



## FITTINGS, TUBING & VALVES

Supplying Sanitary Distributors who  
Service the Beverage, Dairy,  
Food & Pharmaceutical Industries



THE RIGHT WAY

THE FAST WAY

THE EASY WAY



[www.WaylandIndustries.com](http://www.WaylandIndustries.com)

1-888-798-2653





### What We Do

Wayland Industries provides the highest quality stainless steel sanitary fittings, valves, and tubing to distributors and system integrators throughout North America. Our products are made from T304 and T316 stainless steel, are 3A sanitary standard, and meet the highest specifications of compliance in the industry.

### Who We Are

Wayland Industries was founded by brothers, Kevin and Andy Kurstin. Distribution of industrial pipe, valves, and fittings is in their DNA. Their grandfather was one of the earliest full line manufacturers of stainless steel butt-weld fittings on the West Coast, and their father founded Smith-Cooper International, one of the nation's largest distributors of industrial PVF. With a passion for exceeding traditional industry standards, Kevin and Andy represent the third generation of expertise in quality stainless steel sanitary fittings, valves and tubing.

### What We Believe

At Wayland, we run our business the right way and offer our customers the fast way and the easy way to buy sanitary products.

**THE RIGHT WAY** – Our vision is to create partnerships founded on reliability and excellence. We are committed to exceeding our customers' expectations and staying true to our word. Doing things the right way is the core of Wayland Industries.

**THE FAST WAY** – From inquiry to delivery, we believe our customers should experience the fast way to buy sanitary products. By providing real-time quotes backed by a fully stocked inventory, we guarantee same-day shipping on over 95% of our products.

**THE EASY WAY** – We recognize the evolving nature of the industry when it comes to customer experience. Our multi-platform ordering capability along with our availability of dedicated, highly experienced staff provides our customers the easy way to purchase sanitary products.

**THE RIGHT WAY**

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**THE FAST WAY**

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**THE EASY WAY**



## WAYLAND PART NUMBER BREAKDOWN

### INDUSTRY STANDARD

2	Elbow (45° or 90°)	22	Female Adapter	BFV	Butterfly Valve
7	Tee	23	Thermometer Cap	BV	Ball Valve
9	Cross	28	Y or Lateral	TC	Tri-Clamp
13	Clamp or Hex Nut	31	Concentric Reducer	SV	Sample Valve
14	Ferrule or Hose Adapter	32	Eccentric Reducer	MP	in part number usually indicates a Clamp fitting
15	Ferrule Threaded or Female	38	Flange	W	in part number usually indicates a Weld part
16	End Cap	40	Gaskets	I	in a part number usually indicates I-Line fitting
17	Adapter	42	Fractional Gaskets		
19	Weld x NPT	45	Check Valve		
21	Male Adapter	54	Sight Glass		

### HOW TO ORDER

W + Alloy + Product Code - Size (in.) - Polish

4 = 304	L2S	.50	7 = Polished
6 = 316L	13MHM	.75	1 = Unpolished
	14AM7	1.0	
	...	1.5	
		...	<i>*only applicable for weld fittings</i>

Example: **W** + **4** + **L2S** - **2** - **7**

**( W4L2S-2-7 )**

## AUSTENITIC STAINLESS STEEL CHEMISTRY

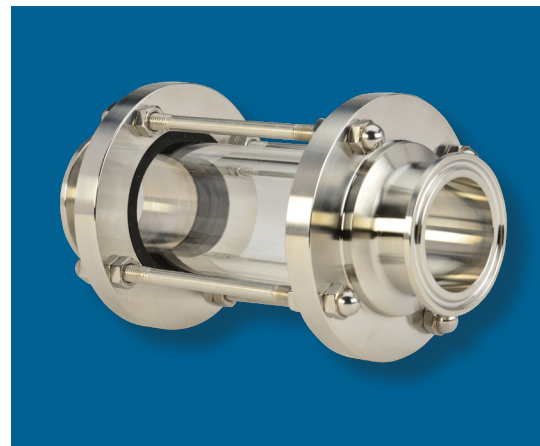
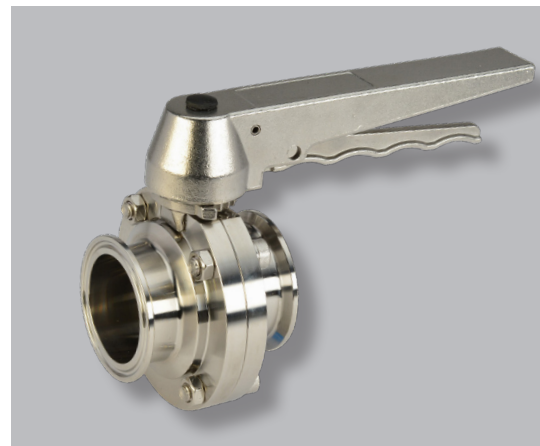
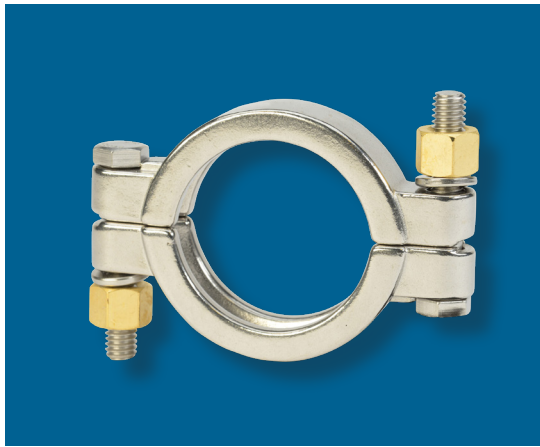
ELEMENT	Carbon (C) max	Manganese (Mn) max	Phosphorus (P) max	Sulfur (S) max	Silicone (Si) max	Chromium (Cr)	Nickel (Ni)	Molybdenum (Mo)
304 <sup>1</sup> (wt %)	0.080	2.00	0.045	0.030	0.75	18.0-20.0	8.0-10.5	n/a
316L <sup>1</sup> (wt %)	0.035	2.00	0.045	0.030	0.75	16.0-18.0	10.0-14.0	2.0-3.0

<sup>1</sup> AISI specifications for wrought material. Percentages are maximums unless a range is specified

## FINISH DESIGNATIONS FOR TUBING & FITTINGS

FINISHED NUMBER	FINISH CONDITIONS
1	Mill Finish (bright annealed, pickled, sand blast or tumbled)
3	Polished 180 grit inside diameter (ID) only
5	Polished 150 grit outside diameter (OD) only
7	Polished 180 grit outside/inside diameter (OD/ID) only
3A	Polished 150 grit outside (OD) 180 grit inside (ID)





**CLAMP FITTINGS**

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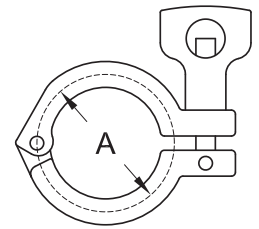
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CLAMPS

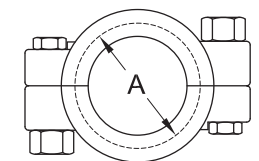
SINGLE PIN HEAVY DUTY CLAMPS WITH CROSS HOLE WING NUT 13MHM



TUBE O.D.	SERVICE PRESSURE RATING @ 70° F *	SERVICE PRESSURE RATING @ 250° F *	A	304 PART NUMBER
1/2" & 3/4"	1500	1200	1.062	W413MHM-.50/.75
1" & 1-1/2"	500	300	2.122	W413MHM-1/15
2"	450	250	2.654	W413MHM-2
2.5"	400	200	3.185	W413MHM-25
3"	350	175	3.717	W413MHM-3
4"	300	150	4.820	W413MHM-4
5"	225	100	5.820	W413MHM-5
6"	150	75	6.695	W413MHM-6
8"	100	50	8.695	W413MHM-8
10"	75	40	10.740	W413MHM-10
12"	50	25	12.740	W413MHM-12

\* Wing nut tightened to 25 in. lb. of torque

HIGH PRESSURE BOLTED CLAMPS 13MHP



TUBE O.D.	SERVICE PRESSURE RATING @ 70° F	SERVICE PRESSURE RATING @ 250° F	A	304 PART NUMBER
1/2" & 3/4"	1500	1200	1.062	W413MHP-.50/.75
1" & 1-1/2"	1500	1200	2.046	W413MHP-1/15
2"	1000	800	2.578	W413MHP-2
2.5"	1000	800	3.110	W413MHP-25
3"	1000	800	3.640	W413MHP-3
4"	800	600	4.744	W413MHP-4
5"	300	200	5.826	W413MHP-5
6"	300	200	6.632	W413MHP-6
8"	250	150	8.638	W413MHP-8
10"	200	125	10.740	W413MHP-10
12"	150	100	12.740	W413MHP-12

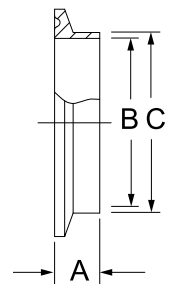
\* All nuts are tightened to 20 ft. lb. of torque  
PTFE Gaskets are not recommended for use on 13MHP

CLAMP FERRULES

SHORT WELD FERRULES 14WMP



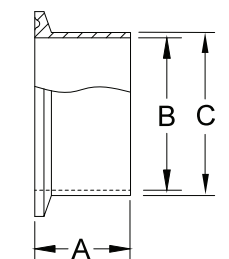
TUBE O.D.	A	B	C	304 PART NUMBER	316L PART NUMBER
1/2"	0.500	0.370	0.500	N/A	W614WMP-.50
3/4"	0.500	0.620	0.750	N/A	W614WMP-.75
1"	0.500	0.870	1.000	W414WMP-1	W614WMP-1
1-1/2"	0.500	1.370	1.500	W414WMP-15	W614WMP-15
2"	0.500	1.870	2.000	W414WMP-2	W614WMP-2
2-1/2"	0.500	2.370	2.500	W414WMP-25	W614WMP-25
3"	0.500	2.870	3.000	W414WMP-3	W614WMP-3
4"	0.625	3.834	4.000	W414WMP-4	W614WMP-4
5"	0.750	4.782	5.000	N/A	W614WMP-5
6"	0.875	5.782	6.000	W414WMP-6	W614WMP-6
8"	0.875	7.760	8.000	W414WMP-8	W614WMP-8
10"	0.875	9.782	10.000	W414WMP-10	W614WMP-10
12"	0.875	11.760	12.000	W414WMP-12	W614WMP-12



LONG WELD FERRULES 14AM7



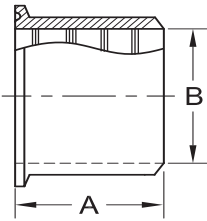
TUBE O.D.	A	B	C	304 PART NUMBER	316L PART NUMBER
1/2"	1.125	0.370	0.500	N/A	W614AM7-.50
3/4"	1.125	0.620	0.750	N/A	W614AM7-.75
1"	1.125	0.870	1.000	W414AM7-1	W614AM7-1
1-1/2"	1.125	1.370	1.500	W414AM7-15	W614AM7-15
2"	1.125	1.870	2.000	W414AM7-2	W614AM7-2
2.5"	1.125	2.370	2.500	W414AM7-25	W614AM7-25
3"	1.125	2.870	3.000	W414AM7-3	W614AM7-3
4"	1.125	3.834	4.000	W414AM7-4	W614AM7-4
5"	1.125	4.782	5.000	N/A	W614AM7-5
6"	1.500	5.782	6.000	W414AM7-6	W614AM7-6
8"	1.500	7.760	8.000	W414AM7-8	W614AM7-8
10"	1.750	9.782	10.000	W414AM7-10	W614AM7-10
12"	1.750	11.760	12.000	W414AM7-12	W614AM7-12





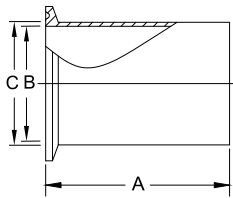
## CLAMP FERRULES

### ROLL-ON FERRULES 14RMP



TUBE O.D.	A	B	304 PART NUMBER	316L PART NUMBER
1"	.750	1.005	<b>W414RMP-1</b>	<b>W614RMP-1</b>
1-1/2"	1.125	1.505	<b>W414RMP-15</b>	<b>W614RMP-15</b>
2"	1.312	2.005	<b>W414RMP-2</b>	<b>W614RMP-2</b>
2-1/2"	1.375	2.505	<b>W414RMP-25</b>	<b>W614RMP-25</b>
3"	1.437	3.005	<b>W414RMP-3</b>	<b>W614RMP-3</b>
4"	1.5	4.005	<b>W414RMP-4</b>	<b>W614RMP-4</b>
6"	2.000	6.005	<b>W414RMP-6</b>	<b>W614RMP-6</b>

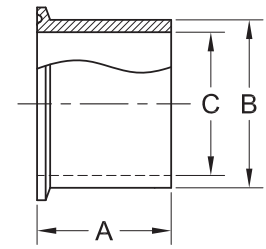
### TANK FERRULES (LIGHT DUTY) 14WLMP



TUBE O.D.	A	B	C	304 PART NUMBER	316L PART NUMBER
1/2"	3.000	0.370	0.500	<b>N/A</b>	<b>W614WLMP-.50</b>
3/4"	3.000	0.620	0.750	<b>N/A</b>	<b>W614WLMP-.75</b>
1"	3.000	0.870	1.000	<b>W414WLMP-1</b>	<b>W614WLMP-1</b>
1-1/2"	3.000	1.370	1.500	<b>W414WLMP-15</b>	<b>W614WLMP-15</b>
2"	3.000	1.870	2.000	<b>W414WLMP-2</b>	<b>W614WLMP-2</b>
2-1/2"	3.000	2.370	2.500	<b>W414WLMP-25</b>	<b>W614WLMP-25</b>
3"	4.000	2.870	3.000	<b>W414WLMP-3</b>	<b>W614WLMP-3</b>
4"	4.000	3.834	4.000	<b>W414WLMP-4</b>	<b>W614WLMP-4</b>
6"	6.000	5.782	6.000	<b>W414WLMP-6</b>	<b>W614WLMP-6</b>
8"	6.000	7.760	8.000	<b>W414WLMP-8</b>	<b>W614WLMP-8</b>
10"	6.000	9.782	10.000	<b>W414WLMP-10</b>	<b>W614WLMP-10</b>
12"	6.000	11.760	12.000	<b>W414WLMP-12</b>	<b>W614WLMP-12</b>

## CLAMP FERRULES

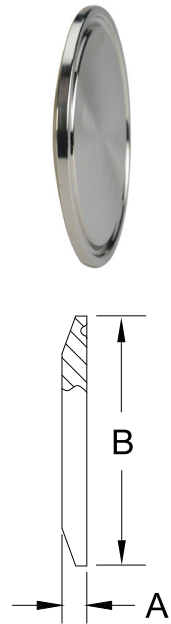
### TANK FERRULES (HEAVY DUTY) 14MPW



TUBE O.D.	A	B	C	304 PART NUMBER	316L PART NUMBER
1/2"	1.625	0.502	0.321	<b>N/A</b>	<b>W614MPW-.50</b>
3/4"	1.625	0.750	0.574	<b>N/A</b>	<b>W614MPW-.75</b>
1"	1.625	1.160	0.870	<b>W414MPW-1</b>	<b>W614MPW-1</b>
1-1/2"	1.625	1.676	1.370	<b>W414MPW-15</b>	<b>W614MPW-15</b>
2"	1.750	2.192	1.870	<b>W414MPW-2</b>	<b>W614MPW-2</b>
2-1/2"	1.750	2.708	2.370	<b>W414MPW-25</b>	<b>W614MPW-25</b>
3"	1.813	3.224	2.870	<b>W414MPW-3</b>	<b>W614MPW-3</b>
4"	2.125	4.256	3.834	<b>W414MPW-4</b>	<b>W614MPW-4</b>
6"	2.500	6.192	5.758	<b>W414MPW-6</b>	<b>W614MPW-6</b>
8"	2.500	8.192	7.758	<b>N/A</b>	<b>W614MPW-8</b>

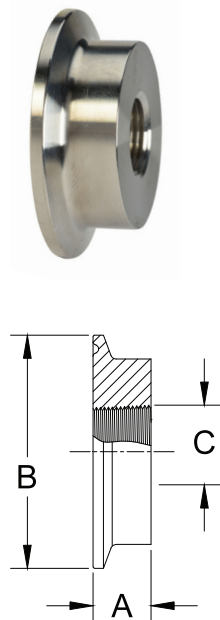
CLAMP CAPS

SOLID END CAPS 16AMP



TUBE O.D.	A	B	304 PART NUMBER	316L PART NUMBER
1/2" & 3/4"	0.187	0.992	N/A	W616AMP-.50/.75
1" & 1-1/2"	0.250	1.984	W416AMP-1/15	W616AMP-1/15
2"	0.250	2.516	W416AMP-2	W616AMP-2
2-1/2"	0.250	3.047	W416AMP-25	W616AMP-25
3"	0.250	3.579	W416AMP-3	W616AMP-3
4"	0.312	4.682	W416AMP-4	W616AMP-4
5"	0.312	5.687	N/A	W616AMP-5
6"	0.437	6.570	W416AMP-6	W616AMP-6
8"	0.437	8.570	W416AMP-8	W616AMP-8
10"	0.437	10.570	W416AMP-10	W616AMP-10
12"	0.437	12.570	W416AMP-12	W616AMP-12

THERMOMETER CAPS 23BMP

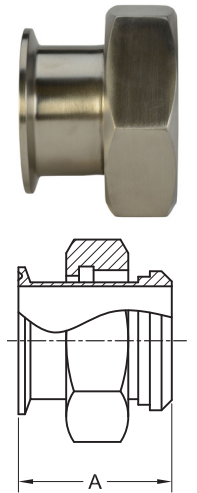


TUBE O.D.	A	B	C	304 PART NUMBER	316L PART NUMBER
1"	0.625	1.984	0.500NPT	W423BMP-1	W623BMP-1
1-1/2"	0.625	1.984	0.750NPT	W423BMP-15	W623BMP-15
2"	0.625	2.516	0.750NPT	W423BMP-2	W623BMP-2
2-1/2"	0.625	3.047	0.750NPT	W423BMP-25	W623BMP-25
3"	0.625	3.579	0.750NPT	W423BMP-3	W623BMP-3
4"	0.625	4.682	0.750NPT	W423BMP-4	W623BMP-4
1-1/2" x 1/4"	0.625	1.984	0.250NPT	W423BMP-15X.25	W623BMP-15X.25

CLAMP ADAPTERS

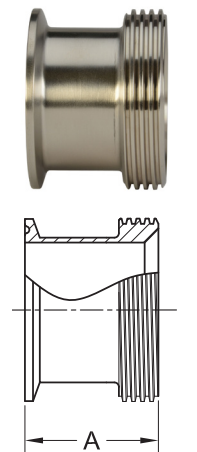
CLAMP X PLAIN BEVEL SEAT ADAPTERS W/ HEX NUT 17MP-14

TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1"	3.000	W417MP-14-1	W617MP-14-1
1-1/2"	3.000	W417MP-14-15	W617MP-14-15
2"	3.000	W417MP-14-2	W617MP-14-2
2-1/2"	3.500	W417MP-14-25	W617MP-14-25
3"	3.750	W417MP-14-3	W617MP-14-3
4"	4.000	W417MP-14-4	W617MP-14-4



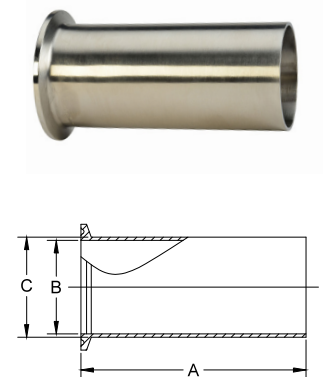
CLAMP X THREADED BEVEL SEAT ADAPTERS 17MP-15

TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1"	1.843	W417MP-15-1	W617MP-15-1
1-1/2"	1.843	W417MP-15-15	W617MP-15-15
2"	1.875	W417MP-15-2	W617MP-15-2
2-1/2"	2.000	W417MP-15-25	W617MP-15-25
3"	2.031	W417MP-15-3	W617MP-15-3
4"	2.156	W417MP-15-4	W617MP-15-4



TYGON® HOSE ADAPTERS 14MPHT

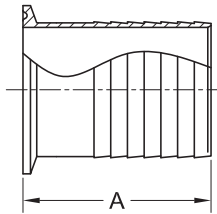
TUBE O.D.	A	B	C	316L PART NUMBER
1/2"	4.000	0.370	0.500	W614MPHT-.50
3/4"	4.000	0.620	0.750	W614MPHT-.75
1"	4.500	0.870	1.000	W614MPHT-1
1-1/2"	4.500	1.370	1.500	W614MPHT-15
2"	4.500	1.870	2.000	W614MPHT-2
2-1/2"	4.500	2.370	2.500	W614MPHT-25
3"	4.500	2.870	3.000	W614MPHT-3
4"	4.625	3.834	4.000	W614MPHT-4
6"	6.000	5.782	6.000	W614MPHT-6





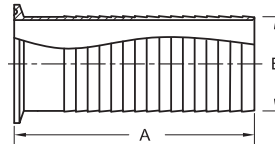
## CLAMP ADAPTERS

### RUBBER HOSE ADAPTERS 14MPHR



TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1/2"	1.500	N/A	W614MPHR-.50
3/4"	1.500	N/A	W614MPHR-.75
1"	1.688	W414MPHR-1	W614MPHR-1
1-1/2"	1.688	W414MPHR-15	W614MPHR-15
2"	2.312	W414MPHR-2	W614MPHR-2
2-1/2"	2.344	W414MPHR-25	W614MPHR-25
3"	3.094	W414MPHR-3	W614MPHR-3
4"	3.406	W414MPHR-4	W614MPHR-4
6"	3.406	W414MPHR-6	W614MPHR-6
8"	3.406	W414MPHR-8	W614MPHR-8
1-1/2"x1"	1.688	W414MPHR-15X1	N/A

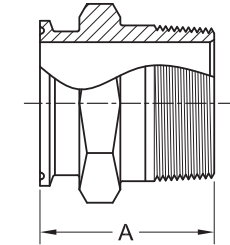
### BREWERY HOSE BARB ADAPTERS 14MPHRL



TUBE O.D.	A	B	304 PART NUMBER
1	3.500	1.030	W414MPHRL-1
1-1/2"	5.000	1.530	W414MPHRL-15
2"	5.000	2.030	W414MPHRL-2
2-1/2"	5.500	2.530	W414MPHRL-25
3"	5.500	3.030	W414MPHRL-3
4"	5.500	4.030	W414MPHRL-4

## CLAMP ADAPTERS

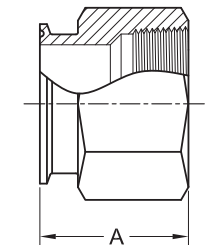
### MALE NPT ADAPTERS 21MP



TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1/2"	2.000	N/A	W621MP-.50
3/4"	2.000	N/A	W621MP-.75
1"	2.464	W421MP-1	W621MP-1
1-1/2"	2.583	W421MP-15	W621MP-15
2"	2.638	W421MP-2	W621MP-2
2-1/2"	2.874	W421MP-25	W621MP-25
3"	3.000	W421MP-3	W621MP-3
4"	3.161	W421MP-4	W621MP-4

\*Reducing sizes available

### FEMALE NPT ADAPTERS 22MP

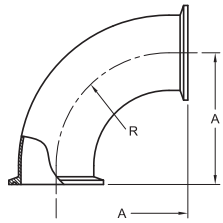


TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1/2"	1.500	N/A	W622MP-.50
3/4"	1.625	N/A	W622MP-.75
1"	1.630	W422MP-1	W622MP-1
1-1/2"	2.250	W422MP-15	W622MP-15
2"	2.187	W422MP-2	W622MP-2
2-1/2"	2.187	W422MP-25	W622MP-25
3"	2.189	W422MP-3	W622MP-3
4"	3.652	W422MP-4	W622MP-4

\*Reducing sizes available

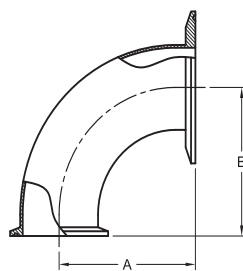
CLAMP ELBOWS

90° CLAMP ELBOWS 2CMP



TUBE O.D.	A	R	304 PART NUMBER	316L PART NUMBER
1/2"	1.625	1.125	N/A	W62CMP-.50
3/4"	1.625	1.125	N/A	W62CMP-.75
1"	2.000	1.500	W42CMP-1	W62CMP-1
1-1/2"	2.750	2.250	W42CMP-15	W62CMP-15
2"	3.500	3.000	W42CMP-2	W62CMP-2
2-1/2"	4.250	3.750	W42CMP-25	W62CMP-25
3"	5.000	4.500	W42CMP-3	W62CMP-3
4"	6.625	6.000	W42CMP-4	W62CMP-4
6"	9.875	9.000	W42CMP-6	W62CMP-6

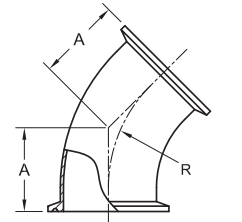
90° NON-TAPERED REDUCING CLAMP ELBOWS 2CMP-31MP



TUBE O.D.	A	B	304 PART NUMBER	316L PART NUMBER
1-1/2" X 1"	2.000	2.000	W42CMP-31MP-15X1	W62CMP-31MP-15X1
2" X 1"	2.000	2.000	W42CMP-31MP-2X1	W62CMP-31MP-2X1
2" X 1-1/2"	2.750	2.750	W42CMP-31MP-2X15	W62CMP-31MP-2X15
2-1/2" X 1-1/2"	2.750	2.750	W42CMP-31MP-25X15	W62CMP-31MP-25X15
2-1/2" X 2"	3.500	3.500	W42CMP-31MP-25X2	W62CMP-31MP-25X2
3" X 1-1/2"	2.750	2.750	W42CMP-31MP-3X15	W62CMP-31MP-3X15
3" X 2"	3.500	3.500	W42CMP-31MP-3X2	W62CMP-31MP-3X2
3" X 2-1/2"	4.250	4.250	W42CMP-31MP-3X25	W62CMP-31MP-3X25
4" X 2-1/2"	4.250	4.250	W42CMP-31MP-4X25	W62CMP-31MP-4X25
4" X 3"	5.125	5.000	W42CMP-31MP-4X3	W62CMP-31MP-4X3

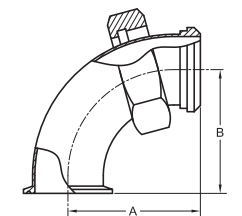
CLAMP ELBOWS

45° CLAMP ELBOWS 2KMP



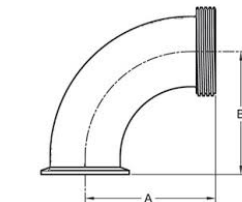
TUBE O.D.	A	R	304 PART NUMBER	316L PART NUMBER
1/2"	0.966	1.125	N/A	W62KMP-.50
3/4"	0.966	1.125	N/A	W62KMP-.75
1"	1.125	1.500	W42KMP-1	W62KMP-1
1-1/2"	1.437	2.250	W42KMP-15	W62KMP-15
2"	1.750	3.000	W42KMP-2	W62KMP-2
2-1/2"	2.062	3.750	W42KMP-25	W62KMP-25
3"	2.375	4.500	W42KMP-3	W62KMP-3
4"	3.125	6.000	W42KMP-4	W62KMP-4
6"	4.625	9.000	W42KMP-6	W62KMP-6

90° CLAMP BY PLAIN BEVEL SEAT WITH HEX NUT ELBOWS 2FMP-14



TUBE O.D.	A	B	304 PART NUMBER	316L PART NUMBER
1"	2.218	2.000	W42FMP-14-1	W62FMP-14-1
1-1/2"	2.968	2.750	W42FMP-14-15	W62FMP-14-15
2"	3.750	3.500	W42FMP-14-2	W62FMP-14-2
2-1/2"	4.625	4.250	W42FMP-14-25	W62FMP-14-25
3"	5.406	5.000	W42FMP-14-3	W62FMP-14-3
4"	7.031	6.625	W42FMP-14-4	W62FMP-14-4

90° CLAMP BY THREAD BEVEL SEAT ELBOWS 2FMP-15

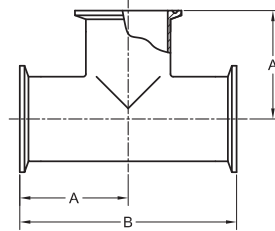


TUBE O.D.	A	B	304 PART NUMBER	316L PART NUMBER
1"	2.218	2.000	W42FMP-15-1	W62FMP-15-1
1-1/2"	2.968	2.750	W42FMP-15-15	W62FMP-15-15
2"	3.750	3.500	W42FMP-15-2	W62FMP-15-2
2-1/2"	4.625	4.250	W42FMP-15-25	W62FMP-15-25
3"	5.406	5.000	W42FMP-15-3	W62FMP-15-3
4"	7.031	6.625	W42FMP-15-4	W62FMP-15-4



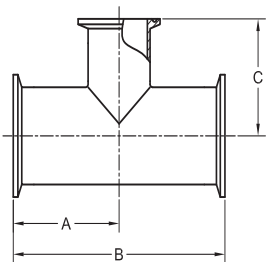
## CLAMP TEES

### CLAMP TEES 7MP



TUBE O.D.	A	B	304 PART NUMBER	316L PART NUMBER
1/2"	2.375	4.750	N/A	W67MP-.50
3/4"	2.500	5.000	N/A	W67MP-.75
1"	2.375	4.750	W47MP-1	W67MP-1
1-1/2"	2.750	5.500	W47MP-15	W67MP-15
2"	3.500	7.000	W47MP-2	W67MP-2
2-1/2"	3.500	7.000	W47MP-25	W67MP-25
3"	3.750	7.500	W47MP-3	W67MP-3
4"	4.500	9.000	W47MP-4	W67MP-4
6"	6.500	13.000	W47MP-6	W67MP-6

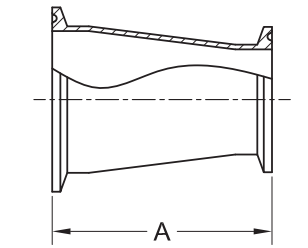
### CLAMP REDUCING TEES 7RMP



TUBE O.D.	A	B	C	304 PART NUMBER	316L PART NUMBER
1-1/2" X 1"	2.156	4.312	1.875	W47RMP-15X1	W67RMP-15X1
2" X 1"	2.562	5.125	2.125	W47RMP-2X1	W67RMP-2X1
2" X 1-1/2"	2.562	5.125	2.406	W47RMP-2X15	W67RMP-2X15
2-1/2" X 1-1/2"	2.844	5.688	2.656	W47RMP-25X15	W67RMP-25X15
2-1/2" X 2"	2.844	5.688	2.812	W47RMP-25X2	W67RMP-25X2
3" X 1-1/2"	3.093	6.188	2.906	W47RMP-3X15	W67RMP-3X15
3" X 2"	3.093	6.188	3.063	W47RMP-3X2	W67RMP-3X2
3" X 2-1/2"	3.093	6.188	3.093	W47RMP-3X25	W67RMP-3X25
4" X 1-1/2"	4.063	8.125	3.406	W47RMP-4X15	W67RMP-4X15
4" X 2"	4.063	8.125	3.563	W47RMP-4X2	W67RMP-4X2
4" X 2-1/2"	4.063	8.125	3.594	W47RMP-4X25	W67RMP-4X25
4" X 3"	4.063	8.125	3.594	W47RMP-4X3	W67RMP-4X3
6" X 3"	6.315	12.63	6.125	N/A	W67RMP-6X3
6" X 4"	6.375	12.75	6.375	N/A	W67RMP-6X4

## CLAMP REDUCERS

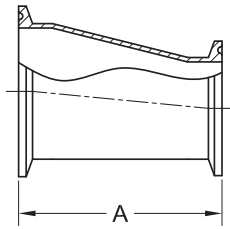
### CLAMP CONCENTRIC REDUCERS 31-14MP



TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1" X 1/2"	3.000	N/A	W631-14MP-1X.50
1" X 3/4"	2.000	N/A	W631-14MP-1X.75
1-1/2" X 1"	3.000	W431-14MP-15X1	W631-14MP-15X1
2" X 1"	5.000	W431-14MP-2X1	W631-14MP-2X1
2" X 1-1/2"	3.000	W431-14MP-2X15	W631-14MP-2X15
2-1/2" X 1"	6.000	W431-14MP-25X1	W631-14MP-25X1
2-1/2" X 1-1/2"	5.000	W431-14MP-25X15	W631-14MP-25X15
2-1/2" X 2"	3.000	W431-14MP-25X2	W631-14MP-25X2
3" X 1-1/2"	7.000	W431-14MP-3X15	W631-14MP-3X15
3" X 2"	5.000	W431-14MP-3X2	W631-14MP-3X2
3" X 2-1/2"	3.000	W431-14MP-3X25	W631-14MP-3X25
4" X 2"	9.125	W431-14MP-4x2	W631-14MP-4x2
4" X 2-1/2"	7.125	W431-14MP-4x25	W631-14MP-4x25
4" X 3"	5.125	W431-14MP-4x3	W631-14MP-4x3
6" X 3"	6.875	W431-14MP-6x3	W631-14MP-6x3
6" X 4"	7.000	W431-14MP-6x4	W631-14MP-6x4
8" X 4"	7.500	W431-14MP-8x4	W631-14MP-8x4
8" X 6"	7.750	W431-14MP-8x6	W631-14MP-8x6

CLAMP REDUCERS

CLAMP ECCENTRIC REDUCERS 32-14MP



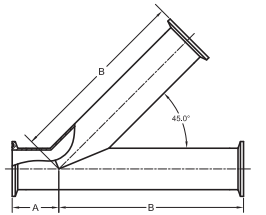
TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1-1/2" X 1"	3.000	W432-14MP-15X1	W632-14MP-15X1
2" X 1"	5.000	W432-14MP-2X1	W632-14MP-2X1
2" X 1-1/2"	3.000	W432-14MP-2X15	W632-14MP-2X15
2-1/2" X 1-1/2"	5.000	W432-14MP-25X15	W632-14MP-25X15
2-1/2" X 2"	3.000	W432-14MP-25X2	W632-14MP-25X2
3" X 1-1/2"	7.000	W432-14MP-3X15	W632-14MP-3X15
3" X 2"	5.000	W432-14MP-3X2	W632-14MP-3X2
3" X 2-1/2"	3.000	W432-14MP-3X25	W632-14MP-3X25
4" X 2"	9.125	W432-14MP-4X2	W632-14MP-4X2
4" X 2-1/2"	7.125	W432-14MP-4X25	W632-14MP-4X25
4" X 3"	5.125	W432-14MP-4X3	W632-14MP-4X3
6" X 3"	6.875	W432-14MP-6X3	W632-14MP-6X3
6" X 4"	7.000	W432-14MP-6X4	W632-14MP-6X4
8" X 4"	7.500	W432-14MP-8X4	W632-14MP-8X4
8" X 6"	7.750	W432-14MP-8X6	W632-14MP-8X6

MISCELLANEOUS CLAMP CONFIGURATIONS

CLAMP LATERALS 28AMP



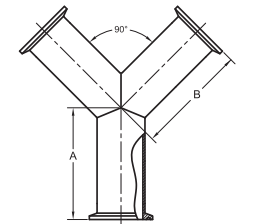
TUBE O.D.	A	B	304 PART NUMBER	316L PART NUMBER
1"	1.500	5.500	W428AMP-1	W628AMP-1
1-1/2"	1.687	6.688	W428AMP-15	W628AMP-15
2"	2.125	7.625	W428AMP-2	W628AMP-2
2-1/2"	2.000	9.000	W428AMP-25	W628AMP-25
3"	2.375	9.375	W428AMP-3	W628AMP-3
4"	2.687	11.375	W428AMP-4	W628AMP-4



CLAMP TRUE Y 28BMP



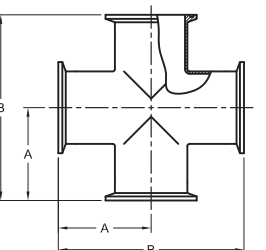
TUBE O.D.	A	B	304 PART NUMBER	316L PART NUMBER
1"	2.500	2.938	W428BMP-1	W628BMP-1
1-1/2"	2.500	2.938	W428BMP-15	W628BMP-15
2"	3.125	3.750	W428BMP-2	W628BMP-2
2-1/2"	3.870	4.625	W428BMP-25	W628BMP-25
3"	4.500	5.375	W428BMP-3	W628BMP-3
4"	6.000	6.000	W428BMP-4	W628BMP-4



CLAMP CROSSES 9MP



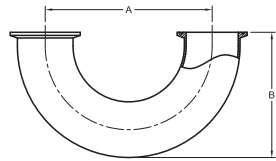
TUBE O.D.	A	B	304 PART NUMBER	316L PART NUMBER
1/2"	1.250	2.500	W49MP-.50	W69MP-.50
3/4"	2.375	4.750	W49MP-.75	W69MP-.75
1"	2.375	4.750	W49MP-1	W69MP-1
1-1/2"	2.750	5.500	W49MP-15	W69MP-15
2"	3.500	7.000	W49MP-2	W69MP-2
2-1/2"	3.500	7.000	W49MP-25	W69MP-25
3"	3.750	7.500	W49MP-3	W69MP-3
4"	4.500	9.000	W49MP-4	W69MP-4





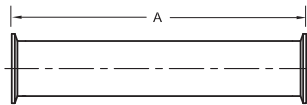
MISCELLANEOUS CLAMP CONFIGURATIONS

CLAMP 180° RETURN BENDS 2UMP



TUBE O.D.	A	B	304 PART NUMBER	316L PART NUMBER
1"	3.000	2.500	W42UMP-1	W62UMP-1
1-1/2"	4.500	3.500	W42UMP-15	W62UMP-15
2"	6.000	4.500	W42UMP-2	W62UMP-2
2-1/2"	7.500	5.500	W42UMP-25	W62UMP-25
3"	9.000	6.500	W42UMP-3	W62UMP-3
4"	12.000	8.625	W42UMP-4	W62UMP-4

SPOOL ASSEMBLY SPOOL



TUBE O.D.	A (minimum length)	304 PART NUMBER	316L PART NUMBER
1/2"	2.250	N/A	W6SPOOL*-.50
3/4"	2.250	N/A	W6SPOOL*-.75
1"	2.250	W4SPOOL*-1	W6SPOOL*-1
1-1/2"	2.250	W4SPOOL*-15	W6SPOOL*-15
2"	2.250	W4SPOOL*-2	W6SPOOL*-2
2-1/2"	2.250	W4SPOOL*-25	W6SPOOL*-25
3"	2.250	W4SPOOL*-3	W6SPOOL*-3
4"	2.250	W4SPOOL*-4	W6SPOOL*-4
6"	2.250	W4SPOOL*-6	W6SPOOL*-6

\* Various lengths and end connections available.

LET OUR EXPERIENCED SALES TECHNICIANS HELP WITH YOUR CUSTOM FABRICATION PROJECTS. CALL FOR DETAILS.



CLAMP GASKETS

CLAMP GASKETS 40MP - 42MP



SIZE	GASKET O.D.	GASKET I.D.	EPDM	PTFE	FKM	BUNA	WHITE SILICONE
1/2"	.860	.460	42MPE-.50	42MPG-.50	42MPSFY-.50	42MPU-.50	42MPX-.50
3/4"	.860	.640	42MPE-.75	42MPG-.75	42MPSFY-.75	42MPU-.75	42MPX-.75
1"	1.984	0.870	40MPE-1	40MPG-1	40MPSFY-1	40MPU-1	40MPX-1
1-1/2"	1.984	1.370	40MPE-15	40MPG-15	40MPSFY-15	40MPU-15	40MPX-15
2"	2.516	1.870	40MPE-2	40MPG-2	40MPSFY-2	40MPU-2	40MPX-2
2-1/2"	3.047	2.370	40MPE-25	40MPG-25	40MPSFY-25	40MPU-25	40MPX-25
3"	3.579	2.870	40MPE-3	40MPG-3	40MPSFY-3	40MPU-3	40MPX-3
4"	4.682	3.834	40MPE-4	40MPG-4	40MPSFY-4	40MPU-4	40MPX-4
5"	6.507	5.817	40MPE-5	40MPG-5	40MPSFY-5	40MPU-5	40MPX-5
6"	6.562	5.782	40MPE-6	40MPG-6	40MPSFY-6	40MPU-6	40MPX-6
8"	8.602	7.782	40MPE-8	40MPG-8	40MPSFY-8	40MPU-8	40MPX-8
10"	9.782	10.570	40MPE-10	40MPG-10	40MPSFY-10	40MPU-10	40MPX-10
12"	11.760	12.570	40MPE-12	40MPG-12	40MPSFY-12	40MPU-12	40MPX-12

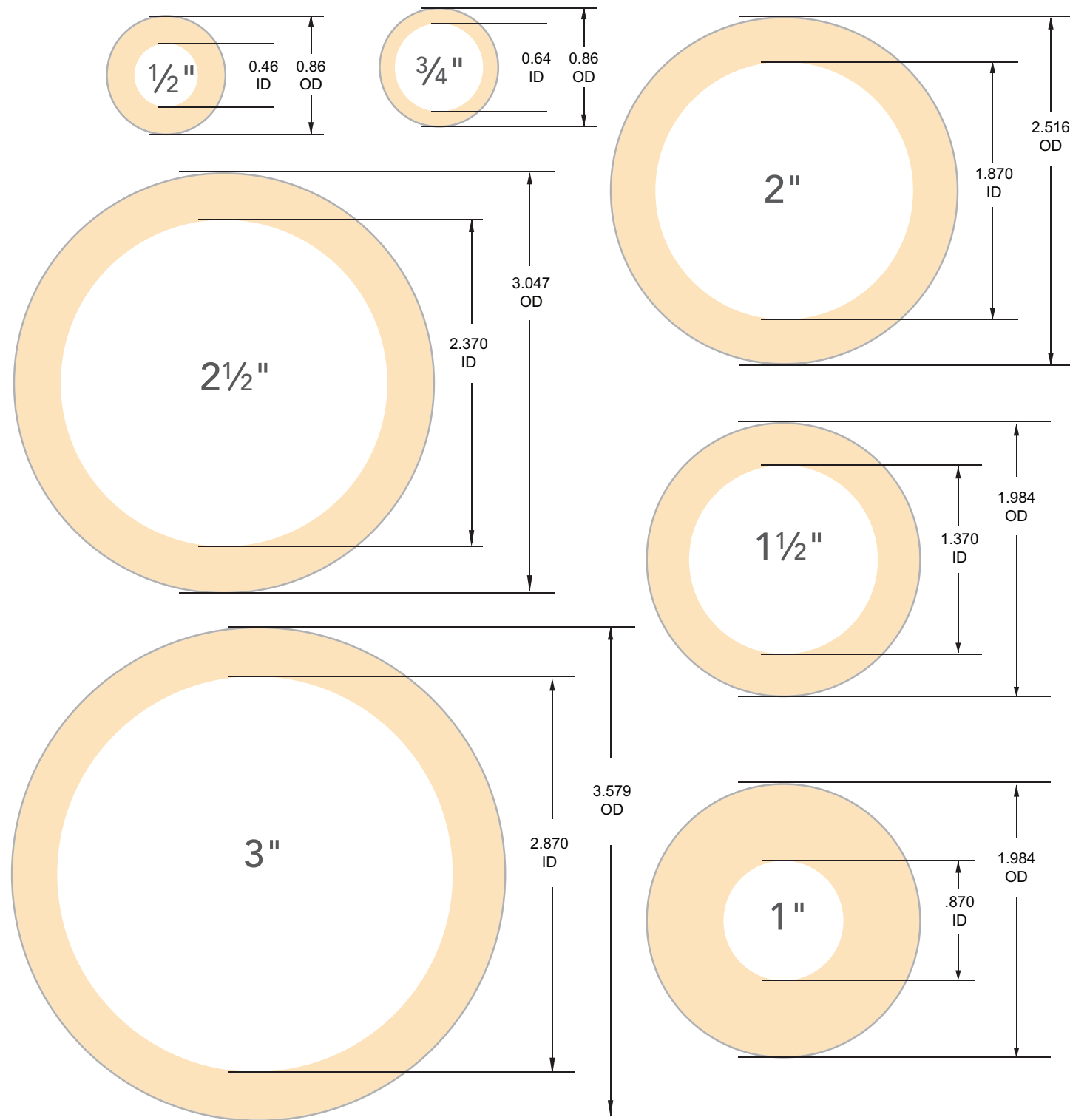
GASKET MATERIALS - COLOR CODING

MATERIAL	PART # ID	COLOR	COLOR CODE	USEFUL TEMPERATURE
BUNA	U	BLACK	ONE RED DOT	-25°F to 225°F
BUNA	UW	WHITE	ONE RED DOT	-25°F to 225°F
EPDM SULFUR CURED	E	BLACK	ONE GREEN DOT	-40°F to 275°F
EPDM PEROXIDE CURED	E	BLACK	THREE GREEN DOTS	-40°F to 275°F
FKM	SFY	BLACK / BROWN	ONE WHITE ONE YELLOW	-15°F to 375°F
SILICONE PEROXIDE CURED	XW	WHITE	ONE PINK DOT	-50°F to 400°F
SILICONE PLATINUM CURED	XC	CLEAR	NO DOT	-50°F to 400°F
PTFE	G	WHITE	NO DOT	-10°F to 300°F
PTFE WITH 50% 316 PARTICLES	GTS	SILVER	NO DOT	-20°F to 450°F

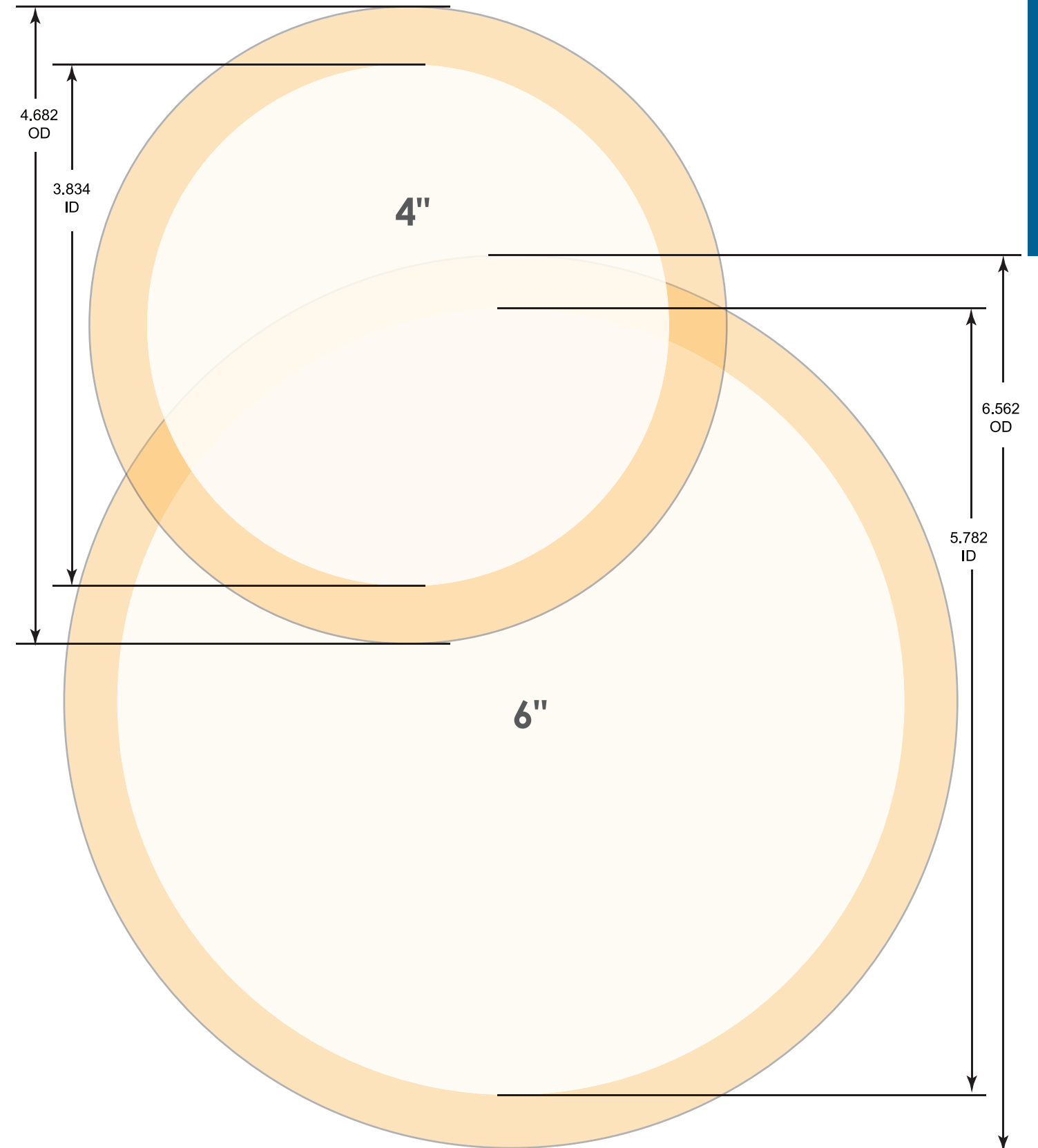


Many sanitary elastomeric materials are the same in appearance. Sanitary gaskets are specifically color coded with dots to easily identify the gasket material. Please refer to this chart to visually identify each material.

# CLAMP GASKET SIZING GUIDE



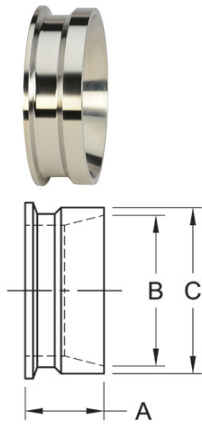
# CLAMP GASKET SIZING GUIDE





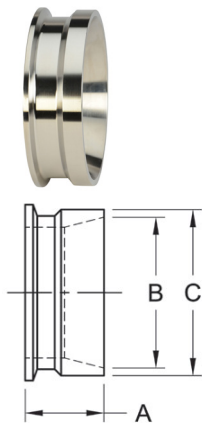
## PIPE SIZE ADAPTERS

### CLAMP X SCHEDULE 10S WELD ADAPTERS 19MPX



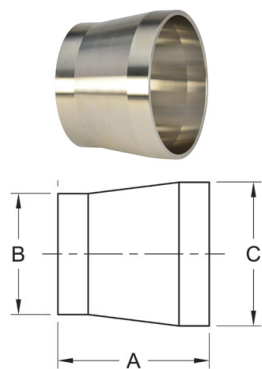
PIPE SIZE	A	B	C	304 PART NUMBER	316L PART NUMBER
1/2"	1.500	0.674	0.840	<b>W419MPX-.50</b>	<b>W619MPX-.50</b>
3/4"	1.500	0.884	1.050	<b>W419MPX-.75</b>	<b>W619MPX-.75</b>
1"	1.125	1.097	1.315	<b>W419MPX-1</b>	<b>W619MPX-1</b>
1-1/2"	1.125	1.682	1.900	<b>W419MPX-15</b>	<b>W619MPX-15</b>
2"	1.125	2.157	2.375	<b>W419MPX-2</b>	<b>W619MPX-2</b>
2-1/2"	1.125	2.635	2.875	<b>W419MPX-25</b>	<b>W619MPX-25</b>
3"	1.125	3.260	3.500	<b>W419MPX-3</b>	<b>W619MPX-3</b>
4"	1.125	4.260	4.500	<b>W419MPX-4</b>	<b>W619MPX-4</b>

### CLAMP X SCHEDULE 40S WELD ADAPTERS 19MPXLI



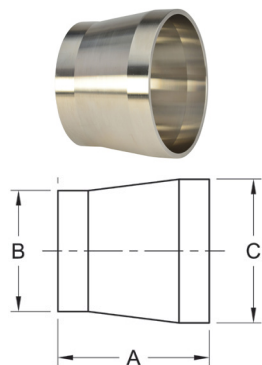
PIPE SIZE	A	B	C	304 PART NUMBER	316L PART NUMBER
1"	1.125	1.049	1.315	<b>W419MPXLI-1</b>	<b>W619MPXLI-1</b>
1-1/2"	1.125	1.610	1.900	<b>W419MPXLI-15</b>	<b>W619MPXLI-15</b>
2"	1.125	2.067	2.375	<b>W419MPXLI-2</b>	<b>W619MPXLI-2</b>
3"	1.125	3.068	3.500	<b>W419MPXLI-3</b>	<b>W619MPXLI-3</b>
4"	1.125	4.026	4.500	<b>W419MPXLI-4</b>	<b>W619MPXLI-4</b>

### TUBE OD WELD X SCHEDULE 10S WELD ADAPTERS 19WX



PIPE SIZE	A	B	C	304 PART NUMBER	316L PART NUMBER
1/2"	1.500	0.500	0.840	<b>W419WX-.50</b>	<b>W619WX-.50</b>
3/4"	2.00	0.750	1.050	<b>W419WX-.75</b>	<b>W619WX-.75</b>
1"	2.00	1.000	1.315	<b>W419WX-1</b>	<b>W619WX-1</b>
1-1/2"	2.500	1.500	1.900	<b>W419WX-15</b>	<b>W619WX-15</b>
2"	2.500	2.000	2.375	<b>W419WX-2</b>	<b>W619WX-2</b>
2-1/2"	2.500	2.500	2.875	<b>W419WX-25</b>	<b>W619WX-25</b>
3"	2.500	3.000	3.500	<b>W419WX-3</b>	<b>W619WX-3</b>
4"	3.000	4.000	4.500	<b>W419WX-4</b>	<b>W619WX-4</b>

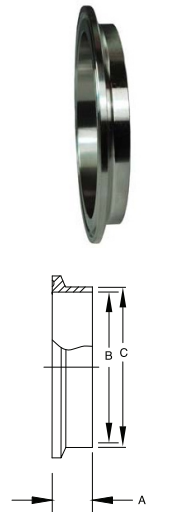
### TUBE OD WELD X SCHEDULE 40S WELD ADAPTERS 19WXLI



PIPE SIZE	A	B	C	304 PART NUMBER	316L PART NUMBER
1-1/2"	2.000	1.500	1.900	<b>W419WXLI-15</b>	<b>W619WXLI-15</b>
2"	2.500	2.000	2.375	<b>W419WXLI-2</b>	<b>W619WXLI-2</b>
3"	3.000	3.000	3.500	<b>W419WXLI-3</b>	<b>W619WXLI-3</b>
4"	3.000	4.000	4.500	<b>W419WXLI-4</b>	<b>W619WXLI-4</b>

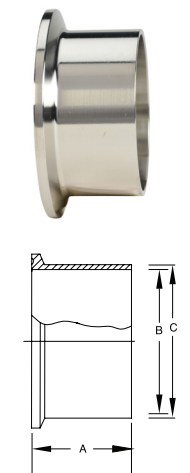
## PIPE SIZE FERRULES

### SCHEDULE 10 SHORT WELD FERRULES 14WMX



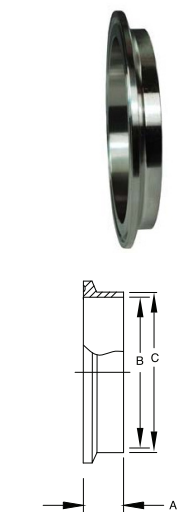
PIPE SIZE	A	B	C	304 PART NUMBER	316L PART NUMBER
1"	0.500	1.097	1.315	<b>W414WMX-1</b>	<b>W614WMX-1</b>
1-1/2"	0.500	1.682	1.900	<b>W414WMX-15</b>	<b>W614WMX-15</b>
2"	0.500	2.157	2.375	<b>W414WMX-2</b>	<b>W614WMX-2</b>
2-1/2"	0.500	2.635	2.875	<b>W414WMX-25</b>	<b>W614WMX-25</b>
3"	0.500	3.260	3.500	<b>W414WMX-3</b>	<b>W614WMX-3</b>
4"	0.625	4.260	4.500	<b>W414WMX-4</b>	<b>W614WMX-4</b>
6"	0.875	6.357	6.625	<b>W414WMX-6</b>	<b>W614WMX-6</b>
8"	0.875	8.329	8.625	<b>W414WMX-8</b>	<b>W614WMX-8</b>

### SCHEDULE 10 LONG WELD FERRULES 14AM7X



PIPE SIZE	A	B	C	304 PART NUMBER	316L PART NUMBER
1"	1.125	1.097	1.315	<b>W414AM7X-1</b>	<b>W614AM7X-1</b>
1-1/2"	1.125	1.682	1.900	<b>W414AM7X-15</b>	<b>W614AM7X-15</b>
2"	1.125	2.157	2.375	<b>W414AM7X-2</b>	<b>W614AM7X-2</b>
2-1/2"	1.125	2.635	2.875	<b>W414AM7X-25</b>	<b>W614AM7X-25</b>
3"	1.125	3.260	3.500	<b>W414AM7X-3</b>	<b>W614AM7X-3</b>
4"	1.125	4.260	4.500	<b>W414AM7X-4</b>	<b>W614AM7X-4</b>

### SCHEDULE 5 SHORT WELD FERRULES 14WMV



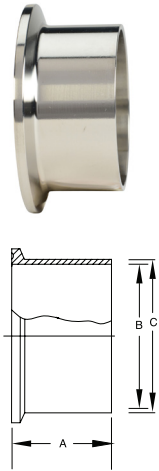
PIPE SIZE	A	B	C	304 PART NUMBER	316L PART NUMBER
1"	0.500	1.315	1.185	<b>W414WMV-1</b>	<b>W614WMV-1</b>
1-1/2"	0.500	1.900	1.770	<b>W414WMV-15</b>	<b>W614WMV-15</b>
2"	0.500	2.375	2.245	<b>W414WMV-2</b>	<b>W614WMV-2</b>
2-1/2"	0.500	2.875	2.709	<b>W414WMV-25</b>	<b>W614WMV-25</b>
3"	0.500	3.500	3.334	<b>W414WMV-3</b>	<b>W614WMV-3</b>
4"	0.625	4.500	4.334	<b>W414WMV-4</b>	<b>W614WMV-4</b>
6"	0.875	6.625	6.407	<b>W414WMV-6</b>	<b>W614WMV-6</b>
8"	0.875	8.625	8.407	<b>W414WMV-8</b>	<b>W614WMV-8</b>

### PIPE SIZE FERRULES

#### SCHEDULE 5 LONG WELD FERRULES 14AM7V



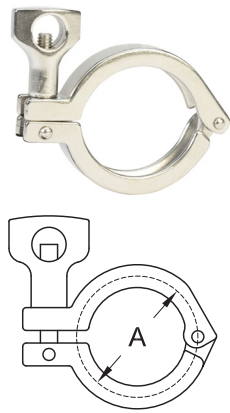
PIPE SIZE	A	B	C	304 PART NUMBER	316L PART NUMBER
1"	1.125	1.185	1.315	W414AM7V-1	W614AM7V-1
1-1/2"	1.125	1.770	1.900	W414AM7V-15	W614AM7V-15
2"	1.125	2.245	2.375	W414AM7V-2	W614AM7V-2
2-1/2"	1.125	2.709	2.875	W414AM7V-25	W614AM7V-25
3"	1.125	3.334	3.500	W414AM7V-3	W614AM7V-3
4"	1.125	4.334	4.500	W414AM7V-4	W614AM7V-4
6"	1.500	6.407	6.625	W414AM7V-6	W614AM7V-6



### PIPE SIZE CLAMPS

#### SCHEDULE 5 SINGLE PIN CLAMPS 13MHV

PIPE SIZE	A	304 PART NUMBER	316L PART NUMBER
1"	2.122	W413MHV-1	W613MHV-1
1-1/2"	2.654	W413MHV-15	W613MHV-15
2"	3.185	W413MHV-2	W613MHV-2
2-1/2"	3.717	W413MHV-25	W613MHV-25
3"	4.263	W413MHV-3	W613MHV-3
4"	5.263	W413MHV-4	W613MHV-4

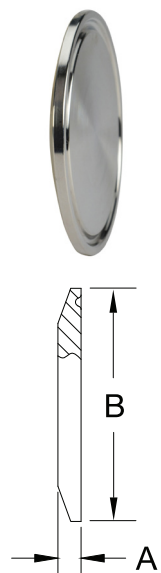


### PIPE SIZE CAPS

#### SCHEDULE 5 SOLID END CAPS 16AMV



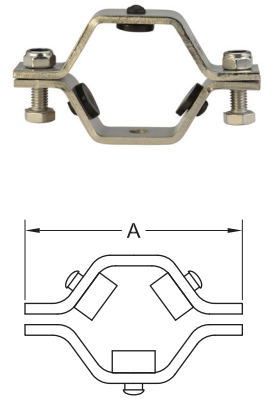
PIPE SIZE	A	B	304 PART NUMBER	316L PART NUMBER
1"	0.250	1.984	W416AMV-1	W616AMV-1
1-1/2"	0.250	2.516	W416AMV-15	W616AMV-15
2"	0.250	3.047	W416AMV-2	W616AMV-2
2-1/2"	0.250	3.579	W416AMV-25	W616AMV-25
3"	0.313	4.125	W416AMV-3	W616AMV-3
4"	0.313	5.125	W416AMV-4	W616AMV-4
6"	0.437	7.195	W416AMV-6	W616AMV-6
8"	0.437	9.200	W416AMV-8	W616AMV-8



### PIPE SIZE HANGERS

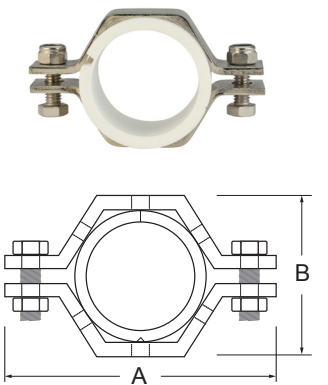
#### HEX HANGERS WITH RUBBER GROMMETS 24RV

PIPE SIZE	A	PART NUMBER
1"	3.625	W424RV-1
1-1/2"	3.625	W424RV-15
2"	4.312	W424RV-2
2-1/2"	4.875	W424RV-25
3"	5.375	W424RV-3
4"	6.562	W424RV-4
6"	9.000	W424RV-6



#### HEX HANGERS WITH POLYPROPYLENE SLEEVE 24PV

PIPE SIZE	A	B	PART NUMBER
1"	3.625	2.125	W424PV-1
1-1/2"	4.312	2.625	W424PV-15
2"	4.875	3.125	W424PV-2
2-1/2"	4.812	3.125	W424PV-25
3"	6.000	4.25	W424PV-3
4"	7.500	5.625	W424PV-4
6"	9.750	7.375	W424PV-6



### PIPE SIZE GASKETS

#### PIPE SIZE GASKETS 40MP-V



PIPE SIZE	GASKET O.D.	GASKET I.D.	EPDM	PTFE	FKM	BUNA
1"	1.980	1.100	40MPE-V-1	40MPG-V-1	40MPSFY-V-1	40MPU-V-1
1-1/2"	2.520	1.680	40MPE-V-15	40MPG-V-15	40MPSFY-V-15	40MPU-V-15
2"	3.050	2.160	40MPE-V-2	40MPG-V-2	40MPSFY-V-2	40MPU-V-2
2-1/2"	3.580	2.640	40MPE-V-25	40MPG-V-25	40MPSFY-V-25	40MPU-V-25
3"	4.130	3.260	40MPE-V-3	40MPG-V-3	40MPSFY-V-3	40MPU-V-3
4"	5.130	4.260	40MPE-V-4	40MPG-V-4	40MPSFY-V-4	40MPU-V-4
6"	7.200	6.350	40MPE-V-6	40MPG-V-6	40MPSFY-V-6	40MPU-V-6



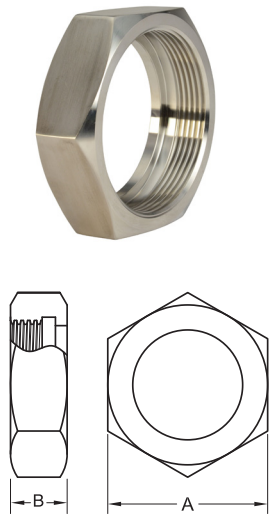
BEVEL SEAT NUTS

UNION HEX NUTS 13H



TUBE O.D.	A	B	304 PART NUMBER	316L PART NUMBER
1"	1.812	0.906	W413H-1	
1-1/2"	2.406	0.968	W413H-15	
2"	3.000	1.062	W413H-2	
2-1/2"	3.594	1.187	W413H-25	
3"	4.188	1.281	W413H-3	
4"	5.438	1.500	W413H-4	

\* Hex Nut 400 PSI Maximum

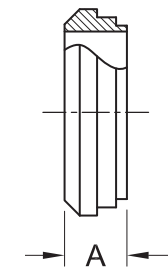


BEVEL SEAT FERRULES

SHORT PLAIN BEVEL SEAT WELD FERRULES 14PRF



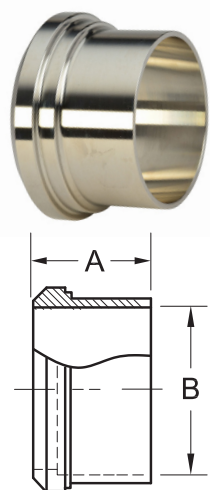
TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1"	0.718	W414PRF-1	W614PRF-1
1-1/2"	0.718	W414PRF-15	W614PRF-15
2"	0.75	W414PRF-2	W614PRF-2
2-1/2"	0.875	W414PRF-25	W614PRF-25
3"	0.906	W414PRF-3	W614PRF-3
4"	1.031	W414PRF-4	W614PRF-4



LONG PLAIN BEVEL SEAT FERRULES 14A



TUBE O.D.	A	B	304 PART NUMBER	316L PART NUMBER
1"	1.375	0.870	W414A-1	W614A-1
1-1/2"	1.500	1.370	W414A-15	W614A-15
2"	1.500	1.870	W414A-2	W614A-2
2-1/2"	1.750	2.370	W414A-25	W614A-25
3"	1.750	2.870	W414A-3	W614A-3
4"	1.750	3.834	W414A-4	W614A-4

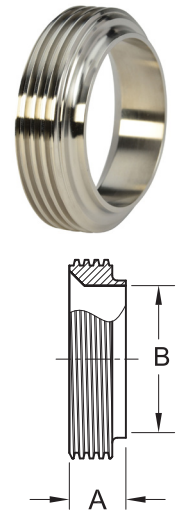


BEVEL SEAT FERRULES

SHORT THREADED BEVEL SEAT FERRULES 15TRF



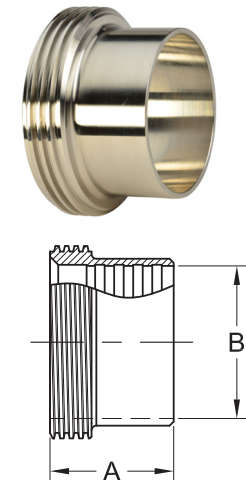
TUBE O.D.	A	B	304 PART NUMBER	316L PART NUMBER
1"	.718	0.870	W415TRF-1	W615TRF-1
1-1/2"	.718	1.370	W415TRF-15	W615TRF-15
2"	.750	1.870	W415TRF-2	W615TRF-2
2-1/2"	.875	2.370	W415TRF-25	W615TRF-25
3"	.906	2.870	W415TRF-3	W615TRF-3
4"	1.031	3.834	W415TRF-4	W615TRF-4



LONG THREADED BEVEL SEAT FERRULES 15A



TUBE O.D.	A	B	304 PART NUMBER	316L PART NUMBER
1"	1.375	0.870	W415A-1	W615A-1
1-1/2"	1.500	1.370	W415A-15	W615A-15
2"	1.500	1.870	W415A-2	W615A-2
2-1/2"	1.750	2.370	W415A-25	W615A-25
3"	1.750	2.870	W415A-3	W615A-3
4"	1.750	3.834	W415A-4	W615A-4

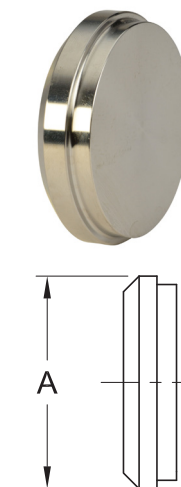


BEVEL SEAT END CAPS

PLAIN BEVEL SEAT SOLID END CAPS 16A

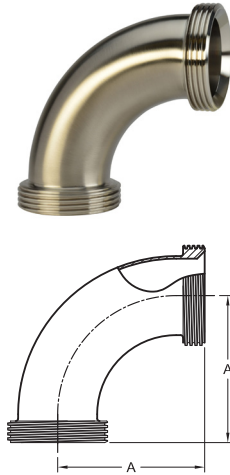


TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1"	1.312	W416A-1	W616A-1
1-1/2"	1.843	W416A-15	W616A-15
2"	2.375	W416A-2	W616A-2
2-1/2"	2.906	W416A-25	W616A-25
3"	3.437	W416A-3	W616A-3
4"	4.500	W416A-4	W616A-4



BEVEL SEAT ELBOWS

THREADED BEVEL SEAT X  
THREADED BEVEL SEAT 90° ELBOWS 2C



TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1"	2.218	W42C-1	W62C-1
1-1/2"	2.968	W42C-15	W62C-15
2"	3.750	W42C-2	W62C-2
2-1/2"	4.625	W42C-25	W62C-25
3"	5.406	W42C-3	W62C-3
4"	7.031	W42C-4	W62C-4

THREADED BEVEL SEAT X  
THREADED BEVEL SEAT 45° ELBOWS 2K



TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1"	1.343	W42K-1	W62K-1
1-1/2"	1.655	W42K-15	W62K-15
2"	2.000	W42K-2	W62K-2
2-1/2"	2.437	W42K-25	W62K-25
3"	2.781	W42K-3	W62K-3
4"	3.351	W42K-4	W62K-4

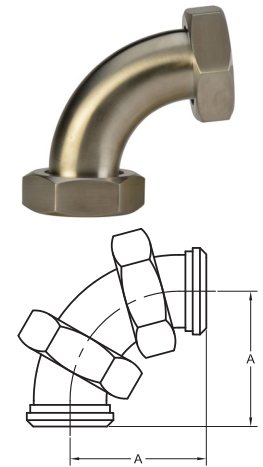
THREADED BEVEL SEAT X PLAIN  
BEVEL SEAT WITH HEX NUT 90° ELBOWS 2F



TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1"	2.218	W42F-1	W62F-1
1-1/2"	2.968	W42F-15	W62F-15
2"	3.750	W42F-2	W62F-2
2-1/2"	4.625	W42F-25	W62F-25
3"	5.406	W42F-3	W62F-3
4"	7.031	W42F-4	W62F-4

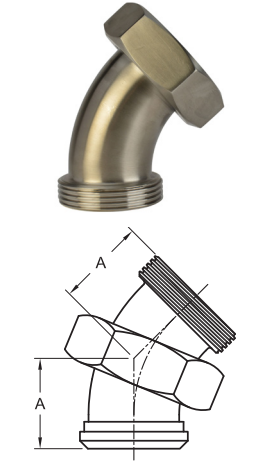
BEVEL SEAT ELBOWS

PLAIN BEVEL SEAT WITH HEX NUT X PLAIN  
BEVEL SEAT WITH HEX NUT 90° ELBOWS 2E



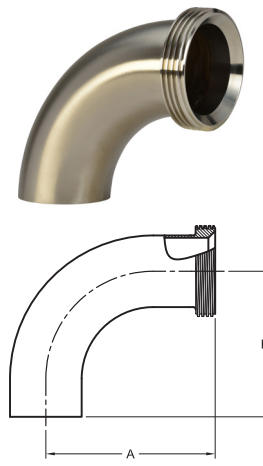
TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1"	2.218	W42E-1	W62E-1
1-1/2"	2.968	W42E-15	W62E-15
2"	3.750	W42E-2	W62E-2
2-1/2"	4.625	W42E-25	W62E-25
3"	5.406	W42E-3	W62E-3
4"	7.031	W42E-4	W62E-4

PLAIN BEVEL SEAT WITH HEX NUT X  
THREADED BEVEL SEAT 45° ELBOWS 2P



TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1"	1.343	W42P-1	W62P-1
1-1/2"	1.655	W42P-15	W62P-15
2"	2.000	W42P-2	W62P-2
2-1/2"	2.437	W42P-25	W62P-25
3"	2.781	W42P-3	W62P-3
4"	3.531	W42P-4	W62P-4

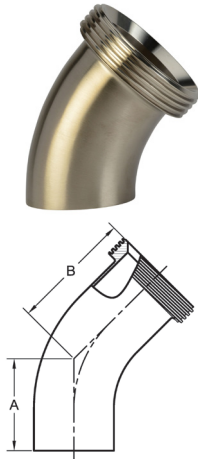
POLISHED 90° THREADED BEVEL SEAT X WELD ELBOWS 2T



TUBE O.D.	A	B	304 PART NUMBER	316L PART NUMBER
1"	2.780	2.062	W42T-1	W62T-1
1-1/2"	3.656	2.937	W42T-15	W62T-15
2"	4.812	4.062	W42T-2	W62T-2
2-1/2"	6.062	5.187	W42T-25	W62T-25
3"	7.218	6.312	W42T-3	W62T-3
4"	9.343	8.312	W42T-4	W62T-4

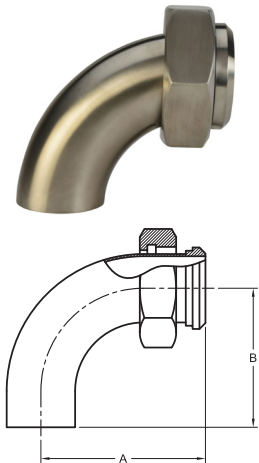
BEVEL SEAT ELBOWS

45° WELD X THREADED BEVEL SEAT ELBOWS 2KT



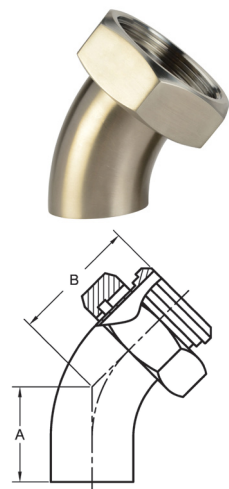
TUBE O.D.	A	B	304 PART NUMBER	316L PART NUMBER
1"	1.188	1.906	W42KT-1	W62KT-1
1-1/2"	1.625	2.343	W42KT-15	W62KT-15
2"	2.312	3.062	W42KT-2	W62KT-2
2-1/2"	3.000	3.875	W42KT-25	W62KT-25
3"	3.688	4.594	W42KT-3	W62KT-3
4"	4.812	5.843	W42KT-4	W62KT-4

90° WELD X PLAIN BEVEL SEAT ELBOWS WITH HEX NUT L2F



TUBE O.D.	A	B	304 PART NUMBER	316L PART NUMBER
1"	2.843	2.062	W4L2F-1	W6L2F-1
1-1/2"	3.656	2.937	W4L2F-15	W6L2F-15
2"	4.812	4.062	W4L2F-2	W6L2F-2
2-1/2"	6.062	5.187	W4L2F-25	W6L2F-25
3"	7.218	6.312	W4L2F-3	W6L2F-3
4"	9.343	8.312	W4L2F-4	W6L2F-4

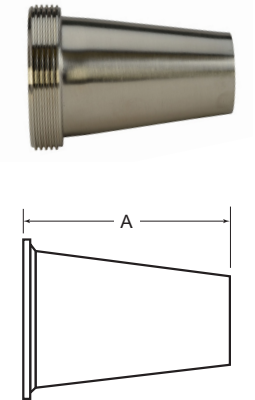
45° WELD X PLAIN BEVEL SEAT ELBOWS WITH HEX NUT 2KP



TUBE O.D.	A	B	304 PART NUMBER	316L PART NUMBER
1"	1.188	1.906	W42KP-1	W62KP-1
1-1/2"	1.625	2.343	W42KP-15	W62KP-15
2"	2.312	3.062	W42KP-2	W62KP-2
2-1/2"	3.000	3.875	W42KP-25	W62KP-25
3"	3.688	4.594	W42KP-3	W62KP-3
4"	4.812	5.843	W42KP-4	W62KP-4

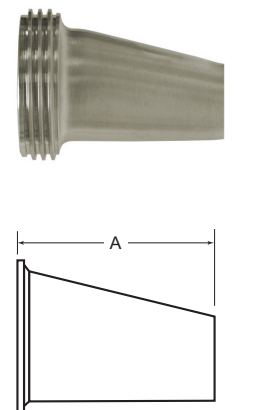
BEVEL SEAT REDUCERS

THREADED BEVEL SEAT X WELD CONCENTRIC REDUCERS 31T



TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1-1/2" X 1"	2.718	W431T-15X1	W631T-15X1
2" X 1"	4.750	W431T-2X1	W631T-2X1
2" X 1-1/2"	2.750	W431T-2X15	W631T-2X15
2-1/2" X 1-1/2"	4.875	W431T-25X15	W631T-25X15
2-1/2" X 2"	2.875	W431T-25X2	W631T-25X2
3" X 1-1/2"	6.906	W431T-3X15	W631T-3X15
3" X 2"	4.906	W431T-3X2	W631T-3X2
3" X 2-1/2"	2.906	W431T-3X25	W631T-3X25
4" X 1-1/2"	11.030	W431T-4X15	W631T-4X15
4" X 2"	9.031	W431T-4X2	W631T-4X2
4" X 2-1/2"	7.031	W431T-4X25	W631T-4X25
4" X 3"	5.031	W431T-4X3	W631T-4X3

THREADED BEVEL SEAT X WELD ECCENTRIC REDUCERS 32T

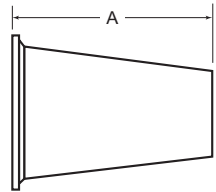
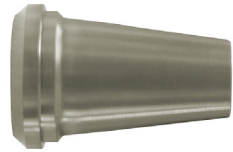


TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1-1/2" X 1"	2.718	W432T-15X1	W632T-15X1
2" X 1"	4.750	W432T-2X1	W632T-2X1
2" X 1-1/2"	2.750	W432T-2X15	W632T-2X15
2-1/2" X 1-1/2"	4.875	W432T-25X15	W632T-25X15
2-1/2" X 2"	2.875	W432T-25X2	W632T-25X2
3" X 1-1/2"	6.906	W432T-3X15	W632T-3X15
3" X 2"	4.906	W432T-3X2	W632T-3X2
3" X 2-1/2"	2.906	W432T-3X25	W632T-3X25
4" X 1-1/2"	11.030	W432T-4X15	W632T-4X15
4" X 2"	9.031	W432T-4X2	W632T-4X2
4" X 2-1/2"	7.031	W432T-4X25	W632T-4X25
4" X 3"	5.031	W432T-4X3	W632T-4X3



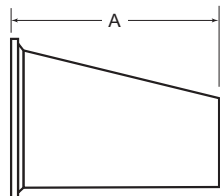
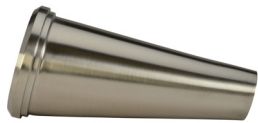
BEVEL SEAT REDUCERS

PLAIN BEVEL SEAT X WELD CONCENTRIC REDUCERS 31P



TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1-1/2" X 1"	2.718	W431P-15X1	W631P-15X1
2" X 1"	4.750	W431P-2X1	W631P-2X1
2" X 1-1/2"	2.750	W431P-2X15	W631P-2X15
2-1/2" X 1-1/2"	4.875	W431P-25X15	W631P-25X15
2-1/2" X 2"	2.875	W431P-25X2	W631P-25X2
3" X 1-1/2"	6.906	W431P-3X15	W631P-3X15
3" X 2"	4.906	W431P-3X2	W631P-3X2
3" X 2-1/2"	2.906	W431P-3X25	W631P-3X25
4" X 1-1/2"	11.030	W431P-4X15	W631P-4X15
4" X 2"	9.031	W431P-4X2	W631P-4X2
4" X 2-1/2"	7.031	W431P-4X25	W631P-4X25
4" X 3"	5.031	W431P-4X3	W631P-4X3

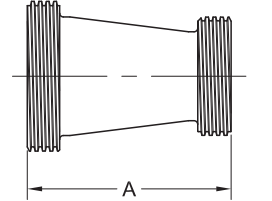
PLAIN BEVEL SEAT X WELD ECCENTRIC REDUCERS 32P



TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1-1/2" X 1"	2.718	W432P-15X1	W632P-15X1
2" X 1"	4.750	W432P-2X1	W632P-2X1
2" X 1-1/2"	2.750	W432P-2X15	W632P-2X15
2-1/2" X 1-1/2"	4.875	W432P-25X15	W632P-25X15
2-1/2" X 2"	2.875	W432P-25X2	W632P-25X2
3" X 1-1/2"	6.906	W432P-3X15	W632P-3X15
3" X 2"	4.906	W432P-3X2	W632P-3X2
3" X 2-1/2"	2.906	W432P-3X25	W632P-3X25
4" X 1-1/2"	11.030	W432P-4X15	W632P-4X15
4" X 2"	9.031	W432P-4X2	W632P-4X2
4" X 2-1/2"	7.031	W432P-4X25	W632P-4X25
4" X 3"	5.031	W432P-4X3	W632P-4X3

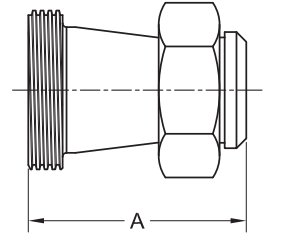
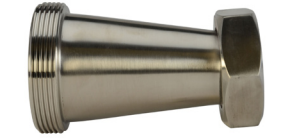
BEVEL SEAT REDUCERS

THREADED BEVEL SEAT X THREADED BEVEL SEAT CONCENTRIC REDUCERS 31TT



TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1-1/2" X 1"	3.438	W431TT-15X1	W631TT-15X1
2" X 1-1/2"	3.468	W431TT-2X15	W631TT-2X15
2-1/2" X 2"	3.625	W431TT-25X2	W631TT-25X2
3" X 2"	5.656	W431TT-3X2	W631TT-3X2
3" X 2-1/2"	3.781	W431TT-3X25	W631TT-3X25
4" X 3"	5.937	W431TT-4X3	W631TT-4X3

THREADED BEVEL SEAT X PLAIN BEVEL W/ HEX NUT CONCENTRIC REDUCERS 31TP

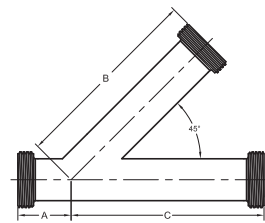


TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1-1/2" X 1"	3.438	W431TP-15X1	W631TP-15X1
2" X 1-1/2"	3.468	W431TP-2X15	W631TP-2X15
2-1/2" X 2"	3.625	W431TP-25X2	W631TP-25X2
3" X 2"	5.656	W431TP-3X2	W631TP-3X2
3" X 2-1/2"	3.781	W431TP-3X25	W631TP-3X25
4" X 3"	5.937	W431TP-4X3	W631TP-4X3

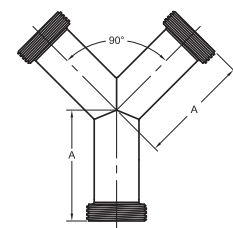
### MISCELLANEOUS BEVEL SEAT CONFIGURATIONS



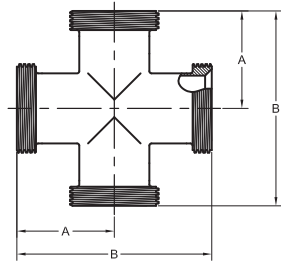
Other types of bevel seat configurations are available.  
Call 888-798-2653 for information.



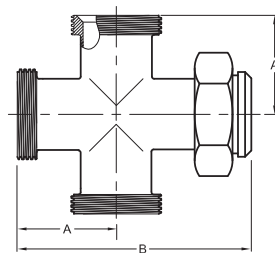
**28A**  
THREADED LATERAL WYE



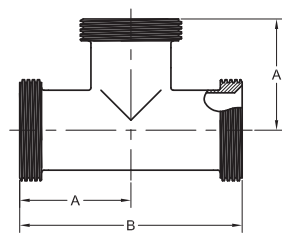
**28B**  
THREADED TRUE WYE



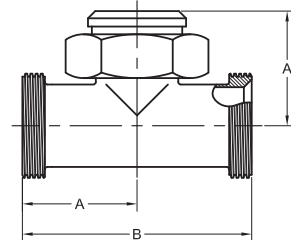
**9**  
THREAD ENDS EQUAL CROSS



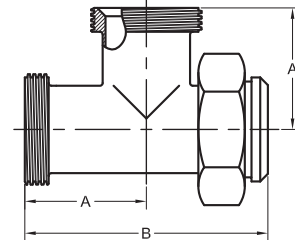
**9A**  
THREAD (3 ENDS) X PLAIN  
BEVEL SEAT WITH NUT



**7**  
THREADED ENDS  
EQUAL TEE

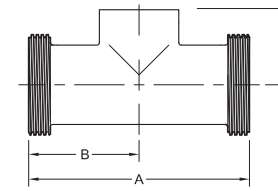


**7A**  
THREAD X THREAD X  
PLAIN OUTLET EQUAL TEE

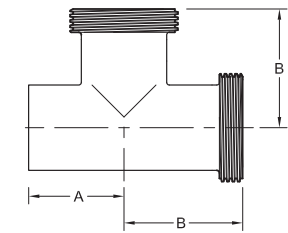


**7B**  
THREAD X PLAIN X  
THREAD OUTLET  
EQUAL TEE

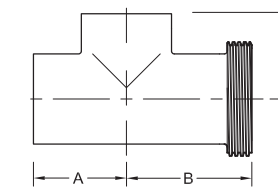
### MISCELLANEOUS WELD BY BEVEL SEAT TEE CONFIGURATIONS



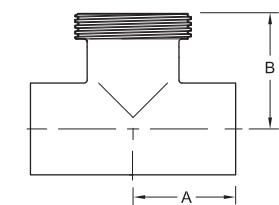
**7TTW**  
THREAD RUN BY WELD BRANCH



**7WTT**  
WELD BY THREAD RUN BY  
THREAD BRANCH



**7WTW**  
WELD BY THREAD RUN  
BY WELD BRANCH



**7WWT**  
WELD RUN  
BY THREAD BRANCH

### BEVEL SEAT GASKETS

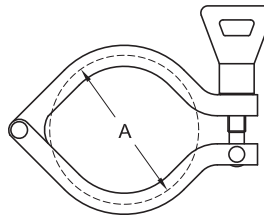
BEVEL SEAT GASKETS **40BS**

SIZE	GASKET O.D.	GASKET I.D.	EPDM	PTFE	FKM	BUNA	SILICONE
1"	1.312	.870	40BS-E-1	40BS-T-1	40BS-V-1	40BS-B-1	40BS-X-1
1-1/2"	1.848	1.370	40BS-E-15	40BS-T-15	40BS-V-15	40BS-B-15	40BS-X-15
2"	2.380	1.870	40BS-E-2	40BS-T-2	40BS-V-2	40BS-B-2	40BS-X-2
2-1/2"	2.912	2.370	40BS-E-25	40BS-T-25	40BS-V-25	40BS-B-25	40BS-X-25
3"	3.444	2.870	40BS-E-3	40BS-T-3	40BS-V-3	40BS-B-3	40BS-X-3
4"	4.508	3.832	40BS-E-4	40BS-T-4	40BS-V-4	40BS-B-4	40BS-X-4



## I-LINE CLAMPS

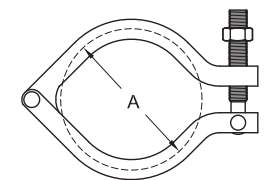
### WING NUT I-LINE CLAMPS 13IS



TUBE O.D.	SERVICE PRESSURE RATING @ 70° F	SERVICE PRESSURE RATING @ 250° F	A	304 PART NUMBER
1" & 1-1/2"	700 PSI	250 PSI	2.122	<b>W413IS-1/15</b>
2"	450 PSI	250 PSI	2.654	<b>W413IS-2</b>
2-1/2"	450 PSI	200 PSI	3.185	<b>W413IS-25</b>
3"	350 PSI	150 PSI	3.717	<b>W413IS-3</b>
4"	200 PSI	125 PSI	4.820	<b>W413IS-4</b>
6"	150 PSI	100 PSI	7.689	<b>W413IS-6</b>
8"	125 PSI	75 PSI	9.689	<b>W413IS-8</b>

\* Wing nut tightened to 25 in. lb. of torque

### BOLTED I-LINE CLAMPS 13I



TUBE O.D.	SERVICE PRESSURE RATING @ 70° F	SERVICE PRESSURE RATING @ 250° F	A	304 PART NUMBER
1" & 1-1/2"	1220 PSI	1100 PSI	2.122	<b>W413I-1/15</b>
2"	900 PSI	830 PSI	2.654	<b>W413I-2</b>
2-1/2"	720 PSI	660 PSI	3.185	<b>W413I-25</b>
3"	600 PSI	550 PSI	3.717	<b>W413I-3</b>
4"	570 PSI	525 PSI	4.820	<b>W413I-4</b>
6"	300 PSI	200 PSI	7.689	<b>W413I-6</b>

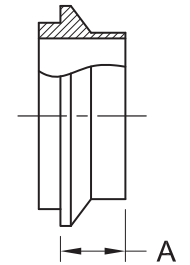
\* Nut tightened to 20 in. ft. of torque

## I-LINE FERRULES

### MALE I-LINE SHORT WELD FERRULES 14WI



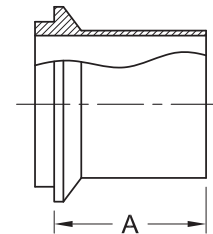
TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1"	0.600	<b>W414WI-1</b>	<b>W614WI-1</b>
1-1/2"	0.765	<b>W414WI-15</b>	<b>W614WI-15</b>
2"	0.790	<b>W414WI-2</b>	<b>W614WI-2</b>
2-1/2"	0.848	<b>W414WI-25</b>	<b>W614WI-25</b>
3"	0.906	<b>W414WI-3</b>	<b>W614WI-3</b>
4"	1.031	<b>W414WI-4</b>	<b>W614WI-4</b>
6"	0.937	N/A	<b>W614WI-6</b>
8"	0.937	N/A	<b>W614WI-8</b>



### MALE I-LINE LONG WELD FERRULES 14WLI



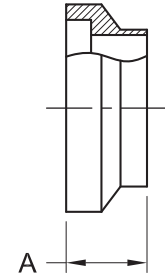
TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1"	1.562	<b>W414WLI-1</b>	<b>W614WLI-1</b>
1-1/2"	1.843	<b>W414WLI-15</b>	<b>W614WLI-15</b>
2"	2.062	<b>W414WLI-2</b>	<b>W614WLI-2</b>
2-1/2"	2.188	<b>W414WLI-25</b>	<b>W614WLI-25</b>
3"	2.375	<b>W414WLI-3</b>	<b>W614WLI-3</b>
4"	2.688	<b>W414WLI-4</b>	<b>W614WLI-4</b>





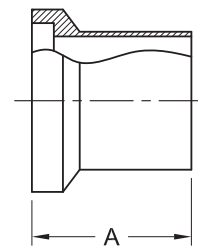
## I-LINE FERRULES

### FEMALE I-LINE SHORT WELD FERRULES 15WI



TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1"	0.786	W415WI-1	W615WI-1
1-1/2"	0.950	W415WI-15	W615WI-15
2"	1.036	W415WI-2	W615WI-2
2-1/2"	1.161	W415WI-25	W615WI-25
3"	1.223	W415WI-3	W615WI-3
4"	1.348	W415WI-4	W615WI-4
6"	1.125	N/A	W615WI-6
8"	1.130	N/A	W615WI-8

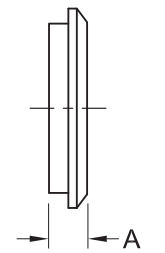
### FEMALE I-LINE LONG WELD FERRULES 15WLI



TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1"	1.750	W415WLI-1	W615WLI-1
1-1/2"	2.031	W415WLI-15	W615WLI-15
2"	2.312	W415WLI-2	W615WLI-2
2-1/2"	2.500	W415WLI-25	W615WLI-25
3"	2.688	W415WLI-3	W615WLI-3
4"	3.000	W415WLI-4	W615WLI-4

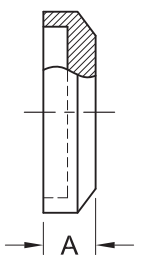
## I-LINE END CAPS

### MALE I-LINE SOLID END CAPS 16AI-14I



TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1"	0.500	W416AI-14I-1	W616AI-14I-1
1-1/2"	0.500	W416AI-14I-15	W616AI-14I-15
2"	0.687	W416AI-14I-2	W616AI-14I-2
2-1/2"	0.687	W416AI-14I-25	W616AI-14I-25
3"	0.750	W416AI-14I-3	W616AI-14I-3
4"	0.750	W416AI-14I-4	W616AI-14I-4
6"	0.750	W416AI-14I-6	W616AI-14I-6

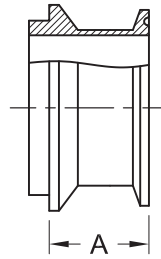
### FEMALE I-LINE SOLID END CAPS 16AI-15I



TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1"	0.500	W416AI-15I-1	W616AI-15I-1
1-1/2"	0.500	W416AI-15I-15	W616AI-15I-15
2"	0.687	W416AI-15I-2	W616AI-15I-2
2-1/2"	0.750	W416AI-15I-25	W616AI-15I-25
3"	0.750	W416AI-15I-3	W616AI-15I-3
4"	0.750	W416AI-15I-4	W616AI-15I-4
6"	0.750	W416AI-15I-6	W616AI-15I-6

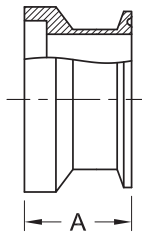
## I-LINE ADAPTERS

### MALE I-LINE X CLAMP ADAPTERS 17-14I-14MP



TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1"	1.093	W417-14I-14MP-1	W617-14I-14MP-1
1-1/2"	1.265	W417-14I-14MP-15	W617-14I-14MP-15
2"	1.290	W417-14I-14MP-2	W617-14I-14MP-2
2-1/2"	1.312	W417-14I-14MP-25	W617-14I-14MP-25
3"	1.406	W417-14I-14MP-3	W617-14I-14MP-3
4"	1.656	W417-14I-14MP-4	W617-14I-14MP-4

### FEMALE I-LINE X CLAMP ADAPTERS 17-15I-14MP

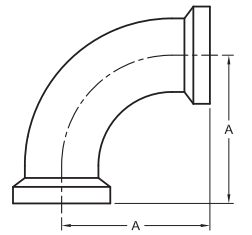


TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1"	1.281	W417-15I-14MP-1	W617-15I-14MP-1
1-1/2"	1.450	W417-15I-14MP-15	W617-15I-14MP-15
2"	1.540	W417-15I-14MP-2	W617-15I-14MP-2
2-1/2"	1.625	W417-15I-14MP-25	W617-15I-14MP-25
3"	1.718	W417-15I-14MP-3	W617-15I-14MP-3
4"	1.968	W417-15I-14MP-4	W617-15I-14MP-4

## I-LINE ELBOWS

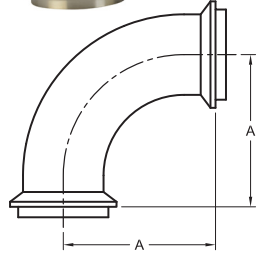
### 90° FEMALE I-LINE ELBOWS 2CI

TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1"	2.281	W42CI-1	W62CI-1
1-1/2"	3.188	W42CI-15	W62CI-15
2"	4.031	W42CI-2	W62CI-2
2-1/2"	4.906	W42CI-25	W62CI-25
3"	5.718	W42CI-3	W62CI-3
4"	7.344	W42CI-4	W62CI-4
6"	10.130	W42CI-6	W62CI-6
8"	13.130	W42CI-8	W62CI-8



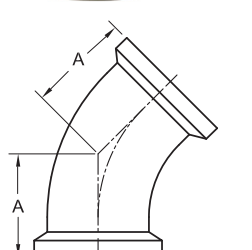
### 90° MALE I-LINE ELBOWS 2EI

TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1"	2.093	W42EI-1	W62EI-1
1-1/2"	3.000	W42EI-15	W62EI-15
2"	3.781	W42EI-2	W62EI-2
2-1/2"	4.593	W42EI-25	W62EI-25
3"	5.406	W42EI-3	W62EI-3
4"	7.031	W42EI-4	W62EI-4
6"	9.940	W42EI-6	W62EI-6
8"	12.940	W42EI-8	W62EI-8



### 45° FEMALE I-LINE ELBOWS 2KI

TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1"	1.406	W42KI-1	W62KI-1
1-1/2"	1.888	W42KI-15	W62KI-15
2"	2.281	W42KI-2	W62KI-2
2-1/2"	2.718	W42KI-25	W62KI-25
3"	3.093	W42KI-3	W62KI-3
4"	3.844	W42KI-4	W62KI-4
6"	4.875	W42KI-6	W62KI-6
8"	6.125	W42KI-8	W62KI-8

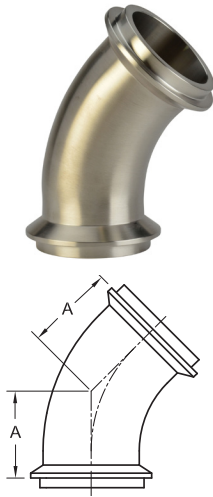


## I-LINE ELBOWS

### 45° MALE I-LINE ELBOWS 2HI



TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1"	1.406	W42HI-1	W62HI-1
1-1/2"	1.888	W42HI-15	W62HI-15
2"	2.281	W42HI-2	W62HI-2
2-1/2"	2.718	W42HI-25	W62HI-25
3"	3.093	W42HI-3	W62HI-3
4"	3.844	W42HI-4	W62HI-4
6"	4.875	W42HI-6	W62HI-6
8"	6.125	W42HI-8	W62HI-8



### FEMALE I-LINE X MALE I-LINE 90° ELBOWS 2FI



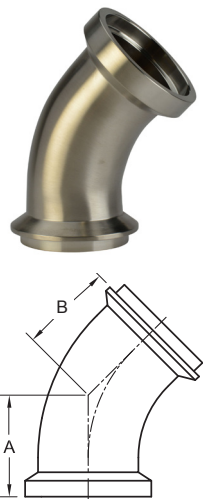
TUBE O.D.	A	B	R	304 PART NUMBER	316L PART NUMBER
1"	2.281	2.093	1.500	W42FI-1	W62FI-1
1-1/2"	3.188	3.000	2.250	W42FI-15	W62FI-15
2"	4.031	3.781	3.000	W42FI-2	W62FI-2
2-1/2"	4.906	4.593	3.750	W42FI-25	W62FI-25
3"	5.718	5.406	4.500	W42FI-3	W62FI-3
4"	7.344	7.031	6.000	W42FI-4	W62FI-4
6"	10.130	9.940	9.000	W42FI-6	W62FI-6
8"	13.130	12.940	12.000	W42FI-8	W62FI-8



### FEMALE I-LINE X MALE I-LINE 45° ELBOWS 2PI



TUBE O.D.	A	B	304 PART NUMBER	316L PART NUMBER
1"	1.406	1.225	W42PI-1	W62PI-1
1-1/2"	1.888	1.702	W42PI-15	W62PI-15
2"	2.281	2.040	W42PI-2	W62PI-2
2-1/2"	2.718	2.410	W42PI-25	W62PI-25
3"	3.093	2.781	W42PI-3	W62PI-3
4"	3.844	3.351	W42PI-4	W62PI-4
6"	4.875	4.690	W42PI-6	W62PI-6
8"	6.125	5.940	W42PI-8	W62PI-8

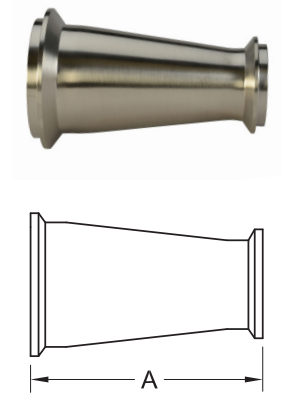


## I-LINE REDUCERS

### MALE X MALE I-LINE CONCENTRIC REDUCERS 3114I-14I



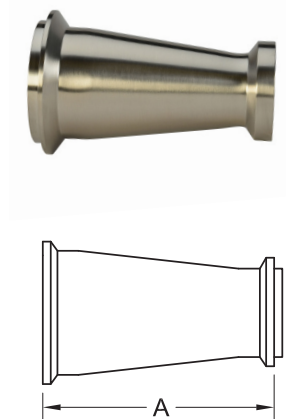
TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1-1/2" X 1"	3.365	W43114I-14I-15X1	W63114I-14I-15X1
2" X 1"	5.390	W43114I-14I-2X1	W63114I-14I-2X1
2" X 1-1/2"	3.555	W43114I-14I-2X15	W63114I-14I-2X15
2-1/2" X 1-1/2"	5.613	W43114I-14I-25X15	W63114I-14I-25X15
2-1/2" X 2"	3.638	W43114I-14I-25X2	W63114I-14I-25X2
3" X 1-1/2"	7.665	W43114I-14I-3X15	W63114I-14I-3X15
3" X 2"	5.690	W43114I-14I-3X2	W63114I-14I-3X2
3" X 2-1/2"	3.745	W43114I-14I-3X25	W63114I-14I-3X25
4" X 2"	9.828	W43114I-14I-4X2	W63114I-14I-4X2
4" X 2-1/2"	7.886	W43114I-14I-4X25	W63114I-14I-4X25
4" X 3"	5.938	W43114I-14I-4X3	W63114I-14I-4X3
6" X 3"	7.348	W43114I-14I-6X3	W63114I-14I-6X3
6" X 4"	7.478	W43114I-14I-6X4	W63114I-14I-6X4



### MALE X FEMALE I-LINE CONCENTRIC REDUCERS 3114I-15I



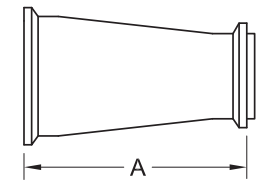
TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1-1/2" X 1"	3.550	W43114I-15I-15X1	W63114I-15I-15X1
2" X 1"	5.640	W43114I-15I-2X1	W63114I-15I-2X1
2" X 1-1/2"	3.805	W43114I-15I-2X15	W63114I-15I-2X15
2-1/2" X 1-1/2"	5.925	W43114I-15I-25X15	W63114I-15I-25X15
2-1/2" X 2"	3.950	W43114I-15I-25X2	W63114I-15I-25X2
3" X 1-1/2"	7.985	W43114I-15I-3X15	W63114I-15I-3X15
3" X 2"	6.010	W43114I-15I-3X2	W63114I-15I-3X2
3" X 2-1/2"	4.068	W43114I-15I-3X25	W63114I-15I-3X25
4" X 2"	10.140	W43114I-15I-4X2	W63114I-15I-4X2
4" X 2-1/2"	8.198	W43114I-15I-4X25	W63114I-15I-4X25
4" X 3"	6.250	W43114I-15I-4X3	W63114I-15I-4X3
6" X 3"	7.535	W43114I-15I-6X3	W63114I-15I-6X3
6" X 4"	4.663	W43114I-15I-6X4	W63114I-15I-6X4





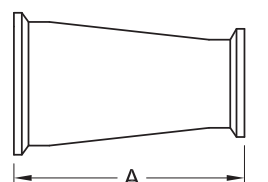
I-LINE REDUCERS

FEMALE X MALE I-LINE CONCENTRIC REDUCERS 3115I-14I



TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1-1/2" X 1"	3.550	W43115I-14I-15X1	W63115I-14I-15X1
2" X 1"	5.640	W43115I-14I-2X1	W63115I-14I-2X1
2" X 1-1/2"	3.805	W43115I-14I-2X15	W63115I-14I-2X15
2-1/2" X 1-1/2"	5.925	W43115I-14I-25X15	W63115I-14I-25X15
2-1/2" X 2"	3.950	W43115I-14I-25X2	W63115I-14I-25X2
3" X 1-1/2"	7.985	W43115I-14I-3X15	W63115I-14I-3X15
3" X 2"	6.010	W43115I-14I-3X2	W63115I-14I-3X2
3" X 2-1/2"	4.068	W43115I-14I-3X25	W63115I-14I-3X25
4" X 2"	10.140	W43115I-14I-4X2	W63115I-14I-4X2
4" X 2-1/2"	8.198	W43115I-14I-4X25	W63115I-14I-4X25
4" X 3"	6.250	W43115I-14I-4X3	W63115I-14I-4X3
6" X 3"	7.535	W43115I-14I-6X3	W63115I-14I-6X3
6" X 4"	4.663	W43115I-14I-6X4	W63115I-14I-6X4

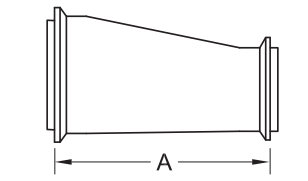
FEMALE I-LINE CONCENTRIC REDUCERS 3115I-15I



TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1-1/2" X 1"	3.735	W43115I-15I-15X1	W63115I-15I-15X1
2" X 1"	5.825	W43115I-15I-2X1	W63115I-15I-2X1
2" X 1-1/2"	3.990	W43115I-15I-2X15	W63115I-15I-2X15
2-1/2" X 1-1/2"	6.110	W43115I-15I-25X15	W63115I-15I-25X15
2-1/2" X 2"	4.200	W43115I-15I-25X2	W63115I-15I-25X2
3" X 1-1/2"	8.170	W43115I-15I-3X15	W63115I-15I-3X15
3" X 2"	6.260	W43115I-15I-3X2	W63115I-15I-3X2
3" X 2-1/2"	4.380	W43115I-15I-3X25	W63115I-15I-3X25
4" X 2"	10.39	W43115I-15I-4X2	W63115I-15I-4X2
4" X 2-1/2"	8.510	W43115I-15I-4X25	W63115I-15I-4X25
4" X 3"	6.570	W43115I-15I-4X3	W63115I-15I-4X3
6" X 3"	7.845	W43115I-15I-6X3	W63115I-15I-6X3
6" X 4"	7.975	W43115I-15I-6X4	W63115I-15I-6X4

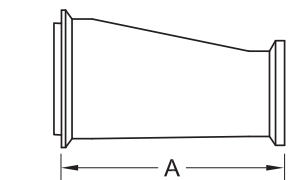
I-LINE REDUCERS

MALE X MALE I-LINE ECCENTRIC REDUCERS 3214I-14I



TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1-1/2" X 1"	3.365	W43214I-14I-15X1	W63214I-14I-15X1
2" X 1"	5.390	W43214I-14I-2X1	W63214I-14I-2X1
2" X 1-1/2"	3.555	W43214I-14I-2X15	W63214I-14I-2X15
2-1/2" X 1-1/2"	5.613	W43214I-14I-25X15	W63214I-14I-25X15
2-1/2" X 2"	3.638	W43214I-14I-25X2	W63214I-14I-25X2
3" X 1-1/2"	7.665	W43214I-14I-3X15	W63214I-14I-3X15
3" X 2"	5.690	W43214I-14I-3X2	W63214I-14I-3X2
3" X 2-1/2"	3.745	W43214I-14I-3X25	W63214I-14I-3X25
4" X 2"	9.828	W43214I-14I-4X2	W63214I-14I-4X2
4" X 2-1/2"	7.886	W43214I-14I-4X25	W63214I-14I-4X25
4" X 3"	5.938	W43214I-14I-4X3	W63214I-14I-4X3
6" X 3"	7.348	W43214I-14I-6X3	W63214I-14I-6X3
6" X 4"	7.478	W43214I-14I-6X4	W63214I-14I-6X4

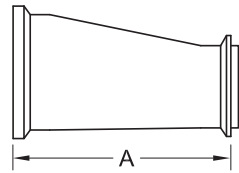
MALE X FEMALE I-LINE ECCENTRIC REDUCERS 3214I-15I



TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1-1/2" X 1"	3.550	W43214I-15I-15X1	W63214I-15I-15X1
2" X 1"	5.575	W43214I-15I-2X1	W63214I-15I-2X1
2" X 1-1/2"	3.740	W43214I-15I-2X15	W63214I-15I-2X15
2-1/2" X 1-1/2"	5.798	W43214I-15I-25X15	W63214I-15I-25X15
2-1/2" X 2"	3.888	W43214I-15I-25X2	W63214I-15I-25X2
3" X 1-1/2"	7.858	W43214I-15I-3X15	W63214I-15I-3X15
3" X 2"	5.948	W43214I-15I-3X2	W63214I-15I-3X2
3" X 2-1/2"	6.068	W43214I-15I-3X25	W63214I-15I-3X25
4" X 2"	10.08	W43214I-15I-4X2	W63214I-15I-4X2
4" X 2-1/2"	8.198	W43214I-15I-4X25	W63214I-15I-4X25
4" X 3"	6.250	W43214I-15I-4X3	W63214I-15I-4X3
6" X 3"	7.660	W43214I-15I-6X3	W63214I-15I-6X3
6" X 4"	7.790	W43214I-15I-6X4	W63214I-15I-6X4

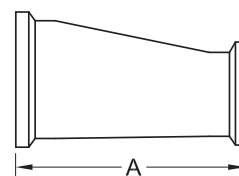
## I-LINE REDUCERS

### FEMALE X MALE I-LINE ECCENTRIC REDUCERS 3215I-14I



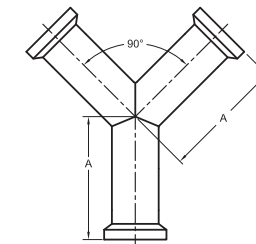
TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1-1/2" X 1"	3.550	W43215I-14I-15X1	W63215I-14I-15X1
2" X 1"	5.640	W43215I-14I-2X1	W63215I-14I-2X1
2" X 1-1/2"	3.805	W43215I-14I-2X15	W63215I-14I-2X15
2-1/2" X 1-1/2"	5.925	W43215I-14I-25X15	W63215I-14I-25X15
2-1/2" X 2"	3.950	W43215I-14I-25X2	W63215I-14I-25X2
3" X 1-1/2"	7.985	W43215I-14I-3X15	W63215I-14I-3X15
3" X 2"	6.010	W43215I-14I-3X2	W63215I-14I-3X2
3" X 2-1/2"	4.068	W43215I-14I-3X25	W63215I-14I-3X25
4" X 2"	10.140	W43215I-14I-4X2	W63215I-14I-4X2
4" X 2-1/2"	8.198	W43215I-14I-4X25	W63215I-14I-4X25
4" X 3"	6.250	W43215I-14I-4X3	W63215I-14I-4X3
6" X 3"	7.535	W43215I-14I-6X3	W63215I-14I-6X3
6" X 4"	7.663	W43215I-14I-6X4	W63215I-14I-6X4

### FEMALE I-LINE ECCENTRIC REDUCERS 3215I-15I

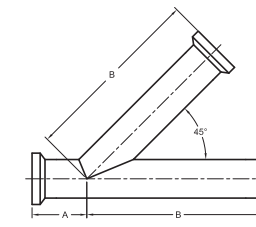


TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1-1/2" X 1"	3.550	W43215I-15I-15X1	W63215I-15I-15X1
2" X 1"	5.640	W43215I-15I-2X1	W63215I-15I-2X1
2" X 1-1/2"	3.805	W43215I-15I-2X15	W63215I-15I-2X15
2-1/2" X 1-1/2"	5.925	W43215I-15I-25X15	W63215I-15I-25X15
2-1/2" X 2"	3.950	W43215I-15I-25X2	W63215I-15I-25X2
3" X 1-1/2"	7.985	W43215I-15I-3X15	W63215I-15I-3X15
3" X 2"	6.010	W43215I-15I-3X2	W63215I-15I-3X2
3" X 2-1/2"	4.068	W43215I-15I-3X25	W63215I-15I-3X25
4" X 2"	10.140	W43215I-15I-4X2	W63215I-15I-4X2
4" X 2-1/2"	8.198	W43215I-15I-4X25	W63215I-15I-4X25
4" X 3"	6.250	W43215I-15I-4X3	W63215I-15I-4X3
6" X 3"	7.535	W43215I-15I-6X3	W63215I-15I-6X3
6" X 4"	7.663	W43215I-15I-6X4	W63215I-15I-6X4

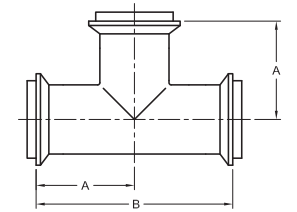
## MISCELLANEOUS I-LINE CONFIGURATIONS



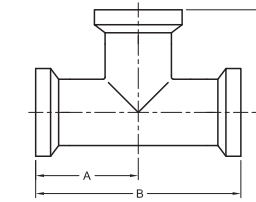
**28BI**  
MALE I-LINE TRUE WYE



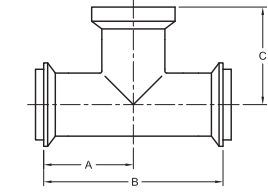
**28AI**  
MALE I-LINE LATERAL WYE



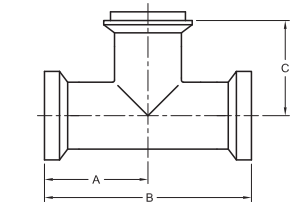
**7HI**  
MALE I-LINE TEE



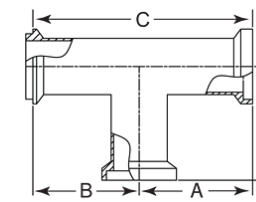
**7I**  
FEMALE I-LINE TEE



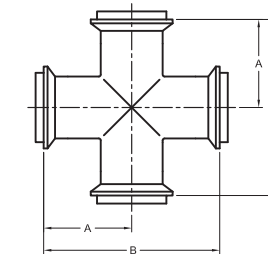
**7EI**  
MALE RUN BY FEMALE  
OUTLET TEE



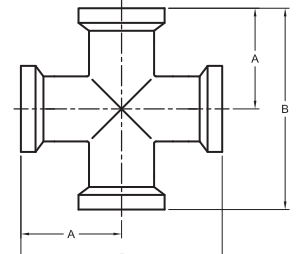
**7AI**  
FEMALE RUN BY  
MALE OUTLET TEE



**7BI**  
FEMALE BY MALE RUN BY  
FEMALE BRANCH TEE



**9HI**  
FEMALE I-LINE CROSS



**9I**  
MALE I-LINE CROSS

## I-LINE GASKETS

### I-LINE GASKETS 40I



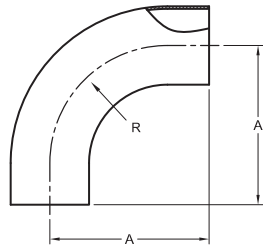
SIZE	GASKET O.D.	GASKET I.D.	EPDM	PTFE	BUNA	FKM	SILICONE
1"	1.260	.870	<b>40I-E-1</b>	<b>40I-T-1</b>	<b>40I-U-1</b>	<b>40I-V-1</b>	<b>40I-X-1</b>
1-1/2"	1.750	1.370	<b>40I-E-15</b>	<b>40I-T-15</b>	<b>40I-U-15</b>	<b>40I-V-15</b>	<b>40I-X-15</b>
2"	2.250	1.870	<b>40I-E-2</b>	<b>40I-T-2</b>	<b>40I-U-2</b>	<b>40I-V-2</b>	<b>40I-X-2</b>
2-1/2"	2.760	2.370	<b>40I-E-25</b>	<b>40I-T-25</b>	<b>40I-U-25</b>	<b>40I-V-25</b>	<b>40I-X-25</b>
3"	3.310	2.870	<b>40I-E-3</b>	<b>40I-T-3</b>	<b>40I-U-3</b>	<b>40I-V-3</b>	<b>40I-X-3</b>
4"	4.310	3.832	<b>40I-E-4</b>	<b>40I-T-4</b>	<b>40I-U-4</b>	<b>40I-V-4</b>	<b>40I-X-4</b>
6"	6.910	5.782	<b>40I-E-6</b>	<b>40I-T-6</b>	<b>40I-U-6</b>	<b>40I-V-6</b>	<b>40I-X-6</b>

THESE GASKETS ARE USED FOR MALE AND FEMALE I-LINE APPLICATIONS ONLY.



WELD ELBOWS

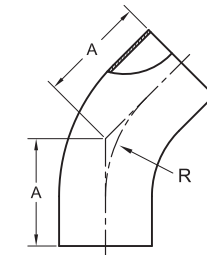
POLISHED 90° WELD ELBOWS WITH TANGENTS L2S



TUBE O.D.	A	R	304 PART NUMBER	316L PART NUMBER
1/2"	3.000	1.125	N/A	W6L2S-.50-7
3/4"	3.000	1.125	N/A	W6L2S-.75-7
1"	2.062	1.500	W4L2S-1-7	W6L2S-1-7
1-1/2"	2.937	2.250	W4L2S-15-7	W6L2S-15-7
2"	4.062	3.000	W4L2S-2-7	W6L2S-2-7
2-1/2"	5.187	3.750	W4L2S-25-7	W6L2S-25-7
3"	6.312	4.500	W4L2S-3-7	W6L2S-3-7
4"	8.312	6.000	W4L2S-4-7	W6L2S-4-7
6"	12.460	9.000	W4L2S-6-7	W6L2S-6-7

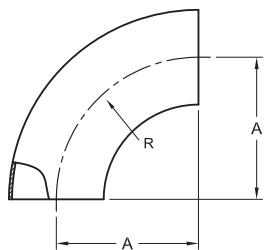
WELD ELBOWS

POLISHED 45° WELD ELBOWS WITH TANGENTS L2KS



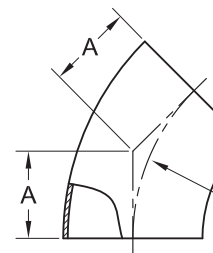
TUBE O.D.	A	R	304 PART NUMBER	316L PART NUMBER
1/2"	2.250	1.125	N/A	W6L2KS-.50-7
3/4"	2.250	1.125	N/A	W6L2KS-.75-7
1"	1.188	1.500	W4L2KS-1-7	W6L2KS-1-7
1-1/2"	1.625	2.250	W4L2KS-15-7	W6L2KS-15-7
2"	2.312	3.000	W4L2KS-2-7	W6L2KS-2-7
2-1/2"	3.000	3.750	W4L2KS-25-7	W6L2KS-25-7
3"	3.688	4.500	W4L2KS-3-7	W6L2KS-3-7
4"	4.812	6.000	W4L2KS-4-7	W6L2KS-4-7
6"	6.000	9.000	W4L2KS-6-7	W6L2KS-6-7

POLISHED 90° WELD ELBOWS 2WCL



TUBE O.D.	A	R	304 PART NUMBER	316L PART NUMBER
1/2"	1.125	1.125	N/A	W62WCL-.50-7
3/4"	1.125	1.125	N/A	W62WCL-.75-7
1"	1.500	1.500	W42WCL-1-7	W62WCL-1-7
1-1/2"	2.250	2.250	W42WCL-15-7	W62WCL-15-7
2"	3.000	3.000	W42WCL-2-7	W62WCL-2-7
2-1/2"	3.750	3.750	W42WCL-25-7	W62WCL-25-7
3"	4.500	4.500	W42WCL-3-7	W62WCL-3-7
4"	6.000	6.000	W42WCL-4-7	W62WCL-4-7
5"	7.500	7.500	N/A	W62WCL-5-7
6"	9.000	9.000	W42WCL-6-7	W62WCL-6-7
8"	12.000	12.000	W42WCL-8-7	W62WCL-8-7
10"	15.000	15.000	N/A	W62WCL-10-7
12"	18.000	18.000	N/A	W62WCL-12-7

POLISHED 45° WELD ELBOWS 2WK

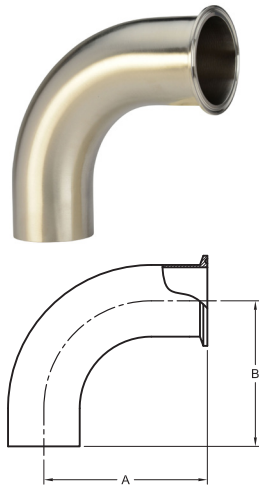


TUBE O.D.	A	R	304 PART NUMBER	316L PART NUMBER
1/2"	0.466	1.125	N/A	W62WK-.50-7
3/4"	0.466	1.125	N/A	W62WK-.75-7
1"	0.625	1.500	W42WK-1-7	W62WK-1-7
1-1/2"	0.937	2.250	W42WK-15-7	W62WK-15-7
2"	1.250	3.000	W42WK-2-7	W62WK-2-7
2-1/2"	1.562	3.750	W42WK-25-7	W62WK-25-7
3"	1.875	4.500	W42WK-3-7	W62WK-3-7
4"	2.500	6.000	W42WK-4-7	W62WK-4-7
5"	3.125	7.500	N/A	W62WK-5-7
6"	3.750	9.000	W42WK-6-7	W62WK-6-7
8"	5.000	12.000	W42WK-8-7	W62WK-8-7
10"	6.250	15.000	N/A	W62WK-10-7
12"	7.500	18.000	N/A	W62WK-12-7



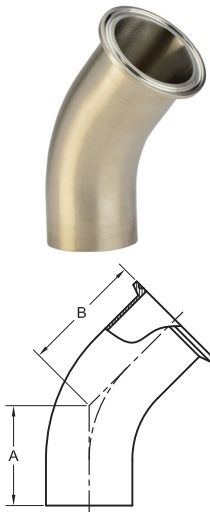
## WELD ELBOWS

### POLISHED 90° CLAMP X WELD ELBOWS L2CM



TUBE O.D.	A	B	304 PART NUMBER	316L PART NUMBER
1"	2.563	2.063	W4L2CM-1-7	W6L2CM-1-7
1-1/2"	3.438	2.938	W4L2CM-15-7	W6L2CM-15-7
2"	4.563	4.063	W4L2CM-2-7	W6L2CM-2-7
2-1/2"	5.688	5.188	W4L2CM-25-7	W6L2CM-25-7
3"	6.813	6.313	W4L2CM-3-7	W6L2CM-3-7
4"	8.938	8.313	W4L2CM-4-7	W6L2CM-4-7

### POLISHED 45° CLAMP X WELD ELBOWS L2KM



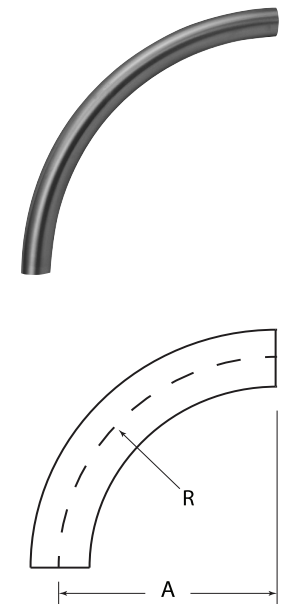
TUBE O.D.	A	B	304 PART NUMBER	316L PART NUMBER
1"	1.188	1.688	W4L2KM-1-7	W6L2KM-1-7
1-1/2"	1.625	2.125	W4L2KM-15-7	W6L2KM-15-7
2"	2.312	2.812	W4L2KM-2-7	W6L2KM-2-7
2-1/2"	3.000	3.500	W4L2KM-25-7	W6L2KM-25-7
3"	3.688	4.188	W4L2KM-3-7	W6L2KM-3-7
4"	4.812	5.437	W4L2KM-4-7	W6L2KM-4-7

## SWEEP ELBOWS

### POLISHED 90° WELD SWEEP ELBOWS 2SXL



TUBE O.D.	A	R	304 PART NUMBER	316L PART NUMBER
1/2"	12	12	W42SXL12-.50	W62SXL12-.50
3/4"	12	12	W42SXL12-.75	W62SXL12-.75
1"	12	12	W42SXL12-1	W62SXL12-1
1"	24	24	W42SXL24-1	W62SXL24-1
1.5"	12	12	W42SXL12-15	W62SXL12-15
1.5"	18	18	W42SXL18-15	W62SXL18-15
1.5"	24	24	W42SXL24-15	W62SXL24-15
1.5"	36	36	W42SXL36-15	W62SXL36-15
2.0"	12	12	W42SXL12-2	W62SXL12-2
2.0"	18	18	W42SXL18-2	W62SXL18-2
2.0"	24	24	W42SXL24-2	W62SXL24-2
2.0"	36	36	W42SXL36-2	W62SXL36-2
2.0"	48	48	W42SXL48-2	W62SXL48-2
2.5"	12	12	W42SXL12-25	W62SXL12-25
2.5"	18	18	W42SXL18-25	W62SXL18-25
2.5"	24	24	W42SXL24-25	W62SXL24-25
2.5"	36	36	W42SXL36-25	W62SXL36-25
3.0"	12	12	W42SXL12-3	W62SXL12-3
3.0"	18	18	W42SXL18-3	W62SXL18-3
3.0"	24	24	W42SXL24-3	W62SXL24-3
3.0"	36	36	W42SXL36-3	W62SXL36-3
3.0"	48	48	W42SXL48-3	W62SXL48-3
4.0"	12	12	W42SXL12-4	W62SXL12-4
4.0"	18	18	W42SXL18-4	W62SXL18-4
4.0"	24	24	W42SXL24-4	W62SXL24-4
4.0"	36	36	W42SXL36-4	W62SXL36-4
4.0"	48	48	W42SXL48-4	W62SXL48-4
6.0"	15	15	W42SXL15-6	W62SXL15-6
6.0"	24	24	W42SXL24-6	W62SXL24-6
6.0"	36	36	W42SXL36-6	W62SXL36-6
6.0"	48	48	W42SXL48-6	W62SXL48-6

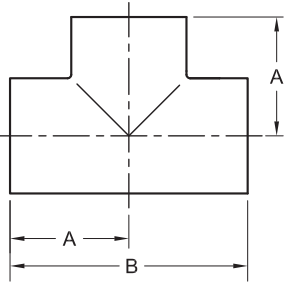


#### Other Sweep Elbow Combinations Available:

- 2SXLMP - 90° CLAMP END SWEEP
- 2KSXL - 45° WELD SWEEP ELBOW
- 2KSXLMP - 45° CLAMP END SWEEP

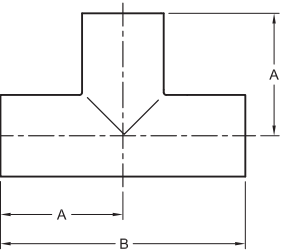
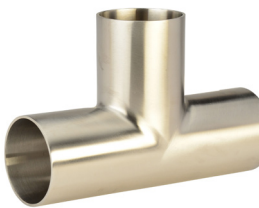
WELD TEES

POLISHED SHORT WELD TEES 7WWW



TUBE O.D.	A	B	304 PART NUMBER	316L PART NUMBER
1"	1.125	2.250	W47WWW-1-7	W67WWW-1-7
1-1/2"	1.656	3.312	W47WWW-15-7	W67WWW-15-7
2"	2.063	4.125	W47WWW-2-7	W67WWW-2-7
2-1/2"	2.344	4.688	W47WWW-25-7	W67WWW-25-7
3"	2.594	5.188	W47WWW-3-7	W67WWW-3-7
4"	3.438	6.875	W47WWW-4-7	W67WWW-4-7
6"	5.625	11.250	W47WWW-6-7	W67WWW-6-7

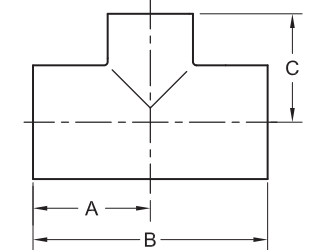
POLISHED LONG WELD TEES 7W



TUBE O.D.	A	B	304 PART NUMBER	316L PART NUMBER
1/2"	1.875	3.750	N/A	W67W-.50-7
3/4"	2.000	4.000	N/A	W67W-.75-7
1"	1.875	3.750	W47W-1-7	W67W-1-7
1-1/2"	2.250	4.500	W47W-15-7	W67W-15-7
2"	3.000	6.000	W47W-2-7	W67W-2-7
2-1/2"	3.000	6.000	W47W-25-7	W67W-25-7
3"	3.250	6.500	W47W-3-7	W67W-3-7
4"	3.875	7.750	W47W-4-7	W67W-4-7
6"	5.625	11.25	W47W-6-7	W67W-6-7
8"	7.000	14.00	N/A	W67W-8-7

WELD TEES

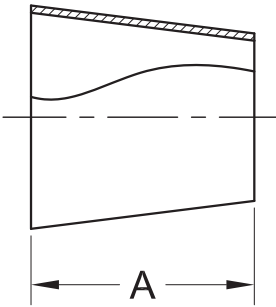
POLISHED REDUCING SHORT WELD TEES 7RWWW



TUBE O.D.	A	B	C	304 PART NUMBER	316L PART NUMBER
3/4" X 1/2"	2.000	4.000	2.000	N/A	W67RWWW-.75X.50-7
1-1/2" X 1"	1.656	3.312	1.375	W47RWWW-15X1-7	W67RWWW-15X1-7
2" X 1"	2.062	4.125	1.625	W47RWWW-2X1-7	W67RWWW-2X1-7
2" X 1-1/2"	2.062	4.125	1.905	W47RWWW-2X15-7	W67RWWW-2X15-7
2-1/2" X 1"	2.344	4.688	1.875	W47RWWW-25X1-7	W67RWWW-25X1-7
2-1/2" X 1-1/2"	2.344	4.688	2.156	W47RWWW-25X15-7	W67RWWW-25X15-7
2-1/2" X 2"	2.344	4.688	2.312	W47RWWW-25X2-7	W67RWWW-25X2-7
3" X 1"	2.594	5.188	2.125	W47RWWW-3X1-7	W67RWWW-3X1-7
3" X 1-1/2"	2.594	5.188	2.406	W47RWWW-3X15-7	W67RWWW-3X15-7
3" X 2"	2.594	5.188	2.562	W47RWWW-3X2-7	W67RWWW-3X2-7
3" X 2-1/2"	2.594	5.188	2.594	W47RWWW-3X25-7	W67RWWW-3X25-7
4" X 1"	3.438	6.875	2.625	W47RWWW-4X1-7	W67RWWW-4X1-7
4" X 1-1/2"	3.438	6.875	2.906	W47RWWW-4X15-7	W67RWWW-4X15-7
4" X 2"	3.438	6.875	3.062	W47RWWW-4X2-7	W67RWWW-4X2-7
4" X 2-1/2"	3.438	6.875	3.094	W47RWWW-4X25-7	W67RWWW-4X25-7
4" X 3"	3.438	6.875	3.157	W47RWWW-4X3-7	W67RWWW-4X3-7
6" X 2"	5.625	11.250	4.500	W47RWWW-6X2-7	W67RWWW-6X2-7
6" X 3"	5.625	11.250	4.875	W47RWWW-6X3-7	W67RWWW-6X3-7
6" X 4"	5.625	11.250	5.125	W47RWWW-6X4-7	W67RWWW-6X4-7

## WELD REDUCERS

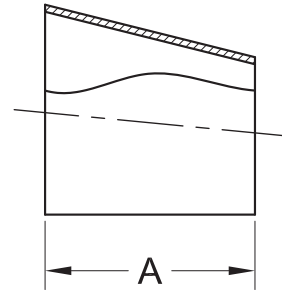
### POLISHED CONCENTRIC WELD REDUCERS 31W



TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
3/4" X 1/2"	1.000	N/A	W631W-.75X.50-7
1" X 1/2"	1.000	N/A	W631W-1X.50-7
1" X 3/4"	1.000	N/A	W631W-1X.75-7
1-1/2" X 1/2"	2.000	N/A	W631W-15X.50-7
1-1/2" X 3/4"	2.000	N/A	W631W-15X.75-7
1-1/2" X 1"	2.000	W431W-15X1-7	W631W-15X1-7
2" X 1"	4.000	W431W-2X1-7	W631W-2X1-7
2" X 1-1/2"	2.000	W431W-2X15-7	W631W-2X15-7
2-1/2" X 1-1/2"	4.000	W431W-25X15-7	W631W-25X15-7
2-1/2" X 2"	2.000	W431W-25X2-7	W631W-25X2-7
3" X 2"	4.000	W431W-3X2-7	W631W-3X2-7
3" X 2-1/2"	2.000	W431W-3X25-7	W631W-3X25-7
4" X 2"	8.000	W431W-4X2-7	W631W-4X2-7
4" X 3"	4.000	W431W-4X3-7	W631W-4X3-7
6" X 2"	5.500	W431W-6X2-7	W631W-6X2-7
6" X 3"	5.500	W431W-6X3-7	W631W-6X3-7
6" X 4"	5.500	W431W-6X4-7	W631W-6X4-7
8" X 4"	6.000	W431W-8X4-7	W631W-8X4-7
8" X 6"	6.000	W431W-8X6-7	W631W-8X6-7

## WELD REDUCERS

### POLISHED ECCENTRIC WELD REDUCERS 32W

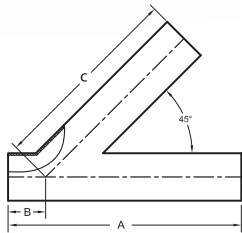
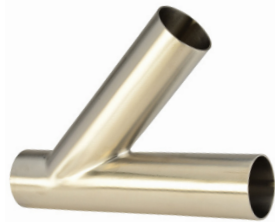


TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
3/4" X 1/2"	1.000	N/A	W632W-.75X.50-7
1" X 1/2"	1.000	N/A	W632W-1X.50-7
1" X 3/4"	1.000	N/A	W632W-1X.75-7
1-1/2" X 1/2"	2.000	N/A	W632W-15X.50-7
1-1/2" X 3/4"	2.000	N/A	W632W-15X.75-7
1-1/2" X 1"	2.000	W432W-15X1-7	W632W-15X1-7
2" X 1"	4.000	W432W-2X1-7	W632W-2X1-7
2" X 1-1/2"	2.000	W432W-2X15-7	W632W-2X15-7
2-1/2" X 1-1/2"	4.000	W432W-25X15-7	W632W-25X15-7
2-1/2" X 2"	2.000	W432W-25X2-7	W632W-25X2-7
3" X 2"	4.000	W432W-3X2-7	W632W-3X2-7
3" X 2-1/2"	2.000	W432W-3X25-7	W632W-3X25-7
4" X 2"	8.000	W432W-4X2-7	W632W-4X2-7
4" X 3"	4.000	W432W-4X3-7	W632W-4X3-7
6" X 2"	5.500	W432W-6X2-7	W632W-6X2-7
6" X 3"	5.500	W432W-6X3-7	W632W-6X3-7
6" X 4"	5.500	W432W-6X4-7	W632W-6X4-7
8" X 4"	6.000	W432W-8X4-7	W632W-8X4-7
8" X 6"	6.000	W432W-8X6-7	W632W-8X6-7



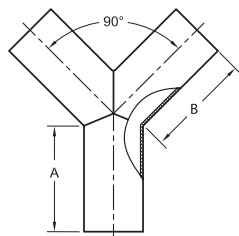
MISCELLANEOUS WELD CONFIGURATIONS

POLISHED WELD LATERALS 28WA



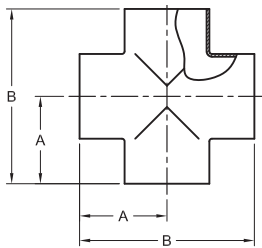
TUBE O.D.	A	B	C	304 PART NUMBER	316L PART NUMBER
1"	6.000	1.000	5.000	W428WA-1-7	W628WA-1-7
1-1/2"	7.375	1.188	6.188	W428WA-15-7	W628WA-15-7
2"	8.750	1.625	7.125	W428WA-2-7	W628WA-2-7
2-1/2"	10.000	1.500	8.500	W428WA-25-7	W628WA-25-7
3"	10.750	1.875	8.875	W428WA-3-7	W628WA-3-7
4"	12.812	2.015	10.750	W428WA-4-7	W628WA-4-7
6"	16.500	4.000	14.750	W428WA-6-7	W628WA-6-7

POLISHED WELD TRUE Y 28WB



TUBE O.D.	A	B	304 PART NUMBER	316L PART NUMBER
1"	2.000	2.438	W428WB-1-7	W628WB-1-7
1-1/2"	2.000	2.438	W428WB-15-7	W628WB-15-7
2"	2.625	3.250	W428WB-2-7	W628WB-2-7
2-1/2"	3.375	4.125	W428WB-25-7	W628WB-25-7
3"	4.000	4.875	W428WB-3-7	W628WB-3-7
4"	5.375	6.562	W428WB-4-7	W628WB-4-7

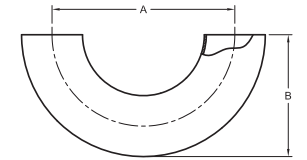
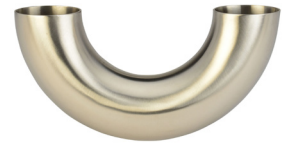
POLISHED WELD CROSSES 9WVVVV



TUBE O.D.	A	B	304 PART NUMBER	316L PART NUMBER
1/2"	0.750	1.500	W49VVVV-.50-7	W69VVVV-.50-7
3/4"	1.125	2.250	W49VVVV-.75-7	W69VVVV-.75-7
1"	1.125	2.250	W49VVVV-1-7	W69VVVV-1-7
1-1/2"	1.656	3.312	W49VVVV-15-7	W69VVVV-15-7
2"	2.062	4.125	W49VVVV-2-7	W69VVVV-2-7
2-1/2"	2.343	4.687	W49VVVV-25-7	W69VVVV-25-7
3"	2.598	5.187	W49VVVV-3-7	W69VVVV-3-7
4"	3.437	6.875	W49VVVV-4-7	W69VVVV-4-7

MISCELLANEOUS WELD CONFIGURATIONS

POLISHED WELD 180° RETURN BENDS 2WU



TUBE O.D.	A	B	304 PART NUMBER	316L PART NUMBER
1"	3.000	2.000	W42WU-1-7	W62WU-1-7
1-1/2"	4.500	3.000	W42WU-15-7	W62WU-15-7
2"	6.000	4.000	W42WU-2-7	W62WU-2-7
2-1/2"	7.500	5.000	W42WU-25-7	W62WU-25-7
3"	9.000	6.000	W42WU-3-7	W62WU-3-7
4"	12.000	8.000	W42WU-4-7	W62WU-4-7

POLISHED ORBITAL WELD FITTINGS

WE OFFER 32Ra POLISHED ID AND OD ORBITAL WELD FITTINGS IN TUBE SIZES 1/2" - 4" 304 OR 316L STAINLESS STEEL. CALL FOR DETAILS.



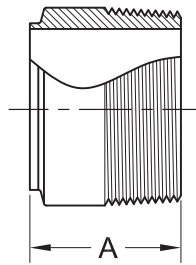
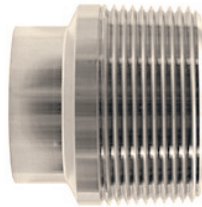
CUSTOM FABRICATION

LET OUR EXPERIENCED SALES TECHNICIANS HELP WITH YOUR CUSTOM FABRICATION PROJECTS. CALL FOR DETAILS.



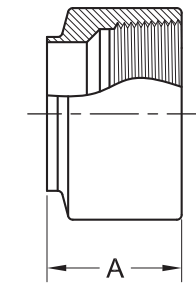
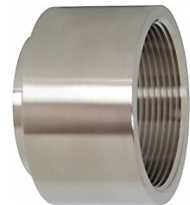
## UNPOLISHED ADAPTERS

### UNPOLISHED MALE NPT X WELD END ADAPTERS 19WB



TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1/2"	1.625	N/A	W619WB-.50-1
3/4"	1.625	N/A	W619WB-.75-1
1"	1.750	W419WB-1-1	W619WB-1-1
1-1/2"	1.750	W419WB-15-1	W619WB-15-1
2"	1.812	W419WB-2-1	W619WB-2-1
2-1/2"	2.312	W419WB-25-1	W619WB-25-1
3"	2.500	W419WB-3-1	W619WB-3-1
4"	2.562	W419WB-4-1	W619WB-4-1

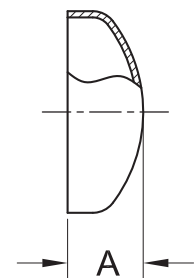
### UNPOLISHED FEMALE NPT X WELD END ADAPTERS 22WB



TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1/2"	1.250	N/A	W622WB-.50-1
3/4"	1.625	N/A	W622WB-.75-1
1"	1.750	W422WB-1-1	W622WB-1-1
1-1/2"	1.750	W422WB-15-1	W622WB-15-1
2"	1.812	W422WB-2-1	W622WB-2-1
2-1/2"	2.312	W422WB-25-1	W622WB-25-1
3"	2.500	W422WB-3-1	W622WB-3-1
4"	2.500	W422WB-4-1	W622WB-4-1

## UNPOLISHED DOME CAPS

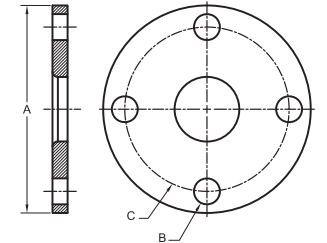
### UNPOLISHED DOME CAPS 16W



TUBE O.D.	A	304 PART NUMBER	316L PART NUMBER
1/2"	0.250	N/A	W616W-.50-1
3/4"	0.312	N/A	W616W-.75-1
1"	0.375	W416W-1-1	W616W-1-1
1-1/2"	0.562	W416W-15-1	W616W-15-1
2"	0.750	W416W-2-1	W616W-2-1
2-1/2"	1.000	W416W-25-1	W616W-25-1
3"	1.250	W416W-3-1	W616W-3-1
4"	1.500	W416W-4-1	W616W-4-1
6"	1.875	W416W-6-1	W616W-6-1
8"	2.500	W416W-8-1	W616W-8-1

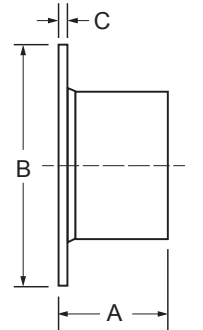
## UNPOLISHED FLANGES

### UNPOLISHED TUBE FLANGES 38SL



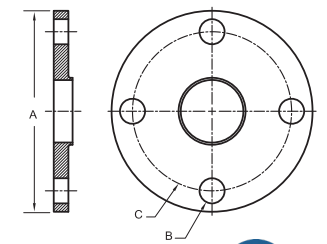
TUBE O.D.	A	B	C	304 PART NUMBER	316L PART NUMBER
1"	4.250	0.625	3.125	W438SL-1-1	W638SL-1-1
1-1/2"	5.000	0.625	3.875	W438SL-15-1	W638SL-15-1
2"	6.000	0.750	4.750	W438SL-2-1	W638SL-2-1
2-1/2"	7.000	0.750	5.500	W438SL-25-1	W638SL-25-1
3"	7.500	0.750	6.000	W438SL-3-1	W638SL-3-1
4"	9.000	0.750	7.500	W438SL-4-1	W638SL-4-1
6"	11.000	0.875	9.500	W438SL-6-1	W638SL-6-1
8"	13.500	0.875	11.750	W438SL-8-1	W638SL-8-1
10"	16.000	0.984	14.270	W438SL-10-1	W638SL-10-1
12"	19.000	0.984	17.000	W438SL-12-1	W638SL-12-1

### UNPOLISHED TYPE A STUB ENDS 14VB



TUBE O.D.	A	B	C	316L PART NUMBER
1/2"	2.000	1.500	0.130	W614VB-.50-1
3/4"	2.000	1.500	0.130	W614VB-.75-1
1"	1.625	2.000	0.130	W614VB-1-1
1-1/2"	1.750	2.875	0.130	W614VB-15-1
2"	1.500	3.625	0.130	W614VB-2-1
2-1/2"	2.000	4.125	0.130	W614VB-25-1
3"	2.250	5.000	0.166	W614VB-3-1
4"	2.625	6.187	0.166	W614VB-4-1
6"	3.000	8.500	0.218	W614VB-6-1
8"	3.000	10.625	0.232	W614VB-8-1
10"	3.500	12.750	0.283	W614VB-10-1
12"	3.000	15.000	0.283	W614VB-12-1

### UNPOLISHED WELD NECK FLANGES 38W



TUBE O.D.	A	B	C	316L PART NUMBER
1"	4.250	0.625	3.125	W638W-1-1
1-1/2"	5.000	0.625	3.875	W638W-15-1
2"	6.000	0.750	4.750	W638W-2-1
2-1/2"	7.000	0.750	5.500	W638W-25-1
3"	7.500	0.750	6.000	W638W-3-1
4"	9.000	0.750	7.500	W638W-4-1
6"	11.000	0.8750	9.500	W638W-6-1

## WAYLAND TUBING

**TYPES:**

- ASTM A249/A269 General Services
- ASTM A270 Sanitary/Pharmaceutical

**GRADES:**

- W4 = 304 stainless steel
- W6 = 316L stainless steel

**QUALITY ASSURANCE/ TESTING:**

- All required ASTM A270 testing, plus additional tests:
- Flare
  - Reverse Bend
  - Flatten
  - Flange

**PACKAGING:**

- Square packed, scored cardboard, heavy duty tri-wall box, paper/poly sleeve, interweave, cardboard tubes, hex pack, bulk skids

**FINISH:**

- 3A Polished ID and OD: 20 Ra / 32 Ra
- Unpolished



**HOW TO ORDER**

W + Alloy + Product Type - Size (in.) - Wall Thickness

4 = 304	A270	.50	.065
6 = 316L	A249	.75	.083
		1.0	.109
		1.5	.120
		...	...

Example:  
**W + 4 + A270 - 1 - .065**  
 ( W4A270-1-.065 )

## TUBING WEIGHTS & OPERATING PRESSURES

**304 STAINLESS STEEL TUBE**

SIZE (TUBE O.D.)	WEIGHT PER FOOT (LBS.)	PRESSURE (PSI)		
		WORKING	YIELD	BURST
1/2"	.30	4870	7800	19500
3/4"	.48	3250	5200	13000
1"	.66	2440	3900	9800
1-1/2"	1.00	1630	2600	6500
2"	1.35	1220	2000	4900
2-1/2"	1.70	980	1600	3900
3"	2.05	810	1300	3300
4"	3.50	780	1200	3100
6"	6.92	680	1090	2720

**316L STAINLESS STEEL TUBE**

SIZE (TUBE O.D.)	WEIGHT PER FOOT (LBS.)	PRESSURE (PSI)		
		WORKING	YIELD	BURST
1/2"	.30	3250	6500	19500
3/4"	.48	2167	4330	13000
1"	.66	2280	3300	9100
1-1/2"	1.00	1520	2200	6100
2"	1.35	1140	1600	4600
2-1/2"	1.70	910	1300	3600
3"	2.05	760	1100	3000
4"	3.50	730	1000	2900
6"	6.92	635	900	2540

## POLISHED ID & OD SANITARY TUBING

**POLISHED TUBING ASTM-A270**



SIZE (TUBE O.D.)	GAUGE	WALL THICKNESS (TOLERANCE)		304 PART NUMBER	316L PART NUMBER
1/2"	16	.065	±10%	N/A	W6A270-.50-.065
3/4"	16	.065	±10%	N/A	W6A270-.75-.065
1"	16	.065	±10%	W4A270-1-.065	W6A270-1-.065
1-1/2"	16	.065	±10%	W4A270-15-.065	W6A270-15-.065
2"	16	.065	±10%	W4A270-2-.065	W6A270-2-.065
2-1/2"	16	.065	±10%	W4A270-25-.065	W6A270-25-.065
3"	16	.065	±10%	W4A270-3-.065	W6A270-3-.065
4"	14	.083	±10%	W4A270-4-.083	W6A270-4-.083
6"	12	.109	±10%	W4A270-6-.109	W6A270-6-.109
8"	12	.109	±10%	W4A270-8-.109	W6A270-8-.109
10"	11	.120	±10%	W4A270-10-.120	W6A270-10-.120
12"	11	.120	±10%	W4A270-12-.120	W6A270-12-.120

## UNPOLISHED ID & OD TUBING

**UNPOLISHED TUBING ASTM-A249/A269**

SIZE (TUBE O.D.)	GAUGE	WALL THICKNESS (TOLERANCE)		304 PART NUMBER	316L PART NUMBER
1/2"	16	.065	±10%	N/A	W6A249-.50-.065
3/4"	16	.065	±10%	N/A	W6A249-.75-.065
1"	16	.065	±10%	W4A249-1-.065	W6A249-1-.065
1-1/2"	16	.065	±10%	W4A249-15-.065	W6A249-15-.065
2"	16	.065	±10%	W4A249-2-.065	W6A249-2-.065
2-1/2"	16	.065	±10%	W4A249-25-.065	W6A249-25-.065
3"	16	.065	±10%	W4A249-3-.065	W6A249-3-.065
4"	14	.083	±10%	W4A249-4-.083	W6A249-4-.083
6"	12	.109	±10%	W4A249-6-.109	W6A249-6-.109
8"	12	.109	±10%	W4A249-8-.109	W6A249-8-.109
10"	11	.120	±10%	W4A249-10-.120	W6A249-10-.120
12"	11	.120	±10%	W4A249-12-.120	W6A249-12-.120

**Notes:**

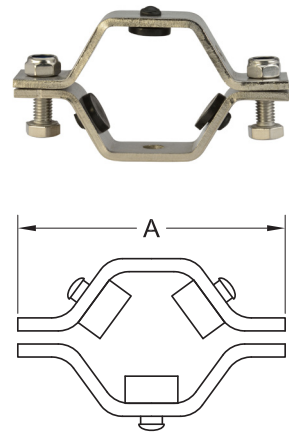
Tubing available in 20' lengths only. Tubing ships via truck. Call for pricing & freight allowance details. Other sizes may be available, call. We are unable to accept tubing returns.





## TUBE HEX HANGERS

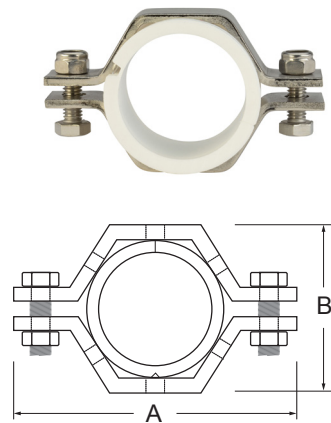
### HEX HANGERS WITH NITRILE GROMMETS RGHT



TUBE SIZE	A	304 PART NUMBER
1"	3.625	<b>RGHT-1</b>
1-1/2"	3.625	<b>RGHT-15</b>
2"	4.313	<b>RGHT-2</b>
2-1/2"	4.875	<b>RGHT-25</b>
3"	5.500	<b>RGHT-3</b>
4"	6.563	<b>RGHT-4</b>
6"	9.000	<b>RGHT-6</b>

Notes:  
Nitrile grommets maximum temperature: 230°F

### HEX HANGERS WITH ABS SLEEVE PVCT



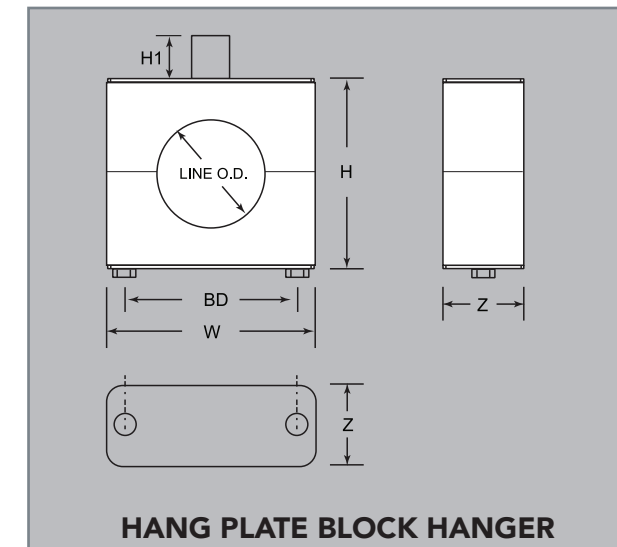
TUBE O.D.	A	B	304 PART NUMBER
1/2"	2.687	2.000	<b>PVCT-.50</b>
3/4"	2.687	1.562	<b>PVCT-.75</b>
1"	3.625	2.125	<b>PVCT-1</b>
1-1/2"	4.312	2.625	<b>PVCT-15</b>
2"	4.312	3.125	<b>PVCT-2</b>
2-1/2"	4.850	3.125	<b>PVCT-25</b>
3"	5.500	4.250	<b>PVCT-3</b>
4"	7.500	5.625	<b>PVCT-4</b>
6"	9.750	7.375	<b>PVCT-6</b>
8"	11.500	8.625	<b>PVCT-8</b>
10"	14.500	10.500	<b>PVCT-10</b>
12"	16.625	13.000	<b>PVCT-12</b>

Notes:  
ABS sleeve maximum temperature: 230°F

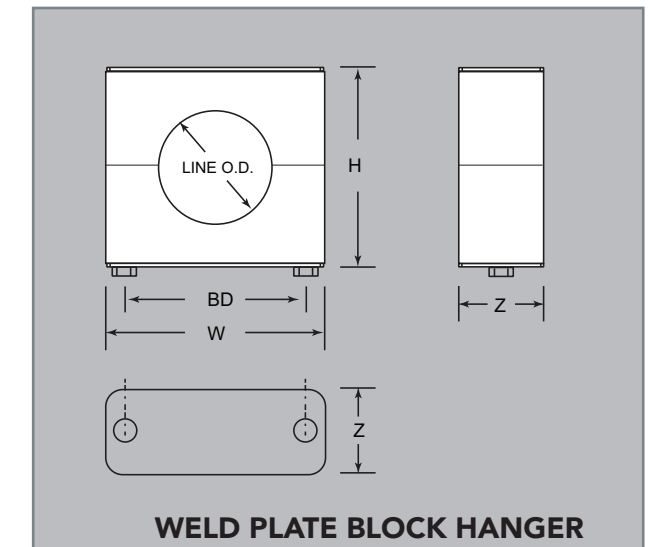
## TUBE BLOCK HANGERS

### HANG PLATE BLOCK HANGERS 24HP

TUBE O.D.	BD	H	H1	W	LINE O.D.	Z	THREAD	304 PART NUMBER
1/2"	1.44	1.69	0.60	1.93	0.50	0.75	3/8"-16	<b>W424HP-.50</b>
3/4"	1.44	1.69	0.60	1.93	0.75	0.75	3/8"-16	<b>W424HP-.75</b>
1"	1.44	1.69	0.60	1.93	1.00	0.75	3/8"-16	<b>W424HP-1</b>
1-1/2"	1.94	2.19	0.60	2.49	1.50	0.75	3/8"-16	<b>W424HP-15</b>
2"	2.44	2.69	0.60	2.99	2.00	0.88	1/2"-13	<b>W424HP-2</b>
2-1/2"	2.81	3.22	1.21	3.36	2.50	0.88	1/2"-13	<b>W424HP-25</b>
3"	3.44	3.97	1.21	3.99	3.00	0.88	1/2"-13	<b>W424HP-3</b>
4"	4.55	4.85	1.39	5.10	4.00	1.00	5/8"-11	<b>W424HP-4</b>



HANG PLATE BLOCK HANGER



WELD PLATE BLOCK HANGER

### WELD PLATE BLOCK HANGERS 24WP

TUBE O.D.	BD	H	W	LINE O.D.	Z	304 PART NUMBER
1/2"	1.44	1.73	1.93	0.50	0.75	<b>W424WP-.50</b>
3/4"	1.44	1.73	1.93	0.75	0.75	<b>W424WP-.75</b>
1"	1.44	1.73	1.93	1.00	0.75	<b>W424WP-1</b>
1-1/2"	1.94	2.23	2.49	1.50	0.75	<b>W424WP-15</b>
2"	2.44	2.75	2.99	2.00	0.88	<b>W424WP-2</b>
2-1/2"	2.81	3.25	3.36	2.50	0.88	<b>W424WP-25</b>
3"	3.44	3.68	3.99	3.00	0.88	<b>W424WP-3</b>
4"	4.55	4.87	5.10	4.00	1.00	<b>W424WP-4</b>

## BUTTERFLY VALVES

**FEATURES:**

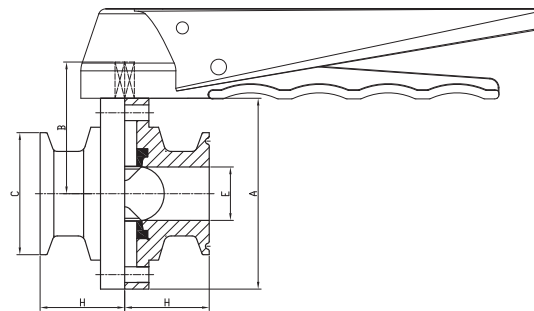
- Material: 316L forged stainless steel body and disc
- 100% hydraulic tested / 100% inspected
- Field serviceable (no special tools required)
- Vacuum rating: 0.4 inches Hg at 68°F
- Operating temperature range: 15° to 200° F
- Seat options: silicone, EPDM, FKM
- Low resistance to flow
- Bi-directional flow
- Polyacetal bushings for the valve disc for reduced friction and increased life cycle
- All wetted surfaces are R<sub>a</sub> 32 minimum
- Lockout/Tagout handle



REPAIR KITS AVAILABLE

**DIMENSIONS**

SIZE	A	B	C	E	H
1"	3.110	1.949	1.988	0.870	1.378
1-1/2"	3.346	2.067	1.988	1.370	1.378
2"	3.937	2.362	2.520	1.870	1.457
2-1/2"	4.528	2.657	3.051	2.370	1.496
3"	5.000	2.894	3.583	2.870	1.535
4"	6.142	3.465	4.685	3.843	1.772
6"	8.465	4.665	6.567	5.776	2.441



**SPECIFICATIONS**

Information below based on water media at 68°F/20°C

SIZE	BREAK TORQUE (IN LBS.)			PRESSURE RATING (PSI)	FLOW COEFFICIENT (C <sub>v</sub> )	WEIGHT W/PULL HANDLE (LBS.)
	SILICONE	EPDM	FKM			
1"	20	75	70	140	23	3.65
1-1/2"	40	130	125	140	80	3.33
2"	55	165	175	140	230	4.12
2-1/2"	70	210	220	110	264	5.02
3"	165	350	310	110	372	5.76
4"	350	540	450	85	800	7.66
6"	700	1550	n/a	85	1200	17.28 (Pull Handle)

## BUTTERFLY VALVES

**CLAMP END BUTTERFLY VALVES BFVTC**

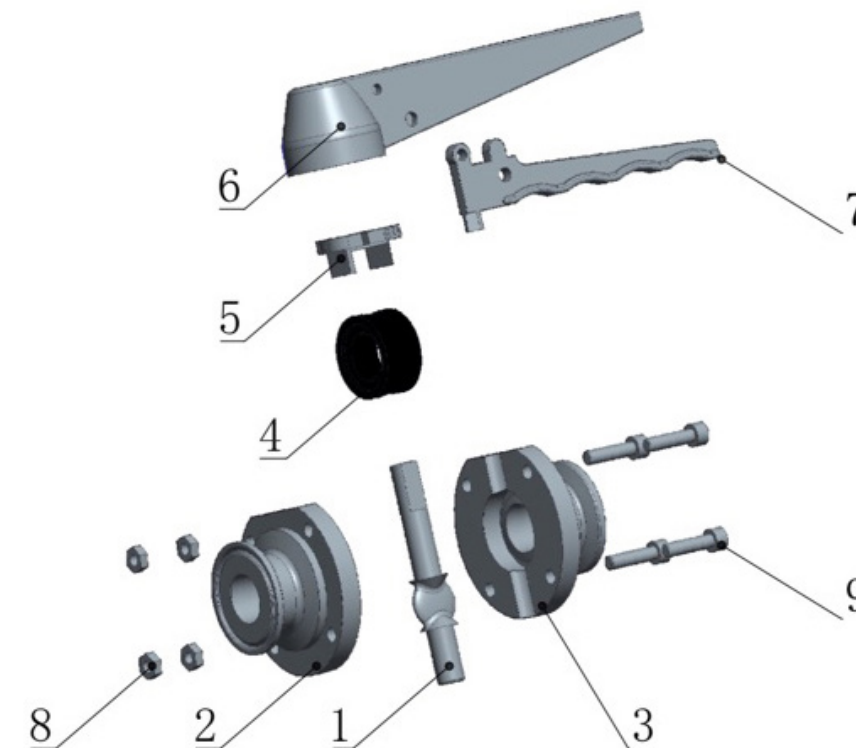
SIZE	SILICONE SEATS	EPDM SEATS	FKM SEATS
1"	W6BFVTC-S-1	W6BFVTC-E-1	W6BFVTC-V-1
1-1/2"	W6BFVTC-S-15	W6BFVTC-E-15	W6BFVTC-V-15
2"	W6BFVTC-S-2	W6BFVTC-E-2	W6BFVTC-V-2
2-1/2"	W6BFVTC-S-25	W6BFVTC-E-25	W6BFVTC-V-25
3"	W6BFVTC-S-3	W6BFVTC-E-3	W6BFVTC-V-3
4"	W6BFVTC-S-4	W6BFVTC-E-4	W6BFVTC-V-4

**HOW TO ORDER**

W + Alloy + Product Code + Ends - Seat - Size (in.)

6 = 316L    BFV=Butterfly Valve    TC = Tri-Clamp    E=EPDM    S=Silicone    V=FKM

Example: **W + 6 + BFV + TC - E - 3**  
( W6BFVTC-E-3 )

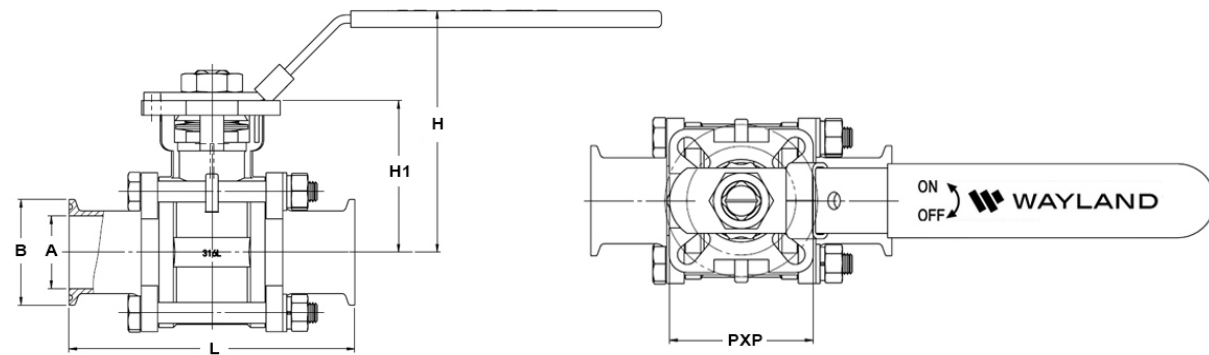


ITEM	DESCRIPTION	MATERIAL	QNTY
1	Disc	316L	1
2	Body Half	316L	1
3	Body Half	316L	1
4	Seat	EPDM	1
5	Sprocket	304	1
6	Handle	304	1
7	Trigger	304	1
8	M6 Nut	304	4
9	M6 Bolt	304	4

## ENCAPSULATED 2-WAY BALL VALVES

**FEATURES:**

- 3A Sanitary Certified
- Material: CF8M (316L) stainless steel
- ID polish is R<sub>a</sub> 32 minimum
- Blow-out proof stem
- Full port design offers lower pressure drop and less turbulent flow
- Precision stainless steel balls reduce torque and friction losses while extending seat life
- ISO high mounting pad for direct mount automation
- Pressure Rating (Body): 1/2"~ 2" 1000PSI WOG  
2-1/2"~ 4" 800PSI WOG
- Pressure Rating (Clamp End): 200PSI WOG
- Live-loaded stem packing
- Lockable handle can prevent accidental actuation
- Fully encapsulated construction
- 100% tested



**DIMENSIONS**

SIZE	A	B	L	H1	H	PXP
1/2"	0.370	0.992	3.543	1.417	2.441	1.654 x 1.654
3/4"	0.622	0.992	4.016	1.673	2.697	1.654 x 1.654
1"	0.870	1.988	4.528	2.067	3.504	1.969 x 1.969
1-1/2"	1.370	1.988	5.433	2.854	4.547	2.559 x 2.559
2"	1.870	2.520	6.142	3.091	4.783	2.559 x 2.559
2-1/2"	2.370	3.051	6.693	3.740	5.433	2.559 x 2.559
3"	2.870	3.583	7.756	4.350	6.496	3.563 x 3.563
4"	3.835	4.685	9.528	4.823	6.772	3.563 x 3.563

## ENCAPSULATED 2-WAY BALL VALVES

**ENCAPSULATED 2-WAY BALL VALVES BVETC**



SEAT MATERIAL	SIZE	WEIGHT (LBS)	BREAK TORQUE	BALL VALVE PART NUMBER
VIRGIN PTFE	1/2"	1.06	105	<b>W6BVETC-P-.50</b>
	3/4"	1.46	116	<b>W6BVETC-P-.75</b>
	1"	2.51	336	<b>W6BVETC-P-1</b>
	1-1/2"	4.43	420	<b>W6BVETC-P-15</b>
	2"	6.83	473	<b>W6BVETC-P-2</b>
	2-1/2"	11.68	788	<b>W6BVETC-P-25</b>
	3"	18.43	1155	<b>W6BVETC-P-3</b>
	4"	29.32	1680	<b>W6BVETC-P-4</b>

REPAIR KITS AVAILABLE

**HOW TO ORDER**

W + Alloy + Product Code + Encapsulated + Ends - Seat - Size (in.)

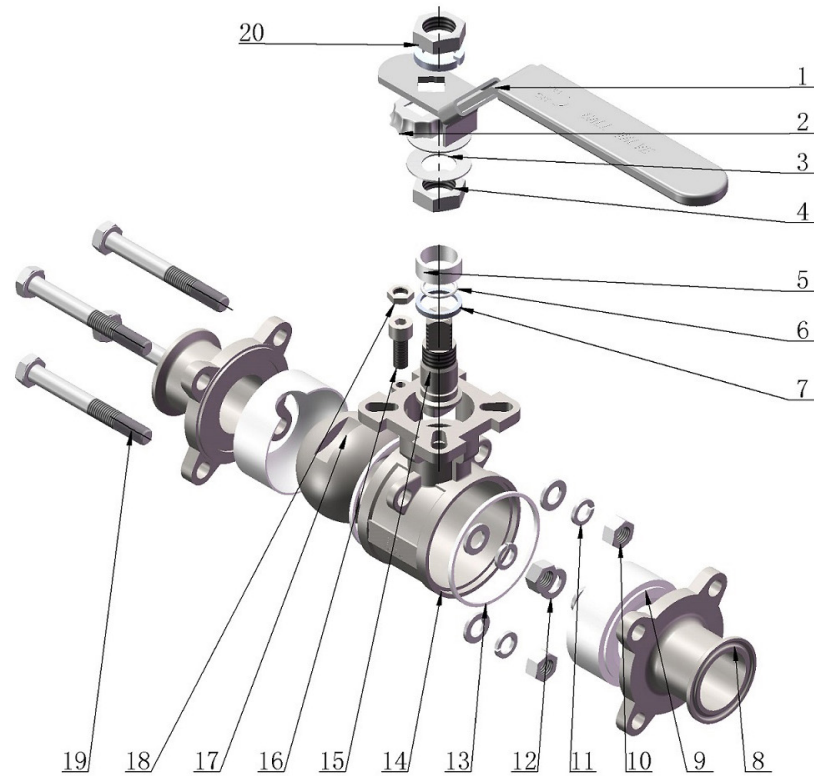
6=316L    BV = 3pc 2-way Ball Valve    E=Encapsulated, N=Non-Encapsulated    TC=Tri-Clamp    P=PTFE

Example: **W + 6 + BV + E + TC - P - 4** (W6BVETC-P-4)





## ENCAPSULATED 2-WAY BALL VALVES



ITEM	DESCRIPTION	MATERIAL	QNTY
1	Handle	304	1
2	Backstop Pad	304	1
3	Gland Ring	304	2
4	Hex Nut	304	2
5	Stem Packing	PTFE	3
6	O-Ring	VITON	1
7	Stem Seal	PTFE	1
8	Valve End	316L	2
9	Seat (encapsulated)	PTFE	2
10	Hex Nut	304	4
11	Bolt Elastic Washer	304	4
12	Bolt Washer	304	4
13	Body Seal	PTFE	2
14	Valve Body	316L	1
15	Stem	316L	1
16	Stop Pin	304	1
17	Ball	316L	1
18	Hex Nut	304	1
19	Bolt	304	4
20	Bolt Elastic Washer	304	1



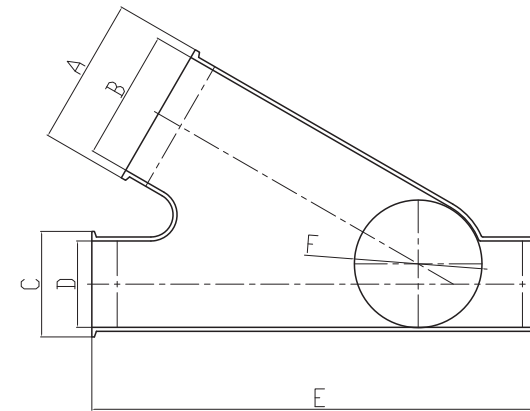
## Y-BALL CHECK VALVES

**FEATURES:**

- Material: All metal product surfaces are 316L stainless steel
- Polished ID and OD to 3A standards
- PTFE ball provides better heat and abrasion resistance
- Easy cleaning without tools
- Air blow check valve can be added
- Operating Temperature Range: 15°F to 200°F
- Maximum Operating Pressure: 150 PSI



REPAIR KITS AVAILABLE



### Y-BALL CHECK VALVES 45BY

SIZE	CAP/CLAMP SIZE	WEIGHT (LBS)	316L PART NUMBER
1-1/2"	2.0	2.9	<b>W645BY-15</b>
2"	2.5	4.4	<b>W645BY-2</b>
2-1/2"	4.0	7.3	<b>W645BY-25</b>
3"	4.5	14.5	<b>W645BY-3</b>

### DIMENSIONS

VALVE SIZE	A	B	C	D	E	F
1-1/2"	2.520	1.860	1.990	1.370	8.600	1.610
2"	3.051	2.330	2.520	1.810	10.430	2.130
2-1/2"	4.650	3.520	3.050	2.370	11.890	3.540
3"	5.120	4.170	3.580	2.870	14.630	4.090

**HOW TO ORDER**

W + Alloy + Product Code - Size (in.)  
 6=316L 45BY=Y-Ball Check Valve 1.5 2 2.5 ...

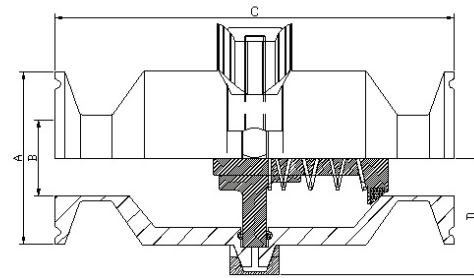
Example: **W + 6 + 45BY - 2**  
**( W645BY-2 )**



## SPRING CHECK VALVES

**FEATURES:**

- Material: Forged 316L stainless steel
- Lower resistance to flow
- Suitable for low and medium viscosity fluids
- Full size flow plate
- Long stem bushing for better life cycle
- All wetted surfaces are sanitary finished to  $\leq 32R_a$
- Operating temperature range: 15°F to 200°F
- Maximum operating pressure: 145 PSI
- Seat and O-ring: FKM



### SPRING CHECK VALVES 45MP



SEAT MATERIAL	SIZE	A	B	C	D	316L PART NUMBER
FKM	1"	1.988	0.870	4.094	1.496	<b>W645MP-V-1</b>
	1-1/2"	1.988	1.370	4.173	1.732	<b>W645MP-V-15</b>
	2"	2.520	1.870	4.488	2.000	<b>W645MP-V-2</b>
	2-1/2"	3.051	2.370	4.764	2.323	<b>W645MP-V-25</b>
	3"	3.583	2.870	5.197	2.560	<b>W645MP-V-3</b>
	4"	4.685	3.843	5.394	3.071	<b>W645MP-V-4</b>

**HOW TO ORDER**

W + Alloy + Product Code - Seat - Size (in.)  
 6 = 316L      45MP = Spring Check Valve      V = FKM      1, 1.5, 2, 2.5, ...

Example: **W + 6 + 45MP - V - 2**  
**( W645MP-V-2 )**

## SAMPLE VALVES

**FEATURES:**

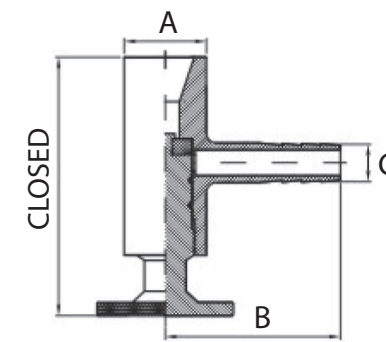
- Material: 304 stainless steel
- Double silicone O-rings
- PTFE seat ensures a leak-proof shutoff
- Surface finish polished to sanitary standards
- Temperature rating: 300°F
- Pressure rating: 200 PSI



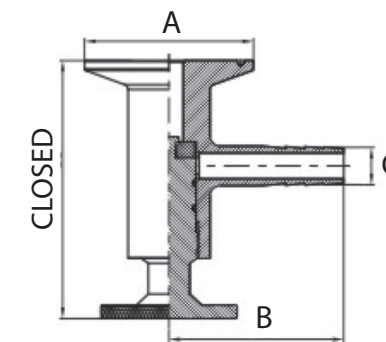
### SAMPLE VALVES SVW



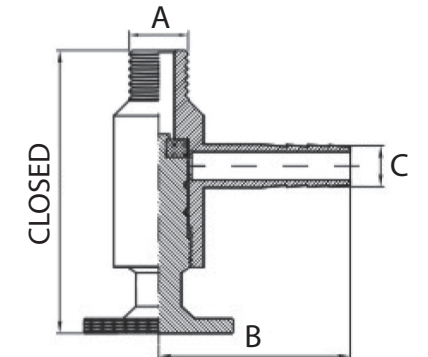
TUBE O.D.	STYLE	SEAT MATERIAL	A	B	C	CLOSED	WEIGHT (LBS)	304 PART NUMBER
1"	BUTT-WELD	PTFE	1.000	2.047	0.472	3.504	0.794	<b>W4SVWW-P-1</b>
1"	CLAMP	PTFE	1.988	2.047	0.472	3.504	0.838	<b>W4SVWC-P-1</b>
3/8"	NPT	PTFE	0.825	2.047	0.472	3.504	0.794	<b>W4SVWN-P-.375</b>



WELD STYLE



CLAMP STYLE



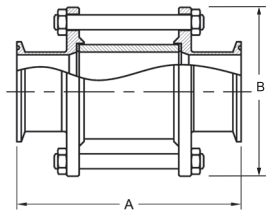
NPT STYLE

**HOW TO ORDER**

W + Alloy + Product Code + Ends - Seat - Size (in.)  
 4 = 304      SVW=Sample Valve      C = Tri-Clamp      P=PTFE      1, .375 (NPT)  
 W = Butt-Weld      N = NPT

Example: **W + 4 + SVW + C - P - 1**  
**( W4SVWC-P-1 )**

## SIGHT GLASSES

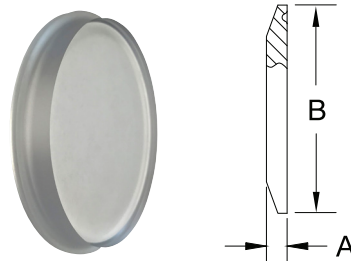


**SIGHT GLASS TC ENDS PYREX 54BMP**



TUBE O.D.	A	B	316L PART NUMBER
1"	5.63	3.11	<b>W654BMP-1</b>
1-1/2"	5.75	3.35	<b>W654BMP-15</b>
2"	5.91	4.13	<b>W654BMP-2</b>
2-1/2"	5.91	4.41	<b>W654BMP-25</b>
3"	6.14	4.92	<b>W654BMP-3</b>
4"	6.14	6.18	<b>W654BMP-4</b>

**SIGHT GLASS END CAPS 16AMP-SGL**



TUBE O.D.	A	B	PART NUMBER
1"	0.250	1.984	<b>W616AMP-SGL-1</b>
1-1/2"	0.250	1.984	<b>W616AMP-SGL-15</b>
2"	0.250	2.516	<b>W616AMP-SGL-2</b>
2-1/2"	0.250	3.047	<b>W616AMP-SGL-25</b>
3"	0.250	3.579	<b>W616AMP-SGL-3</b>
4"	0.312	4.682	<b>W616AMP-SGL-4</b>

\*Offered in Lexan Glass or Acrylic Plastic

## 3-A SANITARY PRESSURE GAUGES

Available with a 2.5" or 4" aluminum dial, our All-Purpose Sanitary Gauges are built to withstand all sanitary applications where 3-A approval is required including food, beverage and dairy installations.



- Quality series for all sanitary gauge systems
- Food grade glycerin filling standard
- High polish finish
- Industrial grade polycarbonate lens
- Clean-In-Place and Steam-In-Place design
- 0.75", 1.5" and 2" Tri-Clamp connection bottom and back
- ASME 840.100 compliant
- 5 year warranty

# WAYLAND CROSS REFERENCE CHART

## TRI-CLAMP FITTINGS

Product Description	Wayland	Alfa Laval	Dixon	VNE	Topline	Sanitary Solutions
Single Pin Heavy Duty Clamp	<b>W13MHM</b>	13MHM	13MHM	13MHM	13MHM	SS13MHM
High Pressure Bolted Clamp	<b>W13MHP</b>	13MHP	13MHP	13MHP	13MHP	SS13MHP
Short Weld Ferrule	<b>W14WMP</b>	14WMP	14WMP	EG2CS	14WMP	SS14WMP
Long Weld Ferrule	<b>W14AM7</b>	L14AM7	L14AM7	EG14AM7	L14AM7	SSL14AM7
Roll-On Ferrule	<b>W14RMP</b>	14RMP	14RMP	EG14R	14RMP	SS14RMP
Tank Ferrule (Light Duty)	<b>W14WLMP</b>	14WLMP	14WLMP	EG14WL	14WLMP	SS14WLMP
Tank Ferrule (Heavy Duty)	<b>W14MPW</b>	14MPW	14MPW	EG14W	14MPW	SS14MPW
Solid End Cap	<b>W16AMP</b>	16AMP	16AMP	EG16A	16AMP	SS16AMP
Thermometer Cap	<b>W23BMP</b>	23BMP	B23BMP	EG23B	23BMP	SS23BMP
Clamp x Plain Bevel Adapter w/ Hex Nut	<b>W17MP-14</b>	17MP-14	17MP-14	EG17PR	17MP-14	SS17MP-14
Clamp x Thread Bevel Seat Adapter	<b>W17MP-15</b>	17MP-15	17MP-15	EG17TR	17MP-15	SS17MP-15
Tygon™ Hose Adapter	<b>W14MPHT</b>	14MPHT	14MPHT	EG14HT	14MPHT	SS14MPHT
Rubber Hose Adapter	<b>W14MPHR</b>	14MPHR	14MPHR	EG14RT	14MPHR	SS14MPHR
Brewery Hose Barb Adapter	<b>W14MPHRL</b>	14MPHRL	14MPHRL	EG14MPHRL	14MPHRL	SS14MPHRL
Male NPT x Tri-Clamp Adapter	<b>W21MP</b>	21MP	21MP	EG21	21MP	SS21MP
Female NPT x Tri-Clamp Adapter	<b>W22MP</b>	22MP	22MP	EG22	22MP	SS22MP
90° Clamp Elbow	<b>W2CMP</b>	B2CMP	B2CMP	EG2C	2CMP	SS2CMP
90° Reducing Clamp Elbow	<b>W2CMP-31MP</b>	2CMP-31MP	B2CMP31MP	EG2C-31	2CMP-31MP	SS2CMP-31MP
45° Clamp Elbow	<b>W2KMP</b>	B2KMP	B2KMP	EG2K	2KMP	SS2KMP
90° Clamp x Plain Bevel w/ Hex Nut	<b>W2FMP-14</b>	2FMP-14	B2FMP-14	EG2FPR	2FMP-14	SS2FMP-14
90° Clamp x Thread Bevel Seat	<b>W2FMP-15</b>	2FMP-15	B2FMP-15	EG2FTR	2FMP-15	SS2FMP-15
Clamp Tee	<b>W7MP</b>	B7MP	B7MP	EG7	7MP	SS7MP
Clamp Reducing Tee	<b>W7RMP</b>	7RMP	B7RMP	EG7R	7RMP	SS7RMP
Clamp Conc Reducer	<b>W31-14MP</b>	B31-14MP	B3114MP	EG31CC	31-14MP	SS31-14MP
Clamp Ecc Reducer	<b>W32-14MP</b>	B32-14MP	B3214MP	EG32CC	32-14MP	SS32-14MP
45° Clamp Lateral	<b>W28AMP</b>	B28AMP	B28AMP	EG28A	28AMP	SS28AMP
Clamp True Wye	<b>W28BMP</b>	B28BMP	B28BMP	EG28B	28BMP	SS28BMP
Clamp Cross	<b>W9MP</b>	B9MP	B9MP	EG9	9MP	SS9MP
Clamp 180° Return Bend	<b>W2UMP</b>		B2WUMP	EG2WU	2WUMP	SS2WUMP

## BEVEL SEAT FITTINGS

Product Description	Wayland	Alfa Laval	Dixon	VNE	Topline	Sanitary Solutions
Union Hex Nut	<b>W13H</b>	13H	13H	13H	13H	SS13H
Short Plain Bevel Seat Weld Ferrule	<b>W14PRF</b>	14PRF	14PRF	14PR	14PRF	SS14PRF
Long Plain Bevel Seat Ferrule	<b>W14A</b>	L14A7	14A	14A	L14A7	SS14A
Short Thread Bevel Seat Ferrule	<b>W15TRF</b>	15TRF	15TRF	15TR	15TRF	SS15TRF
Long Thread Bevel Seat Ferrule	<b>W15A</b>	L15A7	15A	15A	L15A7	SS15A
Plain Bevel Seat Solid End Cap	<b>W16A</b>	16A	16A	16A	16A	SS16A

# WAYLAND CROSS REFERENCE CHART

## I-LINE FITTINGS

Product Description	Wayland	Alfa Laval	Dixon	VNE	Topline	Sanitary Solutions
Wing Nut I-Line Clamp	<b>W13IS</b>	HDI-13UD	13ILH	E13IS	13IS	SS13ILC
Bolted I-Line Clamp	<b>W13I</b>	HDI-13I	13ILB	E13IU	13IU	SS13ILB
Male I-Line Short Weld Ferrule	<b>W14WI</b>	HDI-14WI	14WI	E14WI	14WI	SS14WI
Male I-Line Long Weld Ferrule	<b>W14WLI</b>	HDI-14WLI	14WLI	E14WLI	14WLI	SS14WLI
Female I-Line Short Weld Ferrule	<b>W15WI</b>	HDI-15WI	15WI	E15WI	15WI	SS15WI
Female I-Line Long Weld Ferrule	<b>W15WLI</b>	HDI-15WLI	15WLI	E15WLI	15WLI	SS15WLI
Male I-Line Solid End Cap	<b>W16AI-14I</b>	HDI-16AI-14I	16AI-14I	E16AI-14I	16AI-14I	SS16AI-14I
Female I-Line Solid End Cap	<b>W16AI-15I</b>	HDI-16AI-15I	16AI-15I	E16AI-15I	16AI-15I	SS16AI-15I

## BUTT WELD FITTINGS

Product Description	Wayland	Alfa Laval	Dixon	VNE	Topline	Sanitary Solutions
Polished 90° Weld Elbow w/ Tangents	<b>WL2S</b>	L2S	B2S	E2S	L2S	SS2S
Polished 90° Weld Elbow	<b>W2WCL</b>	2WCL	B2WCL	2WCL	2WCL	SS2WCL
Polished 45° Weld Elbow w/ Tangents	<b>WL2KS</b>	L2KS	B2KS	E2KS	L2KS	SS2KS
Polished 45° Weld Elbow	<b>W2WK</b>	2WK	B2WK	E2WK	2WK	SS2WK
Polished 90° Clamp x Weld Elbow	<b>WL2CM</b>	L2CM	B2CM	E2C	L2CM	SS2CM
Polished 45° Clamp x Weld Elbow	<b>WL2KM</b>	L2KM	B2KM	E2KC	L2KM	SS2KM
Polished 90° Weld Sweep Elbow	<b>W2SXL</b>		B2SXL			SS2SXL
Polished Short Weld Tee	<b>W7WWW</b>	L7WWW	B7WWW	E7WWW	L7WWW	SS7WWW
Polished Long Weld Tee	<b>W7W</b>	L7W	B7W	E7W	7W	SS7W
Polished Reducing Short Weld Tee	<b>W7RWWW</b>	L7RWWW	B7RWWW	E7RWWW	L7RWWW	SS7RWWW
Polished Conc Weld Reducer	<b>W31W</b>	L31	B31W	E31WW	L31	SS31W
Polished Ecc Weld Reducer	<b>W32W</b>	L32	B32W	E32WW	L32	SS32W
Polished Weld Lateral	<b>W28WA</b>	L28WA	B28WA	E28WA	L28WA	SS28WA
Polished Weld True Wye	<b>W28WB</b>	L28WB	B28WB	E28WB	L28WB	SS28WB
Polished Weld Cross	<b>W9WWW</b>	B9WWW	B9WWW	E9WWW	L9WWW	SS9WWW
Polished Weld 180° Return Bend	<b>W2WU</b>	L2WU	B2WUL	E2WU	2WUL	SS2WUL

## MISCELLANEOUS

Product Description	Wayland	Alfa Laval	Dixon	VNE	Topline	Sanitary Solutions
Male NPT x Weld End Adapter	<b>W19WB</b>	19WB	B19WB	19WB	19WB	SS19WB
Female NPT x Weld End Adapter	<b>W22WB</b>	22WB	B22WB	22WB	22WB	SS22WB
Dome Cap	<b>W16W</b>	16W	B16W	V16W	16W	SS16W
Tube Flange	<b>W38SL</b>	38SL	B38SL	E38SL	38SL	SS38SL
Type A Stub End	<b>W14VB</b>	14VB	14VB	V14WA	14VB	SS14VBA
Weld Neck Flange	<b>W38W</b>	38W	B38W	V38W	38W	SS38W
Hex Hanger w/ Nitrile Grommets	<b>RGHT</b>		B24RG	E24	C24T	SSTHG
Hex Hanger w/ Abs Sleeve	<b>PVCT</b>		B24PS	E24PVC	B24W	SSTHP



## FRACTION - DECIMAL - MM CONVERSION CHART

INCH FRACTION	INCH DECIMAL	MILLIMETERS
1/64	0.015625	0.3969
1/32	0.03125	0.7938
3/64	0.046875	1.1906
1/16	0.0625	1.5875
5/64	0.078125	1.9844
3/32	0.09375	2.3813
7/64	0.109375	2.7781
1/8	0.125	3.175
9/64	0.140625	3.5719
5/32	0.15625	3.9688
11/64	0.171875	4.3656
3/16	0.1875	4.7625
13/64	0.203125	5.15940
7/32	0.21875	5.5563
15/64	0.234375	5.9531
1/4	0.25	6.35
17/64	0.265625	6.7469
9/32	0.28125	7.1438
19/64	0.296875	7.5406
5/16	0.3125	7.9375
21/64	0.328125	8.3344
11/32	0.34375	8.7313
23/64	0.359375	9.1281
3/8	0.375	9.525
25/64	0.390625	9.9219
13/32	0.40625	10.3188
27/64	0.421875	10.7156
7/16	0.4375	11.1125
29/64	0.453125	11.5094
15/32	0.46875	11.9063
31/64	0.484375	12.3031
1/2	0.500	12.7001

INCH FRACTION	INCH DECIMAL	MILLIMETERS
33/64	0.515625	13.0969
17/32	0.53125	13.4938
35/64	0.546875	13.8906
9/16	0.5625	14.2875
37/64	0.578125	14.6844
19/32	0.59375	15.0813
39/64	0.609375	15.4781
5/8	0.625	15.8750
41/64	0.640625	16.2719
21/32	0.65625	16.6688
43/64	0.671875	17.0656
11/16	0.6875	17.4625
45/64	0.703125	17.8594
23/32	0.71875	18.2563
47/64	0.734375	18.6531
3/4	0.75	19.05
49/64	0.765625	19.4469
25/32	0.78125	19.8438
51/64	0.796875	20.2406
13/16	0.8125	20.6375
53/64	0.828125	21.0344
27/32	0.84375	21.4313
55/64	0.859375	21.8281
7/8	0.875	22.225
57/64	0.890625	22.6219
29/32	0.90625	23.0188
59/64	0.921875	23.4156
15/16	0.9375	23.8125
61/64	0.953125	24.2094
31/32	0.96875	25.0127
63/64	0.984375	25.0031
1	1.00	25.4001

## COMPOUND SELECTION FOR FLUIDS & CHEMICALS

A – SATISFACTORY B – FAIR C – SEVERE EFFECT – EXCEPT FOR SOME STATIC APPLICATIONS D – UNSATISFACTORY E – INSUFFICIENT INFORMATION

FLUID	MATERIAL				
	Buna	EPDM	FKM	PTFE	Silicone
Acetaldehyde	D	A	D	A	B
Acetamide	A	A	B	A	B
Acetic Acid, 30%	B	A	B	A	A
Acetone	D	A	D	A	C
Acetophenone	D	A	D	A	D
Acetyl Chloride	D	D	A	A	C
Acetylene	A	A	A	A	B
Acrylonitrile	D	D	C	A	D
Adipic Acid	A	A	E	E	E
Ammonia Gas (cold)	A	A	D	A	A
Ammonium Chloride (aq)	A	A	A	A	E
Ammonium Hydroxide (conc.)	D	A	B	A	A
Ammonium Nitrate (aq)	A	A	E	A	E
Ammonium Nitrite (aq)	A	A	E	E	B
Ammonium Phosphate (aq)	A	A	E	A	A
Ammonium Sulfate (aq)	A	A	D	A	E
Amyl Acetate (Banana Oil)	D	A	D	A	D
Amyl Alcohol	B	A	B	A	D
Amyl Borate	A	D	A	A	E
Arsenic Acid	A	A	A	E	A
Arsenic Trichloride (aq)	A	C	E	E	E
Barium Chloride (aq)	A	A	A	A	A
Barium Hydroxide (aq)	A	A	A	A	A
Barium Sulfate (aq)	A	A	A	A	A
Barium Sulfide (aq)	A	A	A	A	A
Benzaldehyde	D	A	D	A	B
Benzene	D	D	A	A	D
Benzoic Acid	C	C	A	A	C
Benzoyl Chloride	D	D	A	A	E
Benzyl Alcohol	D	A	A	A	B
Benzyl Chloride	D	D	A	A	D
Boric Acid	A	A	A	A	A
Brine	A	A	A	A	A
Bromine, Anhydrous	D	D	A	E	D
Bromine Water	D	B	A	E	D
Butadiene	D	C	A	A	D
Butane	A	D	A	A	D
Butyl Acetate	D	C	D	E	D
Butyl Acetyl Ricinoleate	C	A	A	E	E
Butyl Alcohol	A	B	A	A	B
Butylamine	C	B	D	E	D
Butyl Benzoate	D	B	A	E	E

FLUID	MATERIAL				
	Buna	EPDM	FKM	PTFE	Silicone
Butyl Carbitol	D	A	A	A	D
Butyl Cellosolve	D	A	D	A	E
Butyl Oleate	D	B	A	E	E
Butyl Stearate	B	C	A	E	E
Butylene	B	D	A	E	D
Butyraldehyde	D	B	D	E	D
Carbolic Acid (Phenol)	D	B	A	A	D
Carbon Bisulfide	C	D	A	E	D
Carbon Dioxide	A	B	A	E	B
Carbonic Acid	B	A	A	E	A
Carbon Monoxide	A	A	A	A	A
Carbon Tetrachloride	C	D	A	A	D
Castor Oil	A	B	A	A	A
Cellosolve Acetate	D	B	D	A	D
China Wood Oil (Tung Oil)	A	C	A	A	D
Chlorine (wet)	D	C	A	A	D
Chlorine Dioxide	D	C	A	A	E
Chloroacetic Acid	D	A	D	A	E
Chloroacetone	D	A	D	E	D
Chlorobenzene	D	D	A	E	D
Chlorobromomethane	D	B	A	E	D
Chloroform	D	D	A	A	D
Chlorotoluene	D	D	A	E	D
Chrome Plating Solutions	D	C	A	A	C
Chromic Acid	D	B	A	A	B
Cod Liver Oil	A	A	A	A	B
Copper Acetate (aq)	B	A	D	E	D
Copper Chloride (aq)	A	A	A	A	A
Copper Cyanide (aq)	A	A	A	A	A
Copper Sulfate (aq)	A	A	A	A	A
Creosote (coal tar)	A	D	A	A	D
Cresylic Acid	D	D	A	E	D
Cyclohexane	A	D	A	A	D
Cyclohexanol	C	C	A	E	D
Cyclohexanone	D	B	D	E	D
Denatured Alcohol	A	A	A	A	A
Detergent Solutions	A	A	A	A	A
Diacetone Alcohol	D	A	D	A	B
Dibenzyl Ether	D	B	D	A	E
Dibenzyl Sebecate	D	B	B	E	C
Dibromoethyl Benzene (Alkazene)	D	D	B	E	D
Dibutyl Amine	D	C	D	E	C

**NOTE:** The information contained in these tables was derived from several sources and is to be used as a general guide only. Compounds suitable for any specific application rests solely by the end user. Wayland Industries assumes no responsibility whatsoever.





# COMPOUND SELECTION FOR FLUIDS & CHEMICALS

A – SATISFACTORY B – FAIR C – SEVERE EFFECT – EXCEPT FOR SOME STATIC APPLICATIONS D – UNSATISFACTORY E – INSUFFICIENT INFORMATION

## MATERIAL

FLUID	Buna	EPDM	FKM	PTFE	Silicone
Dibutyl Ether	D	C	C	E	D
Dibutyl Phthalate	D	B	C	A	B
Dibutyl Sebecate	D	B	B	E	B
O-Dichlorobenzene	D	D	A	E	D
Dichloro-Isopropyl Ether	D	C	C	E	D
Diethylamine	B	B	D	A	B
Diethyl Benzene	D	D	A	E	D
Diethyl Ether	D	D	D	E	D
Diethylene Glycol	A	A	A	E	B
Diethyl Sebecate	B	B	B	E	B
Diisobutylene	B	D	A	E	D
Diisopropyl Benzene	D	D	A	E	E
Diisopropyl Ketone	D	A	D	E	D
Diisopropylidene Acetone	D	C	D	E	D
Dimethyl Aniline (Xylidine)	C	B	D	E	D
Dimethyl Ether (Methyl Ether)	A	D	A	E	A
Dimethyl Formamide	B	B	D	E	B
Dimethyl Phthalate	D	B	B	E	E
Dinitrotoluene	D	D	D	E	D
Diocetyl Phthalate	C	B	B	E	C
Diocetyl Sebecate	D	B	B	E	C
Dioxane	D	B	D	E	D
Dioxolane	D	B	D	E	D
Dipentene	A	D	A	E	D
Diphenyl (Phenylbenzene)	D	D	A	E	D
Diphenyl Oxides	D	D	A	E	C
Dowtherm Oil	D	D	A	A	C
Ethane	A	D	A	A	D
Ethanolamine	B	B	D	E	B
Ethyl Acetate	D	B	D	E	B
Ethyl Acetoacetate	D	B	D	E	B
Ethyl Acrylate	D	B	D	E	B
Ethyl Alcohol	A	A	C	A	A
Ethyl Benzene	D	D	A	A	D
Ethyl Benzoate	D	A	A	A	D
Ethyl Cellosolve	D	B	D	E	D
Ethyl Cellulose	B	B	D	A	C
Ethyl Chloride	A	C	A	A	D
Ethyl Chlorocarbonate	D	B	A	A	D
Ethyl Chloroformate	D	B	D	E	D
Ethyl Ether	C	C	D	A	D
Ethyl Pentachlorobenzene	D	D	A	A	D

## MATERIAL

FLUID	Buna	EPDM	FKM	PTFE	Silicone
Ethylene	A	B	A	A	E
Ethylene Chloride	D	C	B	E	D
Ethylene Diamine	A	A	D	E	A
Ethylene Dichloride	D	C	A	A	D
Ethylene Glycol	A	A	A	A	A
Fluoroboric Acid	A	A	E	E	E
Freon 11	B	D	A	A	D
Freon 12	A	B	B	A	D
Freon 22	D	A	D	A	D
Fumaric Acid	A	B	A	E	B
Gallic Acid	B	B	A	A	E
Gasoline	B	D	A	A	D
Glucose	A	A	A	A	A
Glycerin	A	A	A	A	A
Hexane	A	D	A	A	D
Hexyl Alcohol	A	C	A	A	B
Hydrazine	B	A	D	A	C
Hydrobromic Acid	D	A	A	E	D
Hydrocyanic Acid	B	A	A	A	C
Hydrofluoric Acid (conc.) cold	D	C	A	A	D
Hydrofluosilicic Acid	B	B	A	E	D
Hydrogen Gas	A	A	A	A	C
Hydrogen Peroxide (90%)	D	B	B	E	B
Hydrogen Sulfide (wet) cold	D	A	D	E	C
Hydroquinone	C	B	B	A	E
Iodoform	E	D	E	E	E
Isobutyl Alcohol	B	A	A	A	A
Isooctane	A	D	A	E	D
Isopropyl Acetate	D	B	D	A	D
Isopropyl Alcohol	B	A	A	A	A
Isopropyl Chloride	D	D	A	A	D
Isopropyl Ether	B	D	D	A	D
Kerosene	A	D	A	A	D
Lacquers	D	D	D	A	D
Lactic Acid (cold)	A	A	A	A	A
Lead Acetate (aq)	B	A	D	E	D
Lead Nitrite (aq)	A	A	E	E	B
Lime Bleach	A	A	A	E	B
Linoleic Acid	B	D	B	A	B
Maleic Acid	D	B	A	A	E
Malic Acid	A	B	A	E	B
Methane	A	D	B	A	D

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# COMPOUND SELECTION FOR FLUIDS & CHEMICALS

A – SATISFACTORY B – FAIR C – SEVERE EFFECT – EXCEPT FOR SOME STATIC APPLICATIONS D – UNSATISFACTORY E – INSUFFICIENT INFORMATION

## MATERIAL

FLUID	Buna	EPDM	FKM	PTFE	Silicone
Methyl Acetate	D	A	D	A	D
Methyl Acrylate	D	B	D	A	D
Methylacrylic Acid	D	B	D	E	D
Methyl Alcohol	A	A	D	A	A
Methyl Bromide	B	D	A	A	E
Methyl Butyl Ketone	D	A	D	A	C
Methyl Cellosolve	C	B	D	A	D
Methyl Chloride	D	C	B	A	D
Methyl Cyclopentane	D	D	B	E	D
Methylene Chloride	D	C	B	E	D
Methyl Ether	A	D	A	A	A
Methyl Ethyl Ketone	D	A	D	A	D
Methyl Isobutyl Ketone	D	B	D	A	D
Methyl Methacrylate	D	C	D	A	D
Milk	A	A	A	A	A
Mineral Oil	A	C	A	C	B
Monoethanol Amine	D	A	D	E	B
Monomethyl Ether	A	D	A	E	A
Monovinyl Acetylene	A	A	A	A	B
Mustard Gas	E	A	E	E	A
Naphthalenic Acid	B	D	A	A	D
Natural Gas	A	D	A	A	A
Nickel Acetate (aq)	B	A	D	E	D
Nickel Chloride (aq)	A	A	A	A	A
Nickel Sulfate (aq)	A	A	A	A	A
Nitric Acid (dilute)	D	B	A	A	B
Nitrobenzene (Ligroin)	A	D	A	A	D
Nitroethane	D	B	D	A	D
Nitrogen Tetroxide	D	C	D	A	D
Octachlorotoluene	D	D	A	E	D
Octadecane	A	D	A	E	D
N-Octane	B	D	A	A	D
Octyl Alcohol	B	C	A	A	B
Oleic Acid	C	D	B	A	D
Oxalic Acid	B	A	A	E	B
Oxonia	D	A	A	E	A
Oxygen - Cold	B	A	A	A	A
Ozone	D	A	A	E	A
Palmitic Acid	A	B	A	E	D
Perchloric Acid	D	B	A	E	D
Phenyl Ethyl Ether	D	D	D	E	D
Phosphoric Acid - 20%	B	A	A	E	B

## MATERIAL

FLUID	Buna	EPDM	FKM	PTFE	Silicone
Phosphorus Trichloride	D	A	A	A	E
Piperidine	D	A	D	E	D
Polyvinyl Acetate Emulsion	E	A	E	E	E
Potassium Acetate (aq)	B	A	D	E	D
Potassium Chloride (aq)	A	A	A	A	A
Potassium Cyanide (aq)	A	A	A	A	A
Potassium Nitrate (aq)	A	A	A	A	A
i-Propyl Acetate	D	B	D	E	D
Propyl Nitrate	D	B	D	E	D
Propylene	D	D	A	A	D
Pyridine	D	B	D	E	D
Salicylic Acid	B	A	A	E	E
Silicone Oils	A	A	A	A	C
Soap Solutions	A	A	A	A	A
Sodium Acetate (aq)	B	A	D	E	D
Sodium Bicarbonate (aq)	A	A	A	A	A
Sodium Borate (aq)	A	A	A	A	A
Sodium Chloride (aq)	A	A	A	A	A
Sodium Hydroxide (aq)	B	A	B	A	B
Sodium Nitrate (aq)	B	A	E	E	D
Sodium Peroxide (aq)	B	A	A	E	D
Soybean Oil	A	C	A	A	A
Steam, under 300°F	D	A	D	A	C
Stearic Acid	B	B	E	A	B
Stoddard Solvent	A	D	A	A	D
Sulfur Chloride (aq)	C	D	A	B	C
Sulfuric Acid (dilute)	C	B	A	E	D
Sulfurous Acid	B	B	A	A	D
Tannic Acid	A	A	A	A	B
Tartaric Acid	A	B	A	A	A
Tetrachloroethylene	D	D	A	A	D
Toluene	D	D	A	A	D
Triethanol Amine	B	A	D	A	E
Triocetyl Phosphate	D	A	B	E	C
Tung Oil (China Wood Oil)	A	C	A	A	D
Turpentine	A	D	A	A	D
Vegetable Oils	A	C	A	A	B
Vinegar	B	A	A	A	A
Whiskey, Wines	A	A	A	A	A
White Pine Oil	B	D	A	E	D
Zinc Chloride (aq)	A	A	A	A	A

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Warranty & Limitations of Liability

Subject to the conditions and limitations in this Limited Warranty, WAYLAND INDUSTRIES, warrants to the owner of applicable real property in the United States (including its territories) and Canada that WAYLAND products, when properly installed in piping systems, under normal conditions of use, shall be free from failure caused by manufacturing defects for the applicable Warranty Period. This Limited Warranty is in effect for installations made after February 1, 2019 and applies strictly to products installed in the country which they were purchased.

All products must be installed in accordance with all then applicable codes, in accordance with any local, state, provincial or federal requirements. Products must at all times be used in a manner consistent with their intended use and be used in installations and environments acceptable to their material and design specifications, including not being installed in a system that may operate at temperatures or at pressures that exceed the approved ratings.

If a product is defective; the limitation of liability is to replace our products. There are no warranties, either expressed or implied (including any warranties of merchant ability or fitness for a particular purpose) in connection with our products except as expressly stated herein. We will not pay for charges for labor, expenses or damages occasioned by defective material. We will not be liable, in any case, for consequential or punitive damages. All of the above are in effect for 5 years from the date of shipment from Wayland Industries.

Validation of the Warranty Period is required through proof of purchase. No warranty shall be honored for any product which is modified or changed in any manner after leaving Wayland Industries. The warranty set forth herein also does not cover normal and customary wear and tear.

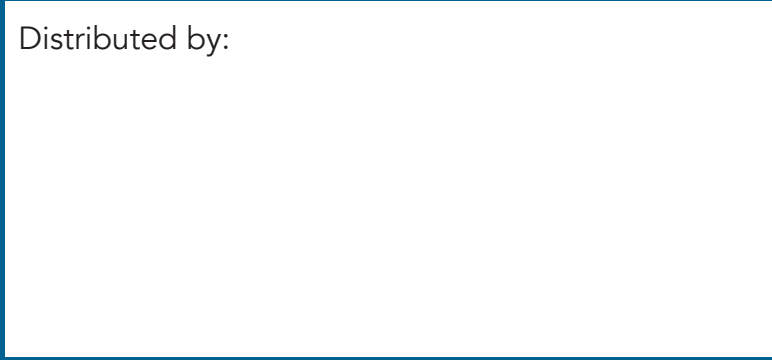
Should any failure to conform to this warranty be discovered within the Warranty Period and written notice of such nonconformity is provided to the Supplier promptly after such discovery and within the Warranty Period, upon return of the defective product to Supplier in accordance with the Supplier's instructions and the reasonable determination by Supplier that the product (a) does not conform to the warranty, Supplier will correct such defects by suitable repair or replacement of the product at Supplier's own expense or refund the portion of the price applicable to the non-conforming portion of the product (which alternative shall be at the sole discretion of Supplier).

No warranty of any kind, whether express or implied shall pass through our initial purchaser to any other person, organization, entity or the like. Except as expressly provided herein, in no event shall any liability or responsibility of Supplier which may arise in any circumstances whatsoever exceed the price to the initial purchaser of the Supplier's product on which liability is based.

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