719
1/2	3/8	MC5205x8x6	3/8-19	1.41	13/16	.391	.531
1/2	1/2	MC5205x8x8	1/2-14	1.59	15/16	.391	.406
1/2	3/4	MC5205x8x12	3/4-14	1.88	1-5/32	.391	.719
5/8	1/2	MC5205x10x8	1/2-14	1.66	15/16	.484	.531
5/8	3/4	MC5205x10x12	3/4-14	1.99	1-1/8	.484	.719
5/8	1	MC5205x10x16	1-11	2.15	1-13/32	.484	.939
3/4	1/2	MC5205x12x8	1/2-14	2.06	1-5/32	.609	.719
3/4	1	MC5205x12x16	1-11	2.25	1-13/32	.609	.531
7/8	3/4	MC5205x14x12	3/4-14	2.12	1-5/32	.609	.939
7/8	1	MC5205x14x16	1-11	2.28	1-13/32	.719	.719
3/4	3/4	MC5205x12x12	3/4-14	1.93	1-1/8	.719	.942
1	3/4	MC5205x16x12	3/4-14	2.14	1-13/32	.845	.939
1	1	MC5205x16x16	1-11	2.13	1-3/8	.845	.719
1-1/4	1-1/4	MC5205x20x20	1-1/4-11	2.34	1-11/16	1.080	1.252
1-1/2	1-1/2	MC5205x24x24	1-1/2-11	2.71	1-15/16	1.314	1.502
2	2	MC5205x32x32	2-11	3.27	2-3/4	1.784	1.940

RELATED PRODUCT

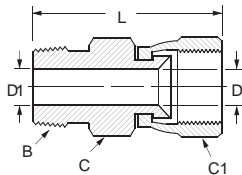
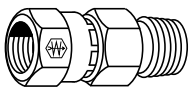
Male British Standard Parallel Pipe to Male 37° SAE



Tube O.D.	BSPB Pipe Size	Catalog Number	BSPB Thread B	A	Hex C
1/4	1/8	MB5315x4x2	1/8-28	1.10	5/8
1/4	1/4	MB5315x4x4	1/4-19	1.24	3/4
5/16	1/4	MB5315x5x4	1/4-19	1.24	3/4
3/8	1/4	MB5315x6x4	1/4-19	1.25	3/4
3/8	3/8	MB5315x6x6	3/8-19	1.31	7/8
1/2	3/8	MB5315x8x6	3/8-19	1.48	7/8
1/2	1/2	MB5315x8x8	1/2-14	1.67	1-1/8
5/8	3/4	MB5315x10x12	3/4-14	1.83	1-3/8
3/4	3/4	MB5315x12x12	3/4-14	1.93	1-3/8
1	1	MB5315x16x16	1-11	2.20	1-3/4
1-1/4	1-1/4	MB5315x20x20	1-1/4-11	2.32	2

Replacement retaining rings and O-rings page 233.

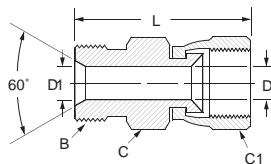
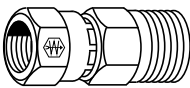
Female 37° SAE Swivel to Male British Standard Tapered Pipe Thread



Tube O.D.	BSPT Pipe Size	Catalog Number	BSPT Pipe Size	Hex C	Hex C1	D	D1	L
1/4	1/4	M9800x4x4	1/4	9/16	9/16	.172	.281*	1.56
5/16	1/4	M9800x5x4	1/4	11/16	5/8	.234	.281*	1.63
3/8	1/4	M9800x6x4	1/4	11/16	11/16	.297	.281	1.69
1/2	1/4	M9800x8x4	1/4	7/8	7/8	.391	.281	1.87
1/2	3/8	M9800x8x6	3/8	7/8	7/8	.391	.406*	1.87
1/2	1/2	M9800x8x8	1/2	7/8	7/8	.391	.531*	2.06
5/8	1/2	M9800x10x8	1/2	1	1	.484	.531*	2.11
3/4	1/2	M9800x12x8	1/2	1-1/8	1-1/4	.609	.531	2.21
3/4	3/4	M9800x12x12	3/4	1-1/8	1-1/4	.609	.719*	2.24
1	3/4	M9800x16x12	3/4	1-3/8	1-1/2	.845	.719	2.39
1	1	M9800x16x16	1	1-3/8	1-1/2	.845	.938*	2.55
1-1/4	1-1/4	M9800x20x20	1-1/4	1-7/8	2	1.079	1.125*	2.73

*Optional counterbore.

Female 37° SAE Swivel to Male British Standard Parallel Pipe Thread



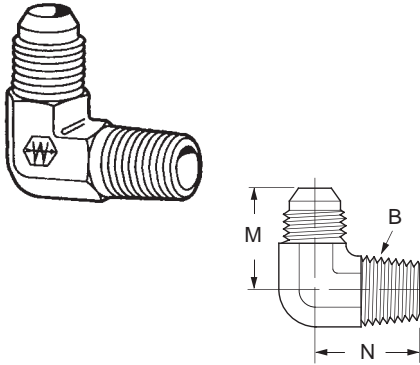
Tube O.D.	BSPB Pipe Size	Catalog Number	BSPB Pipe Size	Hex C1	Hex C	D	D1	L
1/4	1/4	M9600x4x4	1/4	9/16	9/16	.172	.198*	1.43
5/16	1/4	M9600x5x4	1/4	5/8	11/16	.234	.198	1.50
3/8	1/4	M9600x6x4	1/4	11/16	11/16	.297	.198	1.56
3/8	3/8	M9600x6x6	3/8	11/16	11/16	.297	.322*	1.66
1/2	3/8	M9600x8x6	3/8	7/8	7/8	.391	.322	1.77
1/2	1/2	M9600x8x8	1/2	7/8	7/8	.391	.448*	1.92
5/8	1/2	M9600x10x8	1/2	1	1	.484	.448	1.97
3/4	3/4	M9600x12x12	3/4	1-1/4	1-1/8	.609	.666*	2.25
1	1	M9600x16x16	1	1-1/2	1-3/8	.845	.885*	2.48
1-1/4	1-1/4	M9600x20x20	1-1/4	2	1-7/8	1.078	1.125*	2.64

*Optional counterbore.

BSP Fittings

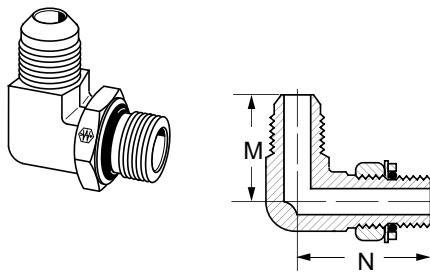
Steel Fittings

Male British Standard Tapered Pipe to Male SAE 37° SAE 90° Elbow



Tube O.D.	BSPT Pipe Size	Catalog Number	BSPT Thread B	M	N	Across Flats
1/4	1/4	MC5405x4x4	1/4-19	1.05	1.09	7/16
5/16	1/4	MC5405x5x4	1/4-19	1.05	1.09	1/2
3/8	1/4	MC5405x6x4	1/4-19	1.06	1.09	9/16
3/8	3/8	MC5405x6x6	3/8-19	1.14	1.22	3/4
1/2	3/8	MC5405x8x6	3/8-19	1.25	1.22	3/4
1/2	1/2	MC5405x8x8	1/2-14	1.33	1.47	7/8
5/8	3/4	MC5405x10x12	3/4-14	1.54	1.59	1-1/16
3/4	3/4	MC5405x12x12	3/4-14	1.66	1.59	1-1/16
1	1	MC5405x16x16	1-11	1.81	1.97	1-5/16
1-1/4	1-1/4	MC5405x20x20	1-1/4-11	2.06	2.38	1-5/8

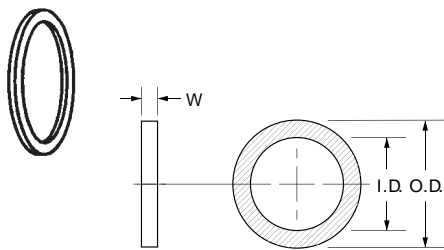
Male British Standard Parallel Pipe to Male 37° SAE 90° Elbow



Replacement retaining rings and O-rings see below.

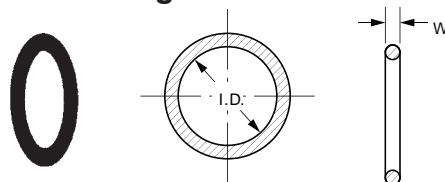
Tube O.D.	BSPP Pipe Size	Catalog Number	BSPP Thread	M	N	Across Flats
1/4	1/4	MB5515x4x4	1/4-19	1.05	1.25	9/16
5/16	1/4	MB5515x5x4	1/4-19	.95	1.25	9/16
3/8	1/4	MB5515x6x4	1/4-19	1.06	1.25	9/16
3/8	3/8	MB5515x6x6	3/8-19	1.14	1.45	3/4
1/2	3/8	MB5515x8x6	3/8-19	1.25	1.45	3/4
1/2	1/2	MB5515x8x8	1/2-14	1.33	1.70	7/8
5/8	3/4	MB5515x10x12	3/4-14	1.34	1.94	1-1/16
3/4	3/4	MB5515x12x12	3/4-14	1.66	1.94	1-1/16
1	1	MB5515x16x16	1-11	1.81	2.05	1-5/16
1-1/4	1-1/4	MB5515x20x20	1-1/4-11	2.06	2.25	1-5/8

British Retaining Ring



Tube O.D.	Catalog Number	Ring I.D.	Ring O.D.	W
1/8	MB7630x2	.45	.60	.044
1/4	MB7630x4	.63	.81	.067
3/8	MB7630x6	.77	.93	.067
1/2	MB7630x8	.91	1.12	.067
5/8	MB7630x10	1.00	1.24	.067
3/4	MB7630x12	1.12	1.37	.067
1	MB7630x16	1.44	1.74	.092
1-1/4	MB7630x20	1.76	2.18	.092
1-1/2	MB7630x24	2.02	2.43	.092

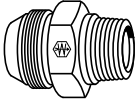
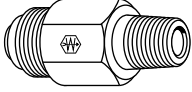
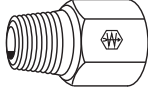
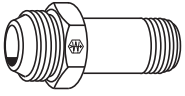
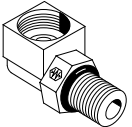
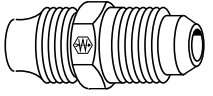
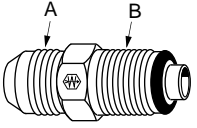
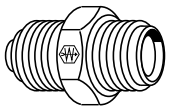
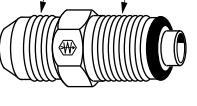
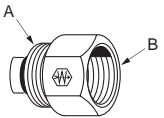
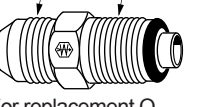
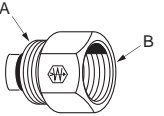
British O-Ring



Material: Buna N 90 Durometer
Temperature Range: -40°F to +250°F
 (-40°C to +121°C)

Tube O.D.	Catalog Number	W	I.D.
1/8	MB7629x2	.070	.239
1/4	MB7629x4	.103	.424
3/8	MB7629x6	.103	.549
1/2	MB7629x8	.103	.695
5/8	MB7629x10	.103	.818
3/4	MB7629x12	.103	.924
1	MB7629x16	.139	1.171
1-1/4	MB7629x20	.139	1.484

RELATED PROD

AC8111 Connector (Steel)  APPLICATION: PTT Thread 30° tube to male pipe adapter for Diesel Engines	Tube Size 1 (1-5/16-14)	Male Pipe Thread 3/4	Catalog Number C9240	Truck Oil Line Extended Fitting Replaces Roto Master No. 10-35 (Brass) 	SAE 45° Tube Size 3/8	Male Pipe Thread 1/4	Catalog Number 1432				
	1 (1-5/16-14)	1	C9200		Restriction Pipe Adapter (Brass) With .0625 Orifice 	Male Pipe Size 1/8	Fem. Pipe Thread 1/8	Catalog Number 1512			
Turbocharger Discharge Connector (Brass) 	Tube Size 19 AC-811 Thread	Male Pipe Thread 3/4	Catalog Number 1408	Ford Transmission 90° Elbow (Brass) Includes O-Ring 	Inv. Tube O.D. 5/16	Straight Pipe Thd. 1/8-27	Catalog Number 1437				
	AC Type Adapter (Brass) 	Tube Size 1/4 Thread Sleeve	SAE 45° Tube O.D. 1/4		Catalog Number 1521	JIC 37° Flare to O-Ring Port (Brass) Includes O-ring 	Tube Size 1/4 3/8	Thread A 7/16-20 9/16-18	Thread B 9/16-18 5/8-18	Catalog Number 1440 1439	
SAE 45° Flare to Inv. Flare Adapter (Brass) 	SAE Tube Size 1/4 1/4 3/8 3/8 3/8	Tube Inv. 3/16 1/4 5/16 3/8 7/16	Catalog Number 1518 1522 1553 1563 1554	JIC 37° Flare to O-Ring Port (Steel) Includes O-ring  (For replacement O-Ring, see page 237.)	Tube Size 1/4 3/8 1/2 5/8 3/4	Thread A 7/16-20 9/16-18 3/4-16 7/8-14 1-1/16-12	Thread B 7/16-24 5/8-18 3/4-16 7/8-14 1-1/16-16	Catalog Number 41157x4 41157x6 41157x8 41157x10 41157x12			
	Metric Power Steering Adapter (Brass) Includes O-ring  (For replacement O-Ring, see page 237.)	Tube Size 3/8 3/8 3/8	Thread A 14x1.5 16x1.5 18x1.5		Inverted Flare B 5/8-18 5/8-18 5/8-18	Catalog Number 1445 1446 1447	JIC 37° Flare to Metric O-Ring Port Adapter (Steel) Includes O-ring  (For replacement O-Ring, see page 237.) Application: GM power steering with Saginaw steering and rack and pinion steering systems.	Tube Size 3/8 3/8 3/8	Thread B M14x1.5 M16x1.5 M18x1.5	Thread A 9/16-18 9/16-18 9/16-18	Catalog Number M41157x6x14 M41157x6x16 M41157x6x18
	Ford Power Steering Fitting (Brass) Includes O-ring  (For replacement O-Ring, see page 237.)	Tube Size 3/8	Thread A 11/16-18		Inverted Flare B 5/8-18	Catalog Number 1444					

Steel Flareless Ermeto® Fittings

Steel Fittings

Forged Fittings and Adaptors
Ermeto® Fittings 7000 Series Pressure Rating Chart

Connection Type	End Size												
	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1-1/4"	1-1/2"	2"
Ermeto® Fittings	5000	5000	5000	5000	5000	4000	4000	4000	4000	4000	3000	3000	3000
W/Adjustable Straight Thread O-Ring	5000	5000	4500	4000	4000	4000	3000	3000	2500	2500	2000	1500	1125
With Male Pipe	5000		5000		5000	4000		4000		4000	3000	2500	2500
With Female Pipe	5000		5000		4000	3000		2500		2000	1500	1500	1000

Typical Application: Hydraulic, instrumentation and chemical processing. Highly recommended for high pressure and high vibration applications.

Pressure: See chart above.

Sealing Method: 3-piece bite-type.

Vibration Rating: Excellent resistance

Material: Carbon steel – AISI/SAE 12L14
Stainless steel – Bodies and nuts type 316, sleeves 17-4PH

Plating: WEATHERCOTE™

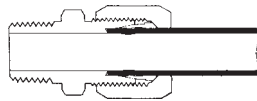
Used With: Aluminum, hard or half-hard copper, steel, stainless steel, monel, titanium and heavy wall tubing that cannot be flared.

Advantages: No tube flaring. Used with extra heavy wall tubing. Broad selection of styles and sizes.

Conformance: Meets ASA, ASME, SAE, and MS specifications and standards.

Ordering Information: Fittings are ordered as complete assemblies. To order bodies only (less nut and sleeve), prefix catalog number with the letter "B." Example: B7205x4. Order nuts and sleeves separately by catalog number.

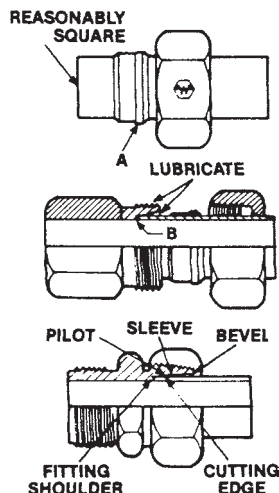
Label Set: FS-1600



Tube O.D.	1/8	3/16	1/4	5/16	3/8	1/2	5/8
Thread	5/16-24	3/8-24	7/16-20	1/2-20	9/16-18	3/4-16	7/8-14

Tube O.D.	3/4	7/8	1	1-1/4	1-1/2	2
Thread	1-1/16-12	1-3/16-12	1-5/16-12	1-5/8-12	1-7/8-12	2-1/2-12

Assembly Instructions



PRESET WITH PRESET TOOL:

(Preset Tools are listed on page 315.)

- Slide nut and then sleeve on tube. Shoulder of sleeve 'A' must be toward nut.
- Insert tube into presetting tool. Be sure that tube is bottomed on fitting tube stop at point 'B.' Lubricate threads, seat of fitting and shoulder of sleeve with good grade of lubricant.
- Turn nut slowly with wrench while turning tube with other hand. When the sleeve grips the tube, that is, when the tube can no longer be turned by hand – STOP – and note the position of the wrench. This is the "Ring Grip" point.

Tighten nut an additional number of turns past the ring grip point as shown in Table 1, page 236.

CAUTION: All stainless steel sleeves should be preset in tool prior to installation.

PRESET IN FITTING BODY:

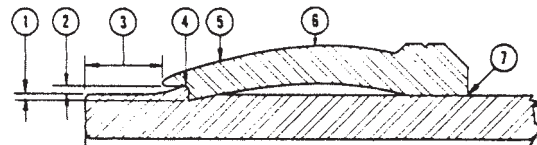
- Follow same procedure as when presetting with preset tool. Once the fitting nut has been turned the proper number of turns past ring grip, the fitting assembly is complete and ready for use.

NOTE: Only carbon steel sleeves can be preset directly into the fitting body. Due to possible thread galling, the use of presetting tools is required when stainless steel fittings are to be assembled.

WARNING: Follow the installation procedures below with care to ensure proper installation of Ermeto® fittings.

Installation:

- After sleeve and nut have been preset on the tubing and checked as described, the assembly is ready for installation into the Ermeto® fitting seat.
- Lubricate threads, seat of fitting and shoulder of sleeve with a good grade of lubricant compatible with system fluid.
- Insert tube assembly into fitting and tighten nut until sharp rise in torque is felt.
- Starting at the position of sharp torque rise, tighten nut 1/4 turn to complete the assembly.



When the assembly procedure for Ermeto® fittings is followed correctly, these points will be evident:

- Cutting edge of sleeve will be imbedded in tubing to its full depth.
- Pilot edge of sleeve should be close to or touching O.D. of tubing.
- Distance between end of tube and leading or pilot edge of sleeve will be at least 1/8".
- Metal will be piled ahead of cutting edge of sleeve under pilot.
- Contact area of sleeve will show evidence of being in perfect contact with tapered seat of fitting.
- Sleeve will show evidence of being bowed within its elastic limits.
- Back of sleeve will be in contact with tube.

NOTE: Performance of fitting will not be affected if sleeve rotates on tube after disassembly.

RELATED PROD

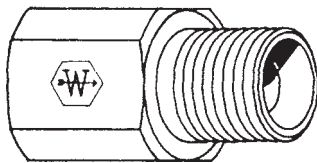


TABLE 1

Number of Additional Turns from “Ring Grip” for Hand Presetting Operation – Ermeto® Sleeve

Tube Size	**Tube Material	.018	.022	.028	.035	.049	.065	.083	.095	.109	.120
2	C1010 MIL T 8504	1-1/6 1-1/6	1-1/6 1-1/6	1-1/6 1-1/6	1-1/6 1-1/6						
3	C1010 MIL T 8504	1-1/6 1-1/6	1-1/6 1-1/6	1-1/6 1-1/6	1 1						
4	C1010 MIL T 8504			1-1/6 1-1/6	1-1/6 1	1-1/6 1	1 5/6				
5	C1010 MIL T 8504			1-1/6 1-1/6	1-1/6 1-1/6	1-1/6 1	1 1				
6	C1010 MIL T 8504				1-1/6 1-1/6	1-1/6 1	1 5/6	1 5/6			
8	C1010 MIL T 8504				1-1/6 1-1/6	1-1/6 1	1 5/6	1 5/6	1 5/6		
10	C1010 MIL T 8504					1-1/6 1-1/6	1 1	5/6 5/6	5/6 5/6	5/6	5/6
12	C1010 MIL T 8504					1 1-1/6	1 1	5/6 5/6	5/6 5/6	5/6 5/6	5/6 5/6
16	C1010 MIL T 8504					1-1/6 1-1/6	1-1/6 1-1/6	5/6 5/6	5/6 5/6	5/6 5/6	5/6 5/6
20	C1010 MIL T 8504					1-1/6 1	1 1	1 1	1 1	5/6 5/6	5/6 5/6
24	C1010 MIL T 8504								1	1	1
32	C1010 MIL T 8504								1	1	1

**C1010 – Carbon Steel Tubing; MIL T 8504 – Annealed Stainless Steel




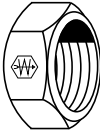


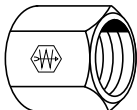
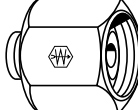
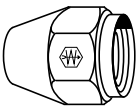

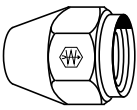

Presetting tools provide a more accurate and positive leakproof method of coupling flareless fittings. Presetting steel Ermeto® sleeves on tubing prior to the fitting assembly will permit the maximum high performance obtainable with flareless fittings. Due to possible thread galling the use of presetting tools is required when stainless steel fittings are to be assembled. See page 315 for T-570-1 hydraulic preset machine.

Ermeto® Hand-Presetting Tools 7000 Series

Catalog Number	Seat Size	Tube O.D. (Inches)	Thread Size
T-7002	2	1/8	5/16-24
T-7003	3	3/16	3/8-24
T-7004	4	1/4	7/16-20
T-7005	5	5/16	1/2-20
T-7006	6	3/8	9/16-18
T-7008	8	1/2	3/4-16
T-7010	10	5/8	7/8-14
T-7012	12	3/4	1-1/16-12
T-7016	16	1	1-5/16-12
T-7020	20	1-1/4	1-5/8-12
T-7024	24	1-1/2	1-7/8-12
T-7032	32	2	2-1/2-12


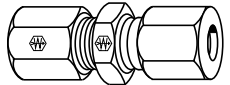
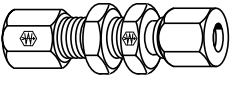
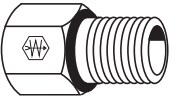
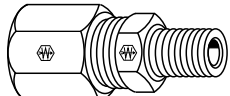
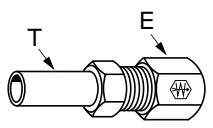
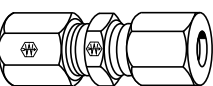
Steel Flareless Ermeto® Fittings

Steel Fittings

Sleeve (Ref. SAE No. 080115B)  *7176x	Tube O.D. 1/8 3/16 1/4 5/16 3/8 1/2 5/8 3/4 7/8 1 1-1/4 1-1/2 2	Catalog Number 7165x2+ 7165x3+ 7165x4+ 7165x5+ 7165x6+ 7165x8+ 7165x10+ 7165x12+ 7165x14+ 7165x16+ 7165x20+ 7165x24+ 7165x32+	Bulkhead Nut (Ref. SAE No. 080118)  *7936x	Tube O.D. 1/4 3/8 1/2 5/8 3/4 7/8 1 1-1/4	Catalog Number 7924x4+ 7924x6+ 7924x8+ 7924x10 7924x12+ 7924x14 7924x16+ 7924x20	
	Sleeve  For use with diesel nuts ONLY .	Tube O.D. 1/4 5/16 3/8	Catalog Number 8165x4 8165x5 8165x6	Seal-Nut For Male Pipe Thread 	Pipe Thread 1/8 1/4 3/8 1/2 3/4 1	Catalog Number C3059x2 C3059x4 C3059x6 C3059x8 C3059x12 C3059x16
Nut (Ref. SAE No. 080110)  *7117x	Tube O.D. 1/8 3/16 1/4 5/16 3/8 1/2 5/8 3/4 7/8 1 1-1/4 1-1/2 2	Catalog Number 7105x2+ 7105x3+ 7105x4+ 7105x5+ 7105x6+ 7105x8+ 7105x10+ 7105x12+ 7105x14+ 7105x16+ 7105x20+ 7105x24+ 7105x32+	Cap  *7141x *7141x2	Tube O.D. 1/4 3/8 1/2 5/8 3/4 1 1-1/4	Catalog Number 7129x4+ 7129x6+ 7129x8+ 7129x10+ 7129x12+ 7129x16+ 7129x20	
	Diesel Nut 	Tube O.D. 1/4 5/16 3/8	Thread Size 9/16-18 5/8-18 3/4-16	Catalog Number 8112x4 8112x5 8112x6	Plug (Ref. SAE No. 080109)  *7241x	Tube O.D. 1/8 1/4 5/16 3/8 1/2 5/8 3/4 1
Diesel Nut 		Tube O.D. 1/4 5/16 3/8	Thread Size 9/16-18 5/8-18 3/4-16	Catalog Number 8112x4 8112x5 8112x6	Straight Thread O-Ring Hex Socket Plug (Ref. SAE No. 090109B)  NOTE: Parts furnished with zinc plate.	Port Size 1/8 3/16 1/4 5/16 3/8 1/2 5/8 3/4 7/8 1 1-1/4

*Stainless Steel Catalog number.

◆ Available in Stainless Steel. • Available in Stainless Steel Only.

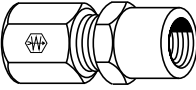
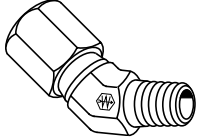
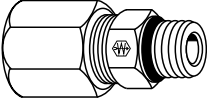
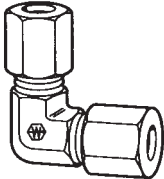
Straight Thread O-Ring Hex Head Plug (Ref. SAE No. 090109A)  NOTE: Parts furnished with zinc plate. #Not counterbored.	Port Size 1/8 3/16 1/4 5/16 3/8 1/2 5/8 3/4 7/8 1 1-1/4 1-1/2 2	Catalog Number 7237x2# 7237x3# 7237x4# 7237x5# 7237x6# 7237x8# 7237x10# 7237x12# 7237x14# 7237x16 7237x20 7237x24 7237x32	Large Hex Union (Ref. SAE No. 080119)  *7318x *7318x6x4	Tube O.D. 1/4 3/8 1/2x3/8 1/2 3/4 1	Catalog Number 7306x4+ 7306x6+ 7306x8x6+ 7306x8+ 7306x12+ 7306x16	
	Bulkhead Union (Ref. SAE No. 080601)  *7337x For bulkhead nuts see page 190.			Tube O.D. 1/4 3/8 1/2 3/4 1	Catalog Number 7325x4 7325x6 7325x8 7325x12 7325x16	
Male Straight Thread/Female Straight Thread O-Ring Boss 	Female Port Size 3/8 1/2 1/2 3/4 1/2 3/4 3/4 1-1/4 1-1/2 1-1/2	Male Port Size 1/2 5/8 3/4 7/8 1 1 1-1/4 1-1/2 2	Catalog Number 7033x8x6 7033x10x8 7033x12x8 7033x14x12 7033x16x8 7033x16x12 7033x20x12 7033x24x20 7033x32x24	 Male Connector (Ref. SAE No. 080102)		
	Reducer (Ref. SAE No. 080123)  *7027x *7027x16x8	Body Size T 3/8 1/2 1/2 5/8 3/4 3/4 1 1-1/4	Tube Size E 1/4 1/4 3/8 1/2 3/8 1/2 3/4 1	Catalog Number 7015x6x4+ 7015x8x4+ 7015x8x6+ 7015x10x8+ 7015x12x6+ 7015x12x8+ 7015x16x12+ 7015x20x16+	Tube O.D. 1/8 1/8 3/16 1/4 1/4 1/4 1/4 1/4 1/4 5/16 5/16 3/8 3/8 3/8 3/8 1/2 1/2 1/2 1/2 1/2 5/8 5/8 3/4 3/4 7/8 1 1 1-1/4 1-1/2 2	Male Pipe Thread 1/8 1/4 1/8 1/8 1/4 1/4 3/8 1/2 1/2 1/8 1/4 3/8 1/2 3/8 1/2 3/4 3/8 1/2 3/4 3/4 3/4 3/4 3/4 3/4 1 1 1-1/4 1-1/2 2
Small Hex Union (Ref. SAE No. 080101)  *7317x	Tube O.D. 1/8 3/16 1/4 5/16 3/8 x 1/4 3/8 1/2 x 3/8 1/2 5/8 3/4 7/8 1 1-1/4 1-1/2 2	Catalog Number 7305x2+ 7305x3+ 7305x4+ 7305x5+ 7305x6x4+ 7305x6+ 7305x8x6 7305x8+ 7305x10+ 7305x12+ 7305x14 7305x16+ 7305x20 7305x24 7305x32	Tube O.D. 1/8 1/8 3/8 3/8 3/8 3/8 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 5/8 5/8 3/4 3/4 7/8 1 1 1-1/4 1-1/2 2	Catalog Number 7217x		

*Stainless Steel Catalog number.

+ Available in Stainless Steel. • Available in Stainless Steel Only.

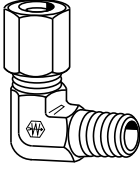
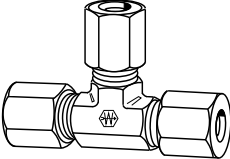
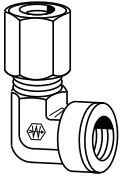
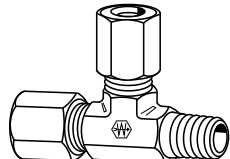
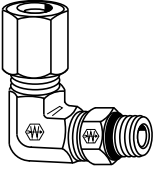
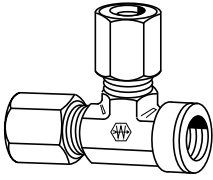
Steel Flareless Ermeto® Fittings

Steel Fittings

Female Connector (Ref. SAE No. 080103)	Tube O.D.	Fem. Pipe Thread	Catalog Number	45° Male Elbow (Ref. SAE No. 080302)	Tube O.D.	Male Pipe Thread	Catalog Number
 <p>*7267x •7267x6x8</p>	1/8	1/8	7255x2+	 <p>*7367x</p>	1/4	1/8	7355x4+
	3/16	1/8	7255x3		1/4	1/4	7355x4x4+
	1/4	1/8	7255x4+		5/16	1/8	7355x5
	1/4	1/4	7255x4x4+		3/8	1/4	7355x6+
	5/16	1/8	7255x5+		1/2	3/8	7355x8+
	3/8	1/4	7255x6+		5/8	1/2	7355x10
	3/8	3/8	7255x6x6+		3/4	3/4	7355x12
	1/2	1/4	7255x8x4+		1	1	7355x16
	1/2	3/8	7255x8+				
	1/2	1/2	7255x8x8+				
	5/8	1/2	7255x10				
	3/4	3/4	7255x12+				
	7/8	3/4	7255x14				
	1	1	7255x16+				
	1-1/4	1-1/4	7255x20				
 <p>*7327x</p>	3/16	3/16	7315x3	 <p>*7517x</p>	1/4		7505x4+
	1/4	1/4	7315x4+		5/16		7505x5
	1/4	5/16	7315x4x5+		3/8		7505x6+
	1/4	3/8	7315x4x6+		1/2		7505x8+
	5/16	5/16	7315x5		1/2		7505x8+
	3/8	3/8	7315x6+		5/8		7505x10+
	3/8	1/2	7315x6x8		3/4		7505x12+
	1/2	1/2	7315x8+		7/8		7505x14+
	1/2	5/8	7315x8x10		1		7505x16+
	1/2	3/4	7315x8x12+		1-1/4		7505x20
	5/8	5/8	7315x10+		1-1/2		7505x24
	3/4	3/4	7315x12+		2		
	3/4	1	7315x12x16				
	7/8	7/8	7315x14				
	1	3/4	7315x16x12				
1	1	7315x16+					
1-1/4	1-1/4	7315x20					
1-1/2	1-1/2	7315x24					
2	2	7315x32					

*Stainless Steel Catalog number.

• Available in Stainless Steel. • Available in Stainless Steel Only.

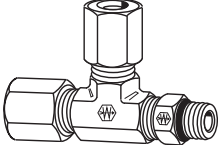
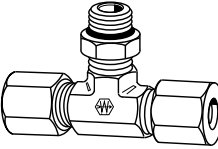
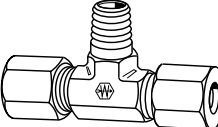
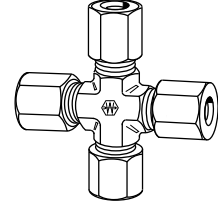
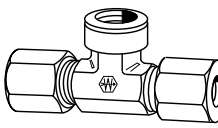

<p>90° Male Elbow (Ref. SAE No. 080202)</p>  <p>*7417x</p>	<p>Tube O.D.</p> <p>1/8 3/16 1/4 1/4 5/16 5/16 3/8 3/8 3/8 3/8 1/2 1/2 1/2 1/2 5/8 5/8 3/4 3/4 7/8 1 1 1-1/4 1-1/2 2</p>	<p>Male Pipe Thread</p> <p>1/8 1/8 1/8 1/4 1/4 1/8 1/4 1/4 3/8 1/2 1/4 3/8 1/2 1/2 3/8 3/8 1/2 1/2 3/4 3/4 3/4 3/4 1 1 1-1/4 1-1/2 2</p>	<p>Catalog Number</p> <p>7405x2+ 7405x3 7405x4+ 7405x4x4+ 7405x5+ 7405x5x4+ 7405x6x2+ 7405x6+ 7405x6x6+ 7405x6x8+ 7405x8x4+ 7405x8+ 7405x8x8+ 7405x10x6+ 7405x10+ 7405x12x8 7405x12+ 7405x14 7405x16x12 7405x16+ 7405x20 7405x24 7405x32</p>	<p>Union Tee (Ref. SAE No. 080401)</p>  <p>*7717x</p>	<p>Tube O.D.</p> <p>3/16 1/4 5/16 3/8 1/2 5/8 3/4 7/8 1</p>	<p>Catalog Number</p> <p>7705x3 7705x4+ 7705x5+ 7705x6+ 7705x8+ 7705x10+ 7705x12+ 7705x14 7705x16+</p>					
	<p>90° Female Elbow (Ref. SAE No. 080203) (Ref. MS51813)</p>  <p>*7467x</p>	<p>Tube O.D.</p> <p>1/4 1/4 3/8 3/8 1/2 1/2 5/8 3/4 7/8 1</p>	<p>Fem. Pipe Thread</p> <p>1/8 1/4 1/4 3/8 3/8 3/8 1/2 1/2 3/4 3/4 3/4 1</p>		<p>Catalog Number</p> <p>7455x4+ 7455x4x4+ 7455x6+ 7455x6x6+ 7455x8+ 7455x8x8+ 7455x10+ 7455x12+ 7455x14 7455x16</p>	<p>Male Run Tee (Ref. SAE No. 080424)</p>  <p>*7767x ¹Special order only</p>	<p>Tube O.D.</p> <p>1/4 1/4 3/8 1/2 1/2 5/8 3/4 1 1-1/4</p>	<p>Male Pipe Thread</p> <p>1/8 1/4 1/4 3/8 3/8 1/2 3/4 1 1-1/4</p>	<p>Catalog Number</p> <p>7755x4+ 7755x4x4x4+ 7755x6+ 7755x8 7755x8x8x8+ 7755x10 7755x12 7755x16 7755x20¹</p>		
		<p>Straight Thread O-Ring 90° Elbow (Ref. SAE No. 080220)</p>  <p>*7527x</p>	<p>Tube O.D.</p> <p>1/4 5/16 3/8 1/2 5/8 3/4 1 1 1-1/4</p>		<p>Port Size</p> <p>1/4 5/16 3/8 1/2 5/8 3/4 1 3/4 1-1/4</p>		<p>Catalog Number</p> <p>7515x4+ 7515x5 7515x6+ 7515x8+ 7515x10+ 7515x12+ 7515x16+ 7515x16x12 7515x20</p>	<p>Female Run Tee (Ref. SAE No. 080426)</p> 	<p>Tube O.D.</p> <p>1/4 1/4 3/8 1/2 5/8 3/4</p>	<p>Fem. Pipe Thread</p> <p>1/8 1/4 1/4 3/8 1/2 3/4</p>	<p>Catalog Number</p> <p>7805x4 7805x4x4x4 7805x6 7805x8 7805x10 7805x12</p>

*Stainless Steel Catalog number.

+ Available in Stainless Steel.

Steel Flareless Ermeto® Fittings

Steel Fittings

Straight Thread O-Ring Run Tee (Ref. SAE No. 080428)	Tube O.D.	Port Size	Catalog Number	Straight Thread O-Ring Branch Tee (Ref. SAE No. 080429)	Tube O.D.	Port Size	Catalog Number
 <p>*7728x</p>	1/4 3/8 1/2	1/4 3/8 1/2	7716x4+ 7716x6+ 7716x8+	 <p>*7727x</p>	1/4 3/8 1/2	1/4 3/8 1/2	7715x4+ 7715x6+ 7715x8
Male Branch Tee (Ref. SAE No. 080425)	Tube O.D.	Male Pipe Thread	Catalog Number	Cross (Ref. SAE No. 080501)	Tube O.D.		Catalog Number
 <p>*7617x</p>	1/4 1/4 5/16 3/8 1/2 1/2 5/8 3/4 1	1/8 1/4 1/8 1/4 3/8 1/2 1/2 3/4 1	7605x4+ 7605x4x4x4+ 7605x5 7605x6+ 7605x8+ 7605x8x8x8+ 7605x10 7605x12 7605x16	 <p>¹Special order only *7967x</p>	1/4 3/8 1/2 5/8 3/4		7955x4+ 7955x6+ 7955x8 7955x10 ¹ 7955x12 ¹
Female Branch Tee (Ref. SAE No. 080427)	Tube O.D.	Fem. Pipe Thread	Catalog Number	Straight Thread O-Ring	Port Size		Catalog Number
 <p>*7667</p>	1/4 1/4 3/8 1/2 5/8 3/4 7/8 1 1-1/4	1/8 1/4 1/4 3/8 1/2 3/4 3/4 1 1-1/4	7655x4+ 7655x4x4x4+ 7655x6+ 7655x8+ 7655x10 7655x12 7655x14 7655x16 7655x20	 <p>Material: Buna-N 90 Durometer Temperature Range: -40°F to +250°F (-40°C to +121°C) Standard O-ring complies with SAE specification SAE J515 Type CH. (See page 202 for O-ring compound and application chart)</p>	1/16 1/8 3/16 1/4 5/16 3/8 7/16 1/2 5/8 3/4 7/8 1 1-1/4 1-1/2 2		7629x1 7629x2 7629x3 7629x4 7629x5 7629x6 7629x7 7629x8 7629x10 7629x12 7629x14 7629x16 7629x20 7629x24 7629x32

*Stainless Steel Catalog number.
+ Available in Stainless Steel.

RELATED PROD



Typical Application: Pressure hydraulic systems.

Pressure: See chart.

Sealing Method: Metal to metal, 30° cone-NPSM thread on pipe swivel end. Sealing methods vary depending on swivel adapter type.

Material: Carbon steel, AISI/SAE 12L14.

Plating: Zinc, yellow dichromate finish.

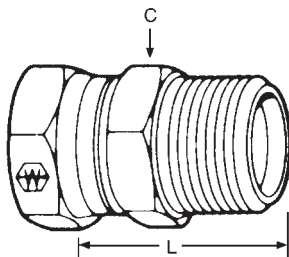
9000 Pipe Fittings

Pipe Fittings 9000 Series Pressure Rating Chart

Connection Type	End Size								
	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Male Pipe (NPTF)*	5000	5000	4000	3000	2500	2000	1500	1000	1000
Female Pipe (NPTF)*	5000	5000	4000	3000	2500	2000	1500	1500	1000

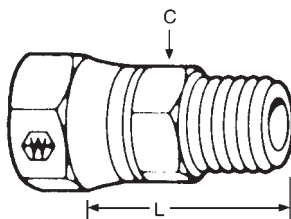
* Pressure ratings shown are the pressure ratings for the fitting and are not necessarily the pressure ratings applicable in an assembly with hydraulic hose. The applicable pressure rating for an assembly with hydraulic hose is the lower value specified for the hose and the fitting unless otherwise agreed to by the supplier and user.

Female Pipe Swivel to Male Pipe (Ref. SAE No. 140130)



NPSM Swivel Nut	Male Pipe Thread	Catalog Number	Hex C	L
1/8-27	1/8-27	9205x2x2	9/16	.900
1/8-27	1/4-18	9205x2x4	11/16	1.187
1/4-18	1/8-27	9205x4x2	11/16	0.940
1/4-18	1/4-18	9205x4x4	11/16	1.200
1/4-18	3/8-18	9205x4x6	11/16	1.200
1/4-18	1/2-14	9205x4x8	7/8	1.500
3/8-18	1/4-18	9205x6x4	5/8	1.210
3/8-18	3/8-18	9205x6x6	3/4	1.240
3/8-18	1/2-14	9205x6x8	7/8	1.540
1/2-14	3/8-18	9205x8x6	7/8	1.330
1/2-14	1/2-14	9205x8x8	1	1.640
1/2-14	3/4-14	9205x8x12	1-1/4	1.620
3/4-14	1/2-14	9205x12x8	1	1.720
3/4-14	3/4-14	9205x12x12	1-1/4	1.680
3/4-14	1-11-1/2	9205x12x16	1-1/2	1.984
1-11-1/2	3/4-14	9205x16x12	1-1/2	1.800
1-11-1/2	1-11-1/2	9205x16x16	1-1/2	2.010
1-11-1/2	1-1/4-11-1/2	9205x16x20	1-11/16	2.080
1-1/4-11-1/2	1-11-1/2	9205x20x16	1-7/8	2.100
1-1/4-11-1/2	1-1/4-11-1/2	9205x20x20	1-7/8	2.140
1-1/4-11-1/2	1-1/2-11-1/2	9205x20x24	2-1/8	2.187
1-1/2-11-1/2	1-1/4-11-1/2	9205x24x20	2-1/8	2.093
1-1/2-11-1/2	1-1/2-11-1/2	9205x24x24	2-1/8	2.270
2-11-1/2	2-11-1/2	9205x32x32	2-5/8	2.420

Female 37° JIC Swivel to Male Pipe Adapter



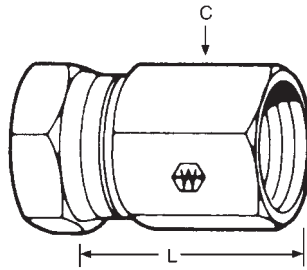
Tube O.D.	Male Pipe Thread	Catalog Number	Hex C	L
1/4	1/4	9100x4x4	9/16	1.130
5/16	1/4	9100x5x4	11/16	1.170
3/8	1/4	9100x6x4	11/16	1.290
3/8	3/8	9100x6x6	11/16	1.290
1/2	3/8	9100x8x6	7/8	1.430
1/2	1/2	9100x8x8	7/8	1.610
5/8	3/8	9100x10x6	1	1.400
5/8	1/2	9100x10x8	1	1.600
3/4	1/2	9100x12x8	1-1/8	1.650
3/4	3/4	9100x12x12	1-1/8	1.650
1	3/4	9100x16x12	1-3/8	1.750
1	1	9100x16x16	1-3/8	1.940
1-1/4	1 1/4	9100x20x20	1-7/8	2.090

NOTE: C and L dimensions subject to change.

Swivel Adapters

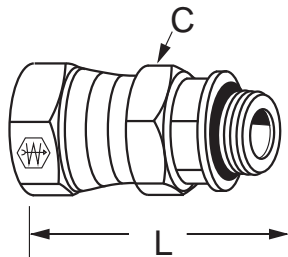
**Steel
Fittings**

Female Pipe Swivel to Female Pipe Straight (Ref. SAE No. 140131)



NPSM Swivel Nut	Fem. Pipe Thread	Catalog Number	Hex C	L
1/8-27	1/8-27	9255x2x2	9/16	.880
1/4-18	1/4-18	9255x4x4	11/16	1.170
1/4-18	3/8-18	9255x4x6	7/8	1.312
3/8-18	1/4-18	9255x6x4	11/16	1.250
3/8-18	3/8-18	9255x6x6	7/8	1.310
3/8-18	1/2-14	9255x6x8	1	1.453
1/2-14	3/8-18	9255x8x6	1	1.500
1/2-14	1/2-14	9255x8x8	1	1.500
3/4-14	3/4-14	9255x12x12	1-1/4	1.620
3/4-14	1-11-1/2	9255x12x16	1-1/2	1.906
1-11-1/2	1-11-1/2	9255x16x16	1-1/2	2.000
1-1/4-11-1/2	1-1/4-11-1/2	9255x20x20	1-7/8	2.000
1-1/2-11-1/2	1-1/2-11-1/2	9255x24x24	2-1/8	2.000
2-11-1/2	2-11-1/2	9255x32x32	2-5/8	2.120

Male Straight Thread O-Ring to Female Pipe Swivel (Ref. SAE No. 140157)



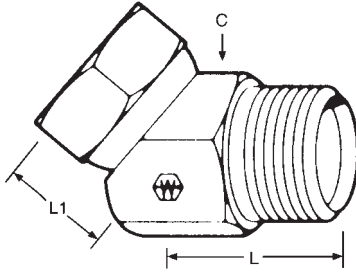
Straight Thread	NPSM Swivel Nut	Catalog Number	Hex C	L
1/4-18	7/16-20	9315x4x4	9/16	.970
3/8-18	7/16-20	9315x4x6	5/8	1.060
1/4-18	1/2-20	9315x5x4	5/8	1.109
1/4-18	9/16-18	9315x6x4	11/16	1.171
3/8-18	9/16-18	9315x6x6	11/16	1.090
1/2-14	9/16-18	9315x6x8	13/16	1.210
1/4-18	3/4-16	9315x8x4	7/8	1.234
3/8-18	3/4-16	9315x8x6	7/8	1.200
1/2-14	3/4-16	9315x8x8	7/8	1.260
3/4-14	3/4-16	9315x8x12	1	1.406
3/8-18	3/4-14	9315x10x6	1	1.375
1/2-14	3/4-14	9315x10x8	1	1.400
3/4-14	3/4-14	9315x10x12	1	1.546
1/2-14	1-1/16-12	9315x12x8	1-1/4	1.453
3/4-14	1-1/16-12	9315x12x12	1-1/4	1.600
3/4-14	1-3/16-12	9315x14x12	1-3/8	1.703
3/4-14	1-5/16-12	9315x16x12	1-1/2	1.734
1-11-1/2	1-5/16-12	9315x16x16	1-1/2	1.710
1-11-1/2	1-5/8-12	9315x20x16	1-7/8	1.828
1-1/4-11-1/2	1-5/8-12	9315x20x20	1-7/8	1.890
1-1/2-11-1/2	1-7/8-12	9315x24x24	2-1/8	1.953
2-11-1/2	2-1/2-12	9315x32x32	2-3/4	2.156

Replacement O-rings page 208.

NOTE: C and L dimensions subject to change.

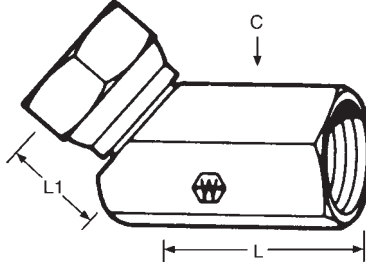
RELATED PRODUCT

45° Swivel Elbow Female Pipe Swivel to Male Pipe
(Ref. SAE No. 140330)



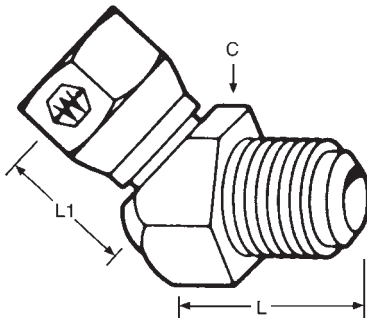
NPSM Swivel Nut	Male Pipe Thread	Catalog Number	Hex C	L	L1
1/8-27	1/8-27	9355x2x2	9/16	.620	.500
1/4-18	1/8-27	9355x4x2	11/16	.660	.470
1/4-18	1/4-18	9355x4x4	11/16	1.020	.670
1/4-18	3/8-18	9355x4x6	7/8	1.060	.620
1/4-18	1/2-14	9355x4x8	1	1.380	.730
3/8-18	1/4-18	9355x6x4	7/8	1.000	.750
3/8-18	3/8-18	9355x6x6	7/8	1.060	.750
3/8-18	1/2-14	9355x6x8	1	1.060	.750
1/2-14	3/8-18	9355x8x6	1	1.310	.910
1/2-14	1/2-14	9355x8x8	1	1.310	.910
1/2-14	3/4-14	9355x8x12	1-1/4	1.31	.910
3/4-14	1/2-14	9355x12x8	1-1/4	1.500	1.000
3/4-14	3/4-14	9355x12x12	1-1/4	1.500	1.000
3/4-14	1-11-1/2	9355x12x16	1-1/2	1.500	1.030
1-11-1/2	3/4-14	9355x16x12	1-1/2	1.310	1.050
1-11-1/2	1-11-1/2	9355x16x16	1-1/2	1.500	1.060
1-11-1/2	1-1/4-11-1/2	9355x16x20	1-7/8	1.800	1.300
1-1/4-11-1/2	1-1/4-11-1/2	9355x20x20	1-7/8	1.750	1.250
1-1/2-11-1/2	1-1/2-11-1/2	9355x24x24	2-1/8	1.940	1.380
2-11-1/2	2-11-1/2	9355x32x32	2-5/8	2.000	1.500

45° Swivel Elbow Female Pipe Swivel to Female Pipe
(Ref. SAE No. 140331)



NPSM Swivel Nut	Fem. Pipe Thread	Catalog Number	Hex C	L	L1
1/8-27	1/8-27	9385x2x2	1/2	.620	.500
1/4-18	1/4-18	9385x4x4	11/16	1.020	.670
1/4-18	3/8-18	9385x4x6	7/8	1.062	.625
3/8-18	3/8-18	9385x6x6	7/8	1.060	.750
3/8-18	1/2-14	9385x6x8	1	1.310	.750
1/2-14	1/2-14	9385x8x8	1	1.310	1.270
3/4-14	3/4-14	9385x12x12	1-1/4	1.500	1.000
3/4-14	1-11-1/2	9385x12x16	1-1/2	1.500	1.031
1-11-1/2	1-11-1/2	9385x16x16	1-1/2	1.500	1.000
1-1/4-11-1/2	1-1/4-11-1/2	9385x20x20	1-7/8	1.790	1.250
1-1/2-11-1/2	1-1/2-11-1/2	9385x24x24	2-1/8	1.940	1.380
2-11-1/2	2-11-1/2	9385x32x32	2-5/8	2.000	1.500

45° Swivel Elbow Female 45° SAE to Male 45° SAE
(Steel)



Tube O.D.	Catalog Number	Hex C	L	L1
3/8	9154x6x6	3/4	1.400	.429
1/2	9154x8x8	1	1.760	.598
5/8	9154x10x10	1-1/4	1.920	.645

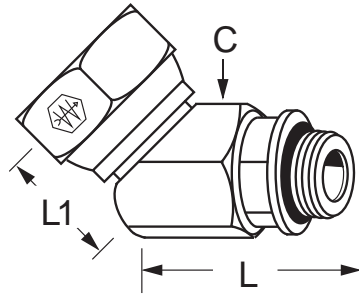
NOTE: C and L dimensions subject to change.

Swivel Adapters

Steel Fittings

45° Swivel Elbow Male Straight Thread O-Ring to Female Pipe Swivel 45° Elbow

(Ref. SAE No. 140357)

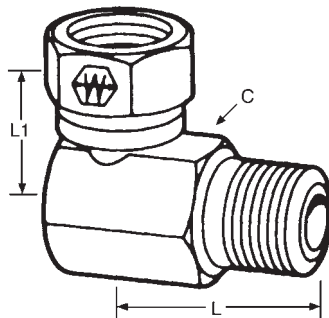


Replacement O-rings page 208.

NPSM Swivel Nut	Straight Thread	Catalog Number	Hex C	L	L1
7/16-20	1/4-18	9365x4x4	11/16	1.062	.656
7/16-20	3/8-18	9365x4x6	7/8	1.062	.656
9/16-18	3/8-18	9365x6x6	7/8	1.062	.703
9/16-18	1/2-14	9365x6x8	1	1.062	.812
3/4-16	3/8-16	9365x8x6	1	1.125	.875
3/4-16	1/2-14	9365x8x8	1	1.125	.812
7/8-14	1/2-14	9365x10x8	1	1.500	.781
1-1/16-12	3/4-14	9365x12x12	1-1/4	1.500	1.046
1-5/16-12	1 11-1/2	9365x16x16	1-1/2	1.625	1.062
1-5/8-12	1-1/4-11 1/2	9365x20x20	1-7/8	1.281	1.171
1-7/8-12	1-1/2-11 1/2	9365x24x24	2-1/8	1.609	1.343

90° Elbow Female Pipe Swivel to Male Pipe

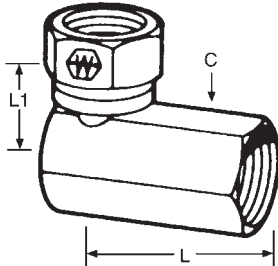
(Ref. SAE No. 140230)



NPSM Swivel Nut	Male Pipe Thread	Catalog Number	Hex C	L	L1
1/8-27	1/8-27	9405x2x2	9/16	.720	.700
1/8-27	1/4-18	9405x2x4	11/16	1.190	.750
1/4-18	1/8-27	9405x4x2	11/16	1.060	.780
1/4-18	1/4-18	9405x4x4	11/16	.980	.750
1/4-18	3/8-18	9405x4x6	11/16	1.090	.810
1/4-18	1/2-14	9405x4x8	1	1.810	.940
3/8-18	1/4-18	9405x6x4	13/16	1.090	.900
3/8-18	3/8-18	9405x6x6	7/8	1.090	.900
3/8-18	1/2-14	9405x6x8	1	1.350	1.020
3/8-18	3/4-14	9405x6x12	1-1/4	2.000	1.120
1/2-14	3/8-18	9405x8x6	1	1.280	1.020
1/2-14	1/2-14	9405x8x8	1	1.350	1.020
1/2-14	3/4-14	9405x8x12	1-1/4	1.490	1.140
1/2-14	1-11-1/2	9405x8x16	1-1/2	2.380	1.250
3/4-14	3/4-14	9405x12x12	1-1/4	1.490	1.200
3/4-14	1-11-1/2	9405x12x16	1-1/2	2.380	1.380
1-11 1/2	3/4-14	9405x16x12	1-1/2	2.190	1.440
1-11-1/2	1-11-1/2	9405x16x16	1-1/2	2.380	1.440
1-11-1/2	1-1/4-11-1/2	9405x16x20	1-7/8	1.578	2.620
1-1/4-11-1/2	1-11-1/2	9405x20x16	1-7/8	2.530	1.660
1-1/4-11-1/2	1-1/4-11-1/2	9405x20x20	1-7/8	2.070	1.630
1-1/4-11-1/2	1-1/2-11-1/2	9405x20x24	2-1/8	2.810	1.780
1-1/2-11-1/2	1-1/2-11-1/2	9405x24x24	2-1/8	2.810	1.750
2-11-1/2	2-11-1/2	9405x32x32	2-5/8	3.120	2.310

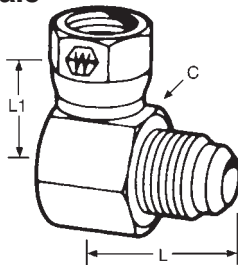
NOTE: C and L dimensions subject to change.

90° Elbow Female Pipe Swivel to Female Pipe
(Ref. SAE No. 140231)



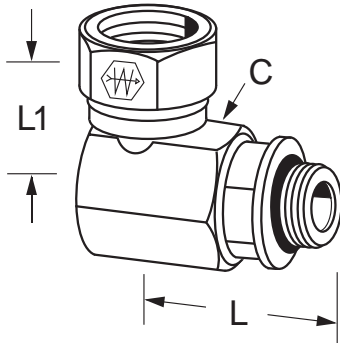
NPSM Swivel Nut	Fem. Pipe Thread	Catalog Number	Hex C	L	L1
1/8-27	1/8-27	9455x2x2	9/16	.640	.700
1/4-18	1/4-18	9455x4x4	11/16	.870	.750
1/4-18	3/8-18	9455x4x6	13/16	1.000	.810
1/4-18	1/2-14	9455x4x8	1	1.250	.940
3/8-18	1/4-18	9455x6x4	13/16	1.000	.900
3/8-18	3/8-18	9455x6x6	13/16	1.000	.900
3/8-18	1/2-14	9455x6x8	1	1.250	1.000
1/2-14	3/8-18	9455x8x6	1	1.220	1.020
1/2-14	1/2-14	9455x8x8	1	1.250	1.000
1/2-14	3/4-14	9455x8x12	1-1/4	1.440	1.120
3/4-14	1/2-14	9455x12x8	1-1/4	1.440	1.250
3/4-14	3/4-14	9455x12x12	1-1/4	1.490	1.200
3/4-14	1-11-1/2	9455x12x16	1-1/2	1.750	1.380
1-11-1/2	3/4-14	9455x16x12	1-1/2	1.750	1.380
1-11-1/2	1-11-1/2	9455x16x16	1-1/2	1.690	1.460
1-1/4-11-1/2	1-1/4-11-1/2	9455x20x20	1-7/8	1.850	1.630
1-1/2-11-1/2	1-1/2-11-1/2	9455x24x24	2-1/8	2.250	1.750
2-11-1/2	2-11 1/2	9455x32x32	2-5/8	2.500	2.310

90° Elbow 45° SAE Female Swivel to SAE 45° Male
(Steel)



Tube O.D.	Catalog Number	Hex C	L	L1
3/8	9151x6x6	3/4	1.00	.69
1/2	9151x8x8	1	1.25	.99
5/8	9151x10x10	1-1/4	1.44	1.09

90° Elbow Male Straight Thread O-Ring to Female Pipe Swivel
(Ref. SAE No. 140257)



Straight Thread	NPSM Swivel Nut	Catalog Number	Hex C	L	L1
7/16-20	1/4-18	9515x4x4	11/16	1.090	.781
7/16-20	3/8-18	9515x4x6	7/8	1.100	.900
9/16-18	1/4-18	9515x6x4	11/16	1.187	.781
9/16-18	3/8-18	9515x6x6	7/8	1.296	.937
9/16-18	1/2-14	9515x6x8	1	1.484	1.000
3/4-16	3/8-18	9515x8x6	1	1.515	1.000
3/4-16	1/2-14	9515x8x8	1	1.515	1.000
3/4-16	3/4-14	9515x8x12	1-1/4	1.656	1.250
7/8-14	3/8-18	9515x10x6	1	1.640	1.000
7/8-14	1/2-14	9515x10x8	1	1.640	1.025
7/8-14	3/4-14	9515x10x12	1-1/4	1.781	1.250
1-1/16-12	1/2-14	9515x12x8	1-1/4	1.921	1.125
1-1/16-12	3/4-14	9515x12x12	1-1/4	1.921	1.250
1-3/16-12	3/4-14	9515x14x12	1-1/4	1.921	1.250
1-5/16-12	3/4-14	9515x16x12	1-1/2	2.093	1.375
1-5/16-12	1-11-1/2	9515x16x16	1-1/2	2.093	1.390
1-5/8-12	3/4-14	9515x20x12	1-7/8	2.484	1.562
1-5/8-12	1-1/4-11-1/2	9515x20x20	1-7/8	2.484	1.656
1-7/8-12	1-1/2-11-1/2	9515x24x24	2-1/8	2.609	1.734
2-1/2-12	2-11-12	9515x32x32	2-5/8	3.250	2.312

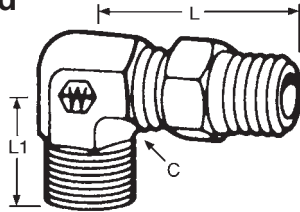
Replacement O-rings page 208.

NOTE: C and L dimensions subject to change.

Swivel Adapters

**Steel
Fittings**

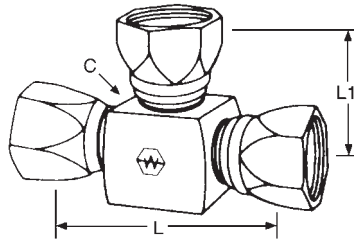
90° Elbow Male Pipe Swivel to Male Pipe Rigid



Not for use with liquids over 212°F.

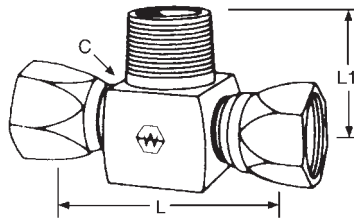
Male Pipe Swivel	Male Pipe Rigid	Catalog Number	Hex		
			C	L	L1
1/4-18	1/4-18	9435x4x4	9/16	1.870	1.060
3/8-18	3/8-18	9435x6x6	3/4	1.950	1.220
1/2-14	1/2-14	9435x8x8	7/8	2.250	1.470

Female Pipe Swivel Tee



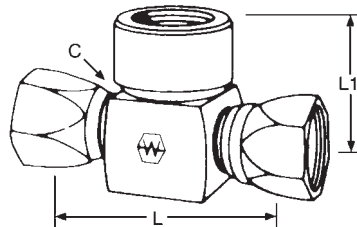
NPSM Swivel	Catalog Number	Hex		
		C	L	L1
1/8-27	9705x2x2x2	1/2	1.406	.660
1/4-18	9705x4x4x4	11/16	1.720	.780
3/8-18	9705x6x6x6	7/8	1.720	.940
1/2-14	9705x8x8x8	1	2.200	1.000
3/4-14	9705x12x12x12	1-1/4	2.780	1.250
1-11-1/2	9705x16x16x16	1-1/2	3.060	1.390
1 1/4-11 1/2	9705x20x20x20	1-7/8	3.320	1.660

Female Pipe Swivel to Male Pipe Branch Tee



NPSM Swivel Thread	Male Pipe	Catalog Number	Hex		
			C	L	L1
1/8-27	1/8-27	9406x2x2x2	9/16	1.380	.940
1/4-18	1/4-18	9406x4x4x4	11/16	1.500	1.190
1/4-18	3/8-18	9406x4x4x6	7/8	1.744	1.500
1/4-18	1/2-14	9406x4x4x8	7/8	1.880	1.500
3/8-18	3/8-18	9406x6x6x6	1	1.874	1.750
3/8-18	1/2-14	9406x6x6x8	1	2.000	1.750
1/2-14	1/2-14	9406x8x8x8	1	2.000	1.810
1/2-14	3/4-14	9406x8x8x12	1-1/4	2.250	2.000
3/4-14	3/4-14	9406x12x12x12	1-1/4	2.380	2.000
3/4-14	1-11-1/2	9406x12x12x16	1-1/2	2.756	2.375
1-11-1/2	3/4-14	9406x16x16x12	1-1/2	2.780	2.187
1-11-1/2	1-11-1/2	9406x16x16x16	1-1/2	2.880	2.380
1-1/4-11-1/2	1-1/4-11-1/2	9406x20x20x20	1-7/8	3.240	2.620
1-1/2-11-1/2	1-1/2-11-1/2	9406x24x24x24	2-1/8	3.500	2.810

Female Pipe Swivel to Female Pipe Branch Tee



NPSM Swivel Thread	Female Pipe	Catalog Number	Hex		
			C	L	L1
1/8-27	1/8-27	9456x2x2x2	1/2	1.312	.687
1/4-18	1/4-18	9456x4x4x4	11/16	1.625	.937
1/4-18	3/8-18	9456x4x4x6	7/8	1.744	1.062
3/8-18	3/8-18	9456x6x6x6	7/8	1.874	.937
3/8-18	1/2-14	9456x6x6x8	1	2.000	1.250
1/2-14	1/2-14	9456x8x8x8	1	2.000	1.250
1/2-14	3/4-14	9456x8x8x12	1-1/4	2.250	1.437
3/4-14	3/4-14	9456x12x12x12	1-1/4	2.500	1.437
3/4-14	1-11-1/2	9456x12x12x16	1-1/2	2.750	1.750
1-11-1/2	1-11-1/2	9456x16x16x16	1-1/2	2.780	1.750
1-1/4-11-1/2	1-1/4-11-1/2	9456x20x20x20	1-7/8	3.312	2.000

NOTE: C and L dimensions subject to change.

RELATED
PROD

Adapter Series: Ready-Lok® Adapters.

Typical Application: General purpose low, medium, and high pressure hydraulics. Generally found in mining operations.

Pressure: For use in hydraulic systems up to and including SAE 100R12 pressures.

Material: Carbon steel – AISI/12L14

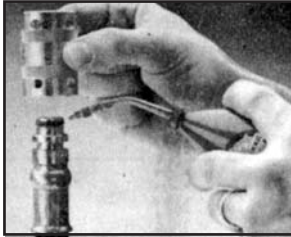
Plating: Zinc, Yellow Dichromate finish.

Advantages: Easy installation. Just lock components together with Ready-Lok® staples. Threadless design simplifies field service and cuts maintenance costs.

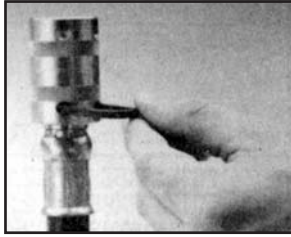
Ordering Information: Order individually by catalog number.

Label Set: FS-2200

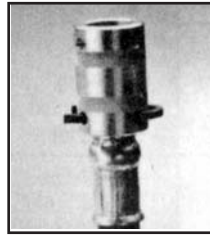
ASSEMBLY INSTRUCTIONS



1. Lubricate the male Ready-Lok® fitting (including o-ring).



2. Assemble male fitting into female adapter until it bottoms. O-ring will engage in internal mating surface. Insert staple into adapter.

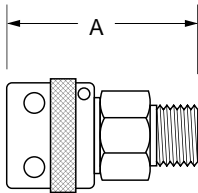


3. When the staple is inserted through the adapter and engages the shoulder of the hose end as shown, the Ready-Lok® connection is complete.



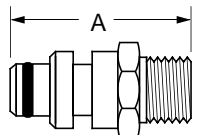
4. To disassemble, remove the staple and disengage the hose end assembly.

Male Pipe To Female Ready-Lok® Swivel-Straight



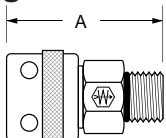
Ready-Lok® Connector Size	Male Pipe Thread	Catalog Number	A	Hex
1/4	1/4	2008x4S	2.13	3/4
3/8	3/8	2008x6S	2.19	15/16
1/2	1/2	2008x8S	2.51	1-1/8
3/4	3/4	2008x12S	2.49	1-5/16
1	1	2008x16S	3.12	1-11/16
1-1/4	1-1/4	2008x20S	3.17	2-1/8

Male Pipe To Male Ready-Lok® Straight



Ready-Lok® Connector Size	Male Pipe Thread	Catalog Number	A	Hex
1/4	1/4	2013x4S	1.91	5/8
3/8	3/8	2013x6S	1.91	13/16
1/2	1/2	2013x8S	2.16	1
3/4	3/4	2013x12S	2.23	1-3/16
1	1	2013x16S	2.72	1-9/16
1-1/4	1-1/4	2013x20S	2.81	1-7/8

Male Straight Thread O-Ring To Female Ready-Lok® Swivel Straight



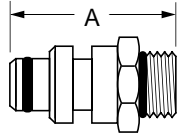
Ready-Lok® Connector Size	Tube Size	Catalog Number	Straight Thread Size	A	Hex
1/4	1/4	2020x4S	7/16–20	1.93	3/4
3/8	3/8	2020x6S	9/16–18	2.02	15/16
1/2	1/2	2020x8S	3/4–16	2.20	1-1/8
3/4	3/4	2020x12S	1-1/16–12	2.33	1-5/16
1	1	2020x16S	1-5/16–12	2.78	1-11/16
1-1/4	1-1/4	2020x20S	1-5/8–12	2.80	2-1/8

NOTE: Order staples separately.

Ready-Lok® Adapters

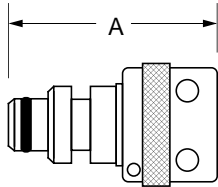
**Steel
Fittings**

Male Straight Thread O-Ring To Male Ready- Lok® Straight



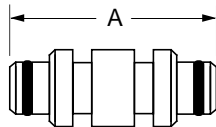
Ready-Lok® Connector Size	Tube Size	Catalog Number	Straight Thread Size	A
1/4	1/4	2012x4S	7/16–20	1.71
3/8	3/8	2012x6S	9/16–18	1.74
1/2	1/2	2012x8S	3/4–16	1.85
3/4	3/4	2012x12S	1-1/16–12	2.08
1	1	2012x16S	1-15/16–12	2.37
1-1/4	1-1/4	2012x20S	1-5/8–12	2.43

Male Ready-Lok® To Female Ready-Lok® Swivel-Straight



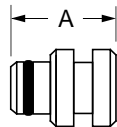
Ready-Lok® Male Connector Size	Ready-Lok® Female Connector Size	Catalog Number	A
1/2	3/8	2015x8x6S	2.16
3/4	1/2	2015x12x8S	2.25
1	1/2	2015x16x8S	2.46
1	3/4	2015x16x12S	2.43
1-1/4	3/4	2015x20x12S	2.43
1-1/4	1	2015x20x16S	2.79

Male Ready-Lok® To Male Ready-Lok® Straight



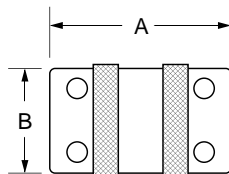
Ready-Lok® Connector Size	Catalog Number	A
1/4	2016x4S	2.20
3/8	2016x6S	2.20
1/2	2016x8S	2.20
3/4	2016x12S	2.20
1	2016x16S	2.63
1-1/4	2016x20S	2.63

Male Ready-Lok® Plug



Ready-Lok® Connector Size	Catalog Number	A
1/4	2017x4S	1.33
3/8	2017x6S	1.33
1/2	2017x8S	1.33
3/4	2017x12S	1.33
1	2017x16S	1.61
1-1/4	2017x20S	1.61

Ready-Lok® Female Connector

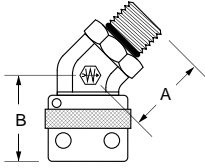


Ready-Lok® Connector Size	Catalog Number	A	B
1/4	2004x4S	2.17	1.000
3/8	2004x6S	2.17	1.250
1/2	2004x8S	2.17	1.438
3/4	2004x12S	2.17	1.625
1	2004x16S	2.50	2.125
1-1/4	2004x20S	2.50	2.500

NOTE: Order staples separately.

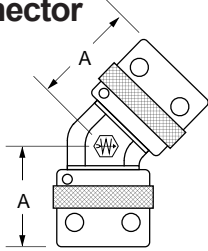
RELATED
PROD

**45° Elbow Male
Straight Thread O-Ring
To Female Ready-Lok®
Swivel**



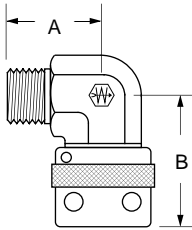
Ready-Lok® Connector Size	Tube Size	Catalog Number	Straight Thread Size	A	B
1/4	1/4	2010x4S	7/16-20	1.03	1.29
3/8	3/8	2010x6S	9/16-18	1.08	1.35
1/2	1/2	2010x8S	3/4-16	1.37	1.65
3/4	3/4	2010x12S	1-1/16-12	1.76	1.57
1	1	2010x16S	1-5/16-12	1.79	2.04
1-1/4	1-1/4	2010x20S	1-5/8-12	1.91	2.01

**45° Elbow Female
Ready-Lok® Swivel
Connector**



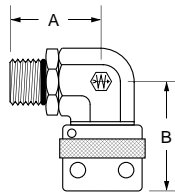
Ready-Lok® Connector Size	Catalog Number	A
1/4	2006x4S	1.38
3/8	2006x6S	1.37
1/2	2006x8S	1.66
3/4	2006x12S	1.59
1	2006x16S	1.97
1-1/4	2006x20S	2.01

**Male Pipe To Female
Ready-Lok® Swivel 90°
Elbow**



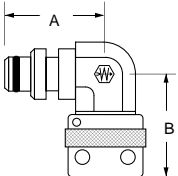
Ready-Lok® Connector Size	Male Pipe Thread	Catalog Number	A	B
1/4	1/4	2009x4S	1.12	1.55
3/8	3/8	2009x6S	1.21	1.69
1/2	1/2	2009x8S	1.49	1.83
3/4	3/4	2009x12S	1.64	1.94
1	1	2009x16S	2.01	2.50
1-1/4	1-1/4	2009x20S	2.38	2.59

**90° Elbow Male
Straight Thread O-Ring
To Female Ready-Lok®
Swivel**



Ready-Lok® Connector Size	Male Pipe Thread	Catalog Number	Straight Thread Size	A	B
1/4	1/4	2011x4S	7/16-20	1.22	1.56
3/8	3/8	2011x6S	9/16-18	1.42	1.69
1/2	1/2	2011x8S	3/4-16	1.57	1.84
3/4	3/4	2011x12S	1-1/16-12	1.96	1.94
1	1	2011x16S	1-5/16-12	2.13	2.50
1-1/4	1-1/4	2011x20S	1-5/8-12	2.33	2.59

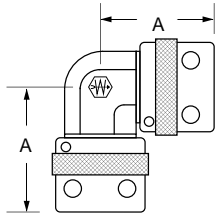
**90° Elbow Male Ready-
Lok® To Female Ready-
Lok®**



Ready-Lok® Connector Size	Catalog Number	A	B
1/4	2014x4S	1.66	1.55
3/8	2014x6S	1.76	1.66
1/2	2014x8S	1.83	1.84
3/4	2014x12S	1.90	1.91
1	2014x16S	2.34	2.60
1-1/4	2014x20S	2.52	2.59

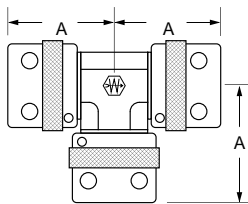
NOTE: Order staples separately.

90° Elbow Female Ready-Lok® Swivel Connector



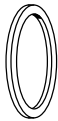
Ready-Lok® Connector Size	Catalog Number	A
1/4	2005x4S	1.56
3/8	2005x6S	1.69
1/2	2005x8S	1.84
3/4	2005x12S	1.94
1	2005x16S	2.50
1-1/4	2005x20S	2.59

Female Ready-Lok® Swivel Connector Tee



Ready-Lok® Connector Size	Catalog Number	A
1/4	2007x4S	1.60
3/8	2007x6S	1.72
1/2	2007x8S	1.84
3/4	2007x12S	1.88
1	2007x16S	2.48
1-1/4	2007x20S	2.59

Ready-Lok® Back-up Ring



Material: Nylon 6/6

Ready-Lok® Connector Size	Catalog Number
1/4	2019x4S
3/8	2019x6S
1/2	2019x8S
3/4	2019x12S
1	2019x16S
1-1/4	2019x20S

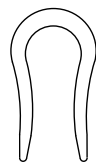
Ready-Lok® O-Ring



Material: Buna-N 90 Durometer
 Temperature Range: -40°F to +250°F
 (-40°C to +121°C)
 Standard O-ring complies with SAE specifications SAE J515 Type CH (See page 204 for O-ring compound and application chart)

Ready-Lok® Connector Size	Catalog Number
1/4	2018x4S
3/8	2018x6S
1/2	2018x8S
3/4	2018x12S
1	2018x16S
1-1/4	2018x20S

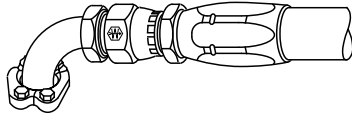
Ready-Lok® Staple



Ready-Lok® Connector Size	Catalog Number
1/4	2003x4
3/8	2003x6
1/2	2003x8
3/4	2003x12
1	2003x16
1-1/4	2003x20

NOTE: Order staples separately.

RELATED
PROD



Adapter Used With Standard Female Swivel End (SAE Code 61)

Weatherhead® split flange adapter eliminates the need for special hose ends. Interconnect pumps and valves with SAE flange outlets using low cost standard hose assemblies to replace equipment hose assembly.

Material: Low carbon steel.

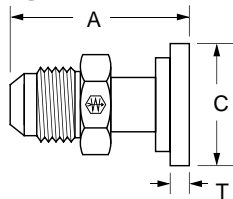
Plating: Zinc, Yellow Dichromate finish.

Pressure: Code 61 – 3000 PSI working pressure (32 sizes 2500 PSI W.P.).

Label Set: FS-300

Note: See page 302 for hydraulic O-ring assortment

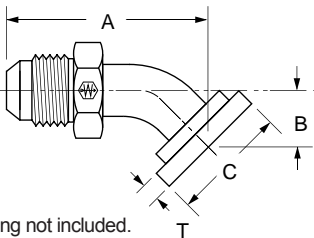
Straight



O-ring not included.

Tube Size	Code 61 Flange Size	Catalog Number	A	Dia. C	T	Thread Size
1/2	1/2	50008	2.66	1.188	.265	3/4-16
1/2	3/4	50008x12	2.72	1.500	.265	3/4-16
3/4	3/4	50012	2.62	1.500	.265	1-1/16-12
1	1	50016	2.74	1.750	.315	1-5/16-12
1	1-1/4	50016x20	2.74	2.000	.315	1-5/16-12
1-1/4	1	50020x16	2.80	1.750	.315	1-5/8-12
1-1/4	1-1/4	50020	3.27	2.000	.315	1-5/8-12
1-1/2	1-1/2	50024	3.42	2.375	.315	1-7/8-12
2	2	50032	4.24	2.812	.375	2-1/2-12

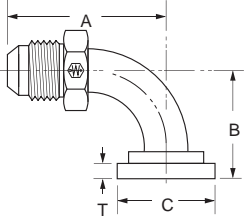
45° Elbow



O-ring not included.

Tube Size	Code 61 Flange Size	Catalog Number	A	B	Dia. C	T	Thread Size
1/2	1/2	54508	2.91	.78	1.188	.265	3/4-16
1/2	3/4	54508x12	2.93	.84	1.500	.265	3/4-16
3/4	3/4	54512	3.28	1.03	1.500	.265	1-1/16-12
1	1	54516	3.61	1.06	1.750	.315	1-5/16-12
1	1-1/4	54516x20	3.61	1.06	2.000	.315	1-5/16-12
1-1/4	1	54520x16	3.67	1.06	1.750	.315	1-5/8-12
1-1/4	1-1/4	54520	3.36	1.15	2.000	.315	1-5/8-12
1-1/2	1-1/2	54524	4.61	1.41	2.375	.315	1-7/8-12
2	2	54532	6.28	2.00	2.812	.375	2-1/2-12

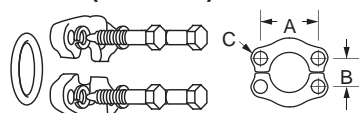
90° Elbow



O-ring not included.

Tube Size	Code 61 Flange Size	Catalog Number	A	B	Dia. C	T	Thread Size
1/2	1/2	59008	2.54	1.63	1.188	.265	3/4-16
1/2	3/4	59008x12	2.54	1.69	1.500	.265	3/4-16
3/4	3/4	59012	2.79	2.19	1.500	.265	1-1/16-12
1	1	59016	3.61	2.38	1.750	.315	1-5/16-12
1	1-1/4	59016x20	3.61	2.38	2.000	.315	1-5/16-12
1-1/4	1	59020x16	3.66	2.38	1.750	.315	1-5/8-12
1-1/4	1-1/4	59020	3.52	2.62	2.000	.315	1-5/8-12
1-1/2	1-1/2	59024	4.32	3.12	2.375	.315	1-7/8-12
2	2	59032	5.95	4.50	2.812	.375	2-1/2-12

Split Flange Kits – SAE Standard Pressure Series (Code 61) SAE J518

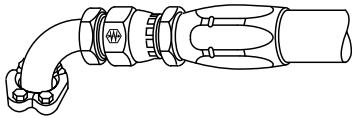


O-Ring Material: Buna-N 90 Durometer
Temperature Range: -40°F to +250°F
 (-40°C to +121°C)

Standard O-ring complies with SAE specification SAE J515 Type CH (See page 204 for O-ring compound and application chart)

Nominal Flange Size	Catalog Number Complete Kit	Included in kit.				A	B	C	Bolt Torque Range Lb.-in.
		Flange Halves 2 Req'd.	O-Ring	Bolts	Lock Washer				
1/2	SFK-08	8x251	8x252	8x853	8x254	1.50	.69	11/32	175-225
3/4	SFK-12	12x251	12x252	12x853	12x254	1.88	.88	13/32	250-350
1	SFK-16	16x251	16x252	12x853	12x254	2.06	1.03	13/32	325-425
1-1/4	SFK-20	20x251	20x252	20x853	20x254	2.31	1.19	15/32	425-550
1-1/2	SFK-24	24x251	24x252	24x853	24x254	2.75	1.41	17/32	550-700
2	SFK-32	32x251	32x252	24x853	24x254	3.06	1.69	17/32	650-800

Flanges conform to SAE J518.



Adapter Used With Standard Female Swivel End (SAE Code 62)

Weatherhead® split flange adapter eliminates the need for special hose ends. Interconnect pumps and valves with SAE flange outlets using low cost standard hose assemblies to replace original equipment hose assembly.

Material: AISI/SAE 12L14 carbon steel.

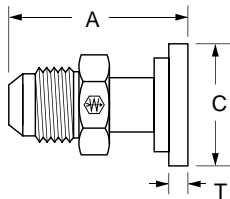
Plating: Zinc, Yellow Dichromate finish.

Pressure: Code 62 – 5000 PSI working pressure.

Label Set: FS-300

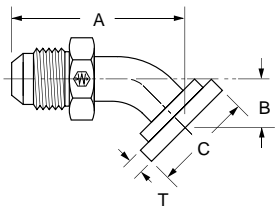
Note: See page 302 for hydraulic O-ring assortment.

Straight



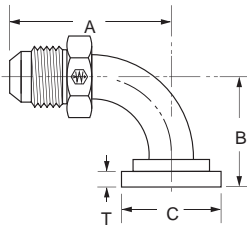
Tube Size	Code 62 Flange Size	Catalog Number	A	Dia. C	T	Thread Size
1/2	1/2	60008	2.32	1.25	.305	3/4-16
3/4	3/4	60012	2.64	1.62	.345	1-1/16-12
1	1	60016	3.44	1.88	.375	1-5/16-12
1-1/4	1-1/4	60020	3.97	2.12	.405	1-5/8-12
1-1/2	1-1/2	60024	4.97	2.50	.495	1-7/8-12
2	2	60032	5.22	3.12	.495	2-1/2-12

45° Elbow



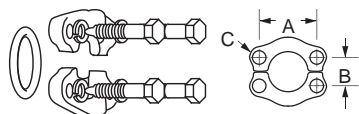
Tube Size	Code 62 Flange Size	Catalog Number	A	B	Dia. C	T	Thread Size
1/2	1/2	64508	2.12	1.10	1.25	.305	3/4-16
3/4	3/4	64512	2.56	1.32	1.62	.345	1-1/16-12
1	1	64516	3.34	1.43	1.88	.375	1-5/16-12
1-1/4	1-1/4	64520	3.49	1.87	2.12	.405	1-5/8-12
1-1/2	1-1/2	64524	6.31	3.07	2.50	.495	1-7/8-12
2	2	64532	8.19	3.74	3.12	.495	2-1/2-12

90° Elbow



Tube Size	Code 62 Flange Size	Catalog Number	A	B	Dia. C	T	Thread Size
1/2	1/2	69008	1.57	2.11	1.25	.305	3/4-16
3/4	3/4	69012	1.93	2.56	1.62	.345	1-1/16-12
1	1	69016	2.35	2.90	1.88	.375	1-5/16-12
1-1/4	1-1/4	69020	2.91	3.46	2.12	.405	1-5/8-12
1-1/2	1-1/2	69024	5.44	6.53	2.50	.495	1-7/8-12
2	2	69032	7.38	8.22	3.12	.495	2-1/2-12

Split Flange Kits – SAE High Pressure Series (Code 62) SAE J518



O-Ring Material: Buna-N 90 Durometer
Temperature Range: -40°F to +250°F (-40°C to +121°C)

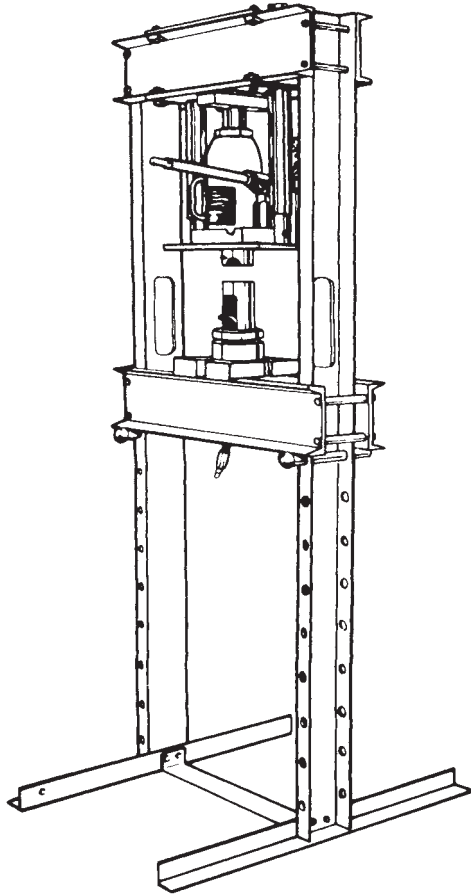
Standard O-ring complies with SAE specifications SAE J515 Type CH (See page 204 for O-ring compound and application chart)

Nominal Flange Size	Catalog Number Complete Kit	Flange Halves 2 Req'd.	Included in kit.			A	B	C	Bolt Torque Range Lb.-in.
			O-Ring	Bolts	Lock Washer				
1/2	SFK62-8	8x262	8x252	8x853	8x254	1.57	.72	5/16	175-225
3/4	SFK62-12	12x262	12x252	12x863	12x254	2.00	.94	13/32	300-400
1	SFK62-16	16x262	16x252	16x863	20x254	2.25	1.09	15/32	500-600
1-1/4	SFK62-20	20x262	20x252	20x863	24x254	2.63	1.25	17/32	750-900
1-1/2	SFK62-24	24x262	24x252	24x863	24x264	3.12	1.44	21/32	1400-1600
2	SFK62-32	32x262	32x252	32x863	32x264	3.81	1.75	25/32	2400-2600

Flanges conform to SAE J518.

NOTE: Code 62 split flange kits cannot be used with Thick Flange™ fittings. Use existing split flanges.

⚠ Refer to safety information regarding Coll-O-Crimp® hose, hose fittings and assembly equipment compatibility on pages 1-2.



Reference pages 284 through 292 for Coll-O-Crimp tooling, tooling packages and pumps.

⚠ WARNING: THESE KITS ARE INTENDED FOR USE ON SHOP PRESSES NOT EXCEEDING A 25-TON RATING. USAGE OF PRESSES EXCEEDING THIS RATING MAY RESULT IN DAMAGE TO THE PUSHER, CAUSING METAL FRAGMENTS TO SPRAY WHICH MAY RESULT IN SERIOUS BODILY INJURY.

T-400-17 • Shop Press Tooling Package

The T-400-17 Shop Press Tooling Kit allows you to make factory-type Weatherhead® hydraulic hose assemblies on your 25-ton shop press. With this minimum investment in equipment, and a nominal stock of packaged bulk hose and hose ends, you can begin to make Coll-O-Crimp® hose assemblies in your own shop. This kit includes tooling to crimp 1/4" through 1" hose I.D. 'U' Series hose ends. Additional tooling is available to crimp 5/8" and 1-1/4" I.D. sizes.

Kit includes one each of the following:


T-400-2C	'U' Series Collet – 1/4"
T-400-3C	'U' Series Collet – 3/8"
T-400-4C	'U' Series Collet – 1/2"
T-400-5C	'U' Series Collet – 3/4"
T-400-6C	'U' Series Collet – 1"
T-400-8	Die Ring – 3/16" thru 1-1/4"
T-400-10	Spacer Ring – Black
T-400-11	Spacer Ring – Silver
T-400-17P	Pusher
T-400-E	Shroud Decal
T-400-MSP	Instructions

T-400-20A • Shop Press 757 'E' Series Tooling Package

The T-400-20A Shop Press 757 'E' Series Tooling Kit allows you to make factory-type Weatherhead® air conditioning hose assemblies on your 25-ton shop press. With this minimum investment in equipment, and a nominal stock of packaged bulk hose and hose ends, you can begin to make Coll-O-Crimp® hose assemblies in your own shop. This kit includes tooling to crimp all of the 757 'E' Series hose ends.


Kit includes one each of the following:

T-400-114	757 'E' Series Collets
T-400-8	Die Ring Fits Collets 3/16" thru 1-1/4"
T-400-10	Spacer Ring – Black
T-400-17P	Pusher
T-400-E	Shroud Decal
FS-3200	Label Set

 Refer to safety information regarding Coll-O-Crimp® hose, hose fittings and assembly equipment compatibility on pages 1-2.



Reference pages 284 through 292 for Coll-O-Crimp tooling, tooling packages and pumps.

 Refer to safety information regarding Coll-O-Crimp® crimping procedures on pages 257-260.

T-475-1 • Portable Air Conditioning Press

This hand operated, lightweight and easy to use air conditioning press is engineered and designed specifically for use with Boston Weatherhead 757 'E' series hose end fittings. Perfect for bench mounting this portable press is made of heavy duty construction for use with an air impact wrench. Uses color coded urethane encased dies and a removable die holder to accommodate complicated shapes. Uses four standard die sizes (#6, #8, #10, and #12) that produce an OE style triple bubble crimp. No electrical requirements necessary.

Capacity: Crimps 2-braid dimension nylon barrier or reduced dia. hose

Mounting: Bench or Mount in Vise

Weight: 6 lbs.



T-475 • Portable Air Conditioning Package

Package includes one each of the following:

T-475-1	Portable A/C Press
T-475-105C	#6 Die Set - Brown
T-475-106C	#8 Die Set - Purple
T-475-107C	#10 Die Set - Almond
T-475-108C	#12 Die Set - White

• Includes Bench Mount Flange, Die Set Lubricant and Steel Pipe Nipple Extension

• Also includes a Custom Carrying Case with Instructions.

T-475-1 Crimping Procedure

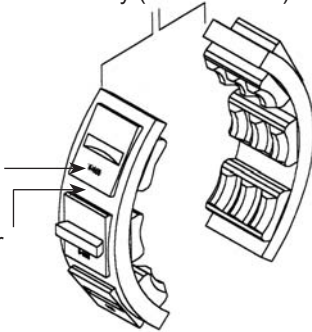
 Refer to safety information regarding Coll-O-Crimp® hose, hose fittings and assembly equipment compatibility on pages 1-2.

T-475-1 Crimp Die Sets

1. Assembly (Part Number)

2. Die

3. Die Carrier

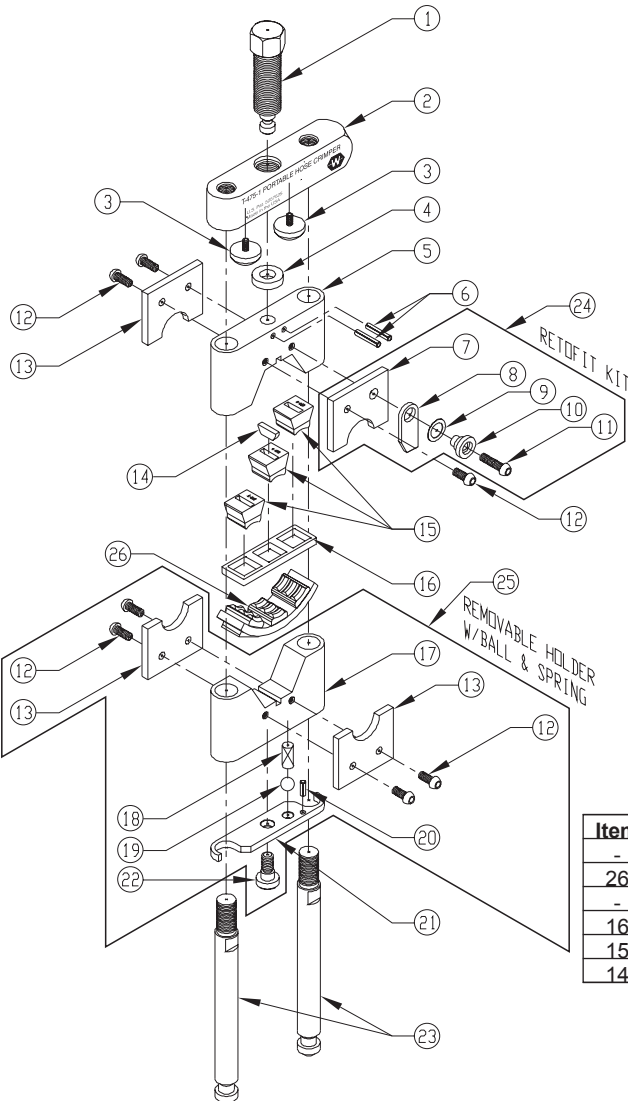


T-475-1 Die Set Info

For use with H757 Hose and 757 'E' Series Hose Ends

Item	Description	Qty	6	8	10	12
1	Ass'y Part No.	1 set	T-475-105C	T-475-106C	T-475-107C	T-475-108C
2	Die Marking	-	556	640	742	897
3	Die Carrier Color	-	Brown	Purple	Almond	White

T-475-1 Crimper Parts List



Item	Part #	Description	Qty.
1	75013	Actuator Screw	1
2	75001	Actuator Bar	1
3	75012	Rubber Bumper	2
4	75011	Thrust Bushing	1
5	75005	Movable Die Holder	1
6	75010	3/16 x 1 Roll Pin	2
7	75099	Die Guide Block (Locator)*	1
8	75086	Locator Flag*	1
9	75088	Curved Disc Spring*	1
10	75087	Locator Bushing*	1
11	75113	1/4-20 x 1 Button Head Screw*	1
12	75003	1/4-20 x 5/8 Button Head Screw**(4)	7
13	75002	Die Guide Block**(2)	3
17	75075	Removable Die Holder**	1
18	75076	Spring-Compression**	1
19	75077	7/16 Dia. Ball**	1
20	75009	3/16 x 1/2 Roll Pin**	1
21	75074	Latch Plate**	1
22	75008	Lock Screw**	1
23	75020	Strain Rod	2
24	75116	Retrofit Kit For Flag	1
25	75081	Removable Holder w/Ball & Spring	1

Items Not Shown

A	71731	5/32 Short Arm Hex Key	1
B	75015	Teflon® Grease	1
C	75016	3/8 x 4 Pipe Nipple	1
D	90607	3/8 Floor Flange	1
E	75017	Carrying Case	1
F	3700-1	Crimper Only (No Dies)	1

* Included in item 24 (Not assembled)

** Included in item 25 (Assembled)

For use with H757 Hose and 757 'E' Series Hose Ends

Item	Description	Qty	6	8	10	12
-	Die Marking	-	556	640	742	897
26	Crimp Die No.	1set	T-475-105C	T-475-106C	T-475-107C	T-475-108C
-	Color	-	Brown	Purple	Almond	White
16	Die Carrier	2	75134	75135	75136	75137
15	Die Segment	6	71741	75119	71743	71744
14	Woodruff Key	2	71671	71671	71671	71671

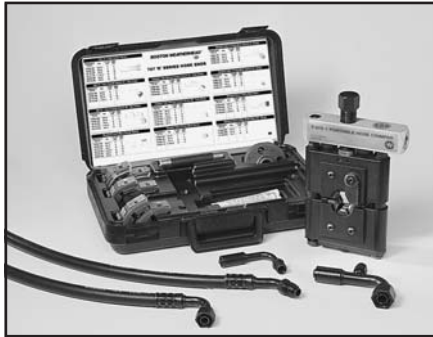
When ordering T-475-1 spare parts,
 contact: www.atcoproductsinc.com
 or Email: info@atcomail.com or call: 1-972-225-8178

T-475-1 Crimping Procedure

Equipment

⚠ Refer to safety information regarding Coll-O-Crimp® hose, hose fittings and assembly equipment compatibility on pages 1-2.

MODEL T-475 PORTABLE AIR CONDITIONING HOSE CRIMPING KIT



FEATURES

- Engineered and designed specifically for use with 757 'E' Series black, zinc finished Hose End Fittings
- Portable, hand operation
- OE style triple bubble crimp
- Heavy duty construction for use with air impact wrench
- Color coded, urethane encased dies
- Easy changeover from size to size
- Crimps 2 braid dimension nylon barrier or reduced diameter hose
- Four standard die sizes – #6, #8, #10, #12
- Capable of crimping under-hood applications
- Light weight for easy handling (less than 6 lbs)
- Removable die holder accommodates complicated shapes
- Unit can be bench mounted
- Shipped in a custom carrying case with instructions
- No electrical requirements
- U.S. Patent No. 5257525
- Made in U.S.A.

Operating Instructions for Model T-475-1 Air Conditioning Hose Crimper General

The Model **T-475-1** Crimper is a hand operated hose end crimping unit specifically designed for use with Boston Weatherhead 757 'E' black, zinc finished Series hose ends. It is intended for use with Boston Weatherhead H757 Air Conditioning hose.

The longer Boston Weatherhead ferrule and triple bubble crimp of the **T-475-1** insures a superior interface between the hose and the end fittings. In addition, the removable die holder allows for easy access in confined under-hood areas as well as for complicated end shapes.

CAUTION: To insure high quality crimped hoses, use only Boston Weatherhead 757 'E' Series black, zinc finished hose and hose ends with this crimper.

The crimp dies included will crimp Boston Weatherhead 757 'E' Series black hose ends onto Boston Weatherhead H757 Air Conditioning hose. The dies are housed in replaceable, flexible, color coded polyurethane carriers (see crimp die set parts list on previous page for part numbers) for easy identification of crimp sizes.

T-475-105C H75706 Hose Brown (.556 Crimp Diameter)

T-475-106C H75708 Hose Purple (.640 Crimp Diameter)

T-475-107C H75710 Hose Almond (.742 Crimp Diameter)

T-475-108C H75712 Hose White (.897 Crimp Diameter)

Description of terms

The crimper can be operated with a 1/2" drive air impact wrench, ratchet or breaker bar. It takes approximately 100 foot pounds of torque to fully close the jaws and achieve a satisfactory crimp. The crimper can be bench mounted using the flange and pipe nipple provided or it can be mounted in a bench vise to stabilize the unit. If the unit is used a service vehicle with a mounted vice, it will be necessary to use a 12" minimum long extension to the pipe nipple to counteract the torque while closing the dies. This extension is not provided in the kit.

Bench mount: Bolt the flange to a bench top. Screw the pipe nipple and crimper to the flange plate.

Impact wrench (1/2" DRIVE @ 100 PSIG MAX.):

Use a 1" impact socket to drive the movable die holder.

⚠ **CAUTION:** Do not exceed 100 PSIG air pressure on the impact wrench as damage to the wrench and the crimper may result.

⚠ **CAUTION:** Do not continue impacting after the dies are closed. This can cause damage to the crimper.

⚠ **CAUTION:** Care should be taken when reversing the impact so that the die holder does not slam into the crimper body (actual bar, Item 2⁺). Bumpers are provided to minimize damage.

Ratchet or breaker bar: Use a 1" socket to drive the movable die holder. It will take approximately 100 foot pounds of torque to achieve a full crimp.

Removable die holder: The bottom of the crimper can be removed to accommodate special shapes or under-hood crimping. Push the latch plate (Item 21⁺) open while holding the removable die holder. Pull the holder off the strain rods.

Die change: With the removable die holder removed, loosen two of the button head screws (Item 12⁺) on **one** side of the die holder. The die will drop out of the holder. Apply grease (Item B⁺) to the slide surfaces. Squeeze the outer segments of the die set together and insert the die into the holder **making sure that the woodruff key (Item 14) in the center segment snaps fully into the groove in the holder (Refer to Fig. 1).**

While holding the die securely in the slot, retighten the two button head screws. Check to make sure that the two outer segments on each half are free to move. If they do not move freely, remove and inspect for damaged guide block or dirt.

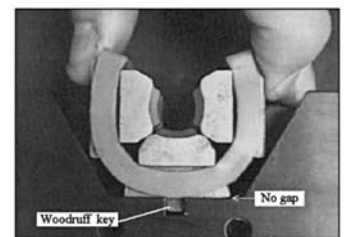


Fig. 1 – Die carrier properly inserted in holder.

⚠ **CAUTION:** Retention of the woodruff key in the slot while tightening the screws is most important. Failure to do so will result in an irregular crimp and damage to the guide blocks and Woodruff Key (Refer to Fig 2).

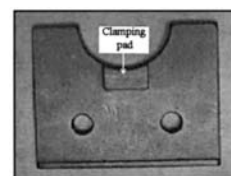
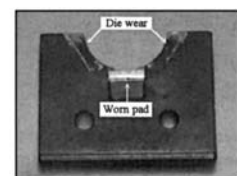


Fig. 2 Undamaged Pad



Damaged Pad

⁺Refer to T-475-1 Crimper Parts List, page 256.

T-475-1 Crimping Procedure

⚠ Refer to safety information regarding Coll-O-Crimp® hose, hose fittings and assembly equipment compatibility on pages 1-2.

⚠ **CAUTION:** It is not necessary to over-tighten the screws. Always use the short hex key wrench provided in order to avoid damage.

Die Carrier: The die carriers will become worn and produce unacceptable crimps with time. To replace the color coded die carriers, simply push the die segment out of the back of the carrier. Reverse the process to assemble die segments in the new carrier.

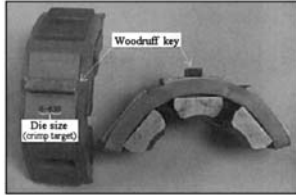


Fig. 3 – Dies with woodruff keys in place.

⚠ **CAUTION:** If the woodruff key is not in the center segment of each half of the die set, an irregular crimp will be formed increasing the probability of leakage.

⚠ **CAUTION:** Never use dies without woodruff key engaged in the slot of the segment and holder.

To replace the woodruff key, use a screwdriver and hammer to remove the old key. Replace the key using a drop of adhesive such as Loctite® to hold the key securely.

Locator Flag: There is a locator flag on the crimper. It is spring loaded and movable to locate the end of the ferrule for proper crimp location. Swivel the flag to a position so that when the fitting is inserted into the crimper, the ferrule will stop in the proper location for crimping.

Crimp diameter measurement: The crimp diameter can be measured by using a set of point micrometers or calipers with a point accessory kit installed. Standard measuring instruments will not reach to the crimp impression because of the pinch of the crimp. When measuring the crimp diameter, take three measurements around the center crimp ring. Add the measurements, divide by three to get the average. The average should be the target crimp diameter (+.015/-.005). Example: The #6 size is .556 target crimp diameter. The crimp should measure between .571 and .551 (Refer to Fig 4).

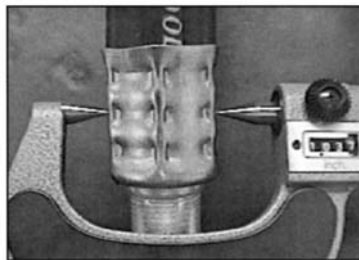
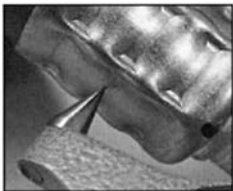


Fig. 4 – Position of tip of micrometer.

Fig. 4 - Measuring the crimp with a micrometer.

Hose Wall Thickness: The hose wall thicknesses for one braid dimension hoses are listed below. It is important to check the hose wall thickness to make sure that the crimp will be leak free.

HOSE SIZE	Hose O.D.
#6 - 5/16 I.D.	9/16
#8 - 13/32 I.D.	11/16
#10 - 1/2 I.D.	3/4
#12 - 5/8 I.D.	15/16

Operation

1. Mount the crimper as described previously unless it is necessary to mount it in the vice on the service vehicle.
2. Select the proper size dies. Check all segments to make sure that all of the segments have the same numbers on the back. Each segment will be marked identifying the hose size and crimp diameter. Example: 5/16 ID hose with a .556 diameter crimp will be marked "556" (Refer to Fig. 3).
3. Lubricate the slides of the crimper die holders (Items 5⁺ and 17⁺) and the screw thread (Item 1⁺) with a Teflon® grease or equivalent.
4. Refer to die change outlined above for proper assembly of the dies into the crimper.
5. Position the locator flag (Item 8⁺) so the ferrule of the fitting bumps it on the side when inserted into the crimper.

⚠ **CAUTION:** Do not locate from the bead on the fitting. This will result in the wrong crimp location.

6. Insert the hose into the fitting making sure that the hose appears in the small inspection hole on the side or end of the ferrule.

⚠ **CAUTION:** If the hose does not appear in the inspection hole, a poor crimp may result.

7. Place the assembly into the crimper and hold it against the locator flag. **Only the ferrule should touch the flag.** Operate the screw (Item 1⁺) to close the dies to the full closed position. This will provide the proper compression to achieve a leak free crimp. When the crimp dies are bottomed out, there will be a slight gap between the two die holders (Items 5⁺ & 17⁺). This insures that the dies are fully closed before the holders bottom out (Refer to Fig. 5).

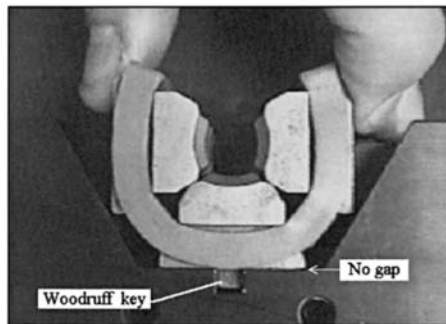


Fig. 5 – Crimp head completely closed.

8. Reverse the screw (Item 1⁺) to release the crimper from the hose assembly. Take care not to drive the die holder (Item 5) against the actuator bar (Item 2⁺) as damage to the crimper may result. The bumpers (Item 3⁺) are provided as a cushion to help prevent this from occurring.

⁺Refer to T-475-1 Crimper Parts List, page 256.

Teflon® is a registered trademark of DuPont

Loctite® is a registered trademark of Loctite Corporation

T-475-1 Crimping Procedure

Equipment

 Refer to safety information regarding Coll-O-Crimp® hose, hose fittings and assembly equipment compatibility on pages 1-2.

9. If the crimp is performed under-hood or the fitting is a complicated shape that requires disassembly of the crimper, open the latch plate (Item 21⁺) and remove the die holder (Item 17⁺).
10. Inspect the first crimp to make sure that the correct dies were used, the crimp location is correct, the crimp is uniform and there is no internal deformation of the fitting.

NOTE: Some hose materials trap air in the hose layers during manufacture. When leak testing a newly pressurized hose using soap bubbles or water submersion, the air in the hose will bleed out at the fitting and hose interface indicating a false leaking condition. Leave the hose pressurized for one hour and retest. The residual air should completely bleed out and no leak will be visible.

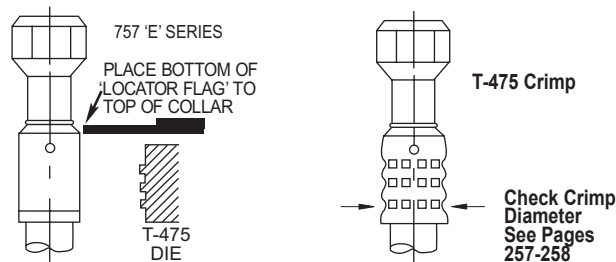
Crimper Maintenance

1. Clean and lubricate all moving parts. Use Teflon® grease (Item B⁺) or equivalent as needed when lubricating.
2. Inspect the strain rods and latch plate for wear around the contact points.
3. Make sure the actuator screw turns freely. Lubricate as noted above.
4. Check for worn or torn die carriers. Replace when crimp appears to go out of round.
5. Inspect woodruff keys. Replace if they are damaged or missing to insure good crimps.

TROUBLE SHOOTING

PROBLEM	CAUSE	ACTION
1. Oblong or irregular crimp	<ul style="list-style-type: none"> • Worn carriers • One die segment in the set is the wrong size • Woodruff key missing • Guide blocks installed backwards 	<ul style="list-style-type: none"> • Replace carriers • Check all segments for correct size on back of die • Replace key • Turn guide blocks around so raised pad clamps on die
2. Crimp diameter too large	<ul style="list-style-type: none"> • Crimper not fully closed – refer to instructions • Incorrect size dies 	<ul style="list-style-type: none"> • Recrimp until dies fully close • Replace with correct size
3. Crimp diameter too small	<ul style="list-style-type: none"> • Incorrect size dies 	<ul style="list-style-type: none"> • Replace with correct size
4. Crimp location too close to closed end of ferrule	<ul style="list-style-type: none"> • Ferrule not inserted far enough into crimper 	<ul style="list-style-type: none"> • Use locator flag to properly locate ferrule position
5. Crimp location too close to hose	<ul style="list-style-type: none"> • Ferrule inserted too far into crimper (past locator flag) 	<ul style="list-style-type: none"> • Use locator flag to properly locate ferrule position
6. Crimped fitting leaks when tested with soap bubbles	<ul style="list-style-type: none"> • Air trapped in the hose during manufacture • Insufficient crimp • Hose wall thickness is undersize (see chart) • Fitting is defective 	<ul style="list-style-type: none"> • Recheck after system has been charged for one hour – air will bleed out of the hose • Check crimp diameter • Recrimp with .030 undersize die • Replace fitting/ recrimp
7. Crimped fitting leaks when tested with electronic leak detector	<ul style="list-style-type: none"> • Insufficient crimp • Hose wall thickness 	<ul style="list-style-type: none"> • Check crimp diameter • Recrimp with .030

T-475-1 Crimping Procedure



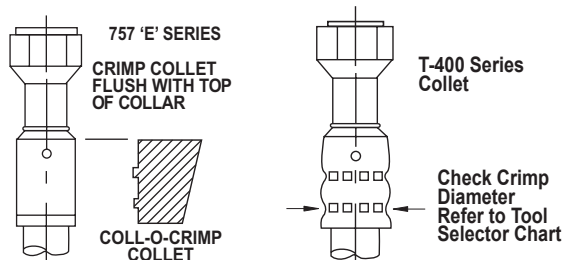
When using T-475 system, the bubble style crimp will have **three** annular rings compared to **two** when crimped with the T-400 series collets.

Nominal Crimp Diameter Measurement

Measuring crimp diameters should be a part of the normal hose assembly procedure. To insure a proper crimp diameter reading, follow these steps.

1. Measure the diameter in the middle of crimped portion of the hose end.
2. Place the caliper in a position to allow a measurement across the pressed (flat) portion of the crimp.

Coll-O-Crimp® Crimping Procedure



When using T-400 C-O-C system, the bubble style crimp will have **two** annular rings compared to **three** when crimped with the T-475 die set.

Nominal Crimp Diameter Measurement

Measuring crimp diameters should be a part of the normal hose assembly procedure. To insure a proper crimp diameter reading, follow these steps.

1. Measure the diameter in the middle of crimped portion of the hose end.
2. Place the caliper in a position to allow

⁺Refer to T-475-1 Crimper Parts List, page 256.

 Refer to safety information regarding Coll-O-Crimp® hose, hose fittings and assembly equipment compatibility on pages 1-2.


757 Hose Ends

Listed below are certain 757 style hose ends that require the use of designated Coll-O-Crimp® systems. As noted, removal of the protective cap covering on the charge port may be necessary.

Catalog Number	Hose End Description	Coll-O-Crimp® System				
		T-400, T-407	T-420	T-460, T-410, T-440	T-462, T-465	T-480
75706E-Z97	-6, 90deg, w/Charge Port	YES/WC	YES/WOC	YES/WC	YES/WC	YES/WC
75708E-Z99	-8, 90deg, w/Charge Port	YES/WC	YES/WC	YES/WC	YES/WC	YES/WC
75710E-Z01	-10, 90deg, w/Charge Port	YES/WC	NO	YES/WC	YES/WC	YES/WC
75712E-Z01	-12, 90deg, w/Charge Port	YES/WC	NO	YES/WC	YES/WC	YES/WC
75706E-Y36	Splicer, -6 to -6	YES	YES	YES	YES	YES
75708E-Y38	Splicer, -8 to -8	YES	YES	YES	YES	YES
75710E-Y40	Splicer, -10 to -10	NO	YES	YES	YES	YES
75712E-Y41	Splicer, -12 to -12	NO	YES	YES	NO	YES
75706E-Y38	Splicer, -6 to -8	YES	YES	YES	YES	YES
75708E-Y40	Splicer, -8 to -12	YES	YES	YES	YES	YES
75710E-Y41	Splicer, -10 to -12	NO	YES	YES	NO	YES
75706E-Y47	Splicer, -6 to -6 w/Charge Port	NO	YES	YES	NO	YES
75708E-Y48	Splicer, -8 to -8 w/Charge Port	NO	YES	YES	NO	YES
75710E-Y49	Splicer, -10 to -10 w/Charge Port	NO	YES	YES	NO	YES
75712E-Y50	Splicer, -12 to -12 w/Charge Port	NO	YES	YES	NO	NO

WOC indicates without protective cap.

WC indicates with protective cap.

 Refer to safety information regarding Coll-O-Crimp® hose, hose fittings and assembly equipment compatibility on pages 1-2.



The Portable Coll-O-Crimp® is a completely PORTABLE hose assembly system. NO ELECTRICAL POWER SOURCE IS NEEDED. Hand pump powered, lightweight, vise or stand mounted, this crimper is ideal for your portable crimping needs.

Capacity: 3/16" I.D. 1 fiber braid through 1-3/8" I.D. 1 wire hose and 1-1/4" 2 wire hose

Mounting: Vise/Stand

Size: 12-1/2" high, 8-1/2" wide, 5-1/2" deep

Weight: 31 lbs.

The vise bracket, die ring, pusher, decal and instruction kit are components of the T-465 Portable Coll-O-Crimp® Press.

Pump Required (sold separately): T-460-2

CAUTION! Use Weatherhead® T-460-2 10,000 PSI hand pump only.

T-465 • Portable Coll-O-Crimp® Press ONLY

T-465-HP • Portable Coll-O-Crimp® Package

Includes one each of the following:

T-465 Portable Coll-O-Crimp® Press

T-460-2 Hand Pump (10,000 PSI)

T-450-3 Quick Disconnect Hose Assembly

For replacement pump see page 290.

T-465 HPU • Portable Coll-O-Crimp® Package

Includes one each of the following:

T-465-HP Portable Coll-O-Crimp® Package

T-400-2C 'U' Series Collet – 1/4"

T-400-3C 'U' Series Collet – 3/8"

T-400-4C 'U' Series Collet – 1/2"

T-400-10 Black Spacer Ring

T-400-62 Yellow Spacer Ring

T-465-HP80 • Portable Coll-O-Crimp® Package

Includes one each of the following:

T-465-HP See above for contents.

T-80 Coll-O-Cut® Portable Saw


T-465 HPU80 • Portable Coll-O-Crimp® Package

Includes one each of the following:

T-465-HPU See above for contents.

T-80 Coll-O-Cut® Portable Saw

Reference pages 284 through 292 for Coll-O-Crimp tooling, tooling packages and pumps.

 Refer to safety information regarding Coll-O-Crimp® crimping procedures on page 263.

CAUTION: The Coll-O-Crimp® power source has the pressure relief valve set at 10000 PSI. Damage to the press will result if higher pressures are used and warranty will be voided.

⚠ Refer to safety information regarding Coll-O-Crimp® hose, hose fittings and assembly equipment compatibility on pages 1-2.



T-450-C • Portable Coll-O-Crimp® Stand

The T-450-C Stand is designed specifically for your Portable Coll-O-Crimp® T-465 Press. This stand allows you to use your press on a work bench or other flat surface without the need of a vise. Simply bolt the press onto the stand with the supplied bolts, and you're ready to make Coll-O-Crimp® Hose Assemblies.



T-465-TB • Portable Coll-O-Crimp® Tool Boxes

The T-465-TB tool boxes feature convenient press, pump and collet storage while offering easy mobility of your hose assembly equipment. Supplied as a set, the T-465-TB tool boxes are an excellent addition to the portable Coll-O-Crimp System.

Includes one each:

- T-460-10B** Small Tool Box
Stores the T-465 and spacer rings. 15" x 9" x 8".
- T-460-10BB** Large Tool Box
Stores the T-460-2 and collets. 25" x 10" x 8".

T-450/T-465 Portable Coll-O-Crimp® Repair and Replacement Items

- T-450-D1** Spacer Ring Selector Decal for Nylon/Teflon® Hose (H009, H209, H243, H435 and H436)
- T-450-P** Pusher
- T-450-Q** Quick Disconnect Coupling
- T-450K** Pusher and Retainer Plate Repair Kit.
Includes: **T-450B** Pusher bolt (1)
T-450R Retainer plate (1)
T-450S Retainer plate screw (2)
- T-465-E** Shroud Decal

T-465-1 Crimping Procedure

Equipment

⚠ WARNING – You must hold the hose assembly in place from below throughout the crimping operation. Do not place fingers or hands at the crimping point during operation. Failure to follow this procedure could result in serious injury to your hand or finger.



1. Clamp the crimper into a vise or mount to a work bench using the mounting bracket.

2. Remove pusher and insert proper size collet halves.



3. Select proper Weatherhead® Coll-O-Crimp® hose and end fitting. Insert hose into end fitting.

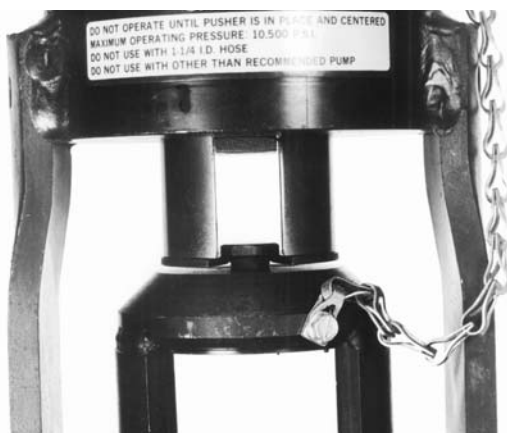
IMPORTANT: Make sure hose is bottomed on end fitting.



4. Insert hose assembly from below between the collet halves. Align dimples on hose end with top of collet. When crimping 229 'P', 265 'P', 338 'P' or H757 'E' Series hose ends, align top of collar on hose end with top surface of collet.



5. Reference Tool Selector Chart for proper spacer ring. Place appropriate spacer ring, with proper side up, on top of collet.



6. Replace pusher by hanging it from ramplate with bolt on top. Slide it back for centering. Close valve on hand pump and start pumping to crimp.



7. When spacer ring contacts die ring, the crimp is complete. Open valve on hand pump. Allow the ram and pusher to retract.

8. Remove pusher and spacer ring. Remove crimped assembly from below through the collet halves. Visually inspect the crimped end.

9. To insure a proper crimp has been completed, measure the nominal crimp diameter. Refer to Hose End and Tool Selector Chart in the back of this catalog for procedure and crimp diameters.

⚠ Refer to safety information regarding Coll-O-Crimp® hose, hose fittings and assembly equipment compatibility on pages 1-2.



For T-460 Tool Box see page 299.

Refer to pages 284 through 292 for Coll-O-Crimp tooling, tooling packages and pumps.

⚠ Refer to safety information regarding Coll-O-Crimp® crimping procedures on pages 265-266.

The T-460 is a completely portable hose assembly system. Lightweight, hand pump powered, and complete with a self-supporting base, this crimping press features layback positioning up to a 45° angle.

Capacity: 3/16" I.D. 1 fiber braid through 1-3/8" I.D. 1 wire hose and 1-1/4" 2 wire hose.

Mounting: Free standing base

Size: 15" high, 14" wide, 11-1/4" deep **Weight:** 62 lbs.

T-464 • Portable Coll-O-Crimp® Package

Includes one each of the following:

T-460 Portable Coll-O-Crimp® Press, Hand Pump & Hose Assembly Kit, **T-460-M** Instructions

T-400-2C 'U' Series Collet – 1/4"

T-400-3C 'U' Series Collet – 3/8"

T-400-4C 'U' Series Collet – 1/2"

T-400-10 Black Spacer Ring

T-400-62 Yellow Spacer Ring

Replacement Items:

T-460-M Instructions

T-460-P Pusher

T-460-SF Slide Flange

T-460-SP Slide Plate

T-460-SPK Slide Pull Knob

T-460-SPR Slide Pull Rod

T-460-16 Hose Assembly

T-460-2 Hand Pump

T-460-E Shroud Decal

For replacement pump see page 290.



For T-462 Tool Box see page 299.

Refer to pages 284 through 292 for Coll-O-Crimp tooling, tooling packages and pumps.

⚠ Refer to safety information regarding Coll-O-Crimp® crimping procedures on pages 265-266.

This portable Coll-O-Crimp® features an air/hydraulic pump making it the ideal system if you have the availability of compressed air in your shop or in the field via a portable compressor.

Capacity: 3/16" I.D. 1 fiber braid through 1-3/8" I.D. 1 wire hose and 1-1/4" 2 wire hose.

Mounting: Free standing base

Size: 15" high, 14" wide, 11-1/4" deep

Weight: 62 lbs.

T-466 • Portable Coll-O-Crimp® Package

Includes one each of the following:

T-462 Portable Coll-O-Crimp® Press, Air/Hydraulic Pump & Hose Assembly Kit, **T-460-M** Instructions

T-400-2C 'U' Series Collet – 1/4"

T-400-3C 'U' Series Collet – 3/8"

T-400-4C 'U' Series Collet – 1/2"

T-400-10 Black Spacer Ring

T-400-62 Yellow Spacer Ring

Replacement Items:

T-460-M Instructions

T-460-P Pusher

T-460-SF Slide Flange

T-460-SP Slide Plate

T-462-E Shroud Decal

140-06675 Air Regulator Kit

T-460-SPK Slide Pull Knob

T-460-SPR Slide Pull Rod

T-462-16 Hose Assembly

T-462-V Regulator only


T-462-2 Air/Hydraulic Pump

For replacement pump see page 290.

T-460 Crimping Procedure

Equipment

 Refer to safety information regarding Coll-O-Crimp® hose, hose fittings and assembly equipment compatibility on pages 1-2.

 **WARNING:** You must hold the hose assembly in place from below throughout the crimping operation. Do not place fingers or hands at the crimping point during operation. Failure to follow this procedure could result in serious injury to your hand or finger.



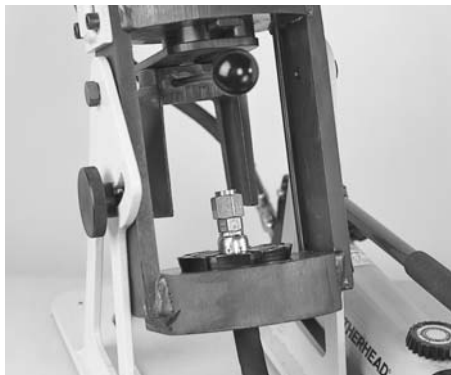
1. Slide pusher to back of machine and insert proper size collet halves.

NOTE: Lubricate tapered cone seat with Lubriplate grease or equivalent before any crimping is done. Continued periodic lubrication is recommended.



2. Select proper Weatherhead® Coll-O-Crimp® hose end fitting. Insert hose into end fitting.

IMPORTANT: Make sure hose is bottomed in end fitting.



3. Insert hose assembly from below between the collet halves. Align dimples on hose end with top of collet. When crimping 229 'P', 265 'P', 338 'P' and 757 'E' Series hose ends, align top of collar on hose end with top surface of collet.



4. Refer to Tool Selector Chart for proper spacer ring. Place appropriate spacer ring, with proper side up, on top of collet. Hold uncrimped hose assembly in place throughout crimping operation.





5. Pull the pusher positioning handle as far forward as it will go. The pusher will now be in the proper position for crimping. Close valve located on rear of hand pump and start pumping to crimp.



6. When spacer ring contacts die ring, the crimp is complete. Open control valve on hand pump. Allow the ram and pusher to retract. Slide pusher clear and remove spacer ring. Remove crimped assembly from below through the collet halves. Visually inspect the crimped end. To insure a proper crimp has been completed, measure the nominal crimp diameter. Refer to Hose End and Tool Selector Chart in the back of this catalog for nominal crimp diameters of finished assemblies.

T-462 Crimping Procedure

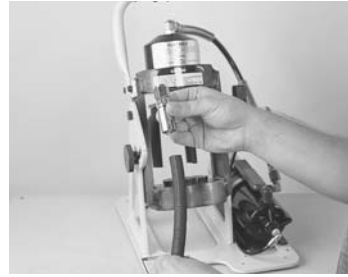
 Refer to safety information regarding Coll-O-Crimp® hose, hose fittings and assembly equipment compatibility on pages 1-2.

 **WARNING:** You must hold the hose assembly in place from below throughout the crimping operation. Do not place fingers or hands at the crimping point during operation. Failure to follow this procedure could result in serious injury to your hand or finger.



1. Slide pusher to back of machine and insert proper size collet halves.

NOTE: Lubricate tapered cone seat with Lubriplate grease or equivalent before any crimping is done. Continued periodic lubrication is recommended.



2. Select proper Weatherhead® Coll-O-Crimp® hose end fitting. Insert hose into end fitting.

IMPORTANT: Make sure hose is bottomed in end fitting.



3. Insert hose assembly from below between the collet halves. Align dimples on hose end with top of collet. When crimping 229 'P', 265 'P', 338 'P' and 757 'E' Series hose ends, align top of collar on hose end with top surface of collet.



4. Refer to spacer ring selector chart located in the back of this catalog. Place appropriate spacer ring, with proper side up, on top of collet. Hold uncrimped hose assembly in place throughout crimping operation.



5. Holding the uncrimped hose assembly in place throughout the crimping operation, pull the pusher positioning handle as far forward as it will go. The pusher will now be in the proper position for crimping. Hold down on activation button and start crimping.



6. When spacer ring contacts die ring, the crimp is complete. Hold the red lever down to allow the pusher to retract.

Slide pusher clear and remove spacer ring. Remove crimped assembly from below through the collet halves. Visually inspect the crimped end. To insure a proper crimp has been completed, measure the nominal crimp diameter. Refer to Hose End and Tool Selector Chart in back of catalog for nominal crimp diameters of finished assemblies.

⚠ Refer to safety information regarding Coll-O-Crimp® hose, hose fittings and assembly equipment compatibility on pages 1-2.



Refer to pages 284 through 292 for Coll-O-Crimp tooling, tooling packages and pumps.

⚠ Refer to safety information regarding Coll-O-Crimp® crimping procedures on page 270.

Make factory-type hose assemblies anywhere-anytime! Versatile and portable, this package offers the ease of use you are looking for in a Coll-O-Crimp® hose assembly system. The T-480 Coll-O-Crimp® Press packages are offered in four options. Listed below are press/power unit packages.

For cabinets see page 296-299 (not included).

T-480-HP • Portable Coll-O-Crimp® Press & Hand Pump Package

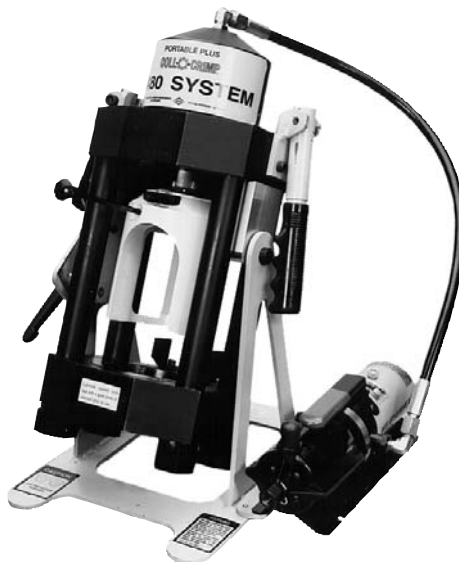
Capacity: 3/16" I.D. 1 fiber braid through 1-1/4" I.D. 6 spiral hose-
Mounting: Free Standing Base
Size: 22-1/2" high, 14" long, 10-1/2" wide
Total Weight: 112 lbs.

T-480-2 Pump Specifications:

Dimensions: 7-3/16" high, 21-1/64" long, 4-3/4" wide
Pressure: 0-10,000 psi
Outlet Port Size: 3/8" NPT
Hydraulic Oil: Enerpac
Reservoir Capacity: 55 cu. in.

Includes T-480-68 blue pusher extension ring to be used with T-480 Portable Coll-O-Crimp® and the T-420 collets only.

For replacement pump see page 290.



Refer to pages 284 through 292 for Coll-O-Crimp tooling, tooling packages and pumps.

⚠ Refer to safety information regarding Coll-O-Crimp® crimping procedures on page 271.

T-480-AH • Portable Coll-O-Crimp® Press & Air/Hydraulic Pump Package

Capacity: 3/16" I.D. 1 fiber braid through 1-1/4" I.D. 6 spiral hose
Mounting: Free Standing Base
Size: 22-1/2" high, 14" long, 10-1/2" wide
Total Weight: 124 lbs.

T-482-2 Pump Specifications:

Dimensions: 5" high, 14-5/8" long, 5-5/8" wide
Pressure: 0-10,000 psi
Outlet Port Size: 3/8" NPT
Inlet Port: 1/4" NPT
Pump Inlet Air Pressure: 60-100 psi
Hydraulic Oil: Enerpac
Reservoir Capacity: 36 cu. in.

Includes T-480-68 blue pusher extension ring to be used with T-480 Portable Coll-O-Crimp® and the T-420 collets only.

NOTE: It is recommended that a filter, regulator, lubricator, and air pressure gauge be installed upstream from the pump. Filter, regulator and lubricator units are not included.

For replacement pump see page 290.

⚠ Refer to safety information regarding Coll-O-Crimp® hose, hose fittings and assembly equipment compatibility on pages 1-2.



Reference pages 284 through 292 for Coll-O-Crimp tooling, tooling packages and pumps.

⚠ Refer to safety information regarding Coll-O-Crimp® crimping procedures on page 272.

T-480-TA • Portable Coll-O-Crimp® Press & Turbo Air/Hydraulic Pump Package

Capacity: 3/16" I.D. 1 fiber braid through 1-1/4" I.D. 6 spiral hose
Mounting: Free Standing Base
Size: 22-1/2" high, 14" long, 10-1/2" wide
Total Weight: 116 lbs.

T-480-3 Pump Specifications:

Dimensions: 8-1/4" high, 12-3/8" long, 8" wide
Pressure: 0-10,000 psi
Outlet Port Size: 3/8" NPT
Inlet Port: 1/4" NPT
Pump Inlet Air Pressure: 40-150 psi
Hydraulic Oil: Enerpac
Reservoir Capacity: 150 cu. in.

Includes T-480-68 blue pusher extension ring to be used with T-480 Portable Coll-O-Crimp® and the T-420 collets only.

NOTE: It is recommended that a filter, regulator, lubricator, and air pressure gauge be installed upstream from the pump. Filter, regulator and lubricator units are not included.

For replacement pump see page 291.



Reference pages 284 through 292 for Coll-O-Crimp tooling, tooling packages and pumps.

⚠ Refer to safety information regarding Coll-O-Crimp® crimping procedures on page 272.

T-480-EP • Portable Coll-O-Crimp® Press & 110v Electric Pump Package

Capacity: 3/16" I.D. 1 fiber braid through 1-1/4" I.D. 6 spiral hose
Mounting: Free Standing Base
Size: 22-1/2" high, 14" long, 10-1/2" wide
Total Weight: 134 lbs.

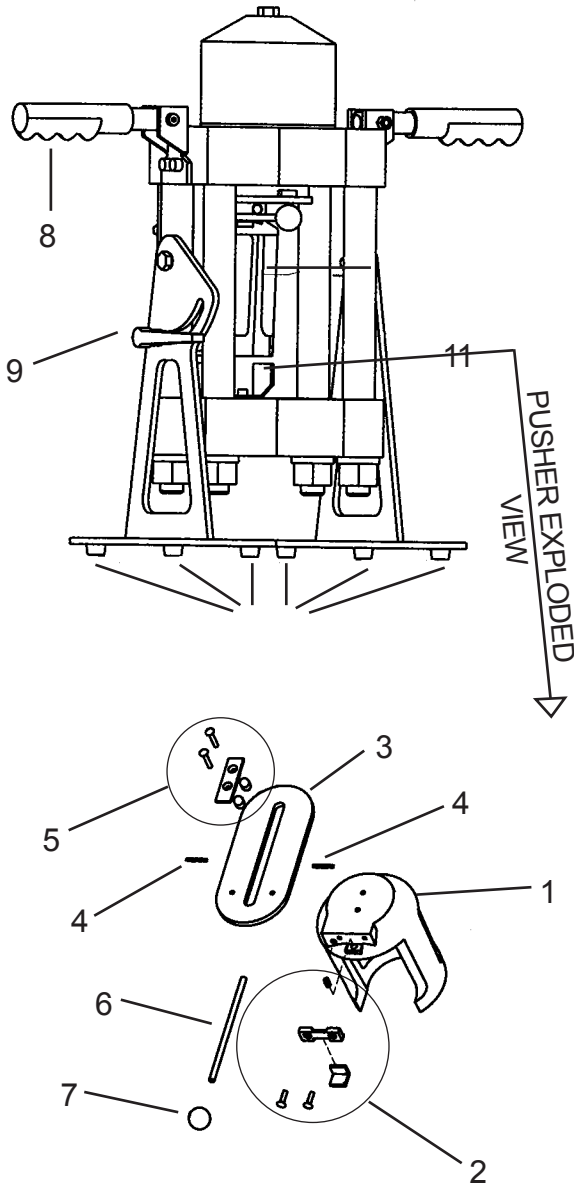
T-481-110 Pump Specifications:

Electrical Power Source: 15amp, 110v grounded 1Ph 50/60HZ
Dimensions: 14-1/4" high, 9-5/8" long, 9-5/8" wide
Pressure: 0-10,000 psi
Outlet Port Size: 3/8" NPT
Hydraulic Oil: Enerpac
Reservoir Capacity: 115.5 cu. in.
Flow: .5 to 1.0 gpm
Motor Rating: 1/2 hp universal, 9 amps at 10,000 psi

Includes T-480-68 blue pusher extension ring to be used with T-480 Portable Coll-O-Crimp® and the T-420 collets only.

For replacement pump see page 292.

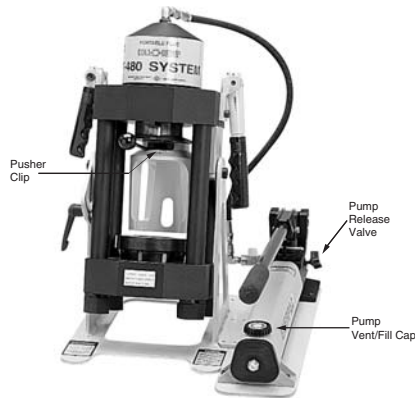
⚠ Refer to safety information regarding Coll-O-Crimp® hose, hose fittings and assembly equipment compatibility on pages 1-2.



T-480 • Portable Coll-O-Crimp® Repair & Replacement Items

Part Number	Description
T-480-P	Pusher
T-480-PSK	Pusher Stop Repair Kit (Includes pusher clip, 2 machine screws, pusher stop & spring)
T-480-SP	Slider Plate
140-05485-01	Roll Pin
T-480-SFK	Slide Flange Kit (Includes slide flange, 2 bushings & 2 machine screws)
T-480-SPR	Slide Pull Rod
T-480-SPK	Slide Pull Knob
140-06601	Vinyl Grip
T-480-TBK	Tilt Bracket Knob
140-06894	Foot Pad
T-480-69	Tool Locator Bracket
T-480-16	10,000 PSI replacement hose assembly for 480-HP
T-480-17	10,000 PSI replacement hose assembly for T-480-TA and T-480-EP
T-480-18	10,000 PSI replacement hose assembly for 480-AH
140-06906	Hydraulic Quick Coupler used with the T-480-TA and T-480-EP System
T-480-3	Turbo Air/Hydraulic replacement pump for T-480-TA System
T-481-110	Electric replacement pump for T-480-EP System
T-480-2	Hand replacement pump for T-480-HP System
T-482-2	Air/Hydraulic replacement pump for T-480-AH System
T-480-E	Shroud Decal
T-480-M	Set-up & Operating Guide for T-480 System

⚠ WARNING – You must hold the hose assembly in place from below throughout the crimping operation. Do not place fingers or hands at the crimping point during operation. Failure to follow this procedure could result in serious injury to your hand or finger.



1. Turn vent/ fill cap to **VENT** position to vent pump reservoir.
2. Close release valve on pump.



- NOTE:** Periodically lubricate die cavity with Weatherhead **T-400-G** lubricant.
3. Release the pusher clip and slide pusher back.
 4. Select the proper Weatherhead hose, end fittings, and tooling (refer to the Hose End and Tool Selector Chart). Insert the hose into the end fitting, making sure that the hose is bottomed in end fitting.



5. Loosen knob and tilt press as necessary. Insert one end of hose assembly from below the base plate and between the collet halves. Align knurl on end fitting with top of collet, making sure that collet halves are evenly aligned.



6. Holding uncrimped hose assembly in place, position **T-480-68** blue pusher extension ring on top of collet.
7. Slide pusher forward, making sure pusher clip has locked.



6. Operate pump handle until **T-480-68** blue pusher extension ring contacts the base plate, indicating that the crimp is complete. Open the **RELEASE** valve to retract pusher. Release the pusher clip and slide the pusher back. Remove the blue pusher extension ring from top of collet and then the crimped hose assembly from below.

NOTE: Visually inspect the crimped end. Measure the nominal crimp diameter and verify that the crimp is within 1/16" from the locating knurl on the collar, see figure C, page 274.

FOR T-400 TOOLING

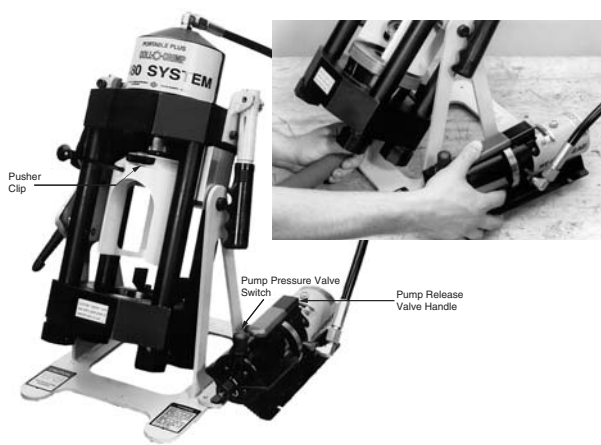
NOTE: The T-480-68 blue extension ring is NOT used with T-400 tooling.

9. When crimping with Coll-O-Crimp I tooling the procedure is the same except;
 - a. Insert the **T-420-25** adapter die ring into the base plate die cavity.
 - b. Periodically lubricate the **T-420-25** adapter die ring or base plate die cavity.
 - c. Use T-400 collets and spacer rings.
 - d. Align dimples on the end fitting with top of collet. When crimping 229 'P', 265 'P', 338 'P' and 757 'E' Series hose ends, align top of collar on hose end with top surface of collet.

Portable T-480-AH Crimping Procedure

Equipment

⚠ WARNING – You must hold the hose assembly in place from below throughout the crimping operation. Do not place fingers or hands at the crimping point during operation. Failure to follow this procedure could result in serious injury to your hand or finger.



1. Attach air supply to pump.



NOTE: Periodically lubricate the die ring with Weatherhead **T-400-G** lubricant.

2. Release the pusher clip and slide pusher back.
3. Select the proper Weatherhead hose, end fittings and tooling (refer to Hose End and Tool Selector Chart). Insert the hose into the end fitting, making sure that the hose is bottomed in end fitting.



4. Loosen knob and tilt press as necessary. Insert one end of hose assembly from below the base plate and between the collet halves. Align knurl on end fitting with top of collet, making sure that collet halves are evenly aligned.



5. Holding uncrimped hose assembly in place, position **T-480-68** blue extension ring on top of collet.
6. Slide pusher forward, making sure pusher clip has locked.



7. Press ACTIVATION button and hold until **T-480-68** blue pusher extension ring contacts the base plate, indicating that the crimp is complete. Depress PRESSURE valve to retract pusher. Release the pusher clip and slide the pusher back. Remove the blue pusher extension ring from top of collet and then crimped hose assembly from below.

NOTE: Visually inspect the crimped end. Measure the nominal crimp diameter and verify that the crimp is within 1/16" from the locating knurl on the collar, see figure C, page 274.

FOR T-400 TOOLING

NOTE: The **T-480-68** blue extension ring is NOT used with T-400 tooling.

9. When crimping with Coll-O-Crimp I tooling the procedure is the same except;
 - a. Insert the **T-420-25** adapter die ring into the base plate die cavity.
 - b. Periodically lubricate the **T-420-25** adapter die ring or base plate die cavity.
 - c. Use **T-400** collets and spacer rings.
 - d. Align dimples on the end fitting with top of collet. When crimping 229 'P', 265 'P', 338 'P' and 757 'E' Series hose ends, align top of collar on hose end with top surface of collet.

⚠ WARNING – You must hold the hose assembly in place from below throughout the crimping operation. Do not place fingers or hands at the crimping point during operation. Failure to follow this procedure could result in serious injury to your hand or finger.



1. Connect hose assembly to pump and crimper.
2. Attach air supply to pump.
3. Vent pump by opening vent screw 1-2 turns.



NOTE: Periodically lubricate the die ring with Weatherhead **T-400-G** lubricant.

4. Release the pusher clip and slide pusher back.
5. Select the proper Weatherhead hose, end fittings and tooling (refer to Hose End and Tool Selector Chart). Insert the hose into the end fitting, making sure that the hose is bottomed in end fitting.



6. Loosen knob and tilt press as necessary. Insert one end of hose assembly from below the base plate and between the collet halves. Align knurl on end fitting with top of collet, making sure that collet halves are evenly aligned.



7. Holding uncrimped hose assembly in place, position **T-480-68** blue extension ring on top of collet.
8. Slide pusher forward, making sure pusher clip has locked.



9. Depress the **PRESSURE** end of treadle and hold until **T-480-68** blue pusher extension ring contacts the base plate, indicating that the crimp is complete. Depress the **RELEASE** end of treadle to retract pusher. Release the pusher clip and slide the pusher back. Remove the blue pusher extension ring from top of collet and then the crimped hose assembly from below.

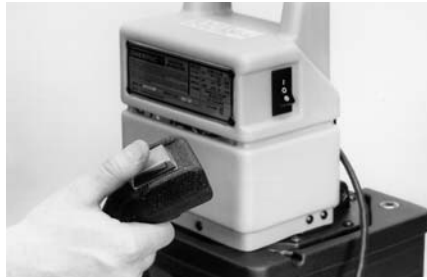
NOTE: Visually inspect the crimped end. Measure the nominal crimp diameter and verify that the crimp is within 1/16" from the locating knurl on the collar, see figure C, page 272.

FOR T-400 TOOLING

NOTE: The **T-480-68** blue extension ring is NOT used with T-400 tooling.

9. When crimping with Coll-O-Crimp I tooling the procedure is the same except;
 - a. Insert the **T-420-25** adapter die ring into the base plate die cavity.
 - b. Periodically lubricate the **T-420-25** adapter die ring or base plate die cavity.
 - c. Use T-400 collets and spacer rings.
 - d. Align dimples on the end fitting with top of collet. When crimping 229 'P', 265 'P', 338 'P' and 757 'E' Series hose ends, align top of collar on hose end with top surface of collet.

WARNING – You must hold the hose assembly in place from below throughout the crimping operation. Do not place fingers or hands at the crimping point during operation. Failure to follow this procedure could result in serious injury to your hand or finger.



1. Connect hose assembly to pump and crimper. Check all connections to be sure they are tight and leak free.
2. Open the pump vent plug by turning it 1-2 turns.



NOTE: Periodically lubricate the die ring with Weatherhead **T-400-G** lubricant.

3. Release the pusher clip and slide pusher back.
4. Select the proper Weatherhead hose, end fittings and tooling (refer to Hose End and Tool Selector Chart). Insert the hose into the end fitting, making sure that the hose is bottomed in end fitting.



5. Loosen knob and tilt press as necessary. Insert one end of hose assembly from below the base plate and between the collet halves. Align knurl on end fitting with top of collet, making sure that collet halves are evenly aligned.



6. Holding uncrimped hose assembly in place, position **T-480-68** blue extension ring on top of collet.
7. Slide pusher forward, making sure pusher clip has locked.



8. Turn pump switch, located on side of shroud, to "ON" position. Press ADVANCE on pendant switch and hold until blue spacer extension ring contacts the base plate, indicating that the crimp is complete. Press RETRACT on the pendant switch and pusher will retract. Remove the blue pusher extension ring from top of collet and then the crimped hose assembly from below.

NOTE: Visually inspect the crimped end. Measure the nominal crimp diameter and verify that the crimp is within 1/16" from the locating knurl on the collar, see figure C, page 272.

FOR T-400 TOOLING

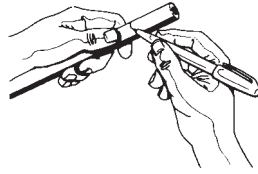
NOTE: The **T-480-68** blue extension ring is NOT used with T-400 tooling.

9. When crimping with Coll-O-Crimp I tooling the procedure is the same except;
 - a. Insert the **T-420-25** adapter die ring into the base plate die cavity.
 - b. Periodically lubricate the **T-420-25** adapter die ring or base plate die cavity.
 - c. Use T-400 collets and spacer rings.
 - d. Align dimples on the end fitting with top of collet. When crimping 229 'P', 265 'P', 338 'P' and 757 'E' Series hose ends, align top of collar on hose end with top surface of collet.

Figure A - Insertion Depth

Push hose end on hose until hose is bottomed in end fitting.

To insure that hose is bottomed in collar, mark the insertion depth on the hose before inserting it into the hose end.



Hose I.D.	'U' Series Rubber	'E' Series Nylon/Teflon	069 'E' Series Truck Hose	757 'E' Series Refrigerant Hose
3/16	—	7/8	1	—
1/4	1-1/2	7/8	1	—
5/16	—	15/16	1-3/32	1
3/8	1-7/16	15/16	—	—
13/32	—	—	1-3/32	1-1/8
1/2	1-7/16	1-1/16	1-3/32	1-3/32
5/8	1-15/16	—	1-5/16	1-3/32
3/4	2-1/8	1-1/4	—	—
7/8	—	—	1-5/16	—
1	2-3/16	1-11/32	—	—
1-1/8	—	—	1-3/8	—

Figure B - COLL-O-CRIMP® Spacer Ring

Typical spacer ring illustrating both sides of ring.

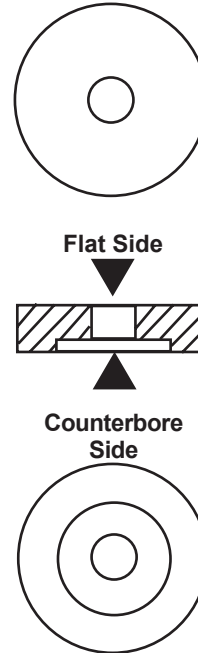


Figure C - Nominal Crimp Diameter Measurement

Measuring crimp diameters should be a part of the normal hose assembly procedure. To insure a proper crimp diameter reading, follow these steps:

1. Measure the diameter in the middle of crimped portion of the hose end.
2. Place the caliper in a position to allow a measurement across the pressed (flat) portion of the crimp.
3. Refer to Hose End and Tool Selector Chart for nominal crimp diameter.

NOTE: In the larger sizes, calipers may be used; however, in the smaller sizes, and in the 'E' Series thermoplastic hose ends, a point micrometer will provide an accurate reading.

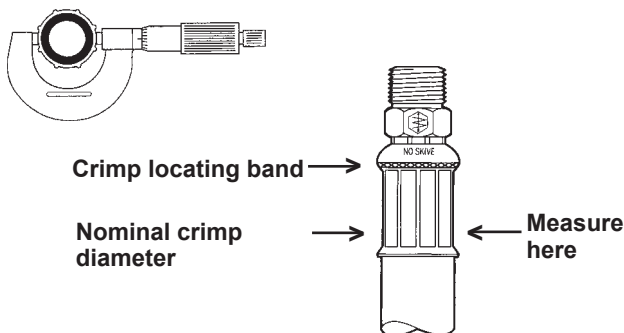
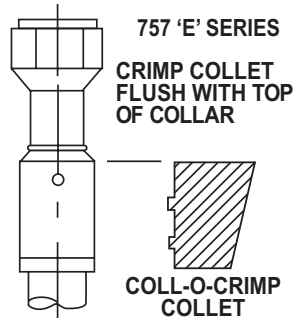



Figure D - 757 'E' Series Hose End

757 'E' Series hose ends must be positioned with top of collar level with top of collet.



 Refer to safety information regarding Coll-O-Crimp® hose, hose fittings and assembly equipment compatibility on pages 1-2.



Packages continued on next page.

Refer to pages 284 through 292 for Coll-O-Crimp tooling, tooling packages and pumps.

NOTE: 25 ton (T-400-1 is C-O-C press only)

 Refer to safety information regarding Coll-O-Crimp® crimping procedures on page 277.

The Coll-O-Crimp® I is the time-proven 'Mini-Factory' that you can easily set up in your own shop. Fast, easy, compact and various power sources available make this crimper versatile for even the smallest of workshops.

Capacity: 3/16" I.D. 1 fiber braid through 1-3/8" I.D. 1 wire hose and 1-1/4" I.D. 2 wire hose.

Mounting: Bench; FH-135X or C40X Cabinet.

For cabinets see pages 296-299.

Size: 16-1/4" high, 8" wide, 21-3/4" deep

Weight: 113 lbs.

T-400 • Coll-O-Crimp® I Package

Includes one each of the following:

- T-400-1** Coll-O-Crimp® Press, **T-400-BB** Switch, and **T-400-M** Instructions
- T-400-2C** 'U' Series Collet – 1/4"
- T-400-3C** 'U' Series Collet – 3/8"
- T-400-4C** 'U' Series Collet – 1/2"
- T-400-5C** 'U' Series Collet – 3/4"
- T-400-6C** 'U' Series Collet – 1"
- T-400-10** Spacer Ring – Black
- T-400-11** Spacer Ring – Silver
- T-400-62** Spacer Ring – Yellow
- T-400-16**** 36" T-421U Pump to Press Hose Assembly
- T-400-8** Die Ring

Pump Required (sold separately): **T-421U**, **T421U-110**, **T-402-2** or **T-403-2** see pages 277-281.

**Not supplied when ordering a T-402 or T-403 package.

T-400 Coll-O-Crimp® I Press/Pump Packages

The T-400 Coll-O-Crimp® Press and tooling package can be supplied with a variety of power units for your particular needs. Listed below are press/power unit packages. **For cabinets see pages 296-299.**

T-401 • C-O-C I & 220v Electric Pump Package

Includes one each of the following:

- T-400** Press and tooling package
- T-421U** Electric Pump (220v, 1 phase)

T-401-110 • C-O-C I & 110v Electric Pump Package

Includes one each of the following:

- T-400** Press and tooling package
- T-421U-110** 110v, 1 Phase Pump

T-402 • C-O-C I & Air/Hydraulic Pump Package

Includes one each of the following:

- T-400** Press and tooling package/Less T-400-16
- T-402-2** Air/Hydraulic Pump
- T-400-18** 108" Hose assembly and fittings

CAUTION: The Coll-O-Crimp® power source has the pressure relief valve set at 4000 to 4200 PSI. Damage to the press will result if higher pressures are used and warranty may be voided.

⚠ Refer to safety information regarding Coll-O-Crimp® hose, hose fittings and assembly equipment compatibility on pages 1-2.

Packages continued from previous page.



NOTE: 25 ton (T-400-1 is C-O-C press only)

⚠ Refer to safety information regarding Coll-O-Crimp® crimping procedures on page 277.

T-400 Coll-O-Crimp I Press/Pump Packages Continued

The T-400 Coll-O-Crimp® I Press and tooling package can be supplied with a variety of power units for your particular needs. Listed below are press/power unit packages.

For cabinets see page 248-251.

T-403 • C-O-C I & Hand Pump Package

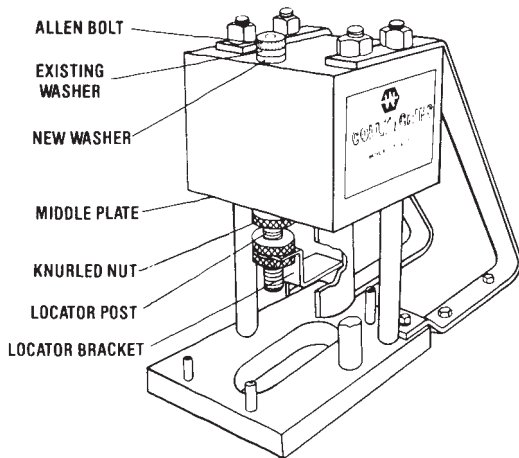
Includes one each of the following:

- T-400 Press and tooling package/Less T-400-16
- T-403-2 Hand Pump
- T-400-19 60" hose assembly and fittings

T-414 • C-O-C I & 12v Electric Pump Package

Includes one each of the following:

- T-400 Press and tooling package
- T-412 12 volt DC Electric Pump



T-400-9 • Crimp Locator

The T-400-9 allows you to make large volumes of hose assemblies by automatically aligning hose ends in proper crimp location.

Installation Procedure

1. Remove the front Allen bolt using an Allen wrench or tool provided with kit.
2. Add the washer provided with the kit to existing washer as shown and torque the bolt down to approximately 75 ft.-lbs.
3. Attach the locator post of the pre-assembled locator to the bottom of the middle plate and lock it in place with one of the knurled nuts.
4. Align the dimples on the first assembly with top of collet to locate the crimp. Drop the locator bracket down to rest on top of the hose end. Lock the bracket in position with remaining two knurled nuts. The locator now can be used, instead of dimples, to locate crimp accurately and consistently on the remaining hose ends of the same size and type.

NOTE: Remove locator assembly when crimping bent tube ends.

T-400-1 Coll-O-Crimp® I Repair and Replacement Items

- T-400-B Pusher Bolt
- T-400-BB Switch to interface T400-1 crimper to T421U pump or T-421U-110 pump
- T-400-G 1.5 oz. Tube High Efficiency Teflon* Grease
- T-400-K1 Seal Replacement Kit for T-400-1 Press
- T-400-E Shroud Decal
- T-400-M Instructions for T-400-1
- T-400-S Replacement press shroud with Decals.
- T-400-8 Die Ring

- T-400-13 Replacement collet cage for T-400 'U' Series collets, 1/4" and 3/8" sizes only, and 229 "P" Series collets, all sizes, with a 'C' suffix (2 required for each collet).
- T-400-14 Replacement collet cage for T-400 'U' Series collets with a 'C' suffix, 1/2" through 1" only, (2 required for each collet).
- T-400-90 Replacement collet cage for T-400 'E', 069 'E', and 'E' Series collets with a 'C' suffix (2 required for each collet).
- T-432-15 Pusher

CAUTION: The Coll-O-Crimp® power source has the pressure relief valve set at 4000 to 4200 PSI. Damage to the press will result if higher pressures are used and warranty may be voided.

⚠ WARNING – You must hold the hose assembly in place from below throughout the crimping operation. Do not place fingers or hands at the crimping point during operation. Failure to follow this procedure could result in serious injury to your hand or finger.



1. Place die ring T-400-8 on base plate against front stops.
2. Insert properly-sized matched collet halves in the die ring. See chart on press.



3. Place the correct Coll-O-Crimp® hose end on hose. Be sure hose is bottomed in hose end.



4. Insert hose assembly from below between the collet halves. Align the dimples on the hose end collar with the top of the collet. When crimping 229 'P', 265 'P', or 338 'P' or 757 'E' Series ends, the collar should be flush with the top of the collet.



5. Place specified side of spacer ring face down on collet with uncrimped hose assembly held in place. Refer to the Hose End & Tool Selection Chart in the back of this catalog for further instruction.
6. Slide entire assembly back against rear locating stops.



7. Activate pump to crimp hose end to hose. When spacer ring contacts die ring, crimping is complete. Release the electric switch to retract pusher. Slide entire assembly forward and remove spacer ring.



8. Remove factory-quality crimped hose assembly and visually inspect the crimped end. The crimp on the collar should be located $\pm 1/16$ " from the dimples or ridges.
9. To insure a proper crimp has been completed, measure the nominal crimp diameter. Refer to Hose End and Tool Selector Chart in back of catalog for procedure and crimp diameters.

⚠ Refer to safety information regarding Coll-O-Crimp® hose, hose fittings and assembly equipment compatibility on pages 1-2.



Refer to pages 284 through 292 for Coll-O-Crimp tooling, tooling packages and pumps.

⚠ Refer to safety information regarding Coll-O-Crimp® crimping procedures on page 277.

T-407-1 • Production Coll-O-Crimp® Press

The T-407-1 Production Coll-O-Crimp®, as its name implies, is at its best in the fast production of *straight configuration hose end crimping. Taking advantage of the swiveling bracket which supports the crimper, tooling can be put in place and the press locked in at up to a 90° angle, facilitating quick hose end crimping. A crimp locator is included. When set to position, the crimp locator allows for a preset of the correct crimp location so hose assemblies can be built in volume, with accuracy and precision. The T-407-1 offers crimping capabilities of 3/16"-1 fiber braid through 1-3/8" I.D. 1 wire hose and 1-1/4" I.D. 2 wire hose.

Weight: (for press and pump) 198 lbs.

Size Press: 16-1/4" high, 21-3/4" deep

Includes one each of the following:

- T-400-M Instructions
- T-400-8 Die Ring
- T-400-9 Crimp Locator
- T-400-19 60" hose assembly and fittings

*Removal of crimp locator allows for crimping of 45° and 90° angle hose end configurations.

T-407 • Production Coll-O-Crimp® Package

The T-407 comes with a high volume pump and a foot switch.

Size Pump: 26" high, 18" wide (Pump is wired for 220v, 1 phase)

Includes one each of the following:

- T-407-1 Production C-O-C Press
- T-433 Two-Stage Piston Pump and foot switch

NOTE: The T-433 pump which is shipped as part of the T-407 Production Coll-O-Crimp® System.



T-433-1 • Foot Switch

Lightweight and easy to use, the T-433-1 is designed with the operator in mind. Colored safety orange, the T-433-1 electric foot switch allows for hands free operation.

For use with T-407-1 C-O-C Production System.

⚠️ Refer to safety information regarding Coll-O-Crimp® hose, hose fittings and assembly equipment compatibility on pages 1-2.



Refer to pages 284 through 292 for Coll-O-Crimp tooling, tooling packages and pumps.

⚠️ Refer to safety information regarding Coll-O-Crimp® crimping procedures on pages 282-283.

The Coll-O-Crimp® Super I is a versatile machine ideal for your shop, factory, construction, and mine locations. Big capacity combined with lever activated crimping gives you wide coverage and a quick and simple way to make factory-quality hose assemblies.

Capacity: 3/16" I.D. 1 fiber braid through 1-1/4" 6 spiral hose; for hoses other than 4 and 6 spiral, conversion tooling is required. See pages 284-287 for details.

Mounting: Bench or C-40X cabinet.

See pages 296-299 for cabinet (not included).

Size: 22" high, 10" wide, 20-1/2" deep

Weight: 210 lbs.

Pump Required (sold separately): T-421U or T-421U-110

T-420-1 • Coll-O-Crimp® Super I Press ONLY
Includes T-420-M Instructions

T-420-N • Coll-O-Crimp® Super I Package

Includes one each of the following:

- T-420-1 Coll-O-Crimp® Super I Press and T-420-M Instructions
- T-421U 220v Electric Pump
- T-400-2C 'U' Series Collet- 1/4"
- T-400-3C 'U' Series Collet- 3/8"
- T-400-4C 'U' Series Collet- 1/2"
- T-400-5C 'U' Series Collet- 3/4"
- T-400-6C 'U' Series Collet- 1"
- T-400-10 Spacer Ring- Black
- T-400-11 Spacer Ring- Silver
- T-400-62 Spacer Ring Yellow
- T-410-22 36" Pump to Press Hose Assembly
- T-420-25 Adapter Ring for T-400 Series Collets
- T-420-4CN 430 'U' Series Collet- 1/2"
- T-420-5CN 430 'U' Series Collet- 3/4"
- T-420-6CN 430 'U' Series Collet- 1"
- T-420-7CN 430 'U' Series Collet- 1-1/4"

T-420N-110 • Coll-O-Crimp® Super I Package

Includes one each of the following:

- T-420-1 Coll-O-Crimp® Super I Press and T-420-M Instructions
- T-421U-110 110v Electric Pump
- T-400-2C 'U' Series Collet- 1/4"
- T-400-3C 'U' Series Collet- 3/8"
- T-400-4C 'U' Series Collet- 1/2"
- T-400-5C 'U' Series Collet- 3/4"
- T-400-6C 'U' Series Collet- 1"
- T-400-62 Spacer Ring- Yellow
- T-400-10 Spacer Ring- Black
- T-400-11 Spacer Ring- Silver
- T-410-22 36" Pump to Press Hose Assembly
- T-420-25 Adapter Ring for T-400 Series Collets
- T-420-4CN 430 'U' Series Collet- 1/2"
- T-420-5CN 430 'U' Series Collet- 3/4"
- T-420-6CN 430 'U' Series Collet- 1"
- T-420-7CN 430 'U' Series Collet- 1-1/4"

CAUTION: The Coll-O-Crimp® power source has the pressure relief valve set at 4000 to 4200 PSI. Damage to the press will result if higher pressures are used and warranty will be voided.

Coll-O-Crimp® Super I Repair and Replacement Items

T-420-1M	Micro-Switch for T-420-1 Press	T-420-26	Insert – Base Plate
140-0677	Tool Locator Bracket	T-420-G	Linkage Assembly
T-420-B	Pusher Bolt and Washers	T-420-2R	Rack
T-420-E	Shroud Decal	T-420-2K	Pinion Shaft Assembly
T-420-H	Handle	T-420-2S	Replacement Pinion Gear Shaft
T-420-L	Light Bulb	T-420-2G	Replacement Pinion Gear
T-420-LA	Light Assembly	T-400-G	1.5 oz. Tube High Efficiency Teflon® Grease
T-420-LS	Light Switch	T-421U-BC	Breather Cap for T-421U Pump
T-420-M	Instructions for T-420-1	140-06745	Pusher Wear Plates includes (1) Left and (1) Right
T-420-P	Pusher Set (2) with Wear Plates and Screws	140-06748	Pusher Wear Plates Screws (1)
T-420-S	Press Shroud with Decals		See pages 289 for replacement pumps.

 Refer to safety information regarding Coll-O-Crimp® hose, hose fittings and assembly equipment compatibility on pages 1-2.



Reference pages 284 through 292 for Coll-O-Crimp tooling, tooling packages and pumps.

NOTE: Seal kits for T-410 and T-440 are not sold separately. Crimpers must be sent in and torqued by Boston Weatherhead.

 Refer to safety information regarding Coll-O-Crimp® crimping procedures on pages 282-283.

The Coll-O-Crimp® II Plus is ideal for factory, high performance machine operations, construction and mine locations. This machine offers the capabilities of crimping all of the crimp style hose ends Weatherhead offers. With this coverage, this heavy-duty crimper can handle all of your crimping needs.

Capacity: 3/16" I.D. 1 fiber braid through 2" 6 spiral hose; for hoses other than 4 and 6 spiral, conversion tooling is required. See page 284-287 for details.

Mounting: Bench

Size: 27" high, 12" wide, 21" deep

Weight: 450 lbs.

Pump Required (sold separately): T-441, see page 279.

T-440-N • Coll-O-Crimp® II Plus Package

Includes one each of the following:

- T-440-1** C-O-C II Plus Press, **T-440-M** Instructions and **140-06741** Switch
- T-441** 220v 2-stage Electric Pump
- T-410-4CN** 430 'U' N/S Collet – 1/2" I.D.
- T-410-5CN** 430 'U' N/S Collet – 3/4" I.D.
- T-410-6CN** 430 'U' N/S Collet – 1" I.D.
- T-410-7CN** 430 'U' N/S Collet – 1-1/4" I.D.
- T-410-8N** 430 'U' N/S Collet – 1-1/2" I.D.
- T-410-9N** 430 'U' N/S Collet – 2" I.D.
- T-410-22** 36" Pump to Press Hose Assembly

NOTE: These packages include tooling to crimp H430 hose. For additional tooling order from pages 284-287.

NOTE: For T-410 press, use T-410-BB switch.

Repair & Replacement Items:

- T-410-26R** Base Plate Insert (7") (T-440-1)
- T-410-26** Base Plate Insert (6") (T-410-1)
- T-410-28** Tool Locator Bracket
- T-410-B** Pusher Bolt and Washers
- T-410-E** Shroud Decal
- T-440-M** Instructions for T-440-1
- T-410-P** Pusher Set (2) for T-410-1 and T-440-1
- T-410-1M** Microswitch for T-410-1 & T-440-1
- T-421-FP** 4 prong female electrical outlet
See page 245 for illustration.
- T-400-G** 1.5 oz. Tube High Efficiency Teflon* Grease
- 140-06741** Pump Switch for the T-440-1 crimper using T-441 pump
- T-410-BB** Pump Switch for T-410-1 crimper using T-421U or T-421U-110 pump only

CAUTION: The Coll-O-Crimp® power source has the pressure relief valve set at 5000 PSI. Damage to the press will result if higher pressures are used and warranty may be voided.

T-420 & T-440 Crimping Procedure

Procedure when using T-410 or T-420 series collets. Spacer ring may be required, please refer to Hose End & Tool Selector Chart in the back of this catalog for tooling specifications.

⚠ WARNING – You must hold the hose assembly in place from below throughout the crimping operation. Do not place fingers or hands at the crimping point during operation. Failure to follow this procedure could result in serious injury to your hand or finger.

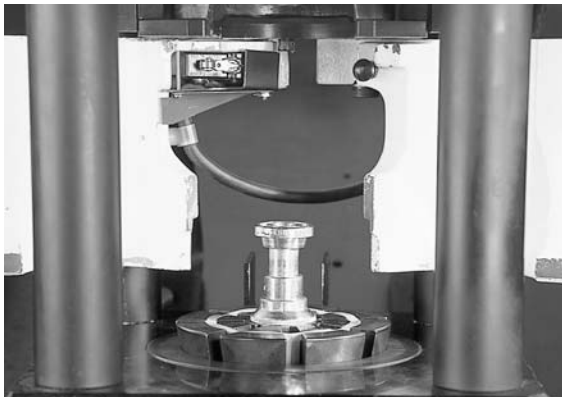
T-440 Used In Example



1. Open pusher halves. Select proper size collet for hose type being crimped. Insert collet as shown.



2. Place proper size Coll-O-Crimp® hose end on hose. Be sure hose is bottomed in hose end.
 2a. When making a hose assembly on the **T-440-1** C-O-C® machine using a 47032E-632 on each end, you must manually remove the spring loaded collet retainer ring in order for the hose end to fit through the opening.



3. Insert hose assembly from below, between collet halves. Crimp locating knurls must align with top surface of collet.



4. **T-440-1**: Close pusher halves and activate pump by turning on switch. When pusher contacts the base plate, the crimp is complete.
 4. **T-420-1**: Pull activating lever down. Pusher halves will close. Continue to pull activating lever down (pump will activate) until pusher contacts the base plate. The crimp is complete. Release activating lever. Pusher will automatically return, and pusher halves will open. Remove hose assembly and measure nominal crimp diameter (see step 6).



5. **T-440-1**: Release switch. Pusher will automatically return. Open pusher halves. Remove factory crimped assembly and inspect.



6. To insure a proper crimp has been completed, measure the nominal crimp diameter. Refer to the Hose End and Tool Selector Chart in back of catalog for procedure and crimp diameter.

‡ When using sizes 24 and 32 of 430 'U' series hose ends on T-440 Press. † When using 430 'E' Series Hose Ends and when using size 12 through 32 of 430 'U' series hose ends. * When using H35016 and H54516 with 430 'U' Series Hose ends.

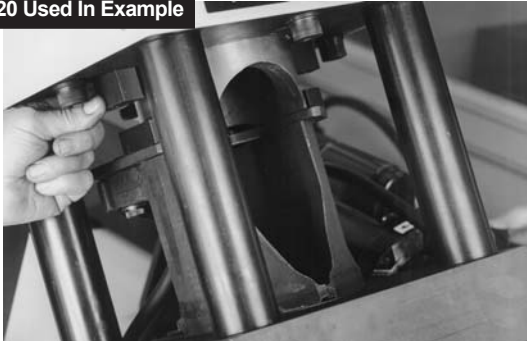
T-420 & T-440 Crimping Procedure

Equipment

Procedure when using T-400 series collets. Please refer to Hose End & Tool Selector Chart in the back of this catalog for tooling specifications.

WARNING – You must hold the hose assembly in place from below throughout the crimping operation. Do not place fingers or hands at the crimping point during operation. Failure to follow this procedure could result in serious injury to your hand or finger.

T-420 Used In Example



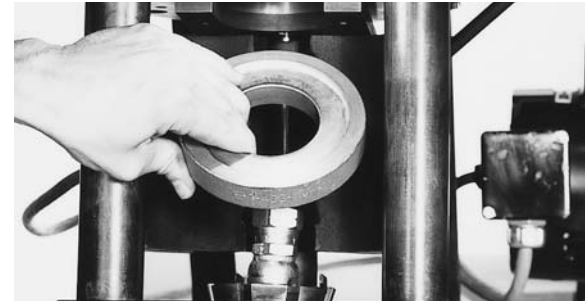
1. Hold switch "ON;" As ram starts down, rotate the ram return stops "OUT" from their "IN" position. Release switch. Ram will return to the full up position allowing enough clearance for insertion of required tooling.



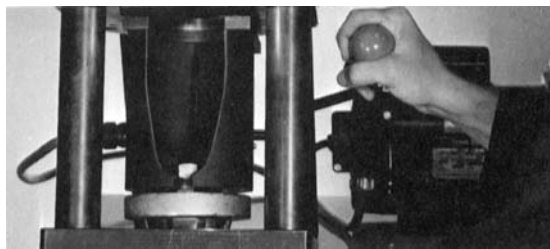
2. Open pusher halves and place adapter ring in the base plate cavity. Select proper size collet for hose type and size being crimped. Insert collet halves in adapter ring.



3. Place proper size Coll-O-Crimp® hose end on hose. Be sure to bottom on hose.



4. Select proper spacer ring. Reference Spacer Ring Selector Chart located on front of press, or Hose End and Tool Selector Chart in back of catalog. Insert hose assembly from below, between collet halves. Align the dimples on the hose end collar with the top of the collet. When using the 229'P', 265'P', 338'P' and 757'E' series hose ends, the collar should be flush with the top of the collet.
5. Place appropriate side of spacer ring on top of collet.



- 6a. **T-440-1:** Close pusher halves. Hold switch on. When spacer ring bottoms on adapter ring the crimp is complete.
- 6b. Release switch to shut off pump and retract pusher halves. Open pusher halves. Remove factory-crimped hose assembly and inspect the crimp.
- 7a. **T-420-1:** Pull activating lever down. Pusher halves will close. Continue to pull activating lever down (pump will activate) until pusher contacts the base plate. The crimp is complete.



- 7b. Release activating lever. Pusher will automatically return and pusher halves will open. Remove factory-crimped hose assembly and inspect the crimp.
8. To insure a proper crimp has been completed, measure the nominal crimp diameter. Refer to Hose End and Tool Selector Chart in back of catalog for procedure and crimp diameters.

 Refer to safety information regarding Coll-O-Crimp® hose, hose fittings and assembly equipment compatibility on pages 1-2.



NOTE: See Hose End and Tool Selector Chart in the back of this catalog for proper Collet selection for hose style and size desired.

NOTE: Collets may be order individually.

T-400-30 • 'E' Series Collet Kit

This kit can be used with the following C-O-C systems: T-400-1, T-420-1, T-440-1, T-460, T-462, T-465 and T-480.

Kit includes one each of the following:

T-400-113C	Collet – 3/16" (H243 only)
T-400-31C	Collet – 1/4"
T-400-32C	Collet – 5/16"
T-400-33C	Collet – 3/8"
T-400-34C	Collet – 1/2"
T-400-35C	Collet – 3/4"
T-400-36C	Collet – 1"
FS-1200	Label Set/Layout Guide

Spacer Rings not included in T-400-30 kit.

T-400-66 • 069 'E' Series Collet Kit

This kit can be used with the following C-O-C systems: T-400-1, T-420-1, T-440-1, T-460, T-462, T-465 and T-480.

Kit includes one each of the following:

T-400-54C	Collet – 3/16"
T-400-55C	Collet – 1/4"
T-400-56C	Collet – 5/16"
T-400-57C	Collet – 13/32"
T-400-58C	Collet – 1/2"
T-400-59C	Collet – 5/8"
T-400-60C	Collet – 7/8"
T-400-61C	Collet – 1-1/8"
T-400-70	Collet – 1-3/8"
FS-1500	Label Set/Layout Guide

Spacer Rings not included in T-400-66 kit.

T-400-67 • 'U' Series Collet Kit

This kit can be used with the following C-O-C systems: T-400-1, T-420-1, T-440-1, T-460, T-462, T-465 and T-480.

Kit includes one each of the following:

T-400-2C	Collet – 1/4"
T-400-3C	Collet – 3/8"
T-400-4C	Collet – 1/2"
T-400-64C	Collet – 5/8"
T-400-5C	Collet – 3/4"
T-400-6C	Collet – 1"
T-400-12	Collet – 1-1/4"
FS-1100	Label Set/Layout Guide

Spacer Rings not included in T-400-67 kit. *Through size -12 only.

T-400-84 • 229 'P' Series Collet Kit

This kit can be used with the following C-O-C systems: T-400-1, T-420-1, T-440-1, T-460, T-462, T-465 and T-480.

T-400-80C	Collet – 3/16"	T-400-82C	Collet – 13/32"
T-400-81C	Collet – 5/16"	T-400-83C	Collet – 1/2"

Spacer Rings not included in T-400-84 kit.

T-400-104 • 338 'P' Series Collet Kit

This kit can be used with the following C-O-C systems: T-400-1, T-420-1, T-440-1, T-460, T-462, T-465 and T-480.

Kit includes one each of the following:

T-400-102C	Collet – 3/8"	T-400-103C	Collet – 1/2"
FS-2900	Label Set		

Spacer Rings not included in T-400-104 kit.

T-400-114 • 757 'E' Series Collet Kit

This kit can be used with the following C-O-C systems: T-400-1, T-420-1, T-440-1, T-460, T-462, T-465 and T-480.

Kit includes one each of the following:

T-400-105C	Collet – 5/16"	T-400-107C	Collet – 1/2"
T-400-106C	Collet – 13/32"	T-400-108C	Collet – 5/8"

Spacer Ring not included in T-400-114 kit.

T-400-129 • 336 'E' Series Collet Kit

This kit can be used with the following C-O-C systems: T-400-1, T-420-1, T-440-1, T-460, T-462 and T-480.

Kit includes one each of the following:

T-400-120C	Collet – 3/16"	T-400-122C	Collet – 3/8"
T-400-121C	Collet – 1/4"	T-400-123C	Collet – 1/2"
FS-3500	Label Set		

* For size 3/4" order T-420-156. For 1" size order T-42016C. For use with T-420-1 and T480-1 only.

T-400-131 • 'M' Series Collet Kit

This kit can be used with the following C-O-C system: T-400-1, T-420-1, T-440-1, T-460, T-462 and T-480.

T-400-109C	Collet – 1/4"
T-400-110C	Collet – 3/8"
T-400-111C	Collet – 1/2"

'M' Series Collet - Size 10


This collet can be used for a T-410 and T-440 ONLY.

T-410-30C 10M Collet – Collet for 5/8" size 'M' Series ends.

This collet can be used for a T-420 and T-480 ONLY.

T-420-30C 10M Collet – Collet for 5/8" size 'M' Series ends.

The Weatherhead tools listed above are offered in kits for any given hose type, or collets and tools can be purchased individually by catalog number. Refer to Hose End and Tool Selector Chart at the back of this catalog for proper spacer rings.

 Refer to safety information regarding Coll-O-Crimp® hose, hose fittings and assembly equipment compatibility on pages 1-2.



NOTE: See Hose End and Tool Selector Chart in the back of this catalog for proper Collet selection for hose style and size desired.

NOTE: Collets may be order individually.

T-410-70 • 470 'E' Series Collet Kit

This kit can be used with the following C-O-C systems: T-410-1 and T-440-1 ONLY.

(For 6 Spiral Hose H470)

Kit includes one each of the following:

T-470-8C	Collet – 1/2"
T-470-12C	Collet – 3/4"
T-470-16C	Collet – 1"
T-470-20	Collet – 1-1/4"
T-470-24	Collet – 1-1/2"
T-440-32*	Collet – 2"
FS-1800	Label Set/Layout Guide

*-32 size requires T-440 system.

T-410-80 • 430 'U' Series No Skive Collet Kit

This kit can be used with the following C-O-C systems: T-410-1 and T-440-1 ONLY.

Kit includes one each of the following:

T-410-4CN	Collet – 1/2"
T-410-5CN	Collet – 3/4"
T-410-6CN	Collet – 1"
T-410-7CN	Collet – 1-1/4"
T-410-8N	Collet – 1-1/2"
T-410-9N	Collet – 2"
FS-3100	Label Set

T-420-70 • 470 'E' Series Collet Kit

This kit can be used with the following C-O-C systems: T-420-1 and T-480

(For 4 and 6 Spiral Hose H470)

Kit includes one each of the following:

T-420-8C	Collet – 1/2"
T-420-9C	Collet – 3/4"
T-420-10C	Collet – 1"
T-420-11	Collet – 1-1/4"
FS-1800	Label Set

T-420-80 • 430 'U' Series No Skive Collet Kit

This kit can be used with the following C-O-C systems: T-420-1 and T-480

Kit includes one each of the following:

T-420-4CN	Collet – 1/2"
T-420-5CN	Collet – 3/4"
T-420-6CN	Collet – 1"
T-420-7CN	Collet – 1-1/4"
FS-3100	Label Set

T-480-80 • 'U' and 430 'U' Series Collet Kit

This kit can be used with the following C-O-C systems: T-420-1, and T-480 ONLY.

Kit includes one each of the following:

T-400-2C	Collet – 1/4"
T-400-3C	Collet – 3/8"
T-400-4C	Collet – 1/2"
T-400-5C	Collet – 3/4"
T-400-6C	Collet – 1"
T-400-10	Spacer Ring - Black
T-400-11	Spacer Ring - Silver
T-400-62	Spacer Ring - Yellow
T-420-25	Adapter Ring for T-400 Series Collets
T-420-4CN	Collet – 1/2"
T-420-5CN	Collet – 3/4"
T-420-6CN	Collet – 1"
T-420-7CN	Collet – 1-1/4"

265 'P' Series Collets

For Hose Styles: H265, H275 and H285

These collets can be used with all C-O-C systems.

T-400-2C	Collet – 1/4"
T-400-3C	Collet – 3/8"
T-400-64C	Collet – 5/8"

T-400-2C is used for crimping 1/4" and 3/8" hose and fittings. T-400-3C is used for crimping 1/2" hose. T-400-64C is used for crimping 3/4" hose and fittings.

Refer to Hose End and Tool Selector Chart at the back of this catalog for proper spacer rings.

 Refer to safety information regarding Coll-O-Crimp® hose, hose fittings and assembly equipment compatibility on pages 1-2.



NOTE: See Hose End and Tool Selector Chart in the back of this catalog for proper Collet selection for hose style and size desired.

NOTE: Collets may be order individually.

T-410-27 • Conversion Kit

For use if you have collets used on our smaller T-400 Coll-O-Crimp® I and you are upgrading to a Coll-O-Crimp® II Plus.

The Weatherhead® tools listed below are offered in kits for any given hose type. For example, if you have a Coll-O-Crimp® II Plus press and desire to be in the rubber hose business, order T-410-27 conversion kit and T-400-67 for all the collets needed to crimp rubber hose. Collets and tools may also be purchased individually by catalog number.

Kit includes one each of the following:

- T-410-10** Spacer Ring – Black
- T-410-11** Spacer Ring – Silver
- T-410-25** Adapter Die Ring
- T-410-41** Yellow Spacer Ring

EXAMPLE: If you desire to crimp hose other than 4 or 6 spiral hose, you will need the T-410-25 Adapter Die Ring which is included in the conversion kit above. This ring allows the use of standard Coll-O-Crimp® I tooling, in the Coll-O-Crimp® II Plus Press.

069 'E' Series Collet - Size 32

This collet can be used for a T-410 and T-440 ONLY.

- T-410-71C** 069 'E' Collet – Collet for 2" size 069 'E' Series ends.

Collet Cage Replacements

- T-400-13** Replacement collet cages for: T-400-2C, T-400-3C, T-400-80C, T-400-81C, T-400-82C, T-400-83C, T-400-100C, T-400-101C
- T-400-14** Replacement collet cages for: T-400-4C, T-400-5C, T-400-6C, T-400-64C, T-400-105C, T-400-106C, T-400-107C, T-400-108C, T-400-109C, T-400-110C, T-400-111C, T-400-120C, T-400-121C, T-400-122C, T-400-123C
- T-400-15** Replacement collet cages for: T-400-31C, T-400-32C, T-400-46C, T-400-47C, T-400-102C, T-400-103C, T-400-113C
- T-400-90** Replacement collet cages for: T-400-33C, T-400-34C, T-400-35C, T-400-36C, T-400-48C, T-400-49C, T-400-54C, T-400-55C, T-400-56C, T-400-57C, T-400-58C, T-400-59C, T-400-60C, T-400-61C
- T-420-14NS** Replacement collet cages for: T-410-4CN, T-410-5CN, T-410-6CN, T-410-7CN, T-410-72CN, T-410-73CN, T-420-4CN, T-420-5CN, T-420-6CN, T-420-7CN
- T-420-14** Replacement collet cages for: T-410-4C, T-410-5C, T-410-6C, T-410-7C, T-410-8C, T-420-4C, T-420-5C, T-420-6C, T-420-7C, T-420-8C, T-420-9C, T-420-10C, T-420-30C, T-470-8C, T-470-12C, T-470-16C

NOTE: These items are half cages. Order 2 for complete cage.

Adapter Die Rings

- T-400-8** Adapter Die Ring for T-400 Collets (T-400-1 Press)
- T-410-25** Adapter Die Ring for T-400 Collets (T-410-1, T-440-1 Presses)
- T-420-25** Adapter Die Ring for T-400 Collets (T-420-1 Press) and T-480 Packages

Die Ring Lubricant

- T-400-G** 1.5 oz. Tube High Efficiency Teflon® Grease

The Weatherhead® tools listed above are offered in kits for any given hose type, or collets and tools can be purchased individually by catalog number. Refer to Hose End and Tool Selector Chart at the back of this catalog for proper spacer rings.

Spacer Rings

Equipment

 Refer to safety information regarding Coll-O-Crimp® hose, hose fittings and assembly equipment compatibility on pages 1-2.



NOTE: See Hose End and Tool Selector Chart in the back of this catalog for proper Spacer Ring selection for hose style and size desired.

NOTE: Spacer rings may be order individually.

Spacer Rings • T-400-1 C-O-C I

Catalog Number	Color (5" Dia.)	Catalog Number	Color (5" Dia.)
T-400-10	Black	T-400-38	Red
T-400-11	Silver	T-400-62	Yellow
T-400-37	Green	T-400-112	Tan

Spacer Rings • T-420-1 C-O-C Super I

Catalog Number	Color (5" Dia.)	Catalog Number	Color (5" Dia.)
T-400-10	Black	T-400-38	Red
T-400-11	Silver	T-400-62	Yellow
T-400-37	Green	T-400-112	Tan
		T-420-29*	Orange

* Spacer Ring for use on Coll-O-Crimp® Super I Press **ONLY**.

If you desire to crimp hose using T-400 collets, you will need the T-420-25 Adapter Die Ring. This ring allows the use of standard Coll-O-Crimp® I tooling.

T-420-25	Adapter Die Ring for T-400 Collets
T-420-E	Spacer Ring Selector Decal

Spacer Rings • T-440-1 C-O-C II Plus

Catalog Number	Color (6" Dia.)	Catalog Number	Color Color
T-410-10	Black	T-410-40	Red
T-410-11	Silver	T-410-41	Yellow
T-410-12	White	T-410-42	Tan
T-410-39	Green	T-410-93	Orange

T-410 Spacer rings can only be used on T-410-1 or T-440-1 Crimpers.

If you desire to crimp hose using T-400 collets, you will need the T-410-25 Adapter Die Ring. This ring allows the use of standard Coll-O-Crimp® I tooling.

T-410-25	Adapter Die Ring for T-400 Collets
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Spacer Rings • T-460 Portable C-O-C

Catalog Number	Color (6" Dia.)	Catalog Number	Color (6" Dia.)
T-400-10	Black	T-400-38	Red
T-400-11	Silver	T-400-62	Yellow
T-400-37	Green	T-400-112	Tan

Spacer Rings • T-462 Portable C-O-C

Catalog Number	Color (5" Dia.)	Catalog Number	Color (5" Dia.)
T-400-10	Black	T-400-38	Red
T-400-11	Silver	T-400-62	Yellow
T-400-37	Green	T-400-112	Tan

Spacer Rings • T-465 Portable C-O-C

Catalog Number	Color (5" Dia.)	Catalog Number	Color (5" Dia.)
T-400-10	Black	T-400-38	Red
T-400-11	Silver	T-400-62	Yellow
T-400-37	Green	T-400-112	Tan

Spacer Rings • T-480 Portable C-O-C

Catalog Number	Color (5" Dia.)	Catalog Number	Color (5" Dia.)
T-400-10	Black	T-400-38	Red
T-400-11	Silver	T-400-62	Yellow
T-400-37	Green	T-400-112	Tan
T-420-29†	Orange	T-480-68*	Blue

*To be used with T-480 portable C-O-C and the T-420 collets **ONLY**.

†Used with 430 'U' Series No Skive hose ends and H14516 hose.

The Weatherhead tools listed above are offered in kits for any given hose type, or collets and tools can be purchased individually by catalog number.





T-402-2 • Air/Hydraulic Pump

(Some models have air port on right side)

For use with T-400-1.

Dimensions..... 5-1/4" high, 12-1/2" long, 5" wide
 Weight..... 18 lbs.
 Operation Pressure..... 4000-4200 PSI
 Reservoir Capacity..... 1 pint
 Hydraulic Oil..... Use Enerpac Oil ONLY
 Outlet Port Size..... 3/8" NPT
 Inlet (Air) Port Size..... 1/4" NPT
 Inlet Air Pressure Required..... .60 to 120 PSI
 Filter..... F23A3T02
 Regulator..... R23RGL02
 Lubricator..... L43MPL02

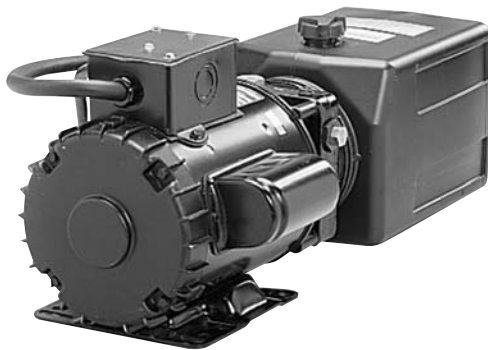
NOTE: It is recommended that a filter, regulator, lubricator and air pressure gauge be installed in the air line as close as possible to the pump. Filter, Regulator and Lubricator units not included.



T-403-2 • Hand Pump

For use with T-400-1.

Dimensions..... 7 high, 21" long, 4-3/4" wide
 Weight..... 9 lbs.
 Operation Pressure..... 4000-4200 PSI
 Reservoir Capacity..... 1 qt.
 Outlet Port Size..... 3/8" NPT
 Hydraulic Oil..... Use Enerpac Oil ONLY



T-411 • Electric Pump (220 volt)

Replacement pump for T-410-1 C-O-C II Press ONLY.

Replacement Parts:

Newer Pumps:

T-421-FP 220v 4 wire Female electrical receptacle.
 See page 245 for illustration.

Older T-411 Pumps:

T-411-B By-pass module
T-411-G Release Handle Spring (Models prior to 1982)
T-411-S Micro-Switch (Models prior to 1982)

Older T-401-1 Pumps:

T-401-1B Replacement Gasket between motor and square reservoir
T-401-1BC Breather Cap for Fenner-Stone pumps
T-401-1G Relief Handle Spring (Models prior to 1982)
T-401-1S Toggle Switch
T-401-SVF Fenner Shuttle Valve
140-06761 Relay for T-421U or T-421U-BC pumps

For repair and replacement items for the following pumps please contact an Enerpac Distributor at www.enerpac.com:
 T-402-2, T-403-2, T-460-2, T-462-2, T-480-2, T-480-3, T-481-110 & T-482-2.



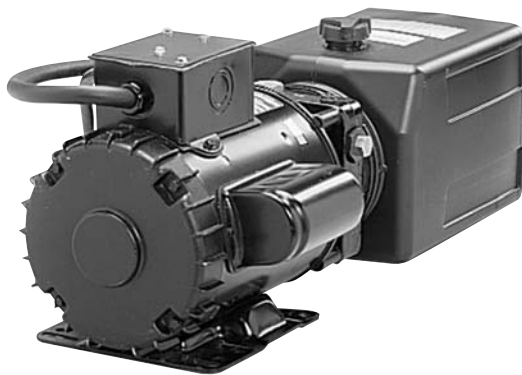
T-412 • Mobile Electric Pump

For use with T-400-1 and T-420-1.

Dimensions..... 7-1/2" high, 14-1/2" long, 9" wide
 Weight..... 65 lbs.
 Operation Pressure..... 4000-4200 PSI
 Reservoir Capacity..... 3 quarts
 Outlet Port Size..... 3/4"-16 straight thread
 Motor..... 12 volt D.C.
 Hydraulic Oil..... SAE 10W hydraulic oil or (ATF) automatic transmission fluid
 Flow..... 0.5 GPM

Replacement Parts:

- T-401-1B** Replacement Gasket between motor and square reservoir
- T-401-1BC** Breather Cap for Fenner-Stone pumps



T-421U • Electric Pump (220 Volt)

For use with T-400-1 and T-420-1.

Pump Specifications:

Dimensions 7-1/2" high, 22" long, 10" wide
 Weight 75 lbs.
 Operation Pressure 4000-4200 PSI
 Reservoir Capacity 6 quarts
 Outlet Port Size 3/4"-16 Straight Thread
 Motor 1 H.P., 3450 R.P.M., 220 volts, 60 cycle, single phase
 At 50 Hertz, RPM = 2,850 At 60 Hertz, RPM = 3,450

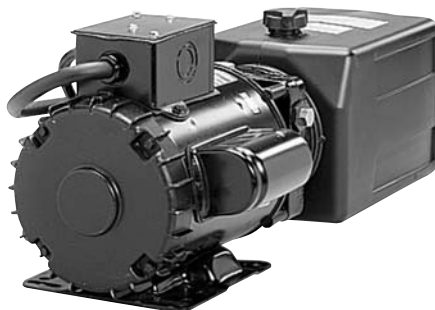
Hydraulic Oil*...ISO 32 hydraulic oil or (ATF) automatic transmission fluid
 Flow..... 2.5 GPM @ 750 PSI, 0.5 GPM @ 4000 PSI

Replacement Parts:

- 140-06761** Relay for T-421U, T-441 and T-441 pumps only
- T-421U-BC** Breather Cap
- T-421-FP** 220v 4 wire Female electrical receptacle

*For low temperature applications automatic transmission fluid can be substituted.

NOTE: It is recommended that the electric pump be used on a 15 amp. fused circuit. Pump wired for 220 volts, single phase.



T-421U-110 • Electric Pump (110 Volt)

For use with T-400-1 and T-420-1.

For dimensional data other than voltage information, refer to T-421U see above.

Replacement Parts:

- T-421U-BC** Breather Cap
- T-421-FP** 220v 4 wire Female electrical receptacle

NOTE: It is recommended that the electric pump be used on an individual 30 amp. fused circuit. Pump wired for 110 volts, single phase.





T-433 • Two Stage Piston Pump (220 volt)

For use with T-407 Production Press, T-400-1 or T-420-1.

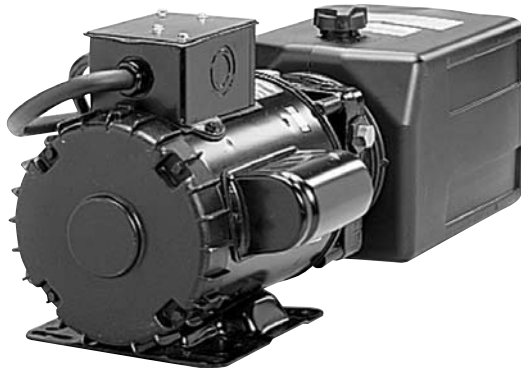
The Weatherhead T-433 two stage piston pump power unit is a high capacity pump especially suited for the T-407 Production crimper. It features a two stage piston pump providing high flow at low pressure for fast ram approach and low flow at high pressure for actual crimping. When used in conjunction with the T-433-2 connector cable, the T-433 can be used as an optional high capacity pump for the T-400-1 or T-420-1 Coll-O-Crimp® presses.

Pump Specifications:

Dimensions..... 22" high, 12" long, 15" long
Weight..... 127 lbs.
Operation Pressure..... 4,000 PSI
Reservoir Capacity..... 2 gallons
Outlet Port Size..... 3/8" Pipe Thread
Motor..... 1-1/2" H.P., 220 volts 60hz single phase
Hydraulic Oil..... Use Enerpac Oil ONLY
Flow..... 2.78 GPM @ 800 PSI, 0.52 GPM @ 4000 PSI

Replacement Parts:

- T-421-FP** 220v 4 wire Female electrical receptacle. See page 292.
- T-433-2** Interlock Cable
- T-433-1** Foot Switch Assembly



T-441 • Electric Pump (220 volt)

For use with T-440-1 ONLY.

The Weatherhead T-441 power unit is designed for use with the latest Coll-O-Crimp® II Plus press. (Shown above only). It features a two-stage pump providing high flow at low pressure for fast ram approach and low flow at high pressure for actual crimping.

Dimensions..... 7-1/2" high, 22" long, 10" wide
Weight..... 75 lbs.
Operation Pressure..... 5,000 PSI
Reservoir Capacity..... 6 quarts
Outlet Port Size..... 3/4-16 Straight Thread O-Ring
Motor..... 1 H.P., 3450 R.P.M., 220 volts, 60 cycle, single phase
Hydraulic Oil..... ISO 32 hydraulic oil automatic transmission fluid
Flow..... 2.5 GPM @ 750 PSI, 0.5 GPM @ 5000 PSI

Replacement Parts:

- T-421U-BC** Breather Cap
- T-421-FP** 220v 4 wire Female electrical receptacle. See page 292.
- 140-06761** Relay for T-421U or T-421U-BC pumps

NOTE: T441 pump is to be used with T440-1 press only. When replacing the pump on a standard T-410 Coll-O-Crimp® II Press (without the black switchbox on the side of the press) refer to the repair and replacement items on page 231.)



T-460-2 • Hand Pump

For use with T-450-1, T-460 and T-465.

Pump Specifications:

Dimensions..... 5-5/8" High, 13-1/4" long, 3-3/4" wide
Weight..... 4-1/2 lbs.
Operation Pressure..... 0-10,000 PSI
Reservoir Capacity..... 20 cu in.
Relief Valve Setting..... 10,000 PSI
Hydraulic Oil..... Use Enerpac Oil ONLY

For repair and replacement items for the following pumps please contact an Enerpac Distributor at www.enerpac.com: T-402-2, T-403-2, T-433, T-460-2, T-462-2, T-480-2, T-480-3, T-481-110 & T-482-2.



T-462-2 • Air/Hydraulic Pump

For use with T-462.

The Weatherhead T-462-2 power unit is a air/hydraulic pump designed for use with the T-462 portable Coll-O-Crimp® system. Ideal if you have the availability of compressed air in your shop or in the field via a portable compressor.

Pump Specifications:

Dimensions..... 4" high, 13" long
 Weight..... 8 lbs.
 Operation Pressure.....0-10,000 PSI
 Reservoir Capacity.....10 cu in.
 Relief Valve Setting..... 10,000 PSI
 Hydraulic Oil.....Use Enerpac Oil ONLY
 Regulator to be set for 100-120 PSI inlet air.



T-480-2 • Two-Stage Hand Pump

For use with T-480-HP.

Pump Specifications:

Dimensions.....7-3/16" high x 21-1/64" long x 4-3/4" wide
 Weight.....9 lbs.
 Operation Pressure.....0-10,000 PSI
 Hydraulic Oil.....Use Enerpac Oil ONLY



T-480-3 • Turbo Air/Hydraulic Pump

For use with T-480-TA.

Pump Specifications:

Dimensions.....8-1/4"High x 12-3/8" long x 8" wide
 Weight.....16-1/2 lbs.
 Operation Pressure.....0-10,000 PSI
 Hydraulic Oil.....Use Enerpac Oil ONLY

For repair and replacement items for the following pumps please contact an Enerpac Distributor at www.enerpac.com: T-402-2, T-403-2, T-460-2, T-462-2, T-480-2, T-480-3, T-481-110 & T-482-2.





T-481-110 • Electric Pump (110 volt)

For use with T-480-EP.

Pump Specifications:

Dimensions.....14-14"High x 9-5/8" long x 9-5/8" wide

Weight.....32 lbs.

Operation Pressure.....0-10,000 PSI

Hydraulic Oil.....Use Enerpac Oil ONLY



T-482-2 • Air/Hydraulic Pump

For use with T-480-AH.

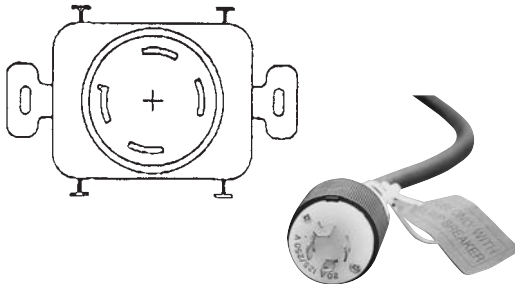
Pump Specifications:

Dimensions.....5"High, 14-5/8" long, 5-5/8" wide

Weight.....12 lbs.

Operation Pressure.....0-10,000 PSI

Hydraulic Oil.....Use Enerpac Oil ONLY



T-421-FP • 4 Prong Female Electrical Outlet

All Weatherhead 220v Coll-O-Crimp power pumps are equipped with a four prong electrical outlet as illustrated. To obtain corresponding female wall receptacle order T-421-FP. For use with T-421U, T-441 & T-433 pumps.

Repair and Replacement Items for Discontinued T-401-1 Pump

- T-401-1B** Replacement Gasket between motor and square reservoir
- T-401-1BC** Breather Cap for Fenner-Stone pumps
- T-401-1G** Relief Handle Spring (Models prior to 1982)

- T-401-1S** Toggle Switch
- T-401-SVF** Shuttle Valve for Fenner-Stone pump

For repair and replacement items for the following pumps please contact an Enerpac Distributor at www.enerpac.com: T-402-2, T-403-2, T-460-2, T-462-2, T-480-2, T-480-3, T-481-110 & T-482-2.

 Refer to safety information regarding Coll-O-Crimp® hose, hose fittings and assembly equipment compatibility on pages 1-2.



T-400-NP60 • Dayco to Boston Weatherhead Conversion Kit

The T-400-NP60 Conversion Kit is designed to allow the use of standard Boston Weatherhead Coll-O-Crimp tooling, hose and hose ends in the Dayco NP60, (2) tie rod, crimp machine. Everything is included to convert the crimper to accept Boston Weatherhead tooling. This kit gives the crimper capacity to crimp up to and including 1-1/4" I.D. 4 spiral wire hose assemblies. See pages 284-286 for collets and pages 287 for spacer rings.

T-400-NP60 Kit Includes:

Part Description	Qty
Base Plate Assembly	1
Dayco Pusher Spacer	1
3/8-16 x 1.75 Cap Screw	1
Adapter Ring for T-400 Collets	1
Instruction Kit	1



T-400-DE60 • Dayco to Boston Weatherhead Conversion Kit

The T-400-DE60 Conversion Kit is designed to allow the use of standard Boston Weatherhead Coll-O-Crimp tooling, hose and hose ends in the Dayco DE60, (4) tie rod, crimp machine. Everything is included to convert the crimper to accept Boston Weatherhead tooling. This kit gives the crimper capacity to crimp up to and including 1-1/4" I.D. 4 spiral wire hose assemblies. See pages 284-286 for collets and pages 287 for spacer rings.

T-400-DE60 Kit Includes:

Part Description	Qty
Base Plate Assembly	1
Dayco Pusher Spacer	1
3/8-16 x 1.75 Cap Screw	1
Adapter Ring for T-400 Collets	1
Instruction Kit	1

EQUIPMENT

 Refer to safety information regarding Coll-O-Crimp® hose, hose fittings and assembly equipment compatibility on pages 1-2.



T-400-GT • Gates PC707 Conversion Kit

The T-400-GT Conversion Kit is designed to allow the use of standard Weatherhead Coll-O-Crimp® tooling, hose, and hose ends in the Gates PC707 crimper. Everything is included to convert the crimper to accept Weatherhead tooling. This kit gives the crimper capacity to crimp up to and including 1-1/4" I.D. 2 wire hose factory-type hose assemblies. This kit does not include the T-400-8 Die Ring which is required for crimping. If you do not already have the die ring or collets, you can order the kit below.

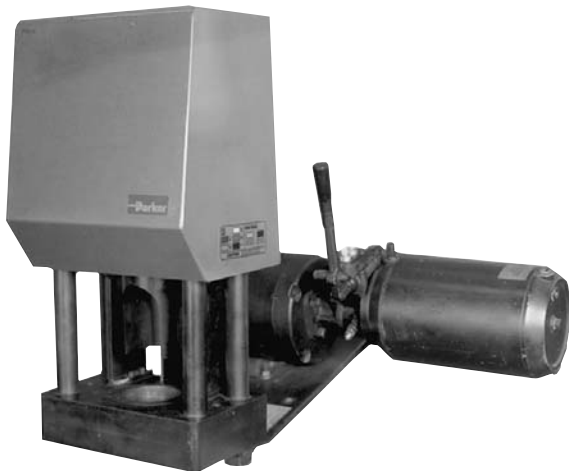
T-400-GT kit includes:

Pusher	10-24 x 1/4 Set Screws (2)
Spacer (2)	Instructions

T-400-GTK • Gates PC707 Conversion Kit

Kit includes one each of the following:

T-400-GT	Conversion Kit
T-400-2C	'U' Series Collet – 1/4"
T-400-3C	'U' Series Collet – 3/8"
T-400-4C	'U' Series Collet – 1/2"
T-400-5C	'U' Series Collet – 3/4"
T-400-6C	'U' Series Collet – 1"
T-400-8	Die Ring – 3/16" thru 1-1/4"
T-400-10	Spacer Ring – Black
T-400-11	Spacer Ring – Silver



T-400-PH • Parker 80c Conversion Kit

The T-400-PH Conversion Kit is designed to allow the use of standard Weatherhead Coll-O-Crimp® tooling, hose, and hose ends in the Parker 80c crimper. Everything is included to convert the crimper to accept Weatherhead tooling. This kit gives the crimper capacity to crimp up to and including 1-1/4" I.D. 2 wire hose factory-type hose assemblies. If you do not already have the collets and spacer rings, you can order the kit below.


T-400-PH Kit includes:

1/4-20 x 1 Cap Screw (4)	Dowel Pin Spacer (2)
1/4" Lockwasher (4)	Spacer Bracket (4)
Adapter Die Ring	Instructions

T-400-PHK • Parker 80c Conversion Kit

Kit includes one each of the following:

T-400-PH	Conversion Kit
T-400-2C	'U' Series Collet – 1/4"
T-400-3C	'U' Series Collet – 3/8"
T-400-4C	'U' Series Collet – 1/2"
T-400-5C	'U' Series Collet – 3/4"
T-400-6C	'U' Series Collet – 1"
T-400-10	Spacer Ring – Black
T-400-11	Spacer Ring – Silver

 Refer to safety information regarding Coll-O-Crimp® hose, hose fittings and assembly equipment compatibility on pages 1-2.



T-400-GY • Goodyear 99060 Conversion Kit

The T-400-GY Conversion Kit is designed to allow the use of standard Weatherhead Coll-O-Crimp® tooling, hose and hose ends in the Goodyear 99060 crimper. Everything is included to convert the crimper to accept Weatherhead tooling. This kit gives the crimper capacity to crimp up to and including 1-1/4" I.D. 2 wire hose factory-type hose assemblies. This kit does not include the T-400-8 Die Ring which is required for crimping. If you do not already have the die ring or collets, you can order the kit below.

T-400-GY Kit includes: Bracket, Base and Instructions

T-400-GYK • Goodyear 99060 Conversion Kit

Kit includes one each of the following:

- T-400-GY Conversion Kit
- T-400-2C 'U' Series Collet – 1/4"
- T-400-3C 'U' Series Collet – 3/8"
- T-400-4C 'U' Series Collet – 1/2"
- T-400-5C 'U' Series Collet – 3/4"
- T-400-6C 'U' Series Collet – 1"
- T-400-8 Die Ring – 3/16" thru 1-1/4"
- T-400-10 Spacer Ring – Black
- T-400-11 Spacer Ring – Silver



C-40X • Stock Cabinet

Ideal for mounting the T-400-1 Coll-O-Crimp® I Press and Pump or T-420-1 Coll-O-Crimp® Super I. The sturdy C-40X Cabinet contains 40 heavy-duty plastic drawers that can be divided into one, two, three, or four compartments providing space for a large selection of Coll-O-Crimp® hose ends and adapters.

Drawers: PD-40 (one drawer)

Dividers: PD-20 (24 per set)

Size: 46-1/2" high, 40" wide, 26" deep at base, 18" deep at top

Weight: 228 lbs.



FH-135X • Stock Cabinet

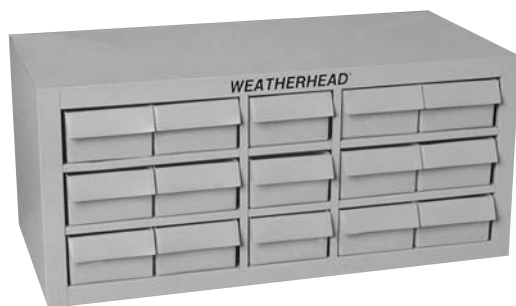
The sturdy FH-135X Cabinet contains 50 heavy-duty plastic drawers that can be divided into one, two, or three compartments allowing you ample space for a large selection of Coll-O-Crimp® hose ends and adapters. Ideal for mounting the Coll-O-Crimp® I Press and Pump.

Drawers: PD-95 (one drawer)

Dividers: PD-15 (30 per set)

Size: 46-1/2" high, 33" wide, 14-1/2" deep

Weight: 115 lbs.



FH-15X • Stock Cabinet

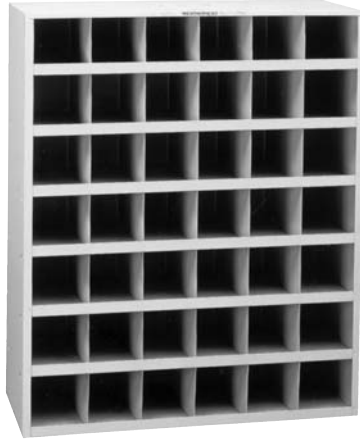
Here is the ideal way to organize your inventory of hose ends and adapters. The rugged FH-15X Cabinet contains 15 plastic drawers for stocking hose ends and adapters.

Drawers: PD-95 (one drawer)

Dividers: PD-15 (30 per set)

Size: 13-5/8" high, 14-3/8" deep, 30-1/4" wide

Weight: 45 lbs.



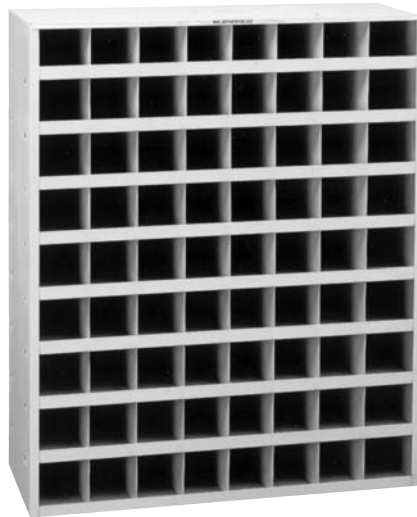
FH-40X • Stock Cabinet

Provides convenient storage areas for those large size fittings and hose ends. This durable 20 gage steel cabinet is made to handle abuse.

Size: 35" wide, 42" high, 12" deep

Weight: 200 lbs.

NOTE: Will not support Weatherhead Coll-O-Crimp® equipment.



FH-72X • Stock Cabinet

Large capacity all-welded cabinet provides 72 storage compartments. Fabricated from 20 gage steel, the FH-72X will provide years of continued service.

Size: 35" wide, 42" high, 12" deep

Weight: 200 lbs.

NOTE: Will not support Weatherhead Coll-O-Crimp® equipment.



C-5X • Stock Cabinet

This mini-cabinet is designed to contain your oversized Weatherhead hose ends which may not currently have an organized home.

Size: 30" wide, 5-7/8" high, 9-5/16" deep

Weight: 10 lbs.



TC-20 • Collet Cabinet

The TC-20 Cabinet provides you easy access to all of your tooling needs. There is ample space for collets, spacer rings, and related Coll-O-Crimp® tooling.

Size: 28-1/2" high, 26-1/2" wide, 12-3/4" deep

Weight: 37-1/2 lbs.



HD-1X • Hose Cabinet

The HD-1X Cabinet offers you the ideal solution for keeping 50 foot lengths of hose off your floor. Vertical slots in the cabinet keep your hoses organized and clean. Consider bolting an FH-15X Stocking Cabinet on top of the HD-1X to keep an inventory of hose ends readily available.

Size: 36" high, 24" deep, 31" wide

Weight: 83 lbs.



HD-2X • Hose Center Display

The HD-2X hose display is built with a heavy steel inner frame which supports the weight of the hose reels, while its tough wooden sides provide additional durability. It is designed to hold both Weatherhead bulk reels and boxed product. Handles are even provided to make loading the hose as safe and easy as possible.

Measurements: 22" wide x 30" deep x 57" tall

Weight: 54 lbs. (UPS Shipping)

Max. Capabilities: (3) Reels or (2) Reels & (4) Boxes
(Hose not included)



T-460-10BB • Coll-O-Crimp® Tool Box

The T-460-10BB Tool Box complements our T-460 and T-462 portable crimpers by offering you storage for your collets, spacer rings, and perhaps an assortment of hose ends.

Measurements: 25"x9"x8"



T-460-TR • ToolRack

The T-460-TR wall mounted tool rack is rugged and built to last! The perfect shop accessory for Boston Weatherhead Coll-O-Crimp machines, the T-460-TR stores up to 10 collets and 4 spacer rings - organized and within easy reach.

Measurements: 24-1/2" Wide x 16" High x 7-1/2" Deep

Weight: 16 lbs.

(The T-460-TR rack does not include tooling)



Plastic Bags

Weatherhead heavy-duty plastic bags for Weatherhead fittings come in sizes 5"x6", 6"x10", and 8"x12". The bags include convenient spaces for labeling.

Catalog Number	Description	Qty
5x6 PB	Plastic Bag	100
6x10 PB	Plastic Bag	100
8x12 PB	Plastic Bag	100

Self Adhesive Label Sets

For C-40X, FH-15X and FH-135X Cabinets

Label

Number	Description
FS-100	Swivel Adapters
FS-200	JIC Steel Adapters
FS-300	Split Flange Adapters
FS-400	Field Attachable Hose Ends – 009 'B' Series
FS-500	Barb-Tite® 100 'B' and 105 'B' Series Hose Ends
FS-600	Field Attachable Hose Ends – 069 'D' & 247 'N' Series
FS-700	Field Attachable Hose Ends – 425 'N' Series
FS-800	Field Attachable Hose Ends – 338 'B' Series & Brass Air Brake Fittings for Copper Tubing
FS-1100	Coll-O-Crimp® Hose Ends – 'U' Series
FS-1200	Coll-O-Crimp® Hose Ends – 'E' Series
FS-1300	Coll-O-Crimp® Hose Ends – 430 'E' Series
FS-1500	Coll-O-Crimp® Hose Ends – 069 'E' Series
FS-1600	7000 Series Flareless Fitting
FS-1800	Coll-O-Crimp® Hose Ends – 470 'E' Series and 570 'S' Series
FS-2000	Steel Pipe
FS-2200	Ready-Lok® Hose Ends and Adapters
FS-2300	Drain Cocks, Valves and Select 338 'B' Series Hose Ends
FS-2400	For-Seal® Adapters Label Set
FS-2500	Metric Hose Ends ('U' Series) and Metric Flareless Nuts/ Sleeves
FS-2800	Field Attachable Hose Ends – 213 'N' Series
FS-2900	Coll-O-Crimp® Hose Ends – 338 'P' Series
FS-3100	Coll-O-Crimp® Hose Ends – 430 'U' Series No-Skive
FS-3200	Coll-O-Crimp® Hose Ends – 757 'E' Series
FS-3300	Quick Connect Air Brake 1800 Series
FS-3400	Coll-O-Crimp® Hose Ends – 'M' Series
FS-3500	Coll-O-Crimp® Hose Ends – 336 'E' Series



A-2103 • Mylar Hose Labels

Weatherhead now offers Mylar labels for marking hose assemblies. They are self adhesive Mylar strips, 1" wide by 3-3/4" long, with a 1" x 1" white area on one end for printed information. They are supplied on a fan-folded computer form, 3 labels per row, 8 rows per page, 2500 labels to a carton. The format is suitable for use in typewriters and tractor feed or friction drive printers. Whether for compliance with federal hose assembly labeling requirements, or for simply meeting customer demands for labeling hose assemblies, we strongly recommend labeling become part of your hose assembly "manufacturing" procedure. The National Highway Traffic Safety Administration places responsibility for labeling an air brake hose assembly in the hands of the "manufacturer" of the hose assembly. (Not the manufacturer of the hose or hose ends.) For a summary of air brake hose assembly labeling recommendations, see "Air Brake Hose Assembly Guidelines." For specific air brake hose assembly regulations, consult "Federal Motor Vehicle Safety Standard (FMVSS) 571.106," available from NHTSA, at the address listed below. For use other than air brake applications, customers may want additional information on the labels. Generally, the labels will accept 9-10 characters per row, on 4 or 5 rows. The information can be handwritten, typed or printed on the labels. The main concern is resistance to the elements. Procedure for applying the labels is simple:

1. Print the appropriate information on the label.
2. Wrap the tag around the hose assembly ... printed end first.
3. Cover the printed end with the clear mylar tail of the label.
4. The clear tail will protect the printed area from the elements.

Office Of Vehicle Safety Standards
National Highway Traffic Safety Administration
400 Seventh Street SW
Washington, DC 20590
Phone (202) 366-5317
www.nhtsa.dot.gov





AB-8 & AB-9 • Air Brake Air Chamber Hose

Assembly Assortment of 3/8" and 1/2" I.D. Lines

Each selection of fourteen ready-made air chamber hose assemblies facilitate replacement of hoses. Eliminates time and cost of making special assemblies. Wall rack keeps assemblies handy and ready to use.

AB-8 • 1/2" I.D. Air Brake Air Chamber Lines

Length	Qty.	Catalog Number	Length	Qty.	Catalog Number
18-1/2"	1	38353-01800	32"	1	38353-03200
20-3/8"	1	38353-02037	34-3/8"	1	38353-03437
24-1/8"	1	38353-02400	36-1/8"	1	38353-03600
28-3/8"	1	38353-02837	41-1/8"	1	38353-04112
30-1/8"	1	38353-03000		1	AB-8X (rack only)

Replacement Labels AB-8L

AB-9 • 3/8" I.D. Lines Air Brake Air Chamber Lines

Length	Qty.	Catalog Number	Length	Qty.	Catalog Number
18-1/2"	1	38166-01812	32"	1	38166-03200
20-3/8"	2	38166-02137	34-3/8"	1	38166-03437
24-1/8"	2	38166-02412	36-1/8"	2	38166-03612
28-3/8"	2	38166-02837	41-1/8"	1	38166-04112
30-1/8"	2	38166-03012		1	AB-9X (rack only)

Replacement Labels AB-9L



CA-130 & CA-230 • Clamp Assortments

You can now increase your all-stainless steel or part-stainless steel clamp sales with these all-purpose clamp assortments. These rugged assortments can be wall mounted or stand free using less than 2 sq. ft. of counter space. They load easily and organize your merchandise effectively.

CA-130 • Part-Stainless Steel

Catalog Number	Quantity	Catalog Number	Quantity
6205-004	20	6203-024	10
6205-006	10	6203-036	10
6203-010	20	CA-10X (rack only)	1
6203-016	20		
6203-020	20		

CA-230 • All-Stainless Steel

Catalog Number	Quantity	Catalog Number	Quantity
6206-004	20	6204-024	10
6206-006	10	6204-036	10
6204-010	20	CA-10X (rack only)	1
6204-016	20		
6204-020	20		



RG-24 • Hydraulic O-Ring Assortment

Weatherhead's RG-24 is your solution to storing a useful inventory of hydraulic o-rings. This kit contains o-rings for Weatherhead's straight thread and FOR-SEAL® tube fitting applications as well as popular (code 61) split flange hydraulic applications. The RG-24 comes enclosed in a handy steel case with a carrying handle. Consider an RG-24 for an over-the-counter sales merchandiser or keep one in your equipment shop or maintenance trailer to prepare for those critical "got-to-have-it" applications.

Twenty-four individual compartments keep your hydraulic o-ring inventory separated by part number, and labelled illustrations on the inside of the assortment prevent the mix-up of o-rings. Compact, organized and reasonably priced, if you specialize in hydraulic applications which call for o-rings – we've got your number – RG-24.

RG-24 • O-Ring Assortment Contents

Part Number	Split Flange Quantity	Part Number	FOR-SEAL® Quantity	Part Number	Straight Thr. Quantity
8x252	12	4629x4	12	7629x4	12
12x252	12	4629x6	12	7629x5	12
16x252	12	4629x8	12	7629x6	12
20x252	12	4629x10	12	7629x8	12
24x252	12	4629x12	12	7629x10	12
32x252	12	4629x16	12	7629x12	12
		4629x20	12	7629x16	12
		4629x24	12	7629x20	12
				7629x24	12
				7629x32	12



FL-310 • Fuel Hose and Fittings Assortment

FL-310 contains 250' of Weatherhead fuel line hose, a variety of brass hose end fittings, and gear-type clamps for easy, instant service on fuel and oil line assemblies.

A well-designed cabinet keeps 1/4", 5/16", 3/8", or 7/16" I.D. hose on reels free of kinks and tangles...ready for instant use. Ten clear plastic drawers with color-coded illustrated labels are provided for storing hose end fittings and clamps. H057 hose is compatible with unleaded gasolines and low pressure fuel systems.

Size: 30" wide, 13-1/2" high, 13" deep

Catalog No.	Qty.	Catalog No.	Qty.	Catalog No.	Qty.
05704B-102	10	05705B-C04	5	05706B-C04	5
05704B-104	5	05706B-102	10	6202	20
05704B-C02	5	05706B-104	10	CL-434	1
05705B-102	10	05706B-106	5	FL-310X	1
05705B-104	10	05706B-1568	5	H05704	100'
05705B-1560	5	05706B-1570	5	H05705	100'
05705B-1561	5	05706B-C02	5	H05706	50'
05705B-C02	5				



SR3100W • Boston Weatherhead Air Conditioning Assortment

Air Conditioning Assortment Kit; containing the most popular steel air conditioning hose ends for use with H757 air conditioning hose.

Included in Kit:

Several sizes of:

- Bumped Tube O-Ring Male Swivels
- Bumped Tube O-Ring Male Swivel 90° Tube Elbows
- Bumped Tube O-Ring Female Swivels
- Bumped Tube O-Ring Female Swivel 90° Tube Elbows
- O-Ring Assortment
- Stackable Sturdy Steel Case (18" x 12" x 3")

Catalog Number	Qty.	Catalog Number	Qty.
75706E-Z47	4	75708E-Z08	4
75708E-Z49	4	75710E-Z10	4
75710E-Z51	4	75712E-Z12	4
75712E-Z51	4	75706E-Z66	4
75712E-Z53	4	75708E-Z68	4
75706E-Z87	4	75710E-Z70	4
75708E-Z89	4	ZW74706	4
75710E-Z91	4	ZW74708	4
75712E-Z91	4	ZW74710	4
75712E-Z93	4	ZW74712	4
75706E-Z06	4		



BL-456 • Barb-Tite® Fittings and Hose Assortment

Making up an air line – oil line – transmission or power steering return line? The BL-456 assortment puts Weatherhead Barb-Tite® fittings and 1/4", 5/16", and 3/8" I.D. 350 PSI maximum operating pressure H101 hose at your fingertips for quick and easy assembly. Simply push ends on hose, and you have a hose assembly. No clamps required!

Measure the hose on top of the cabinet with the rule provided and then select the proper hose ends from the assortment in the two metal drawers. Within minutes the hose assembly is ready for installation.

Size: 15" wide, 16-1/2" high, 13-3/16" deep
16 Compartments in each drawer.

Catalog Number	Qty.	Catalog Number	Qty.
10004B-102	4	10004B-B04	4
10004B-104	4	10004B-B05	4
10004B-304	4	10004B-Y04	4
10004B-305	4	10005B-102	4
10004B-405	4	10005B-104	4
10004B-604	4	10005B-405	4
10004B-A04	4	10005B-B05	4
10004B-A05	4	10005B-B06	4
10004B-B03	4		
Catalog Number	Qty.	Catalog Number	Qty.
10005B-C02	4	10006B-606	4
10005B-C04	4	10006B-B06	4
10005B-Y05	4	10006B-Y06	4
10006B-102	4	H10104	25'
10006B-104	4	H10105	25'
10006B-106	4	H10106	25'
10006B-306	4	FS-501	1
10006B-406	4	BL-456X	1

EQUIPMENT



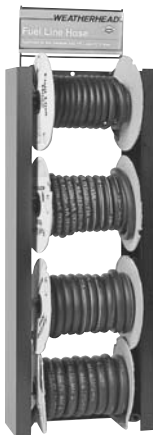
These assortment are ideal for servicing that fleet account. The DOT-approved hose and fittings will enable the user to make up chamber lines, connect to gladhand couplings, and provide routing for air brake lines. The general purpose H069 provides for fuel, oil, water, power steering, and transmission lines. A self-contained assortment in a super cabinet, all set up for easy serviceability!

FA-100 • Fleet Hose and Fitting Assortment (with Cabinet)

Catalog Number	Qty	Catalog Number	Qty	Catalog Number	Qty
H06904	50'	24706N-106	5	24710N-608	5
H06906	50'	24706N-406	5	24710N-610	2
H06908	50'	24706N-604	5	33806-A	20
H06910	50'	24706N-605	5	33806-B	5
H16606	50'	24706N-606	5	33806B-Y06	5
H16608	50'	24706N-608	5	33806B-Y24	5
H33806	50'	24706N-756	5	33806B-Y26	2
24704N-102	5	24706N-B06	5	33806B-Y28	5
24704N-104	5	24708N-106	5	33806B-Y34	5
24704N-604	5	24708N-108	5	33806B-Y36	5
24704N-B04	5	24708N-406	5	33806B-Y38	5
24705N-104	5	24708N-608	5	FH-15X	1
24705N-605	5	24710B-Y58	2	HD-1X	1
24705N-B05	5	24710B-Y60	5		
24706N-104	5	24710N-108	5		

FA-100-CO • Fleet Hose and Fitting Assortment (Contents Only)

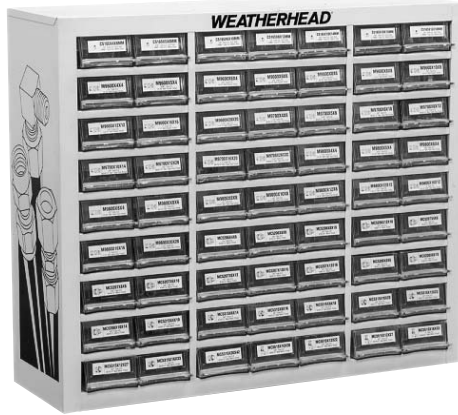
Catalog Number	Qty	Catalog Number	Qty	Catalog Number	Qty
H06904	50'	24706N-106	5	24710N-608	5
H06906	50'	24706N-406	5	24710N-610	2
H06908	50'	24706N-604	5	33806-A	20
H06910	50'	24706N-605	5	33806-B	5
H16606	50'	24706N-606	5	33806B-Y06	5
H16608	50'	24706N-608	5	33806B-Y24	5
H33806	50'	24706N-756	5	33806B-Y26	2
24704N-102	5	24706N-B06	5	33806B-Y28	5
24704N-104	5	24708N-106	5	33806B-Y34	5
24704N-604	5	24708N-108	5	33806B-Y36	5
24704N-B04	5	24708N-406	5	33806B-Y38	5
24705N-104	5	24708N-608	5		
24705N-605	5	24710B-Y58	2		
24705N-B05	5	24710B-Y60	5		
24706N-104	5	24710N-108	5		



HA-574 • Fuel Hose Merchandiser

Now you can make those custom hose assemblies in minutes for instant service on fuel and oil line replacements. The attractive HA-574 includes H057 hose in all popular sizes for low pressure fuel, EEC and PCV lines. Weatherhead H057 low pressure fuel line hose has Nitrile inner tube, fiber braid reinforcement, and Hypalon cover for long life compatibility with gasohol, leaded and unleaded fuels. The HC-574X rack can be easily installed on pegboard, wall, or metal shelving with the included hardware.

Catalog Number	Quantity	Description
H05703	25'	Hose
H05704	25'	Hose
H05705	25'	Hose
H05706	25'	Hose
HC-574X	1	Rack + 4 Dowels



MA-100 • Metric Adapter Assortment (with Cabinet)

The MA-100 is an ideal assortment to begin a metric adapter inventory. Offered are a variety of male British Standard Tapered Pipe and British Standard Parallel fittings in straight and 90° elbow configurations, sizes ranging from 1/8" through 1-1/4". Two male DIN (German metric) fittings adapt SAE fittings and hose ends to metric size tubing, and a third DIN fitting connects SAE fittings with metric female swivel adapters, sizes ranging from 6mm through 42mm. The C5165X metric sleeves adapt metric tubing used with standard JIC fittings. The MA-100 is supplied with cabinet for accurate and easy access to your metric fittings.

Replacement Drawers: **PD-49** (one drawer)

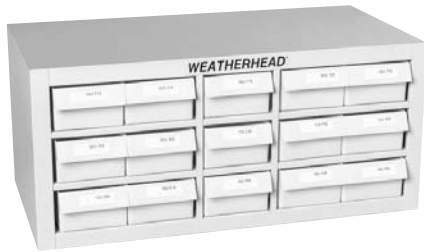
Replacement Dividers: **PD-75 Set** (25/set)

MA-100 Contents

Catalog Number	Qty.	Catalog Number	Qty.	Catalog Number	Qty.	Catalog Number	Qty.	Catalog Number	Qty.
7165X6MM	5	M9700X5X8	2	MB5515X6X4	5	MC5208X6X6	2	MH7105X6	5
7165X8MM	2	M9700X6X10	2	MB5515X6X6	5	MC5208X8X10	2	MH7105X8	5
7165X10MM	5	M9700X8X12	2	MB5515X8X6	5	MC5208X10X14	2	MH7105X10	5
7165X12MM	5	M9700X10X14	2	MB5515X8X8	5	MC5208X12X16	2	MH7105X12	5
7165X14MM	5	M9700X12X20	2	MB5515X10X12	5	MC5315X4X10	2	MH7105X14	5
7165X15MM	5	M9700X16X25	2	MB5515X12X12	5	MC5315X4X12	2	MH7105X16	5
7165X16MM	5	M9700X20X32	1	MB5515X16X16	2	MC5315X6X14	2	MH7105X20	5
7165X18MM	5	M9800X4X4	2	MB5515X20X20	2	MC5315X6X16	2	MH7105X25	5
7165X20MM	5	M9800X5X4	2	MC5205X4X2	5	MC5315X8X18	2	MH7105X30	5
7165X22MM	5	M9800X6X4	2	MC5205X4X4	5	MC5315X10X20	2	ML7105X6	5
7165X25MM	5	M9800X8X4	2	MC5205X5X4	5	MC5315X12X22	2	ML7105X8	5
7165X28MM	5	M9800X8X6	2	MC5205X6X4	5	MC5315X12X27	2	ML7105X10	5
7165X30MM	5	M9800X8X8	2	MC5205X6X6	5	MC5315X16X33	2	ML7105X12	5
M7629X10	5	M9800X10X8	2	MC5205X8X6	5	MC5315X20X42	1	ML7105X15	5
M7629X14	5	M9800X12X8	2	MC5205X8X8	5	MC5405X4X4	5	ML7105X18	5
M7629X16	5	M9800X12X12	2	MC5205X10X8	5	MC5405X5X4	5	ML7105X22	5
M7629X18	5	M9800X16X12	2	MC5205X10X12	5	MC5405X6X4	5	ML7105X28	5
M7629X20	5	M9800X16X16	2	MC5205X12X12	5	MC5405X6X6	5	C5165X4X6MM	5
M7629X22	5	M9800X20X20	1	MC5205X16X16	2	MC5405X8X6	5	C5165X5X8MM	5
M7629X27	5	MB5315X4X2	5	MC5205X20X20	2	MC5405X8X8	5	C5165X6X10MM	5
M7629X33	5	MB5315X4X4	5	MC5206X4X6	2	MC5405X10X12	5	C5165X8X12MM	5
M7629X42	5	MB5315X5X4	5	MC5206X6X8	2	MC5405X12X12	5	C5165X10X14MM	5
M9600X4X4	2	MB5315X6X4	5	MC5206X8X10	2	MC5405X16X16	2	C5165X10X15MM	5
M9600X5X4	2	MB5315X6X6	5	MC5206X8X12	2	MC5405X20X20	2	C5165X10X16MM	5
M9600X6X4	2	MB5315X8X6	5	MC5206X10X15	2	MC5515X4X12	2	C5165X12X18MM	5
M9600X6X6	2	MB5315X8X8	5	MC5206X12X18	2	MC5515X6X14	2	C5165X14X20MM	5
M9600X8X6	2	MB5315X10X12	5	MC5207X4X6	2	MC5515X6X16	2	C5165X16X25MM	5
M9600X8X8	2	MB5315X12X12	5	MC5207X6X8	2	MC5515X8X18	2	C5165X20X30MM	5
M9600X10X8	2	MB5315X16X16	2	MC5207X6X10	2	MC5515X10X20	2	C5165X20X32MM	5
M9600X12X12	2	MB5315X20X20	2	MC5207X8X12	2	MC5515X12X22	2	C-5X	1
M9600X16X16	2	MB5515X4X4	5	MC5207X10X15	2	MC5515X12X27	2	C-63X	1
M9600X20X20	1	MB5515X5X4	5	MC5207X12X18	2	MC5515X16X33	1	CL-502	1
M9700X4X6	2							TA-1002	1

EQUIPMENT





MA-200 • Metric Hose End Assortment (with Cabinet)

The MA-200 Hose End Assortment offers an excellent introductory stock of metric hose ends. Coverage includes 'U' Series British Standard Tapered Pipe (BSPT) and British Standard Parallel Pipe (BSPP) in male straight, and female swivel in straight and 90° tube elbow connections, swivels, and split flange ends for Komatsu and Link Belt applications and DIN standpipe hose ends in light and heavy series. One FH-15X stock cabinet is supplied for storage.

MA-200 Contents

Catalog Number	Qty.	Catalog Number	Qty.	Catalog Number	Qty.	Catalog Number	Qty.	Catalog Number	Qty.
04U-14K	2	06U-76P	2	12U-162	2	16U-P66	2	MH7105X14	2
04U-154	5	08U-158	5	12U-30K	2	7165X8MM	5	MH7105X16	2
04U-354	5	08U-22K	2	12U-362	2	7165X10MM	4	MH7105X20	2
04U-38T	2	08U-358	5	12U-52T	2	7165X12MM	2	MH7105X25	2
04U-40T	2	08U-360	5	12U-55T	2	7165X14MM	2	MH7105X30	1
04U-P54	5	08U-45T	2	12U-G12	2	7165X15MM	2	ML7105X8	2
04U-74P	2	08U-46T	2	12U-G42	2	7165X16MM	2	ML7105X10	2
06U-156	5	08U-P56	2	12U-P62	2	7165X18MM	2	ML7105X12	2
06U-18K	2	08U-P58	2	12U-82P	2	7165X20MM	2	ML7105X15	2
06U-356	5	08U-78P	2	16U-166	2	7165X22MM	2	ML7105X18	2
06U-358	2	08U-80P	5	16U-33K	2	7165X25MM	2	ML7105X22	2
06U-40T	2	10U-24K	2	16U-366	2	7165X28MM	2	ML7105X28	2
06U-42T	2	10U-48T	2	16U-58T	2	7165X30MM	1	FH-15X	2
06U-44T	2	10U-50T	2	16U-60T	1	MH7105X8	2	FS-2500	1
06U-P56	2	10U-G09	2	16U-G16	2	MH7105X10	2		
06U-P58	2	10U-G69	2	16U-G46	2	MH7105X12	2		



FA-15 • Portable Coll-O-Crimp® Assortment (with Cabinet)

This portable assortment includes everything you need to service your hydraulic hose needs on the job site. Three sizes of 2 wire hose plus a variety of hose ends and adapters combined with a crimping system that requires no electrical power source makes this assortment the ultimate for field repairs. A 15-drawer cabinet is included for storage. Also available are assortments with a cut-off saw or less the equipment.

- FA-15** Includes contents listed below.
- FA-15-CO** Includes contents listed below less equipment and cabinet.
- FA-15-NH** Includes contents listed below less hose.
- FA-15-80** Includes contents listed below plus T-80 Saw.

FA-15 Contents

Catalog Number	Qty.	Catalog Number	Qty.	Catalog Number	Qty.	Catalog Number	Qty.	Catalog Number	Qty.
04U-102	5	06U-506	5	06U-P08	5	08U-P08	5	H42508	50'
04U-104	10	06U-508	5	08U-106	5	08U-P10	5	T-465-HPU	1
04U-106	5	06U-606	10	08U-108	10	9205X2X2	5	FS-1100	1
04U-604	10	06U-608	5	08U-112	5	9205X4X4	5	FS-100	1
04U-605	5	06U-666	5	08U-508	5	9205X6X6	5		
04U-606	5	06U-668	5	08U-510	5	9205X8X8	5		
04U-B04	5	06U-755	5	08U-512	5	9405X4X4	5		
04U-J04	5	06U-756	5	08U-608	10	9405X6X6	5		
06U-104	10	06U-B06	5	08U-610	5	9405X8X8	5		
06U-106	10	06U-B66	5	08U-612	5	FH-15X	1		
06U-108	5	06U-J06	5	08U-668	5	H42504	50'		
06U-406	5	06U-J08	5	08U-J08	5	H42506	50'		



FA-135 • Coll-O-Crimp® I Assortment (with Cabinet)

This assortment includes everything you need to start servicing hydraulic hose applications in your own shop. Five sizes of 2 wire hose along with a variety of hose ends and adapters gives you the versatility you need. In addition there is hose for power steering applications and a cabinet for storage. Also available are assortments with a cut-off saw or less the equipment.

FA-135 Includes contents listed below.

FA-135-CO Includes contents listed below less equipment and cabinet.

FA-135-NH Includes contents listed below less hose.

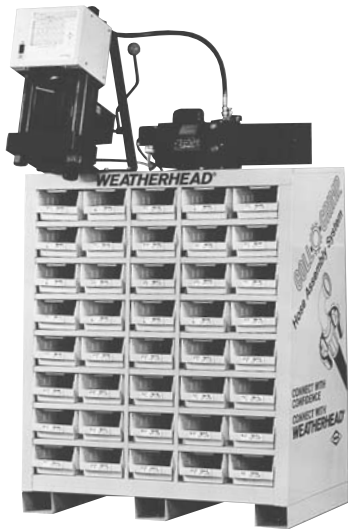
FA-135-10B Includes contents listed below plus T-10B Saw.

FA-135 Contents

Catalog Number	Quantity	Catalog Number	Quantity	Catalog Number	Quantity
04U-102	5	06U-J08	5	12U-P12	5
04U-104	10	06U-P06	5	16U-116	5
04U-106	5	06U-P08	5	16U-516	2
04U-504	5	08U-058	5	16U-616	5
04U-505	5	08U-106	5	16U-676	1
04U-506	5	08U-108	10	16U-J16	1
04U-604	10	08U-112	5	41157X6	5
04U-605	5	08U-208	2	9205X2X2	5
04U-606	5	08U-508	5	9205X4X4	5
04U-664	5	08U-510	5	9205X6X6	5
04U-B04	5	08U-512	5	9205X6X8	5
04U-J04	5	08U-608	10	9205X8X6	5
06U-104	10	08U-610	5	9205X8X8	5
06U-106	10	08U-612	5	9405X4X4	5
06U-108	5	08U-668	5	9405X6X6	5
06U-206	5	08U-670	5	9405X8X8	5
06U-406	5	08U-758	5	9405X12X12	2
06U-446	5	08U-760	5	C5205X4X4	2
06U-506	5	08U-J08	5	C5205X6	4
06U-508	5	08U-P08	5	C5205X6X6	4
06U-606	10	08U-P10	5	C5205X8	4
06U-608	5	08U-R70	5	C5205X10	2
06U-610	5	12U-112	10	FH-135X	1
06U-666	5	12U-116	2	FS-1100	1
06U-668	5	12U-412	5	FS-100	1
06U-686	5	12U-512	5	FS-200	1
06U-755	5	12U-514	2	H32406	50'
06U-756	5	12U-516	2	H42504	50'
06U-B05	5	12U-610	5	H42506	50'
06U-B06	5	12U-612	10	H42508	50'
06U-B46	5	12U-614	5	H42512	50'
06U-B66	5	12U-616	2	H42516	50'
06U-J04	5	12U-672	2	T-401	1
06U-J06	5	12U-J12	5		

EQUIPMENT





CA-50 • Coll-O-Crimp® Super I Assortment (with Cabinet)

The CA-50 assortment includes everything you need to service your larger hydraulic applications. Five sizes of 2 wire hose and four sizes of 4 wire hose combined with a variety of hose ends and adapters gives you the coverage you need. Included with this assortment are skiving tools and a 40-drawer cabinet for mounting your press and storage. Also available are assortments with a cut-off saw or less the equipment.

- CA-50** Includes contents listed below.
- CA-50-CO** Includes contents listed below less equipment and cabinet.
- CA-50-NH** Includes contents listed below less hose.
- CA-50-60A** Includes contents listed below plus T-60A Saw.

CA-50 Contents

Catalog Number	Qty.	Catalog Number	Qty.	Catalog Number	Qty.	Catalog Number	Qty.
04U-102	5	08U-512	5	43012U-G12	1	C5205X4	4
04U-104	10	08U-608	10	43012U-G42	1	C5205X4X4	2
04U-106	5	08U-610	5	43012U-G72	1	C5205X6	4
04U-504	5	08U-612	5	43016U-116	2	C5205X6X6	4
04U-506	5	08U-668	5	43016U-616	2	C5205X8	4
04U-604	10	08U-670	5	43016U-G16	1	C5205X8X8	4
04U-605	5	08U-688	5	43016U-G46	1	C5205X10	2
04U-606	5	08U-758	5	43016U-G76	1	C5205X12	2
04U-664	5	08U-760	5	43020U-120	1	C5205X16	1
04U-B04	5	08U-J08	5	43020U-620	1	C5315X8	1
04U-J04	5	08U-P08	5	43020U-G20	1	C5405X6	2
06U-104	10	08U-P10	5	43020U-G50	1	C5405X6X6	2
06U-106	10	12U-112	10	43020U-G80	1	C5405X8	2
06U-108	5	12U-116	2	9205X2X2	5	C5405X8X8	2
06U-406	5	12U-412	5	9205X4X4	5	C5405X10	1
06U-506	5	12U-512	5	9205X6X6	5	C5515X8	1
06U-508	5	12U-610	5	9205X6X8	5	H24504	50'
06U-604	5	12U-612	10	9205X8X6	5	H24506	50'
06U-606	10	12U-614	5	9205X8X8	5	H24508	50'
06U-608	5	12U-616	2	9205X12X12	2	H24512	50'
06U-610	5	12U-672	2	9205X16X16	1	H24516	50'
06U-666	5	12U-692	2	9405X4X4	5	H43008	50'
06U-668	5	12U-J12	5	9405X6X6	5	H43012	50'
06U-755	5	16U-116	5	9405X8X8	5	H43016	50'
06U-756	5	16U-516	2	9405X12X12	2	H43020	50'
06U-B06	5	16U-616	5	9405X16X16	1	T-420-N	1
06U-B66	5	16U-676	1	C-40X	1	FS-1100	1
06U-J06	5	16U-J16	1	C5105X4	2	FS-100	1
06U-J08	5	43008U-108	2	C5105X6	2	FS-200	1
06U-P08	5	43008U-608	2	C5105X8	2	FS-3100	1
08U-106	5	43008U-G08	1	C5105X12	1		
08U-108	10	43008U-G41	1	C5165X4	10		
08U-112	5	43008U-G71	1	C5165X6	10		
08U-508	5	43012U-112	2	C5165X8	10		
08U-510	5	43012U-612	2	C5165X12	5		



TA-1002 • Thread Measuring Kit

Measuring tube and pipe fitting threads can be a most difficult task if not completely understood. Tools needed include a thread pitch gauge, calipers and seat angle gauges. To aid you, Weatherhead has a kit to fit your needs, the TA-1002 thread measuring kit.

This handy kit includes:

- Thread Pitch Gauge (American and metric)
- Inside/Outside Caliper (inches and millimeters)
- 2 Seat Angle Gauges (37°/45° and a 12°/30°)
- 24-Page International Measuring and Identification Guide and Instruction Booklet
- Carrying Case for Easy Convenient and Storage

Weight: .5 lb.




TA-1004 • Metric Thread Identification Kit

Contained in a durable steel carrying case, TA-1004 will help you with identification of metric, British pipe and JIS thread configurations. Identification pieces are configured for 20 metric and 8 British pipe sizes, an increase of three metric sizes compared to the TA-1003.

This handy kit includes:

- Steel Carrying Case
- Stainless Steel Caliper
- Metric and British Thread Pitch Gauges
- British Thread Measuring Templates (4 measuring 8 sizes) made of durable aircraft grade aluminum.
- Metric Thread Measuring Templates (10 measuring 20 sizes) made of durable aircraft grade aluminum.
- Kit Content Identification Chart

 Refer to safety information regarding Coll-O-Crimp® hose, hose fittings and assembly equipment compatibility on pages 1-2.



T-300 • Field Attachable Hose End Assembly Machine

The Weatherhead® T-300 Machine eliminates lost time and hard work when making replacement hose assemblies with bulk hose and field attachable hose ends. Simple, effortless operation provides uniform, safe assemblies time after time. This heavy-duty machine assembles straight, swivel, elbow and flange-type ends on all medium and high pressure wire braid hose from 3/16" through 2" I.D.

Catalog Number **Description**

- T-300** Assembly Machine – complete with tripod stand, adjustable locator, chuck handle and foot switch
- T-300X** Assembly Machine without tripod stand
- T-301** Tripod Stand
- T-306** Nipple Chuck Wire Carrier
- T-307** Adjustable Locator
- T-308** Foot Switch – complete with cord

Motor: Universal, reversible, 110-115 volts, 25-60 cycle, 1/2 H.P., 8 amps

Weight: 167 lbs.



Mandrel Assembly Tools

These tools are required for assembling 069 'D' Series hose ends in sizes 4 through 12 to prevent cutting the hose inner tube. Size 16 through 32 mandrels are used as a holding device when assembling 069 'D' Series swivel ends. Mandrels can be ordered individually or in sets as shown.


TH-8 Mandrel Set – Contains 1 each of the mandrels listed plus **TH-8 BAG** pocket roll bag for convenient storage.

Hose I.D.	Catalog Number	Swivel End Application
3/16"	T-JS4	SAE 37° & 45°
1/4"	T-JS5	SAE 37° & 45°
5/16"	T-J6	SAE 37°
5/16"	T-S6	SAE 45°
13/32"	T-JS8	SAE 37° & 45°
1/2"	T-JS10	SAE 37° & 45°
5/8"	T-J12	SAE 37°
5/8"	T-S12	SAE 45°

TH-14 Mandrel Set – Contains 1 each of the mandrels listed plus **TH-14 BAG** zipper bag for convenient storage.

Hose I.D.	Catalog Number	Swivel End Application
7/8"	T-J16	SAE 37°
1-1/8"	T-J20	SAE 37°
1-3/8"	T-J24	SAE 37°
1-13/16"	T-J32	SAE 37°



 Refer to safety information regarding Coll-O-Crimp® hose, hose fittings and assembly equipment compatibility on pages 1-2.



T-101A • Barb-Tite® End Assembly Tool

Assembly of Barb-Tite® push-on hose ends is made easy with this handy tool. Easy and fast operation assures dependable, leak proof assemblies. Simply clamp hose in jaws, place hose end on push rod and pull the handle. Engineered for a lifetime of rugged service.

Weight: 1 lb.

Capacity: 1/4" to 1/2" I.D. hose only.



T-201 • Barb-Tite® End Assembly Tool

This bench-mounted tool is actually two tools in one. Not only does it assemble Barb-Tite® hose ends, it is also a hose cutter. To cut your hose, simply retract the handle, place the hose in the cutter area and pull the handle. After cutting the hose to the desired length, place the hose under the cam handle locking it in place with the hose end aligned with the appropriate mark on the label. Place the barbed end of the fitting against the end of the hose and then pull the handle forward to complete the installation. The T-201 Assembly Tool is an easy-to-use tool that does everything you need to create a hose assembly.

Replacement Blade: T-201B

NOTE: This tool is designed to cut fiber-reinforced rubber hose only.

Capacity: 1/4" to 3/4" I.D. hose ONLY.

Hose Cutting Equipment

 Refer to safety information regarding Coll-O-Crimp® hose, hose fittings and assembly equipment compatibility on pages 1-2.



T-80 • Coll-O-Cut® Portable Hand-Powered Cutter

Portable! Efficient! Economical! No outside power source needed. Quick, clean cuts through all fiber, 1 and 2 wire braid hose up to 1" I.D.

Ideal companion for the T-465 Portable Coll-O-Crimp® Machine. Completely portable hose assembly capabilities – only from Weatherhead.

Weight: 15 lbs

Replacement Blade: [T-1080](#)



T-60A • Portable Cutter

An excellent heavy-duty cutting machine. The T-60A is a portable power saw that can cut all hoses, including wire-reinforced. Includes three abrasive blades.

Replacement Blade for T-60A: [T-1060A](#) 14" diameter

Motor: 3-1/2 H.P., 110/115 volts

Amps: 15

Weight: 45 lbs.

RPM: 3500

NOTE: 3 blades are mounted on shaft for shipping purposes. Remove prior to use.



T-10B • Hose Cutting Machine

The T-10B hose cutting machine assures quick, clean, right angle cuts, eliminating ragged and frayed cut ends which make hose assembly difficult and are a possible cause of premature hose failure. A powerful 1 H.P. motor and belt-driven blade cut all low, medium and high pressure fabric and wire-braided hose from 3/16" through 1-1/4" I.D. 2 wire hose. Specifically designed for cutting hose, the T-10B is a natural companion to the T-400-1 Coll-O-Crimp® and T-300 hose assembly machines.

The T-10B is shipped complete with a 7" smooth edge cutting wheel capable of cutting one-wire hose through 1-1/4", T-1047. To receive T-10B with a scalloped blade T-1047-1 capable of cutting two-wire hose through 1-1/4" instead of standard smooth blade, order T-10B-1.

Replacement Blades: [T-1047](#) Smooth
[T-1047-1](#) Scalloped

Replacement Belt for T-10B & T-10C: [T-10-V1](#) Belt

Motor: 1 H.P., 3450 RPM, 115, 60 cycle, single phase

Size: 13" wide, 24" long, 17" high

Weight: 85 lbs.

Amps Drawn: 115 volts – 15

Replacement Parts for T-10B: [T-10-D](#) Hose/Dowel Pin
[T-10-H](#) Handle
[T-10-P](#) Pusher

Replacement Belt for T-10B: [T-10-V](#) Belt

Hose Cutting Equipment

Equipment

 Refer to safety information regarding Coll-O-Crimp® hose, hose fittings and assembly equipment compatibility on pages 1-2.



NOTE: The T-9-1 and T-9-3 are shipped less a line cord and plug. An electrician is recommended for direct electrical hook-up.

T-9-1 & T-9-3 • Hose Cutting Machine

The T-9-1 and T-9-3 provide the capability for cutting multi-spiral and braided wire-reinforced hose through 2" I.D. This machine is a perfect companion for the T-440 Coll-O-Crimp® II Plus. Includes scalloped blade.

Replacement Blade: **T-75-14** Scalloped
T-75-17 Carborundum
T-75-11 Smooth

Guard: **T-9-G**

T-9-1:

Motor: 3 H.P., 230 volts, 60 cycle, single phase

Size: 24" wide, 24" deep, 24" high

Weight: Approx. 255 lbs.

Amps Drawn: At 230 volts – 17

T-9-3:

Motor: 3 H.P., 230 volts, 60 cycle, 3 phase

Size and Weight: Same as T-9-1

Amps Drawn: At 230 volts – 8



T-70 • Hose Cutting Machine

This cutting machine easily handles all one and two braided wire hose through 4" I.D., up to 2" I.D. 4-spiral and up to 1-1/2" I.D. 6 multi-spiral reinforced hose. That makes this machine ideal for cutting most hydraulic and pneumatic hoses as well as a variety of industrial fluid transfer hoses. The T-70 uses a 14" cutting blade for cutting all 1 & 2 wire braid and through 2" 4 spiral hose. The scalloped toothed blade is for cutting industrial transfer hoses through 4" and the smooth beveled blade for cutting hose with a wire braid cover. T-70 includes a scalloped blade.

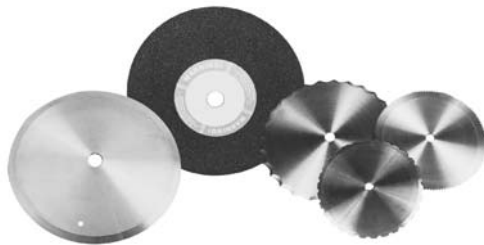
Replacement Blade: **T-1070** Steel Scalloped
T-1071 Steel Scalloped Toothed
T-1072 Steel Smooth Beveled

Motor: 4.2 H.P., 110/115 volts, single phase

Size: 22" wide, 19" deep, 25" high

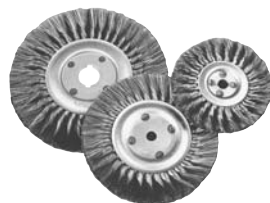
Weight: Approx. 65 lbs.

Amps Drawn: 115 volts – 20



Hose Cutting and Skiving Wheels

Catalog Number	Type	Blade Dia.	Hole Dia.	Machine Used On
Cutting Wheels				
T-1042	Carborundum	8"	5/8"	T-10A
T-1047	Steel Smooth	7"	5/8"	T-10B & T-10C
T-1047-1	Steel Scalloped	7"	5/8"	T-10B & T-10C
T-1060	Carborundum	12"	1"	T-60
T-1060A	Carborundum	14"	1"	T-60A
T-1070	Steel Scalloped	14"		T-70
T-1071	Steel Scalloped Toothed	14"		T-70
T-1072		14"		T-70
T-1080	Carborundum	8"	1"	T-80
T-75-11	Steel Smooth	10"	3/4"	T-9/T-75
T-75-14	Steel Scalloped	10"	3/4"	T-9/T-75
T-75-17	Carborundum	10"	3/4"	T-9/T-75



Skiving Wheels				
T-1040	Wire	6"	5/8"	T-10
T-1046	Wire	8"	5/8"	T-10A
T-75-12	Wire	8"	1"	T-75

Belts				
T-76-B	Reinforced		1"	Old T-76/T-76-1



 Refer to safety information regarding Coll-O-Crimp® hose, hose fittings and assembly equipment compatibility on pages 1-2.



T-1037 • Knife

An inexpensive, reliable knife useful in splitting twin-line and multiple-line hoses quickly and easily.

Replacement Blade: [T-1037B](#)

Replacement Handle: [T-1037H](#)



T-135 • Plastic Tube and Hose Cutter

An economical alternative to quality tube and hose cutting. This versatile tool is lightweight and durable for long service life.

Replacement Blade: [T-135B](#)

Capacity: Up to 1" hose I.D.

NOTE: Not for use with wire-reinforced hose.



T-138 • Hose and Tube Cutter

One hand operation for quick, clean cuts through plastic or nylon compound tubing and solid or fiber-reinforced hose up to 1-1/2" O.D.

- Any wireless hose or tubing.
- Power steering hose (H324)
- Air Conditioning hose (H757)
- Air brake hose (H338)
- Air system nylon tubing (NT100)
- Thermoplastic hose (H435, H436, H335, and H336)
- Low pressure plastic tubing (PT200, PT230, PT240)

Replacement Blade: [T-138B](#)

NOTE: Not for use with wire-reinforced hose.



T-191 • Plastic Tube and Hose Cutter

A tool designed to be small, only 2-7/8" long. The versatile Weatherhead T-191 offers quick and clean square cuts on 1/16" to 1/2" O.D. plastic tubing and non-wire reinforced hose. The T-191 can be either bench or wall mounted and offers the safety of closing automatically when not in use.

Spare Parts: [T-191B](#) Replacement Blade (one per package)



T-570-1 • Ermeto-Quick Set™ Preset Machine

The Ermeto-Quick Set Machine is ideal for bulk assemblies. It has a positive-stop action, which guarantees uniform repeatability, and a hand pump operation which yields quick cycle time, reducing assembly time. The T-570 is an easy tool to use that will save you time and money.

T-570 Package includes:

T-460-2	Hand Pump (10,000 PSI)		
T-450-3	Quick Disconnect Hose Assembly		
T-570-1	Ermeto® Preset Machine		
T-570-4	Preset Die	T-571-4	Tube Support
T-570-6	Preset Die	T-571-6	Tube Support
T-570-8	Preset Die	T-571-8	Tube Support
T-570-12	Preset Die	T-571-12	Tube Support
T-570-16	Preset Die	T-571-16	Tube Support

-20, -24, and -32 sizes also available.



Metric Flareless Hand Presetting Tools

Presetting tools provide a more accurate and positive leak-proof method of coupling flareless fittings. Presetting the steel metric sleeves prior to fitting assembly will permit the maximum high performance obtainable with flareless fittings. These tools are available for both the Light (DIN 3901/3902L) and Heavy (DIN 3901/3902S) flareless series.

Light Series 3901/3902L			Heavy Series 3901/3902S		
Catalog Number	Tube O.D. (mm)	Thread Size	Catalog Number	Tube O.D. (mm)	Thread Size
TL-7008	8	M14x1.5	TH-7008	8	M16x1.5
TL-7010	10	M16x1.5	TH-7010	10	M18x1.5
TL-7012	12	M18x1.5	TH-7012	12	M20x1.5
TL-7015	15	M22x1.5	TH-7014	14	M22x1.5
TL-7018	18	M26x1.5	TH-7016	16	M24x1.5
TL-7022	22	M30x2.0	TH-7020	20	M30x2.0
TL-7028	28	M36x2.0	TH-7025	25	M36x2.0
			TH-7030	30	M42x2.0



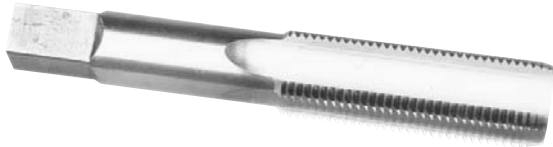
Ermeto® Hand Presetting Tools 7000 Series

Presetting tools provide a more accurate and positive leak-proof method of coupling flareless fittings. Presetting steel Ermeto® sleeves on tubing prior to fitting assembly will permit the maximum high performance obtainable with flareless fittings. Due to possible thread galling, the use of presetting tools is required when assembling stainless steel fittings.

Catalog Number	Tube O.D. (Inches)	Thread Size	Catalog Number	Tube O.D. (Inches)	Thread Size
T-7002	1/8	5/16-24	T-7012	3/4	1 1/16-12
T-7003	3/16	3/8-24	T-7016	1	1 5/16-12
T-7004	1/4	7/16-20	T-7020	1-1/4	1 5/8-12
T-7005	5/16	1/2-20	T-7024	1-1/2	1 7/8-12
T-7006	3/8	9/16-18	T-7032	2	2 1/2-12
T-7008	1/2	3/4-16			
T-7010	5/8	7/8-14			

EQUIPMENT





SAE Straight O-Ring Boss Tapping and Counterboring Tools

These Weatherhead precision counterborer and tap tools are available in the full range of sizes. They provide the correct SAE contour and UNF-2B threads for proper containment of Weatherhead Flareless '7000' Series Ermeto® and Weatherhead Flare-Twin® straight-thread o-ring tube fittings.

Thread Tap Catalog No.	UNF-2B Thread Size of Thread Tap	Drill Size	For Fitting Size	For Tube O.D.	Counter-Borer Catalog No.
T-5002	5/16-24	I	2	1/8	T-5102
T-5003	3/8-24	O	3	3/16	T-5103
T-5004	7/16-20	W	4	1/4	T-5104
T-5005	1/2-20	29/64	5	5/16	T-5105
T-5006	9/16-18	1/2	6	3/8	T-5106
T-5008	3/4-16	11/16	8	1/2	T-5108
T-5010	7/8-14	51/64	10	5/8	T-5110
T-5012	1 1/16-12	31/32	12	3/4	T-5112
T-5014	1 3/16-12	1 3/32	14	7/8	T-5114
T-5016	1 5/16-12	1 7/32	16	1	T-5116
T-5020	1 5/8-12	1 17/32	20	1 1/4	T-5120
T-5024	1 7/8-12	1 25/32	24	1 1/2	T-5124
T-5032*	2 1/2-12	2 27/64	32	2	T-5132*

*Special order only.



T-560 • Magnatorch Brazing Machine

This Magnatorch Brazing Machine from Weatherhead is perfect for making large numbers of FOR-SEAL® Tube Fitting Assemblies. By providing 360 degree induction heating, the brazing process is fast, clean and flameless. A heavy-duty cart is also provided with table top work area, vice, and storage drawer to make up a complete brazing station.



T-562 • Circa Torch

This braze tool from Weatherhead provides an excellent way to braze FOR-SEAL® fittings. Heat is evenly distributed among six flame ports creating a fast, convenient way to make tube assemblies.

⚠ WARNING: Torch only to be used with acetylene!

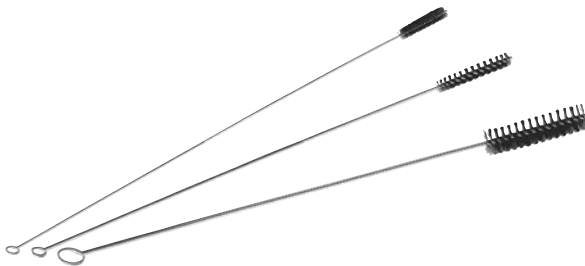
Individual Brushes



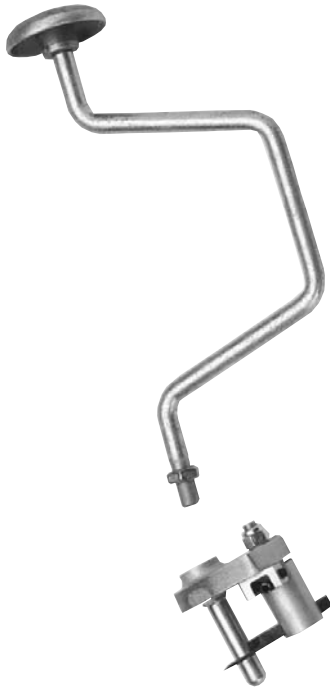
Hose I.D. (inch)	Catalog Number	Bristle O.D. (inch)	Bristle Length (inch)	Overall Length (inch)
3/16-3/8	T-1106	3/8	2	24
1/2-5/8	T-1110	1/2	3	24
3/4-1	T-1116	1	4	24
1-1/8-1-1/2	T-1124	1-1/2	4	24
2-3	T-1132	2	5	24

T-1100 • 3-Piece Kit

Includes one of each of the following:



Hose I.D. (inch)	Catalog Number	Bristle O.D. (inch)	Bristle Length (inch)	Overall Length (inch)
3/16-3/8	T-1106	3/8	2	24
1/2-5/8	T-1110	1/2	3	24
3/4-1	T-1116	1	4	24



Hand Skiving Tool

(For H430, H439 and H470 Hose)

Order hand skiving tool components by the individual catalog numbers listed below. See page 25 for skiving instructions.

Hose Size	Skiving Tool Cutting Head	
	H430, H439	H470
1/2" I.D.	T-410-30	T-410-50
3/4" I.D.	T-410-31	T-410-52
1" I.D.	T-410-32	T-410-53
1-1/4" I.D.	T-410-33	T-410-54
1-1/2" I.D.	T-410-34	T-410-55
2" I.D.	T-410-35	T-410-56

[T-410-36](#) Handle

[T-410-37](#) Replacement Cutting Blades

Rapid Wrenches

The Rapid Wrench is a heavy-duty, high quality wrench that ratchets for quick installation and removal of tube fittings and hose ends. These wrenches have jaws that snap open and close completely around the fitting giving 6-point contact. Needing only 30° of rotation to ratchet, they allow easy access to tight locations. Available individually or in a set with pouch, these wrenches are a welcome addition to any tool box.

[T-139](#) 7-Piece Set with Pouch – 1/2" through 7/8"

[T-139P](#) Pouch for 7-Piece Set

[T-152](#) 11-Piece Set with Pouch

[T-152P](#) Pouch for 11-Piece Set



Catalog Number	Wrench Hex Size	Catalog Number	Wrench Hex Size
T-140	3/8"	T-145	11/16"
T-141	7/16"	T-146	3/4"
T-142	1/2"	T-147	13/16"
T-143	9/16"	T-148	7/8"
T-144	5/8"	T-151	15/16"
		T-149	1"

The Coll-O-Crimp® System may be used to supplement the original equipment-type power steering hose assembly inventory by using hose ends listed below and tubing (from the old hose assembly) to duplicate out-of-stock or slow moving hose assemblies.



H32406 • Passenger Car Power Steering Hose

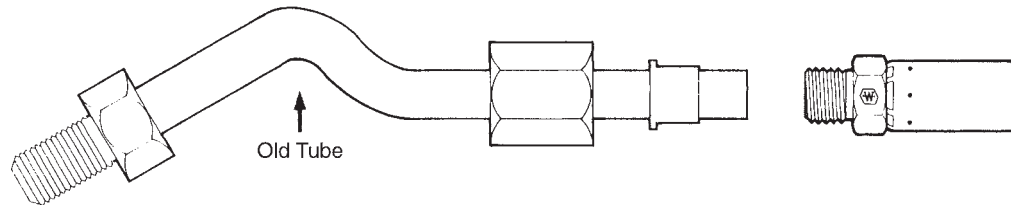
SAE J188 Type 2

Hose I.D.	Hose O.D.	Catalog Number	Recom. Oper. Press.	Min. Burst Press.	Bend Radii
3/8	13/16	H32406	1500	6000	3-1/8

All dimensions in inches; pressure in PSI.

Reinforcement: 2 Fiber Braids
Cubical Expansion: 8 to 17 cc ft. @ 1300 PSI
Temp. Range: -40°F to +250°F

On many of the late model cars the formed tubing from the old line with its complicated bends can be utilized to make up a new assembly. Just use a tube cutter to cut the old tube as close to the hose as possible, then make up a hose assembly with a flareless tube end (i.e., 06U-756) and attach to the old tubing. Reference flareless tube assembly instructions on page 235-236.



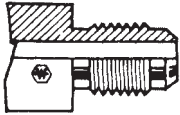
 42x6 SAE 45° Flare Union	 252x6, 252x7 Inverted Flare to Female Pipe	 1444, 1445, 1446, 1447 O-Ring Port to Female Inverted Flare	 1553, 1554, 1563 Inverted Flare to SAE 45° Flare	 1439, 1440, 41157x6 O-Ring Port to JIC 37° Flare M41157x6x14, M41157x6x16, M41157x6x18 Metric O-Ring Port to JIC 37° Flare
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Original End	Configuration	Use Catalog No.	Original End	Configuration	Use Catalog No.	Original End	Configuration	Use Catalog No.
1/4" SAE Swivel 7/16-20		06U-604 06U-684 06U-664 06U-644 06U-754	5/16" SAE Swivel 1/2-20		06U-755	3/8" SAE Swivel 5/8-18		06U-406 06U-486 06U-446 06U-756

EQUIPMENT

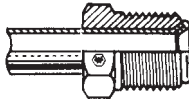


Original End
3/8" SAE 45° Rigid 5/8-18



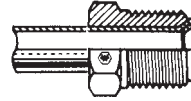
Configuration	Use Catalog No.
Straight	06U-406 with 42x6
45° Elbow	06U-486 with 42x6
90° Elbow	06U-446 with 42x6
Reuse old tube	06U-756

Original End
1/4" Inv. Swivel 7/16-24



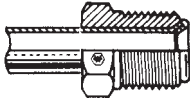
Configuration	Use Catalog No.
Straight	06U-B04
45° Elbow	06U-B44
90° Elbow	06U-B64
Reuse old tube	06U-754

Original End
5/16" Inv. Swivel 1/2-20



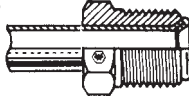
Configuration	Use Catalog No.
Straight	06U-B05 or 06U-406 with 1553
45° Elbow	06U-B45 or 06U-486 with 1553
90° Elbow	06U-B65 or 06U-446 with 1553
Reuse old tube	06U-755

Original End
3/8" Inv. Swivel 5/8-18



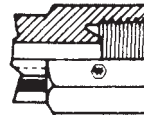
Configuration	Use Catalog No.
Straight	06U-B06 or 06U-406 with 1563
45° Elbow	06U-B46 or 06U-486 with 1563
90° Elbow	06U-B66 or 06U-446 with 1563
Reuse old tube	06U-756

Original End
7/16" Inv. Swivel with 3/8" Tube Opening
11/16-18



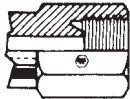
Configuration	Use Catalog No.
Straight	06U-B07 or 06U-406 with 1554
45° Elbow	06U-B47 or 06U-486 with 1554
90° Elbow	06U-B67 or 06U-446 with 1554
Reuse old tube	06U-756
New tubing/nut	105x6x7

Original End
3/8" Inv. Seat 5/8-18



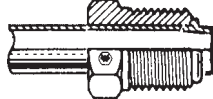
Configuration	Use Catalog No.
Straight	06U-104 with 252x6

Original End
7/16" Inv. Seat 11/16-18



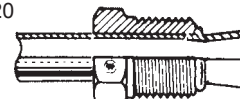
Configuration	Use Catalog No.
Straight	06U-104 with 252x7

Original End
O-Ring Tube End 3/8" Tube – 5/8-18



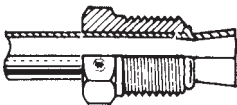
Configuration	Use Catalog No.
Straight	06U-606 with 41157x6
45° Elbow	06U-686 with 41157x6
90° Elbow	06U-666 with 41157x6
Reuse old tube	06U-756

Original End
O-Ring Tube End (Chrysler) 5/16" Swivel
1/2-20



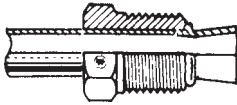
Configuration	Use Catalog No.
Reuse old tube	06U-755

Original End
O-Ring Tube End (Ford) 1/4" Tube – 9/16-18
(Special)



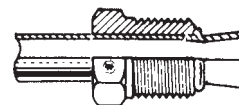
Configuration	Use Catalog No.
Straight	06U-604 with 1440
45° Elbow	06U-684 with 1440
90° Elbow	06U-664 with 1440
Reuse old tube	06U-755

Original End
O-Ring Tube End 3/8" Tube – 5/8-18
(Special)



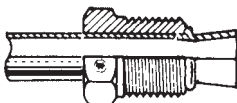
Configuration	Use Catalog No.
Straight	06U-606 with 1439
45° Elbow	06U-686 with 1439
90° Elbow	06U-666 with 1439
Reuse old tube	06U-756

Original End
O-Ring Tube End (Ford) 7/16" Tube –
11/16-18 (Special)



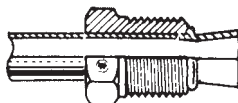
Configuration	Use Catalog No.
Straight	06U-B06 with 1444
45° Elbow	06U-B46 with 1444
90° Elbow	06U-B66 with 1444
Reuse old tube	06U-756

Original End
O-Ring Tube End 3/8" Tube – M14x1.5



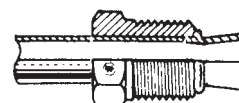
Configuration	Use Catalog No.
Straight	06U-B06 with 1445
45° Elbow	06U-B46 with 1445
90° Elbow	06U-B66 with 1445
Reuse old tube	06U-756

Original End
O-Ring Tube End 3/8" Tube – M16x1.5



Configuration	Use Catalog No.
Straight	06U-B06 with 1446
45° Elbow	06U-B46 with 1446
90° Elbow	06U-B66 with 1446
Reuse old tube	06U-756

Original End
O-Ring Tube End 3/8" Tube – M18x1.5



Configuration	Use Catalog No.
Straight	06U-B06 with 1447
45° Elbow	06U-B46 with 1447
90° Elbow	06U-B66 with 1447
Reuse old tube	06U-756

Dana Corporation Boston Weatherhead Division

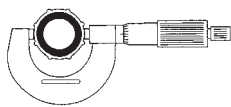
Facility	Registration	Registrar Number	Product Responsibility
Antwerp, OH	ISO/QS9000	TUV 74 300 7687	Steel Hose Ends
Brentwood, TN (Engineering)	ISO/QS9000	UL A5225	New Product Designs
Cleveland, TN	ISO9002	SGS US98/1495	Distribution of Weatherhead Product
Columbia City, IN	ISO9002 ISO14001	INTERTEK 97-956	Crimping Equipment
Hohenwald, TN	ISO/QS9000 ISO14001	UL A5216	Industrial and Hydraulic Hose
Ludlow, MA	ISO14001 ISO/QS9000	TUV 74 300 8803	Teflon Hose and Assembly
Newbern, TN	ISO9001	UL A5754	Industrial and Hydraulic Hose
Vinita, OK	ISO/QS9000 ISO14001	UL A5225 A6947	Brass Fittings, Brass Hose Ends, and Valves



⚠ WARNING – Proper Selection of Hose Ends: Selection of the proper end fittings for the hose end application is essential to the proper operation and safe use of the hose and related equipment. Inadequate attention to the selection of the end fittings for your application can result in leaking or the hose ends blowing off the hose, leading to serious bodily injury or property damage. In order to avoid serious bodily injury or property damage resulting from selection of the wrong end fitting, you should carefully review the information in this catalog.

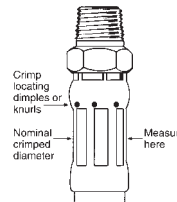
⚠ WARNING – Coll-O-Crimp® Hose, Hose Fittings and Assembly Equipment Compatibility: The Coll-O-Crimp® Equipment Package, Coll-O-Crimp® End Fittings, and Coll-O-Crimp® Hose have been engineered and designed as a complete hose assembly system. Each component of the Coll-O-Crimp® hose assembly system is compatible with other Coll-O-Crimp® components to which it relates. Component compatibility, along with the use of quality components, insures the production of reliable hose assemblies when assembled properly. The use or intermixing of fittings and hose not specifically engineered and designed for use with each other and Coll-O-Crimp® equipment is not recommended and may result in the production of unsafe or unreliable hose assemblies. This can result in hose assembly leakage, hose separation or other failures which can cause serious bodily injury or property damage from spraying fluids, flying projectiles, or other substances. The Weatherhead warranty is limited to apply only when Coll-O-Crimp® end fittings and compatible Coll-O-Crimp® hose are used with Coll-O-Crimp® assembly equipment.

Nominal Crimp Diameter Measurement: Please remove this chart and place near your Coll-O-Crimp® equipment for reference.



Measuring crimp diameters should be a part of the normal hose assembly procedure. To insure a proper crimp diameter reading, follow these steps.

1. Measure the diameter in the middle of crimped portion of the hose end.
2. Place the caliper in a position to allow a measurement across the pressed (flat) portion of the crimp.
3. See crimp diameters on following chart.



NOTE: In larger sizes, calipers may be used; however, in smaller sizes, and in the 'E' Series thermoplastic hose ends, a point micrometer will provide an accurate reading.

Nominal crimp diameters are for Weatherhead hose and end fittings when crimped with Weatherhead Coll-O-Crimp® tooling.

Hose Type	Hose Name	Hose I.D. (in.)	Skive Tool	Hose End Prefix	Collet Number	Spacer Ring Color	Spacer Ring Flat Side	Nominal Crimp Dia.
H00905	—	5/16	N/R	05 'E'	T-400-32C	Black	UP	.585
H00906	—	3/8	N/R	06 'E'	T-400-33C	Black	UP	.655
H00908	—	1/2	N/R	08 'E'	T-400-34C	Black	UP	.805
H01704	—	1/4	N/R	04 'U'	T-400-2C	Yellow	UP	.580
H01706	—	3/8	N/R	06 'U'	T-400-3C	Black	UP	.785
H01708	—	1/2	N/R	08 'U'	T-400-4C	Silver	UP	.940
H01712	—	3/4	N/R	12 'U'	T-400-5C	Silver	UP	1.235
H01716	—	1	N/R	16 'U'	T-400-6C	Silver	UP	1.525
H01720	—	1-1/4	N/R	20 'U'	T-400-12	Black	DN	1.785
H03912	—	3/4	N/R	12 'S'	T-400-5C	Silver	UP	1.230
		3/4	N/R	12 'U'	T-400-5C	Silver	UP	1.230
H03916	—	1	N/R	16 'S'	T-400-6C	Silver	UP	1.520
		1	N/R	16 'U'	T-400-6C	Silver	UP	1.520
H03920	—	1-1/4	N/R	20 'S'	T-400-12	Black	DN	1.790
		1-1/4	N/R	20 'U'	T-400-12	Black	DN	1.790
H03924	—	1-1/2	N/R	43024 'E'	T-410-8C	White	UP	2.160
		1-1/2	N/R	43024 'U'	T-410-8N	N/R	N/R	2.285
H03932	—	2	N/R	43032 'E'	T-410-9	N/R	N/R	2.690
		2	N/R	43032 'U'	T-410-9N	N/R	N/R	2.895
H05904	—	3/16	N/R	06904 'E'	T-400-54C	Yellow	UP	.525
		3/16	N/R	22904 'P'	T-400-80C	Black	DN	.480
H05905	—	1/4	N/R	06905 'E'	T-400-55C	Black	UP	.585
H05906	—	5/16	N/R	06906 'E'	T-400-56C	Black	UP	.680
		5/16	N/R	22906 'P'	T-400-81C	Black	DN	.650

Hose End and Tool Selector Chart

Tool Chart

Hose Type	Hose Name	Hose I.D. (in.)	Skive Tool	Hose End Prefix	Collet Number	Spacer Ring Color	Spacer Ring Flat Side	Nominal Crimp Dia.
H05908	—	13/32	N/R	06908 'E'	T-400-57C	Yellow	UP	.765
		13/32	N/R	22908 'P'	T-400-82C	Black	DN	.775
H05910	—	1/2	N/R	06910 'E'	T-400-58C	Black	UP	.910
		1/2	N/R	22910 'P'	T-400-83C	Black	DN	.875
H05912	—	5/8	N/R	06912 'E'	T-400-59C	Silver	UP	1.080
H05916	—	7/8	N/R	06916 'E'	T-400-60C	Black	UP	1.275
H06904	—	3/16	N/R	06904 'E'	T-400-54C	Yellow	UP	.525
H06905	—	1/4	N/R	06905 'E'	T-400-55C	Black	UP	.585
H06906	—	5/16	N/R	06906 'E'	T-400-56C	Black	UP	.680
H06908	—	13/32	N/R	06908 'E'	T-400-57C	Yellow	UP	.765
H06910	—	1/2	N/R	06910 'E'	T-400-58C	Black	UP	.910
H06912	—	5/8	N/R	06912 'E'	T-400-59C	Silver	UP	1.080
H06916	—	7/8	N/R	06916 'E'	T-400-60C	Black	UP	1.275
H06920	—	1-1/8	N/R	06920 'E'	T-400-61C	Yellow	UP	1.520
H06924	—	1-3/8	N/R	06924 'E'	T-400-70	Black	UP	1.730
H06932	—	1-13/16	N/R	06932 'E'	T-410-71C	N/R	N/R	2.202
H10404	—	1/4	N/R	04 'S'	T-400-2C	Black	DN	.561
		1/4	N/R	04 'U'	T-400-2C	Black	DN	.560
H10406	—	3/8	N/R	06 'S'	T-400-3C	Black	DN	.740
		3/8	N/R	06 'U'	T-400-3C	Black	DN	.740
H10408	—	1/2	N/R	08 'S'	T-400-4C	Black	DN	.863
		1/2	N/R	08 'U'	T-400-4C	Black	DN	.870
H10410	—	5/8	N/R	10 'U'	T-400-64C	Black	DN	1.000
H10412	—	3/4	N/R	12 'S'	T-400-5C	Yellow	UP	1.177
		3/4	N/R	12 'U'	T-400-5C	Black	DN	1.160
H10416	—	1	N/R	16 'S'	T-400-6C	Yellow	UP	1.465
		1	N/R	16 'U'	T-400-6C	Black	DN	1.450
H10420	—	1-1/4	N/R	20 'S'	T-400-12	Black	DN	1.790
		1-1/4	N/R	20 'U'	T-400-12	Black	DN	1.785
H10504	Bosflex 300 (RD)	1/4	N/R	04 'U'	T-400-2C	Black	UP	.610
H10506	Bosflex 300 (RD)	3/8	N/R	06 'U'	T-400-3C	Black	UP	.788
H10508	Bosflex 300 (RD)	1/2	N/R	08 'U'	T-400-4C	Silver	UP	.940
H10512	Bosflex 225 (RD)	3/4	N/R	12 'U'	T-400-5C	Silver	UP	1.232
H10516	Bosflex 300 (RD)	1	N/R	16 'U'	T-400-6C	Silver	UP	1.522
H11404	—	1/4	N/R	04 'S'	T-400-2C	Green	UP	.520
		1/4	N/R	04 'U'	T-400-2C	Green	UP	.520
H11406	—	3/8	N/R	06 'S'	T-400-3C	Green	UP	.695
		3/8	N/R	06 'U'	T-400-3C	Green	UP	.695
H11408	—	1/2	N/R	08 'S'	T-400-4C	Black	DN	.860
		1/2	N/R	08 'U'	T-400-4C	Green	UP	.830
H11504	Performer II (2 Br)	1/4	N/R	04 'U'	T-400-2C	Black	UP	.610

Hose Type	Hose Name	Hose I.D. (in.)	Skive Tool	Hose End Prefix	Collet Number	Spacer Ring Color	Spacer Ring Flat Side	Nominal Crimp Dia.
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H11506	Performer II (2 Br)	3/8	N/R	06 'U'	T-400-3C	Black	UP	.788
H11508	Performer II (2 Br)	1/2	N/R	08 'U'	T-400-4C	Silver	UP	.940
H11512	Performer II (2 Br)	3/4	N/R	12 'U'	T-400-5C	Silver	UP	1.225
H11516	Performer II (2 Br)	1	N/R	16 'U'	T-400-6C	Silver	UP	1.522
H11520	Performer II (2 Br)	1-1/4	N/R	20 'U'	T-400-12	Silver	UP	1.862
H11524	Performer II (2 Br)	1-1/2	N/R	43024 'U'	T-410-8N	N/R	N/R	2.285

H14504	—	1/4	N/R	04 'M'	T-400-109C	Yellow	UP	.630
		1/4	N/R	04 'S'	T-400-2C	Green	UP	.520
		1/4	N/R	04 'U'	T-400-2C	Green	UP	.520
H14506	—	3/8	N/R	06 'M'	T-400-110C	Yellow	UP	.765
		3/8	N/R	06 'S'	T-400-3C	Green	UP	.695
		3/8	N/R	06 'U'	T-400-3C	Green	UP	.695
H14508	—	1/2	N/R	08 'M'	T-400-111C	Yellow	UP	.935
		1/2	N/R	08 'S'	T-400-4C	Yellow	DN	.870
		1/2	N/R	08 'U'	T-400-4C	Yellow	DN	.870
H14510	—	5/8	N/R	10 'M'	T-410-30C	Orange	UP	1.085
		5/8	N/R	10 'M'	T-420-30C	Orange	UP	1.085
		5/8	N/R	10 'U'	T-400-64C	Yellow	UP	1.010
H14512	—	3/4	N/R	12 'S'	T-400-5C	Yellow	DN	1.160
		3/4	N/R	12 'U'	T-400-5C	Yellow	DN	1.160
H14516	—	1	N/R	16 'S'	T-400-6C	Yellow	DN	1.445
		1	N/R	43016 'U'	T-410-6CN	Orange	UP	1.655
		1	N/R	43016 'U'	T-420-6CN	Orange	UP	1.655

H14604	—	1/4	N/R	04 'U'	T-400-2C	Green	UP	.520
H14606	—	3/8	N/R	06 'U'	T-400-3C	Green	UP	.695
H14608	—	1/2	N/R	08 'U'	T-400-4C	Green	UP	.830

H157112	Mineforce	3/4	N/R	12 'U'	T-400-5C	Yellow	DN	1.164
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H16604	—	3/16	N/R	06904 'E'	T-400-54C	Yellow	UP	.525
H16605	—	1/4	N/R	06905 'E'	T-400-55C	Black	UP	.585
H16606	—	5/16	N/R	06906 'E'	T-400-56C	Black	UP	.680
H16608	—	13/32	N/R	06908 'E'	T-400-57C	Yellow	UP	.765
H16610	—	1/2	N/R	06910 'E'	T-400-58C	Black	UP	.910
H16612	—	5/8	N/R	06912 'E'	T-400-59C	Silver	UP	1.080
H16616	—	7/8	N/R	06916 'E'	T-400-60C	Black	UP	1.275
H16620	—	1-1/8	N/R	06920 'E'	T-400-61C	Yellow	UP	1.520

H16904	—	3/16	N/R	06904 'E'	T-400-54C	Yellow	UP	.525
H16905	—	1/4	N/R	06905 'E'	T-400-55C	Black	UP	.585
H16906	—	5/16	N/R	06906 'E'	T-400-56C	Black	UP	.680
H16908	—	13/32	N/R	06908 'E'	T-400-57C	Yellow	UP	.765
H16910	—	1/2	N/R	06910 'E'	T-400-58C	Black	UP	.910
H16912	—	5/8	N/R	06912 'E'	T-400-59C	Silver	UP	1.080

Hose End and Tool Selector Chart

Tool Chart

Hose Type	Hose Name	Hose I.D. (in.)	Skive Tool	Hose End Prefix	Collet Number	Spacer Ring Color	Spacer Ring Flat Side	Nominal Crimp Dia.
H16916	—	7/8	N/R	06916 'E'	T-400-60C	Black	UP	1.275
H16920	—	1-1/8	N/R	06920 'E'	T-400-61C	Yellow	UP	1.520
H16924	—	1-3/8	N/R	06924 'E'	T-400-70	Black	UP	1.730
H177704	Perfection 300	1/4	N/R	04 'U'	T-400-2C	Yellow	UP	.575
H177604	Perfection 300	1/4	N/R	04 'U'	T-400-2C	Silver	UP	.635
H177706	Perfection 300	3/8	N/R	06 'U'	T-400-3C	Black	Down	.730
H177606	Perfection 300	3/8	N/R	06 'U'	T-400-3C	Silver	UP	.810
H177708	Perfection 300	1/2	N/R	08 'U'	T-400-4C	Yellow	UP	.880
H177608	Perfection 300	1/2	N/R	08 'U'	T-400-4C	Silver	UP	.940
H177610	Perfection 300	5/8	N/R	10 'U'	T-400-64C	Black	UP	1.040
H177612	Perfection 300	3/4	N/R	12 'U'	T-400-5C	Silver	UP	1.230
H177616	Perfection 300	1	N/R	16 'U'	T-400-6C	Silver	UP	1.515
H177620	Perfection 300	1-1/4	N/R	20 'U'	T-400-12	Black	UP	1.840
H177624	Perfection 300	1-1/2	N/R	43024 'U'	T-410-8N	N/R	N/R	2.285
H19004		1/4	N/R	04 'W'	T-400-40C	Black	UP	.664
H19006		3/8	N/R	06 'W'	T-400-41C	Black	UP	.820
H19008		1/2	N/R	08 'W'	T-400-42C	Black	UP	.976
H19010		5/8	N/R	10 'W'	T-400-43C	T-400-45R	Down	1.132
		5/8	N/R	10 'W'	T-420-85C	T-420-83R	UP	1.132
		5/8	N/R	10 'W'	T-440-85C	T-440-73R	UP	1.132
H19012		3/4	N/R	12 'W'	T-400-44C	T-400-48R	Down	1.260
		3/4	N/R	12 'W'	T-420-86C	T-420-82R	UP	1.260
		3/4	N/R	12 'W'	T-440-76C	T-440-72R	UP	1.260
H19016		1	N/R	16 'W'	T-420-87C	T-420-80R	UP	1.587
		1	N/R	16 'W'	T-440-77C	T-442-70R	UP	1.587
H194104	Nyall (RD,BK)	1/4	N/R	04 'U'	T-400-2C	Black	DN	.560
H194105	Nyall (RD,BK)	5/16	N/R	05 'E'	T-400-32C	Yellow	UP	.560
H194106	Nyall (RD,BK)	3/8	N/R	06 'U'	T-400-3C	Black	DN	.730
H194108	Nyall (RD)	1/2	N/R	08 'U'	T-400-4C	Green	UP	.820
H194208	Nyall (RD,BK)	1/2	N/R	08 'U'	T-400-4C	Black	UP	.910
H194112	Nyall (RD)	3/4	N/R	12 'U'	T-400-5C	Black	UP	1.205
H194116	Nyall (RD)	1	N/R	16 'U'	T-400-6C	Silver	UP	1.520
H20904	—	1/4	N/R	04 'E'	T-400-31C	Black	DN	.455
H20905	—	5/16	N/R	05 'E'	T-400-32C	Black	DN	.555
H20906	—	3/8	N/R	06 'E'	T-400-33C	Black	DN	.615
H20908	—	1/2	N/R	08 'E'	T-400-34C	Black	DN	.765
H22904	—	3/16	N/R	06904 'E'	T-400-54C	Yellow	UP	.525
		3/16	N/R	22904 'P'	T-400-80C	Yellow	UP	.505
H22906	—	5/16	N/R	06906 'E'	T-400-56C	Black	UP	.680
		5/16	N/R	22906 'P'	T-400-81C	Black	DN	.650

Hose Type	Hose Name	Hose I.D. (in.)	Skive Tool	Hose End Prefix	Collet Number	Spacer Ring Color	Spacer Ring Flat Side	Nominal Crimp Dia.
H22908	—	13/32	N/R	06908 'E'	T-400-57C	Yellow	UP	.765
		13/32	N/R	22908 'P'	T-400-82C	Black	DN	.775
H22910	—	1/2	N/R	06910 'E'	T-400-58C	Black	UP	.910
		1/2	N/R	22910 'P'	T-400-83C	Black	DN	.875
H22912	—	5/8	N/R	06912 'E'	T-400-59C	Silver	UP	1.080
H22916	—	7/8	N/R	06916 'E'	T-400-60C	Black	UP	1.275
H23904		3/16	N/R	229 'P'	T-400-80C	Black	Down	.480
H23906		5/16	N/R	229 'P'	T-400-81C	Black	Down	.650
H23908		13/32	N/R	229 'P'	T-400-82C	Black	Down	.775
H23910		1/2	N/R	229 'P'	T-400-83C	Black	Down	.875
H24303	—	3/16	N/R	03 'E'	T-400-113C	Tan	UP	.355
H24304	—	1/4	N/R	04 'E'	T-400-31C	Green	UP	.405
H24305	—	5/16	N/R	05 'E'	T-400-32C	Red	UP	.475
H24306	—	3/8	N/R	06 'E'	T-400-33C	Red	UP	.545
H24308	—	1/2	N/R	08 'E'	T-400-34C	Red	UP	.695
H24312	—	3/4	N/R	12 'E'	T-400-35C	Red	UP	.978
H24316	—	1	N/R	16 'E'	T-400-36C	Red	UP	1.225
H24504	HI-R FLEX	1/4	N/R	04 'M'	T-400-109C	Black	UP	.665
		1/4	N/R	04 'S'	T-400-2C	Yellow	DN	.560
		1/4	N/R	04 'U'	T-400-2C	Yellow	DN	.560
H24506	HI-R FLEX	3/8	N/R	06 'M'	T-400-110C	Black	UP	.805
		3/8	N/R	06 'S'	T-400-3C	Yellow	DN	.740
		3/8	N/R	06 'U'	T-400-3C	Yellow	DN	.740
H24508	HI-R FLEX	1/2	N/R	08 'M'	T-400-111C	Yellow	UP	.940
		1/2	N/R	08 'S'	T-400-4C	Yellow	DN	.865
		1/2	N/R	08 'U'	T-400-4C	Yellow	DN	.865
H24510	HI-R FLEX	5/8	N/R	10 'M'	T-410-30C	Orange	UP	1.085
		5/8	N/R	10 'M'	T-420-30C	Orange	UP	1.085
		5/8	N/R	10 'U'	T-400-64C	Yellow	UP	1.010
H24512	HI-R FLEX	3/4	N/R	12 'S'	T-400-5C	Yellow	DN	1.160
		3/4	N/R	12 'U'	T-400-5C	Yellow	DN	1.160
		3/4	N/R	43012 'U'	T-410-5CN	Orange	UP	1.365
		3/4	N/R	43012 'U'	T-420-5CN	Orange	UP	1.365
H24516	HI-R FLEX	1	N/R	16 'S'	T-400-6C	Yellow	UP	1.465
		1	N/R	16 'U'	T-400-6C	Yellow	UP	1.465
		1	N/R	43016 'U'	T-410-6CN	Orange	UP	1.660
		1	N/R	43016 'U'	T-420-6CN	Orange	UP	1.660
H24520	HI-R FLEX	1-1/4	N/R	20 'S'	T-400-12	Yellow	DN	1.795
		1-1/4	N/R	20 'U'	T-400-12	Yellow	DN	1.795
		1-1/4	N/R	43020 'U'	T-410-7CN	Orange	UP	1.990
		1-1/4	N/R	43020 'U'	T-420-7CN	Orange	UP	1.990

Hose End and Tool Selector Chart

Tool Chart

Hose Type	Hose Name	Hose I.D. (in.)	Skive Tool	Hose End Prefix	Collet Number	Spacer Ring Color	Spacer Ring Flat Side	Nominal Crimp Dia.
H26504	Ultraforce	1/4	N/R	26504 'P'	T-400-2C	Green	UP	.520
H26506	Ultraforce	3/8	N/R	06 'E'	T-400-33C	Black	UP	.660
		3/8	N/R	26506 'P'	T-400-2C	Silver	UP	.640
H26508	Ultraforce	1/2	N/R	08 'E'	T-400-34C	Black	UP	.810
		1/2	N/R	26508 'P'	T-400-3C	Black	UP	.788
H26512	Ultraforce	3/4	N/R	12 'E'	T-400-35C	Black	UP	1.090
		3/4	N/R	26512 'P'	T-400-64C	Silver	UP	1.070
H26516	Ultraforce	1	N/R	16 'E'	T-400-36C	Black	UP	1.340
H27504	Polyforce II	1/4	N/R	26504 'P'	T-400-2C	Green	UP	.520
H27506	Polyforce II	3/8	N/R	06 'E'	T-400-33C	Black	UP	.660
		3/8	N/R	26506 'P'	T-400-2C	Silver	UP	.640
H27508	Polyforce II	1/2	N/R	08 'E'	T-400-34C	Black	UP	.810
		1/2	N/R	26508 'P'	T-400-3C	Black	UP	.788
H27512	Polyforce II	3/4	N/R	12 'E'	T-400-35C	Black	UP	1.090
		3/4	N/R	26512 'P'	T-400-64C	Silver	UP	1.070
H27516	Polyforce II	1	N/R	16 'E'	T-400-36C	Black	UP	1.340
H27703	—	3/16	N/R	03 'E'	T-400-113C	Tan	UP	.355
H27704	—	1/4	N/R	04 'E'	T-400-31C	Green	UP	.405
H27705	—	5/16	N/R	05 'E'	T-400-32C	Red	UP	.475
H27706	—	3/8	N/R	06 'E'	T-400-33C	Red	UP	.545
H27708	—	1/2	N/R	08 'E'	T-400-34C	Red	UP	.695
H27712	—	3/4	N/R	12 'E'	T-400-35C	Red	UP	.978
H27716	—	1	N/R	16 'E'	T-400-36C	Red	UP	1.225
H28004		1/4	N/R	04 'W'	T-400-40C	T-400-46R	UP	.678
H28006		3/8	N/R	06 'W'	T-400-41C	Black	UP	.820
H28008		1/2	N/R	08 'W'	T-400-42C	T-400-46R	UP	.992
H28010		5/8	N/R	10 'W'	T-400-43C	T-400-45R	Down	1.132
		5/8	N/R	10 'W'	T-420-85C	T-420-83R	UP	1.132
		5/8	N/R	10 'W'	T-440-75C	T-440-73R	UP	1.132
H28012		3/4	N/R	12 'W'	T-400-44C	T-400-49R	Down	1.293
		3/4	N/R	12 'W'	T-420-86C	T-420-81R	UP	1.293
		3/4	N/R	12 'W'	T-440-76C	T-440-71R	UP	1.293
H28016		1	N/R	16 'W'	T-420-87C	T-420-80R	UP	1.587
		1	N/R	16 'W'	T-440-77C	T-440-70R	UP	1.587
H28504	Clearforce	1/4	N/R	04 'E'	T-400-31C	Black	UP	.500
		1/4	N/R	26504 'P'	T-400-2C	Green	UP	.520
H28506	Clearforce	3/8	N/R	06 'E'	T-400-33C	Black	UP	.660
		3/8	N/R	26506 'P'	T-400-2C	Silver	UP	.640
H28508	Clearforce	1/2	N/R	08 'E'	T-400-34C	Black	UP	.810
		1/2	N/R	26508 'P'	T-400-3C	Black	UP	.788
H28512	Clearforce	3/4	N/R	12 'E'	T-400-35C	Black	UP	1.090
		3/4	N/R	26512 'P'	T-400-64C	Silver	UP	1.070



Hose End and Tool Selector Chart

Hose Type	Hose Name	Hose I.D. (in.)	Skive Tool	Hose End Prefix	Collet Number	Spacer Ring Color	Spacer Ring Flat Side	Nominal Crimp Dia.
H28516	Clearforce	1	N/R	16 'E'	T-400-36C	Black	UP	1.340
H29004		1/4	N/R	04 'W'	T-400-40C	Black	UP	.664
H29006		3/8	N/R	06 'W'	T-400-41C	T-400-47R	UP	.854
H29008		1/2	N/R	08 'W'	T-400-42C	T-400-47R	UP	1.007
H29010		5/8	N/R	10 'W'	T-400-43C	N/R	N/R	1.149
		5/8	N/R	10 'W'	T-420-85C	N/R	N/R	1.149
		5/8	N/R	10 'W'	T-440-75C	N/R	N/R	1.149
H29012		3/4	N/R	12 'W'	T-400-44C	N/R	N/R	1.317
		3/4	N/R	12 'W'	T-420-86C	N/R	N/R	1.317
		3/4	N/R	12 'W'	T-440-76C	N/R	N/R	1.317
H29016		1	N/R	16 'W'	T-420-87C	N/R	N/R	1.607
		1	N/R	16 'W'	T-440-77C	N/R	N/R	1.607
H32406	—	3/8	N/R	06 'U'	T-400-3C	Black	UP	.785
H32504	SUB ZERO	1/4	N/R	04 'U'	T-400-2C	Black	UP	.610
H32506	SUB ZERO	3/8	N/R	06 'U'	T-400-3C	Black	UP	.795
H32508	SUB ZERO	1/2	N/R	08 'U'	T-400-4C	Yellow	UP	.885
H32512	SUB ZERO	3/4	N/R	12 'U'	T-400-5C	Black	UP	1.215
H32516	SUB ZERO	1	N/R	16 'U'	T-400-6C	Silver	UP	1.525
H33504	—	1/4	N/R	33604 'E'	T-400-121C	Black	UP	.667
H33506	—	3/8	N/R	33606 'E'	T-400-122C	Black	UP	.770
H33508	—	1/2	N/R	33608 'E'	T-400-123C	Black	UP	.895
H33603	—	3/16	N/R	33603 'E'	T-400-120C	Black	UP	.540
H33604	—	1/4	N/R	33604 'E'	T-400-121C	Black	UP	.667
H33606	—	3/8	N/R	33606 'E'	T-400-122C	Black	UP	.770
H33608	—	1/2	N/R	33608 'E'	T-400-123C	Black	UP	.895
H33612	—	3/4	N/R	33612 'E'	T-420-15C	N/R	N/R	1.115
H33616	—	1	N/R	33616 'E'	T-420-16C	N/R	N/R	1.455
H33806	—	3/8	N/R	33806 'P'	T-400-102C	Black	DN	.700
H33808	—	1/2	N/R	33808 'P'	T-400-103C	Black	DN	.795
H34504	Pressure Washer	1/4	N/R	04 'M'	T-400-109C	Yellow	UP	.630
H34506	Pressure Washer	3/8	N/R	06 'M'	T-400-110C	Yellow	UP	.765
H34508	Pressure Washer	1/2	N/R	08 'M'	T-400-111C	Yellow	DN	.915
H35006	—	3/8	N/R	06 'M'	T-400-110C	Black	UP	.805
		3/8	N/R	06 'U'	T-400-3C	Yellow	DN	.740
H35008	—	1/2	N/R	08 'M'	T-400-111C	Yellow	UP	.945
		1/2	N/R	08 'U'	T-400-4C	Yellow	DN	.865
H35010	—	5/8	N/R	10 'M'	T-410-30C	N/R	N/R	1.120
		5/8	N/R	10 'M'	T-420-30C	N/R	N/R	1.120

Hose End and Tool Selector Chart

Tool Chart

TOOL CHART

Hose Type	Hose Name	Hose I.D. (in.)	Skive Tool	Hose End Prefix	Collet Number	Spacer Ring Color	Spacer Ring Flat Side	Nominal Crimp Dia.
H35012	—	3/4	N/R	43012 'U'	T-410-5CN	N/R	N/R	1.413
		3/4	N/R	43012 'U'	T-420-5CN	N/R	N/R	1.413
H35016	—	1	N/R	43016 'U'	T-410-6CN	N/R	N/R	1.705
		1	N/R	43016 'U'	T-420-6CN	N/R	N/R	1.705
H36606	—	5/16	N/R	06906 'E'	T-400-56C	Black	UP	.680
H36608	—	13/32	N/R	06908 'E'	T-400-57C	Yellow	UP	.765
H40010	—	5/8	N/R	10 'M'	T-410-30C	N/R	N/R	1.120
		5/8	N/R	10 'M'	T-420-30C	N/R	N/R	1.120
H42504	—	1/4	N/R	04 'S'	T-400-2C	Black	UP	.610
		1/4	N/R	04 'U'	T-400-2C	Black	UP	.610
H42506	—	3/8	N/R	06 'S'	T-400-3C	Black	UP	.795
		3/8	N/R	06 'U'	T-400-3C	Black	UP	.795
H42508	—	1/2	N/R	08 'S'	T-400-4C	Black	UP	.920
		1/2	N/R	08 'U'	T-400-4C	Black	UP	.915
H42510	—	5/8	N/R	10 'U'	T-400-64C	Black	UP	1.050
H42512	—	3/4	N/R	12 'S'	T-400-5C	Black	UP	1.210
		3/4	N/R	12 'U'	T-400-5C	Black	UP	1.205
		3/4	N/R	43012 'U'	T-410-5CN	N/R	N/R	1.410
		3/4	N/R	43012 'U'	T-420-5CN	N/R	N/R	1.410
H42516	—	1	N/R	16 'S'	T-400-6C	Silver	UP	1.525
		1	N/R	16 'U'	T-400-6C	Silver	UP	1.525
		1	N/R	43016 'U'	T-410-6CN	N/R	N/R	1.707
		1	N/R	43016 'U'	T-420-6CN	N/R	N/R	1.707
H42520	—	1-1/4	N/R	20 'S'	T-400-12	Silver	UP	1.885
		1-1/4	N/R	20 'U'	T-400-12	Black	UP	1.850
		1-1/4	N/R	43020 'U'	T-410-7CN	N/R	N/R	2.035
		1-1/4	N/R	43020 'U'	T-420-7CN	N/R	N/R	2.035
H42524	—	1-1/2	N/R	43024 'U'	T-410-8N	N/R	N/R	2.270
H42532	—	2	N/R	43032 'U'	T-410-9N	N/R	N/R	2.890
H42908	—	13/32	N/R	057 'P'	T-400-102C	Green	UP	.660
H42910	—	1/2	N/R	057 'P'	T-400-103C	Green	UP	.750
H43008	—	1/2	T-410-30	43008 'E'	T-410-4C	N/R	N/R	.950
		1/2	T-410-30	43008 'E'	T-420-4C	N/R	N/R	.950
		1/2	N/R	43008 'U'	T-410-4CN	N/R	N/R	1.150
		1/2	N/R	43008 'U'	T-420-4CN	N/R	N/R	1.150
H43012	—	3/4	T-410-31	43012 'E'	T-410-5C	N/R	N/R	1.255
		3/4	T-410-31	43012 'E'	T-420-5C	N/R	N/R	1.255
		3/4	N/R	43012 'U'	T-410-5CN	N/R	N/R	1.406
		3/4	N/R	43012 'U'	T-420-5CN	N/R	N/R	1.406

Hose End and Tool Selector Chart

Hose Type	Hose Name	Hose I.D. (in.)	Skive Tool	Hose End Prefix	Collet Number	Spacer Ring Color	Spacer Ring Flat Side	Nominal Crimp Dia.
H43016	—	1	T-410-32	43016 'E'	T-410-6C	N/R	N/R	1.545
		1	T-410-32	43016 'E'	T-420-6C	N/R	N/R	1.545
		1	N/R	43016 'U'	T-410-6CN	N/R	N/R	1.705
		1	N/R	43016 'U'	T-420-6CN	N/R	N/R	1.705
H43020	—	1-1/4	T-410-33	43020 'E'	T-410-7C	N/R	N/R	1.860
		1-1/4	T-410-33	43020 'E'	T-420-7C	N/R	N/R	1.860
		1-1/4	N/R	43020 'U'	T-410-7CN	N/R	N/R	2.035
		1-1/4	N/R	43020 'U'	T-420-7CN	N/R	N/R	2.035
H43024	—	1-1/2	T-410-34	43024 'E'	T-410-8C	N/R	N/R	2.115
		1-1/2	N/R	43024 'U'	T-410-8N	N/R	N/R	2.285
H43032	—	2	T-410-35	43032 'E'	T-410-9	N/R	N/R	2.690
		2	N/R	43032 'U'	T-410-9N	N/R	N/R	2.895
H43504	—	1/4	N/R	04 'E'	T-400-31C	Black	DN	.455
H43505	—	5/16	N/R	05 'E'	T-400-32C	Black	DN	.555
H43506	—	3/8	N/R	06 'E'	T-400-33C	Black	DN	.615
H43508	—	1/2	N/R	08 'E'	T-400-34C	Black	DN	.765
H43512	—	3/4	N/R	12 'E'	T-400-35C	Black	DN	1.035
H43516	—	1	N/R	16 'E'	T-400-36C	Black	DN	1.295
H43604	—	1/4	N/R	04 'E'	T-400-31C	Black	DN	.455
H43605	—	5/16	N/R	05 'E'	T-400-32C	Black	DN	.555
H43606	—	3/8	N/R	06 'E'	T-400-33C	Black	DN	.615
H43608	—	1/2	N/R	08 'E'	T-400-34C	Black	DN	.765
H43612	—	3/4	N/R	12 'E'	T-400-35C	Black	DN	1.035
H43616	—	1	N/R	16 'E'	T-400-36C	Black	DN	1.295
H43908	—	1/2	T-410-30	43008 'E'	T-410-4C	N/R	N/R	.950
		1/2	T-410-30	43008 'E'	T-420-4C	N/R	N/R	.950
		1/2	N/R	43008 'U'	T-410-4CN	N/R	N/R	1.150
		1/2	N/R	43008 'U'	T-420-4CN	N/R	N/R	1.150
H43912	—	3/4	T-410-31	43012 'E'	T-410-5C	N/R	N/R	1.255
		3/4	T-410-31	43012 'E'	T-420-5C	N/R	N/R	1.255
		3/4	N/R	43012 'U'	T-410-5CN	N/R	N/R	1.406
		3/4	N/R	43012 'U'	T-420-5CN	N/R	N/R	1.406
H43916	—	1	T-410-32	43016 'E'	T-410-6C	N/R	N/R	1.545
		1	T-410-32	43016 'E'	T-420-6C	N/R	N/R	1.545
		1	N/R	43016 'U'	T-410-6CN	N/R	N/R	1.705
		1	N/R	43016 'U'	T-420-6CN	N/R	N/R	1.705
H43920	—	1-1/4	T-410-33	43020 'E'	T-410-7C	N/R	N/R	1.860
		1-1/4	T-410-33	43020 'E'	T-420-7C	N/R	N/R	1.860
		1-1/4	N/R	43020 'U'	T-410-7CN	N/R	N/R	2.035
		1-1/4	N/R	43020 'U'	T-420-7CN	N/R	N/R	2.035
H43924	—	1-1/2	T-410-34	43024 'E'	T-410-8C	N/R	N/R	2.115
		1-1/2	N/R	43024 'U'	T-410-8N	N/R	N/R	2.285

Hose End and Tool Selector Chart

Tool Chart

Hose Type	Hose Name	Hose I.D. (in.)	Skive Tool	Hose End Prefix	Collet Number	Spacer Ring Color	Spacer Ring Flat Side	Nominal Crimp Dia.
H43932	—	2	T-410-35	43032 'E'	T-410-9	N/R	N/R	2.690
		2	N/R	43032 'U'	T-410-9N	N/R	N/R	2.895
H47008	—	1/2	T-410-50	47008 'E'	T-420-8C	N/R	N/R	.980
		1/2	T-410-50	47008 'E'	T-470-8C	N/R	N/R	.980
H47012	—	3/4	T-410-52	47012 'E'	T-420-9C	N/R	N/R	1.250
		3/4	T-410-52	47012 'E'	T-470-12C	N/R	N/R	1.250
		3/4	T-410-52	57012 'S'	T-420-9C	N/R	N/R	1.250
		3/4	T-410-52	57012 'S'	T-470-12C	N/R	N/R	1.250
H47016	—	1	T-410-53	47016 'E'	T-420-10C	N/R	N/R	1.560
		1	T-410-53	47016 'E'	T-470-16C	N/R	N/R	1.560
		1	T-410-53	57016 'S'	T-420-10C	N/R	N/R	1.560
		1	T-410-53	57016 'S'	T-470-16C	N/R	N/R	1.560
H47020	—	1-1/4	T-410-54	47020 'E'	T-420-11	N/R	N/R	2.025
		1-1/4	T-410-54	47020 'E'	T-470-20	N/R	N/R	2.025
		1-1/4	T-410-54	57020 'S'	T-420-11	N/R	N/R	2.025
		1-1/4	T-410-54	57020 'S'	T-470-20	N/R	N/R	2.025
H47024	—	1-1/2	T-410-55	47024 'E'	T-470-24	N/R	N/R	2.365
		1-1/2	T-410-55	57024 'S'	T-470-24	N/R	N/R	2.365
H47032	—	2	T-410-56	47032 'E'	T-440-32	N/R	N/R	2.975
		2	T-410-56	57032 'S'	T-440-32	N/R	N/R	2.975
H54504	RhinoHide	1/4	N/R	04 'S'	T-400-2C	Yellow	DN	.560
		1/4	N/R	04 'U'	T-400-2C	Yellow	DN	.560
H54506	RhinoHide	3/8	N/R	06 'S'	T-400-3C	Green	UP	.695
		3/8	N/R	06 'U'	T-400-3C	Green	UP	.695
H54508	RhinoHide	1/2	N/R	08 'M'	T-400-111C	Yellow	UP	.940
		1/2	N/R	08 'S'	T-400-4C	Black	DN	.865
H54508	RhinoHide	1/2	N/R	08 'U'	T-400-4C	Yellow	DN	.865
H54510	RhinoHide	5/8	N/R	10 'U'	T-400-64C	Yellow	UP	1.010
H54512	RhinoHide	3/4	N/R	12 'S'	T-400-5C	Yellow	DN	1.155
		3/4	N/R	12 'U'	T-400-5C	Yellow	DN	1.155
H54516		1	N/R	43016 'U'	T-410-6CN	N/R	N/R	1.705
H54516		1	N/R	43016 'U'	T-420-6CN	N/R	N/R	1.705
H56904	—	3/16	N/R	06904 'E'	T-400-54C	Yellow	UP	.525
H56905	—	1/4	N/R	06905 'E'	T-400-55C	Black	UP	.585
H56906	—	5/16	N/R	06906 'E'	T-400-56C	Black	UP	.680
H56908	—	13/32	N/R	06908 'E'	T-400-57C	Yellow	UP	.765
H56910	—	1/2	N/R	06910 'E'	T-400-58C	Black	UP	.910
H56912	—	5/8	N/R	06912 'E'	T-400-59C	Silver	UP	1.080
H56916	—	7/8	N/R	06916 'E'	T-400-60C	Black	UP	1.275
H56920	—	1-1/8	N/R	06920 'E'	T-400-61C	Black	DN	1.485
H75706	—	5/16	N/R	75706 'E'	T-400-105C	Black	DN	.495
		5/16	N/R	75706 'E'	T-475-105C	N/R	N/R	.556

Hose Type	Hose Name	Hose I.D. (in.)	Skive Tool	Hose End Prefix	Collet Number	Spacer Ring Color	Spacer Ring Flat Side	Nominal Crimp Dia.
H75708	—	13/32	N/R	75708 'E'	T-400-106C	Black	DN	.595
		13/32	N/R	75708 'E'	T-475-106C	N/R	N/R	.640
H75710	—	1/2	N/R	75710 'E'	T-400-107C	Black	DN	.695
		1/2	N/R	75710 'E'	T-475-107C	N/R	N/R	.742
H75712	—	5/8	N/R	75712 'E'	T-400-108C	Black	DN	.850
		5/8	N/R	75712 'E'	T-475-108C	N/R	N/R	.897
H600208	Concord Air	1/2	N/R	08 'U'	T-400-4C	Silver	UP	.940
H600212	Concord Air	3/4	N/R	12 'U'	T-400-5C	Silver	UP	1.230
H600216	Concord Air	1	N/R	16 'U'	T-400-6C	Silver	UP	1.515
H600220	Concord Air	1-1/4	N/R	20 'U'	T-400-12	Yellow	DN	1.895
H600224	Concord Air	1-1/2	N/R	43024 'U'	T-410-8N	Orange	UP	2.230
H600232	Concord Air	2	N/R	43032 'U'	T-410-9N	N/R	N/R	2.890
H600816	Yellow Jack	1	N/R	43016 'U'	T-410-6CN	Orange	UP	1.670
		1	N/R	43016 'U'	T-420-6CN	Orange	UP	1.670
H600824	Yellow Jack	1-1/2	N/R	43024 'U'	T-410-8N	N/R	N/R	2.285
H600832	Yellow Jack	2	N/R	43032 'U'	T-410-9N	Orange	UP	2.860
H600920	Bulldog Gold	1-1/4	N/R	43020 'U'	T-410-7CN	Orange	UP	2.000
		1-1/4	N/R	43020 'U'	T-420-7CN	Orange	UP	2.000
H600924	Bulldog Gold	1-1/2	N/R	43024 'U'	T-410-8N	White	UP	2.330
H600932	Bulldog Gold	2	N/R	43032 'U'	T-410-9N	N/R	N/R	2.905
H90004	Black Line	1/4	N/R	04 'U'	T-400-2C	Black	UP	.610
H90006	Black Line	3/8	N/R	06 'U'	T-400-3C	Black	UP	.784
H90008	Black Line	1/2	N/R	08 'U'	T-400-4C	Silver	UP	.940
H90012	Black Line	3/4	N/R	12 'U'	T-400-5C	Silver	UP	1.235
H90016	Black Line	1	N/R	16 'U'	T-400-6C	Silver	UP	1.518
H960316	Hot Tar Pumping	1	N/R	Wolf Series	T-410-73CN	N/R	N/R	1.710
		1	N/R	Wolf Series	T-605-FP39	N/R	N/R	1.710
H961006	Washdown 1000 (GY,YW)	3/8	N/R	06 'U'	T-400-3C	Black	DN	.735
		3/8	N/R	06 'M'	T-400-110C	Black	UP	.805
H961008	Washdown 1000 (GY,YW)	1/2	N/R	08 'U'	T-400-4C	Black	DN	.862
		1/2	N/R	08 'M'	T-400-111C	Yellow	UP	.940
H961012	Washdown 1000 (YW)	3/4	N/R	12 'U'	T-400-5C	Yellow	UP	1.170
		3/4	N/R	43012 'U'	T-410-5CN	N/R	N/R	1.410
		3/4	N/R	43012 'U'	T-420-5CN	N/R	N/R	1.410
H962208	Contractors Air	1/2	N/R	43008 'U'	T-410-4CN	Orange	UP	1.115
		1/2	N/R	43008 'U'	T-420-4CN	Orange	UP	1.115
H962216	Contractors Air	1	N/R	43016 'U'	T-410-6CN	Orange	UP	1.665
		1	N/R	43016 'U'	T-420-6CN	Orange	UP	1.665


Hose End and Tool Selector Chart

Tool Chart


Hose Type	Hose Name	Hose I.D. (in.)	Skive Tool	Hose End Prefix	Collet Number	Spacer Ring Color	Spacer Ring Flat Side	Nominal Crimp Dia.
H962220	Contractors Air	1-1/4	N/R	43020 'U'	T-410-7CN	Orange	UP	1.985
		1-1/4	N/R	43020 'U'	T-420-7CN	Orange	UP	1.985
H962224	Contractors Air	1-1/2	N/R	43024 'U'	T-410-8N	N/R	N/R	2.235
H962232	Contractors Air	2	N/R	43032 'U'	T-410-9N	N/R	N/R	2.900
H994904	Shock Safe	1/4	N/R	04 'U'	T-400-2C	Silver	UP	.635
H994906	Shock Safe	3/8	N/R	06 'U'	T-400-3C	Black	UP	.785
H994908	Shock Safe	1/2	N/R	08 'U'	T-400-4C	Silver	UP	.935
H994912	Shock Safe	3/4	N/R	12 'U'	T-400-5C	Silver	UP	1.230
H994916	Shock Safe	1	N/R	16 'U'	T-400-6C	Black	UP	1.490

COLOR CODE/KEY USED ON COLL-O-CRIMP® PRESS


WHITE T-400-1, T-400-17, T-407, T-410-1♦, T-420-1*, T-440-1♦, T-460-1, T-462-1, T-465-1, T-480-1*


 T-420-1, T-480-1 **ONLY!**

 T-410-1♦, T-420-1*, T-440-1♦, T-480-1* **ONLY!**

 T-410-1 & T-440-1 **ONLY!**

 T-440-1 **ONLY!**

 T-475 **ONLY!**

 T-475 **ONLY!**

* = When Crimping on T-420-1 & T-480-1, Use Adapter Die Ring T-420-25

♦ = When Crimping on T-410-1 & T-440-1, Use Adapter Die Ring T-410-25

N/R = Not Required

Conversion Chart

Inches			Inches			Inches			Inches		
Fractions	Decimals	MM	Fractions	Decimals	MM	Fractions	Decimals	MM	Fractions	Decimals	MM
-	.0004	.0100	-	.6693	17.0000	1-25/32	1.7810	45.2440	-	3.1102	79.0000
-	.0040	.1000	43/64	.6720	17.0660	-	1.8110	46.0000	3-1/8	3.1250	79.3750
-	.0100	.2500	11/16	.6875	17.4630	1-13/16	1.8125	46.0380	-	3.1496	80.0000
1/64	.0156	.3970	45/64	.7030	17.8590	1-27/32	1.8440	46.8310	3-5/32	3.1560	80.1690
-	.0197	.5000	-	.7087	18.0000	-	1.8504	47.0000	3-3/16	3.1875	80.9630
-	.0295	.7500	23/32	.7190	18.2560	1-7/8	1.8750	47.6250	-	3.1890	81.0000
1/32	.0313	.7940	-	.7283	18.5000	-	1.8898	48.0000	3-7/32	3.2190	81.7560
-	.0394	1.0000	47/64	.7340	18.6530	1-29/32	1.9062	48.4190	-	3.2283	82.0000
3/64	.0469	1.1910	-	.7480	19.0000	-	1.9291	49.0000	3-1/4	3.2500	82.5500
-	.0590	1.5000	3/4	.7500	19.0500	1-15/16	1.9375	49.2130	-	3.2677	83.0000
1/16	.0620	1.5880	49/64	.7656	19.4470	-	1.9685	50.0000	3-9/32	3.2810	83.3440
5/64	.0781	1.9840	25/32	.7810	19.8440	1-31/32	1.9690	50.0060	-	3.3071	84.0000
-	.0787	2.0000	-	.7874	20.0000	2	2.0000	50.8000	3-5/16	3.3120	84.1377
3/32	.0940	2.3810	51/64	.7970	20.2410	-	2.0079	51.0000	3-11/32	3.3440	84.9314
-	.0984	2.5000	13/16	.8125	20.6380	2-1/32	2.0313	51.5940	-	3.3464	85.0000
7.64	.1090	2.7780	-	.8268	21.0000	-	2.0472	52.0000	3-3/8	3.3750	85.7250
-	.1181	3.0000	53/64	.8280	21.0340	2-1/16	2.0620	52.3880	-	3.3858	86.0000
1/8	.1250	3.1750	27/32	.8440	21.4310	-	2.0866	53.0000	3-13/32	3.4060	86.5190
-	.1378	3.5000	55/64	.8590	21.8280	2-3/32	20.9400	53.1810	-	3.4252	87.0000
9/64	.1410	3.5720	-	.8662	22.0000	2-1/8	2.1250	53.9750	3-7/16	3.4380	87.3130
5/32	.1560	3.9690	7/8	.8750	22.2250	-	2.1260	54.0000	-	3.4646	88.0000
-	.1575	4.0000	57/64	.8906	22.6220	2-5/32	2.1560	54.7690	3-15/32	3.4690	88.1060
11/64	.1720	4.3660	-	.9055	23.0000	-	2.1650	55.0000	3-1/2	3.5000	88.9000
-	.1770	4.5000	29/32	.9062	23.0190	2-3/16	2.1875	55.5630	-	3.5039	89.0000
3/16	.1875	4.7630	59/64	.9220	23.4160	-	2.2047	56.0000	3-17/32	3.5310	89.6940
-	.1969	5.0000	15/16	.9375	23.8130	2-7/32	2.2190	56.3560	-	3.5433	90.0000
13/64	.2030	5.1590	-	.9449	24.0000	-	2.2440	57.0000	3-9/16	3.5620	90.4877
-	.2165	5.5000	61/64	.9530	24.2090	2-1/4	2.2500	57.1500	-	3.5827	91.0000
7/32	.2190	5.5560	31/32	.9690	24.6060	2-9/32	2.2810	57.9440	3-19/32	3.5940	91.2810
15/64	.2340	5.9530	-	.9843	25.0000	-	2.2835	58.0000	-	3.6220	92.0000
-	.2362	6.0000	63/64	.9844	25.0030	2-5/16	2.3120	58.7380	3-5/8	3.6250	92.0750
1/4	.2500	6.3500	1	1.0000	25.4000	-	2.3228	59.0000	3-21/32	3.6560	92.8960
-	.2559	6.5000	-	1.0236	26.0000	2-11/32	2.3440	59.5310	-	3.6614	93.0000
17/64	.2656	6.7470	1-1/32	1.0312	26.1940	-	2.3622	60.0000	3-11/16	3.6875	93.6630
-	.2756	7.0000	1-1/16	1.0620	26.9880	2-3/8	2.3750	60.3250	-	3.7008	94.0000
9/32	.2810	7.1440	-	1.0630	27.0000	-	2.4016	61.0000	3-23/32	3.7190	94.4560
-	.2953	7.5000	1-3/32	1.0940	27.7810	2-13/32	2.4060	61.1190	-	3.7401	95.0000
19/64	.2970	7.5410	-	1.1024	28.0000	2-7/16	2.4380	61.9130	3-3/4	3.7500	92.2500
5/16	.3120	7.9380	1-1/8	1.1250	28.5750	-	2.4409	62.0000	-	3.7795	96.0000
-	.3150	8.0000	-	1.1417	29.0000	2-15/32	2.4690	62.7060	3-25/32	3.7810	96.0440
21/64	.3280	8.3340	1-5/32	1.1560	29.3690	-	2.4803	63.0000	3-13/16	3.8125	96.8380
-	.3350	8.5000	-	1.1811	30.0000	2-1/2	2.5000	63.5000	-	3.8189	97.0000
11/32	.3440	8.7310	1-3/16	1.1875	31.1630	-	2.5197	64.0000	3-26/32	3.8440	97.6310
-	.3543	9.0000	1-7/32	1.2190	30.9560	2-17/32	2.5310	64.2940	-	3.8583	98.0000
23/64	.3590	9.1280	-	1.2205	31.0000	-	2.5590	65.0000	3-7/8	3.8750	98.4250
-	.3740	9.5000	1-1/4	1.2500	31.7500	2-9/16	2.5620	65.0880	-	3.8976	99.0000
3/8	.3750	9.5250	-	1.2598	32.0000	2-19/32	2.5940	65.8810	3-29/32	3.9062	99.2190
25/64	.3910	9.9220	1-9/32	1.2810	32.5440	-	2.5984	66.0000	-	3.9370	100.0000
-	.3937	10.0000	-	1.2992	33.0000	2-5/8	2.6250	66.6750	3-15/16	3.9375	100.0130
13/32	.4060	10.3190	1-5/16	1.3120	33.3380	-	2.6380	67.0000	3-31/32	3.9690	100.8060
-	.4130	10.5000	-	1.3386	34.0000	2-21/32	2.6560	67.4690	-	3.9764	101.0000
27/64	.4220	10.7160	1-11/32	1.3440	34.1310	-	2.6772	68.0000	4	4.0000	101.6000
-	.4331	11.0000	1-3/8	1.3750	34.9250	2-11/16	2.6875	68.2630	4-1/16	4.0620	103.1880
7/16	.4380	11.1130	-	1.3779	35.0000	-	2.7165	69.0000	4-1/8	4.1250	104.7750
29/64	.4530	11.5090	1-13/32	1.4060	35.7190	2-23/32	2.7190	69.0560	-	4.1338	105.0000
15/32	.4690	11.9060	-	1.4173	36.0000	2-3/4	2.7500	69.8500	4-3/16	4.1875	106.3630
-	.4724	12.0000	1-7/16	1.4380	36.5130	-	2.7559	70.0000	4-1/4	4.2500	107.9500
31/64	.4840	12.3030	-	1.4567	37.0000	2-25/32	2.7810	70.6439	4-5/16	4.3120	109.5380
-	.4920	12.5000	1-15/32	1.4690	37.3060	-	2.7953	71.0000	-	4.3307	110.0000
1/2	.5000	12.7000	-	1.4961	38.0000	2-13/16	2.8125	71.4376	4-3/8	4.3750	111.1250
-	.5118	13.0000	1-1/2	1.5000	38.1000	-	2.8346	72.0000	4-7/16	4.4380	112.7130
33/64	.5156	13.0970	1-17/32	1.5310	38.8940	2-27/32	2.8440	72.2314	4-1/2	4.5000	114.3000
17/32	.5310	13.4940	-	1.5354	39.0000	-	2.8740	73.0000	-	4.5275	115.0000
35/64	.5470	13.8910	1-9/16	1.5620	39.6880	2-7/8	2.8750	73.0250	4-9/16	4.5620	115.8880
-	.5512	14.0000	-	1.5748	40.0000	2-29/32	2.9062	73.8190	4-5/8	4.6250	117.4750
9/16	.5630	14.2880	1-19/32	1.5940	40.4810	-	2.9134	74.0000	4-11/16	4.6875	119.0630
-	.5710	14.5000	-	1.6142	41.0000	2-15/16	2.9375	74.6130	-	4.7244	120.0000
37/64	.5790	14.6840	1-5/8	1.6250	41.2750	-	2.9527	75.0000	4-3/4	4.7500	120.6500
-	.5906	15.0000	-	1.6535	42.0000	2-31/32	2.9690	75.4060	4-13/16	4.8125	122.2380
19/32	.5940	15.0810	1-31/32	1.6562	42.0690	-	2.9921	76.0000	4-7/8	4.8750	123.8250
39/64	.6090	15.4780	1-11/16	1.6875	42.8630	3	3.0000	76.2000	-	4.9212	125.0000
5/8	.6250	15.8750	-	1.6929	43.0000	3-1/32	3.0312	76.9940	4-15/16	4.9375	125.4130
-	.6299	16.0000	1-23/32	1.7190	43.6560	-	3.0315	77.0000	5	5.0000	127.0000
41/64	.6406	16.2720	-	1.7323	44.0000	3-1/16	3.0620	77.7880			
-	.6496	16.5000	1-3/4	1.7500	44.4500	-	3.0709	78.0000			
21/32	.6560	16.6690	-	1.7717	45.0000	3-3/32	3.0940	78.5810			

A:

abrasion: external damage to a hose assembly caused by its being rubbed on a foreign object; a wearing away by friction.

ABS: Air-Brake Swivel

absorption: regarding hose, the process of taking in fluid. Hose materials are often compared with regard to relative rates and total amounts of absorption as they pertain to specific fluids.

acid resistant: having the ability to withstand the action of identified acids within specified limits of concentration and temperature.

adapter, adaptor: 1) fittings of various sizes and materials used to change an end fitting from one type to another type or one size to another. (i.e., a male SAE to male pipe adapter is often attached to a female SAE to create a male end union fitting); 2) the grooved portion of a cam & groove coupling.

adhesion: the strength of bond between cured rubber surfaces or between a cured rubber surface and a non-rubber surface.

adhesive: a material which, when applied, will cause two surfaces to adhere.

ambient temperature: the temperature of the atmosphere or medium surrounding an object under consideration.

ambient/atmospheric conditions: The surrounding conditions, such as temperature, pressure, and corrosion, to which a hose assembly is exposed.

amplitude of vibrations and/or lateral movement: the distance a hose assembly deflects laterally to one side from its normal position, when this deflection occurs on both sides of the normal hose centerline.

anchor: a restraint applied to eliminate motion and restrain forces.

annular: refers to the convolutions on a hose that are a series of complete circles or rings located at right angles to the longitudinal axis of the hose (sometimes referred to as "bellows").

anodize, anodized: an electrolytic process used to deposit protective or cosmetic coatings in a variety of colors on metal, primarily used with aluminum.

ANSI: American National Standards Institute.

Application working pressure: unique to customer's application. See pressure, working.

application: the service conditions that determine how a hose assembly will be used.

armor: a protective cover slid over and affixed to a hose assembly; used to prevent over bending or for the purpose of protecting hose from severe external environmental conditions such as hot materials, abrasion or traffic.

assembly: a general term referring to any hose coupled with end fittings of any style attached to one or both ends.

ASTM: American Society for Testing and Materials.

attachment: the method of securing an end fitting to a hose (e.g., banding, crimping, swaging, or screw-together 2 piece or 3 piece-style field attachable fittings).

axial movement: compression or elongation along the longitudinal axis.

B:

backing: a soft rubber layer between a hose tube and/or cover and carcass to provide adhesion.

barb: the portion of a fitting (coupling) that is inserted into the hose, usually comprised of two or more radial serrations or ridges designed to form a redundant seal between the hose and fitting.

barbed and ferrule fitting: a two-piece hose fitting comprised of a barbed insert (nipple), normally with peripheral ridges or backward-slanted barbs, for inserting into a hose and a ferrule, usually crimped or swaged.

Barb-Tite™: a line of low pressure push-on brass hose end fittings that is a Trademark of Dana Corporation.

bend radius: the radius of a bent section of hose measured to the innermost surface of the curved portion.

bend radius, minimum: the smallest radius at which a hose can be used. **For Metal Hose:** - the radius of a bend measured to the hose centerline, as recommended by the manufacturer.

blister: a raised area on the surface or a separation between layers usually creating a void or air-filled space in a vulcanized article.

blow out force: the force generated from the internal pressure attempting to push the fitting from the hose.

body wire: normally a round or flat wire helix embedded in the hose wall to increase strength or to resist collapse.

bore: (1) an internal cylindrical passageway, as of a tube, hose or pipe; (2) the internal diameter of a tube, hose, or pipe.

Bosflex A/W®: a product's name for an air and water hose that is a registered trademark of Dana Corporation

braid: the woven portion of a hose used as reinforcement to increase pressure rating and add hoop strength. Various materials such as polyester, cotton or metal wire are used. A hose may have one or more braids, outside or between layers of hose material.

braid wear: motion between the braid and corrugated hose, which normally causes wear on the outside diameter of the corrugation and the inside diameter of the braid.

braided ply: a layer of braided reinforcement.

braid-over-braid: multiple plies of braid having no separating layers.

brand: a mark or symbol identifying or describing a product and/or manufacturer, that is embossed, inlaid or printed.

brass: a family of copper/zinc alloys.

brazing: a process of joining metals using a non-ferrous filler metal having a melting point that is lower than the "parent metals" to be joined, typically over +800°F.

bronze: an alloy of copper, tin and zinc.

BSPP/BSPT: British Standard Pipe Parallel / British Standard Pipe Tapered. See Fitting/Coupling - Pipe Thread Fittings.

C:

carcass: the fabric, cord and/or metal reinforcing section of a hose as distinguished from the hose tube or cover.

chalking: the formation of a powdery surface condition due to disintegration of surface binder or elastomer by weathering or other destructive environments.

checking: the short, shallow cracks on the surface of a rubber product resulting from damaging action of environmental conditions.

chemical compatibility: the relative degree to which a material may contact another without corrosion, degradation or adverse change of properties.

chemical resistance: the ability of a particular polymer, rubber compound, or metal to exhibit minimal physical and/or chemical property changes when in contact with one or more chemicals for a specified length of time, at specified concentrations, pressure, and temperature.

Clearforce®: a product's name for a hose style that is a registered trademark of Dana Corporation.

cold flexibility: relative ease of bending while being exposed to specified low temperature.

collar: 1) the portion of a fitting that is compressed by crimping to seal the hose onto the fitting barbs and create a permanent attachment; also called a ferrule. (With field attachable fittings, the lock and seal are accomplished mechanically by the collar without crimping); 2) a raised portion on the hose shank which functions as a connection for a ferrule or other locking device or functions as a hose stop.

collet: a tool or die-set used to crimp a hose end fitting onto a hose. A crimping die-set is typically six to eight "fingers" designed for infinite diameter settings within a range or preset to a specific diameter for a given hose type and size. Some may have a replaceable cage.

Coll-O-Crimp®: a line of hydraulic and pneumatic hose, hose end fittings, and fabrication equipment that is a registered trademark of Dana Corporation.

combustible liquid: a combustible liquid is one having a flash point at or above +100°F (37.8°C).

compound: the mixture of rubber or plastic and other materials, which are combined to give the desired properties when, used in the manufacture of a product.

compression fitting: see fitting/coupling - Compression

conductive: the ability to transfer electrical potential.

configuration: the combination of fittings on a particular assembly.

convoluted: description of hose or innercore having annular or helical ridges formed to enhance flexibility.

core: the inner portion of a hose, usually referring to the material in contact with the medium.

corrosion: the process of material degradation by chemical or electrochemical means.

corrosion resistance: ability of metal components to resist oxidation.

corrugated hose: hose with a carcass fluted, radially or helically, to enhance its flexibility or reduce its weight.

coupling: a frequently used alternative term for hose end fitting.

cover: the outer component usually intended to protect the carcass of a product.

CPE: chlorinated polyethylene, a rubber elastomer.

cracking: a sharp break or fissure in the surface, generally caused by strain and environmental conditions.

crimp diameter: the distance across opposite flats after crimping.

crimp/crimping: a hose end fitting attachment method utilizing a number of dies mounted in a radial configuration. The dies close perpendicular to the hose and fitting axis, compressing the collar, ferrule, or sleeve around the hose.

cure: the act of vulcanization. See vulcanization.

cut off factor: the hose length to be subtracted from the overall assembly length that allows for the hose coupling end connection extension beyond the end of the hose.

D:

date code: any combination of numbers, letters, symbols or other methods used by a manufacturer to identify the time of manufacture of a product.

deburr: to remove ragged edges from the inside diameter of a hose end.

design factor: a ratio used to establish the working pressure of the hose, based on the burst strength of the hose.

displacement: the amount of motion applied to a hose defined as inches for parallel offset and degrees for angular misalignment.

DOT: Department of Transportation.

DIN: Deutsche Industrie Norme.

duplex assembly: an assembly consisting of two hose assemblies-one inside the other, and connected at the ends; also known as "jacketed assemblies."

durometer: an instrument for measuring the hardness of rubber and plastic compounds.

E:

Easy Couple®: a product's name for a hose style that is a registered trademark of Dana Corporation.

eccentricity: the condition resulting from the inside and outside diameters not having a common center.

effusion: the escape, usually of gases, through a material. See permeation.

elastic limit: the limiting extent to which a body may be deformed and yet return to its original shape after removal of the deforming force.

elastomer: any one of a group of polymeric materials, usually designated thermoset, such as natural rubber, or thermoplastic, which will soften with application of heat.

elongation: the increase in length expressed numerically as a percentage of the initial length.

ERMETO™: a steel fitting product trademarked by Dana Corporation.

endurance test: a service or laboratory test, conducted to product failure, usually under normal use conditions.

EPDM: Ethylene Propylene Diene Monomer; an elastomer.

extrude/extruded/extrusion: forced through the shaping die of an extruder; extrusion may have a solid or hollow cross section.

F:

fabric impression: impression formed on the rubber surface during vulcanization by contact with fabric jacket or wrapper.

fabricator: the producer of hose assemblies.

fatigue: the weakening or deterioration of a material occurring when a repetitious or continuous application of stress causes strain, which could lead to failure.

FDA: United States Food and Drug Administration.

fire sleeve: slip-on or integrally extruded sleeve used to retard the effects of fire in certain applications; most often made with silicone and/or ceramic fiber.

fitting/coupling: a device attached to the end of the hose to facilitate connection. The following is only a partial list of types of fittings available-

Banjo Fitting - a through bolted designed featuring a hollow circle or "donut" attached to one end of the fitting barb so that the inner diameter is along the hose axis.

Compression Fitting - a fitting style that seals on a mating tube by compressing an internal ferrule against the tube O.D..

Field Attachable Fitting - a fitting designed to be attached to hose without crimping or swaging. This fitting is not always a Reusable type fitting.

Flange Style Fittings - pipe flanges and flanged fitting standards are listed under ANSI B16.5. Flanges are rated for pressure and listed as "American Class 150, 300, 400, 600, 900, 1,500 or 2,500". Pressure-Temperature ratings can be obtained by consulting the ANSI specification or ASME B16.5 (American Society of Mechanical Engineers). Designs vary by neck and face style, or other dimensional changes based on use. Various finishes or grooves may be applied to the face for sealing on a gasket or o-ring. Bolt holes and other dimensions are per the ANSI standard.

Inverted Flare Fitting - a fitting consisting of a male or female nut, trapped on a tube by flaring the end of the tube material to either 37° or 45°.

JIC Fittings - joint Industrial Council (no longer in existence). An engineering group that established an industry standard fitting design incorporating a 37° mating surface, male and female styles. These standards are now governed by SAE.

O-ring Fittings - a fitting that seals by means of an elastomeric ring of a specified material.

Pipe Thread Fittings -

NPT - National Pipe Taper. Pipe thread per ANSI B1.20.1

NPTF - National Pipe Tapered for Fuels. (Same as above except dry-seal per ANSI B1.20.3)

NPSH - National Pipe Straight Hose per ANSI B1.20.7

NPSM - National Pipe Straight Mechanical. Straight thread per ANSI B1.20.1

NPSL - National Pipe Straight Loosefit per ANSI B1.20.1

BSPP, BSPT - British Standard Pipe Parallel, British Standard Pipe Taper. BS21

Quick Connect Fitting - a fitting designed to quickly connect and disconnect. These fittings come in many styles and

types.

Split Flange Fitting - a fitting consisting of a flange retainer and a flange of two halves. This design allows the flanges to be installed after the retainer has been attached to the hose, making the flange reusable. SAE Code 61 and 62.

Tube Fitting - a hose fitting of which the mating end conforms to a tube diameter. The mate or male end of a compression fitting.

flammable gases/liquid/media: a flammable gas, including liquefied gas, is one having a closed cup flash point below +100°F (+37.8°C) and a vapor pressure greater than 25 psi. (174.2 KPa).

flex cracking: a surface cracking induced by repeated bending and straightening.

flow rate: a volume of media being conveyed in a given time period.

fluid: a gas or liquid medium.

fluorocarbon: an organic compound containing fluorine directly bonded to carbon. The ability of the carbon atom to form a large variety of structural chains gives rise to many fluorocarbons and fluorocarbon derivatives.

FOR-SEAL™: a product name for a hose end configuration using an o-ring sealing method, trademarked by Dana Corporation.

G:

GPM: gallons per minute.

H:

heat resistance: the property or ability to resist the deteriorating effects of elevated temperatures.

helix: a shape formed by spiraling a wire or other reinforcement around the cylindrical body of a hose; typically used in suction hose.

hose: a flexible conduit consisting of a tube, reinforcement, and usually an outer cover.

hydrostatic testing: the use of liquid pressure to test a hose or hose assembly for leakage, twisting, and/or hose change-in-length.

Hytrel®: a DuPont registered trademark.

I:

I.D.: the abbreviation for inside diameter.

identification yarn: a yarn of single or multiple colors, usually embedded in the hose wall, used to identify the manufacturer.

impression: a design formed during vulcanization in the surface of a hose by a method of transfer, such as fabric impression or molded impression.

impulse: an application of force in a manner to produce sudden strain or motion, such as hydraulic pressure applied in a hose.

innertube: the innermost layer of a hose; the hose material in contact with the medium.

insert: optional term for nipple. See nipple.

interlocking clamp: a clamp which engages the fitting in a manner which prevents the clamp from sliding off the fitting, typically a bolt or U-bolt style with interlocking fingers which engage an interlock ring on the fitting.

interlocking ferrule: a ferrule, which physically attaches to the fitting preventing the ferrule from sliding off the fitting.

ISO: International Organization for Standardization.

J:

jacket: a seamless tubular braided or woven ply generally on the outside of a hose.

JIC: see fitting/coupling-JIC.

K:

kinking: a temporary or permanent distortion of the hose induced by bending beyond the minimum bend radius.

L:

layline: the line of printed information that runs parallel on the side of a manufactured hose giving details such as part number, PSI rating, hose size and manufacturing data.

layer: a single thickness of rubber or fabric between adjacent parts.

loop installation: the assembly is installed in a loop or "U" shape, and is most often used when frequent and/or large amounts of motion are involved.

LPG, LP Gas: the abbreviation for liquefied petroleum gas.

M:

MAWP: see pressure, maximum allowable working.

mandrel built: a hose fabricated and/or vulcanized on a mandrel.

manufacturer's identification: a code symbol used on or in some hose to indicate the manufacturer.

media, medium: the substance(s) being conveyed through a system.

N:

NAHAD: the abbreviation for the National Association of Hose & Accessories Distributors.

Neoprene®: a registered trademark of DuPont.

nipple: the internal member or portion of a hose fitting.

nitrile rubber (NB/Buna-N): a family of acrylonitrile elastomers used extensively for industrial hose.

nominal: a size indicator for reference only.

nomograph: a chart used to compare hose size to flow rate to recommended velocity.

non-conductive: the inability to transfer an electrical charge.

NPT/NPTF: abbreviation for national pipe threads. See fitting/coupling - Pipe Thread Fittings.

nylon: a family of polyamide materials.

O:

OAL: see overall length

O.D.: the abbreviation for outside diameter.

OE/OEM: original equipment manufacturer.

oil resistance: the ability of the materials to withstand exposure to oil.

oil swell: the change in volume of a rubber article resulting from contact with oil.

operating conditions: the pressure, temperature, motion, and environment to which a hose assembly is subjected.

o-ring fitting: see fitting/coupling, O-Ring.

overall length (OAL): the total length of a hose assembly, which consists of the free hose length plus the length of the coupling(s).

oxidation: the reaction of oxygen on a material, usually evidenced by a change in the appearance or feel of the surface or by a change in physical properties.

ozone cracking: the surface cracks, checks or crazing caused by exposure to an atmosphere containing ozone.

ozone resistance: the ability to withstand the deteriorating effects of ozone (generally cracking).

P:

Performer II®: a product's name for a hose style that is a registered trademark of Dana Corporation.

permanent fitting: the type of fitting which, once installed, may not be removed for re-use.

permeation: the process of migration of a substance into and through another, usually the movement of a gas into and through a hose material; the rate of permeation is specific to the substance, temperature, pressure and the material being permeated.

pin pricked: perforations through the cover of a hose to vent permeating gases.

pitch: 1) the distance from one point on a helix to the corresponding point on the next turn of the helix, measured parallel to the axis; 2) the distance between the two peaks of adjacent corrugation or convolution.

plating: a material, usually metal, applied to another metal by electroplating, for the purpose of reducing corrosion; typically a more noble metal such as zinc is applied to steel.

ply: an individual layer in hose construction.

PolyForce II®: a product's name for a hose style that is a registered trademark of Dana Corporation.

polymer: a macromolecular material formed by the chemical combination of monomers, having either the same or different chemical compositions.

pressure: force ÷ unit area. For purposes of this document, refers to PSIG (pounds per square inch gauge).

pressure drop: the measure of pressure reduction or loss over a specific length of hose.

pressure, burst: the pressure at which rupture occurs.

pressure, maximum allowable working: the maximum pressure at which a hose or hose assembly is designed to be used.

pressure, working: the maximum pressure to which a hose will be subjected, including the momentary surges in pressure, which can occur during service. Abbreviated as WP.

psi (PSI): pounds per square inch.

PTFE: polytetrafluoroethylene, a high molecular weight fluoroplastic polymer with carbon atoms shielded by fluorine atoms having very strong inter atomic bonds, giving it chemical inertness.

PVC: polyvinyl chloride. A low cost thermoplastic material typically used in the manufacture of industrial hoses. The operating temperature range is -500°F to +1750°F (-295.5°C to +954.4°C).

R:

reinforcement: the strengthening members, consisting of either fabric, cord, and/or metal, of a hose. See ply.

reusable fitting/coupling: see fitting/coupling, Field Attachable Fittings.

RhinoHide®: a product's name for an abrasion resistant covered hydraulic hose that is a registered trademark of Dana Corporation.

RMA: The Rubber Manufacturers Association, Inc.

S:

SAE: Society of Automotive Engineers.

shank: that portion of a fitting, which is inserted into the bore of a hose.

skive: the removal of a short length of cover and/or tube to permit the attachment of a fitting directly over the hose reinforcement.

sleeve: a metal cylinder, which is not physically attached to the fitting, for the purpose of forcing the hose into the serrations of the fitting.

smooth bore: a term used to describe the type of innercore in a hose.

specification: a document setting forth pertinent details of a product.

spiral: a method of applying reinforcement in which there is not interlacing between individual strands of the reinforcement.

spring guard: a helically wound component applied internally or externally to a hose assembly, used for strain relief, abrasion resistance, collapse resistance.

standard: a document, or an object for physical comparison, for defining product characteristics, products, or processes, prepared by a consensus of a properly constituted group of those substantially affected and having the qualifications to prepare the standard for use.

static wire: wire incorporated in a hose to conduct static electricity.

stem: see nipple.

Sub-Zero®: a product's name for a low temperature resistant hose that is a registered trademark of Dana Corporation.

surge (spike): a rapid and transient rise in pressure.

swelling: an increase in volume or linear dimension of a specimen immersed in liquid or exposed to a vapor.

T:

Teflon®: a registered trademark of E.I. DuPont. See PTFE, FEP and PFA.

Thick-Flange™: a product's name for a hose end fitting that is trademarked by Dana Corporation.

tube: the innermost continuous all-rubber or plastic element of a hose.

tube fitting: see fitting/coupling-Tube.

tubing: a non-reinforced, homogeneous conduit, generally of circular cross-section.

U:

UltraForce®: a product's name for a hose style that is a registered trademark of Dana Corporation.

V:

vacuum resistance: the measure of a hoses ability to resist negative gauge pressure.

vibration: amplitude motion occurring at a given frequency.

viscosity: the resistance of a material to flow.

vulcanization: a process during which a rubber compound, through a change in its chemical structure, improves or extends elastic properties over a greater range of temperature.

W:

weathering: the surface deterioration of a hose cover during outdoor exposure, as shown by checking, cracking, crazing and chalking.

wire reinforced: a hose containing wires to give added strength, increased dimensional stability; crush resistance. See reinforcement.

working temperature: the temperature range of the application, may include the temperature of the fluid conveyed or the environmental conditions the assembly is exposed to in use.

WP: the abbreviation for working pressure.

The preceding Glossary of Terms, as utilized in the hose industry, includes some definitions from The Hose Handbook, published by the Rubber Manufacturers Association.

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Warranty

BOSTON WEATHERHEAD WARRANTY

WARRANTY:

For one year after date of purchase, Dana Corporation warrants its products to be free from defects in materials and workmanship when properly installed and maintained. Products covered include those items contained in this catalog.

If during the warranty period, a product is discovered to be defective, Dana will, at its option, replace the warranted product or grant the purchaser a credit for the product claimed to be defective. Dana will have the sole discretion to determine whether the product was defective.

This warranty is null and void if the product has been used in the wrong application or has been damaged from an accident or willfully destroyed. In addition, this warranty will not apply to Boston Weatherhead assembly equipment, Boston Weatherhead end fittings, and Boston Weatherhead hose if the claimed defective product has been used in an assembly made from other than Boston Weatherhead parts.

NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, NOR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE BY DANA CORPORATION. THE FOREGOING STATES DANA CORPORATION'S ENTIRE AND EXCLUSIVE LIABILITY AND BUYER'S EXCLUSIVE REMEDY FOR ANY CLAIM OR DAMAGES IN CONNECTION WITH THE SALE OF THE PRODUCTS HEREUNDER. IN NO EVENT SHALL DANA CORPORATION BE LIABLE FOR ANY SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES WHATSOEVER.

SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER LEGAL RIGHTS WHICH VARY FROM STATE TO STATE.

CLAIM INFORMATION:

To make a claim under this warranty:

1. Return the defective product along with the purchase receipt and a copy of this certificate to your local distributor or Dana sales representative or to the attention: Engineering Lab, at the following address:

Hose and Fittings	Tooling
Dana Corporation	Dana Corporation
Weatherhead Division	Boston Weatherhead Division
U.S. Route 24, East	1380 South Williams Drive
Antwerp, OH 45813	Columbia City, IN 46725

2. In the event of a question or difficulty, contact your local distributor, Dana sales representative or Boston Weatherhead Product Engineering at the above address.

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For Information Regarding Fluid Connectors, Hose of Teflon®
& Transfer Hose Products:**

- Distributor Listings
- Quality Awards
- Technical Support Netlink
- The Expert® On-Line Catalog
- Latest Literature & New Products
- For Current Hose End & Tool Selector Chart Data

Conversion Chart

Inches			Inches			Inches			Inches		
Fractions	Decimals	MM	Fractions	Decimals	MM	Fractions	Decimals	MM	Fractions	Decimals	MM
-	.0004	.0100	-	.2165	5.5000	29/64	.4530	11.5090	23/32	.7190	18.2560
-	.0040	.1000	7/32	.2190	5.5560	15/32	.4690	11.9060	-	.7283	18.5000
-	.0100	.2500	15/64	.2340	5.9530	-	.4724	12.0000	47/64	.7340	18.6530
1/64	.0156	.3970	-	.2362	6.0000	31/64	.4840	12.3030	-	.7480	19.0000
-	.0197	.5000	1/4	.2500	6.3500	-	.4920	12.5000	3/4	.7500	19.0500
-	.0295	.7500	-	.2559	6.5000	1/2	.5000	12.7000	49/64	.7656	19.4470
1/32	.0313	.7940	17/64	.2656	6.7470	-	.5118	13.0000	25/32	.7810	19.8440
-	.0394	1.0000	-	.2756	7.0000	33/64	.5156	13.0970	-	.7874	20.0000
3/64	.0469	1.1910	9/32	.2810	7.1440	17/32	.5310	13.4940	51/64	.7970	20.2410
-	.0590	1.5000	-	.2953	7.5000	35/64	.5470	13.8910	13/16	.8125	20.6380
1/16	.0620	1.5880	19/64	.2970	7.5410	-	.5512	14.0000	-	.8268	21.0000
5/64	.0781	1.9840	5/16	.3120	7.9380	9/16	.5630	14.2880	53/64	.8280	21.0340
-	.0787	2.0000	-	.3150	8.0000	-	.5710	14.5000	27/32	.8440	21.4310
3/32	.0940	2.3810	21/64	.3280	8.3340	37/64	.5790	14.6840	55/64	.8590	21.8280
-	.0984	2.5000	-	.3350	8.5000	-	.5906	15.0000	-	.8662	22.0000
7.64	.1090	2.7780	11/32	.3440	8.7310	19/32	.5940	15.0810	7/8	.8750	22.2250
-	.1181	3.0000	-	.3543	9.0000	39/64	.6090	15.4780	57/64	.8906	22.6220
1/8	.1250	3.1750	23/64	.3590	9.1280	5/8	.6250	15.8750	-	.9055	23.0000
-	.1378	3.5000	-	.3740	9.5000	-	.6299	16.0000	29/32	.9062	23.0190
9/64	.1410	3.5720	3/8	.3750	9.5250	41/64	.6406	16.2720	59/64	.9220	23.4160
5/32	.1560	3.9690	25/64	.3910	9.9220	-	.6496	16.5000	15/16	.9375	23.8130
-	.1575	4.0000	-	.3937	10.0000	21/32	.6560	16.6690	-	.9449	24.0000
11/64	.1720	4.3660	13/32	.4060	10.3190	-	.6693	17.0000	61/64	.9530	24.2090
-	.1770	4.5000	-	.4130	10.5000	43/64	.6720	17.0660	31/32	.9690	24.6060
3/16	.1875	4.7630	27/64	.4220	10.7160	11/16	.6875	17.4630	-	.9843	25.0000
-	.1969	5.0000	-	.4331	11.0000	45/64	.7030	17.8590	63/64	.9844	25.0030
13/64	.2030	5.1590	7/16	.4380	11.1130	-	.7087	18.0000	1	1.0000	25.4000

For full conversion chart see page 334.

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