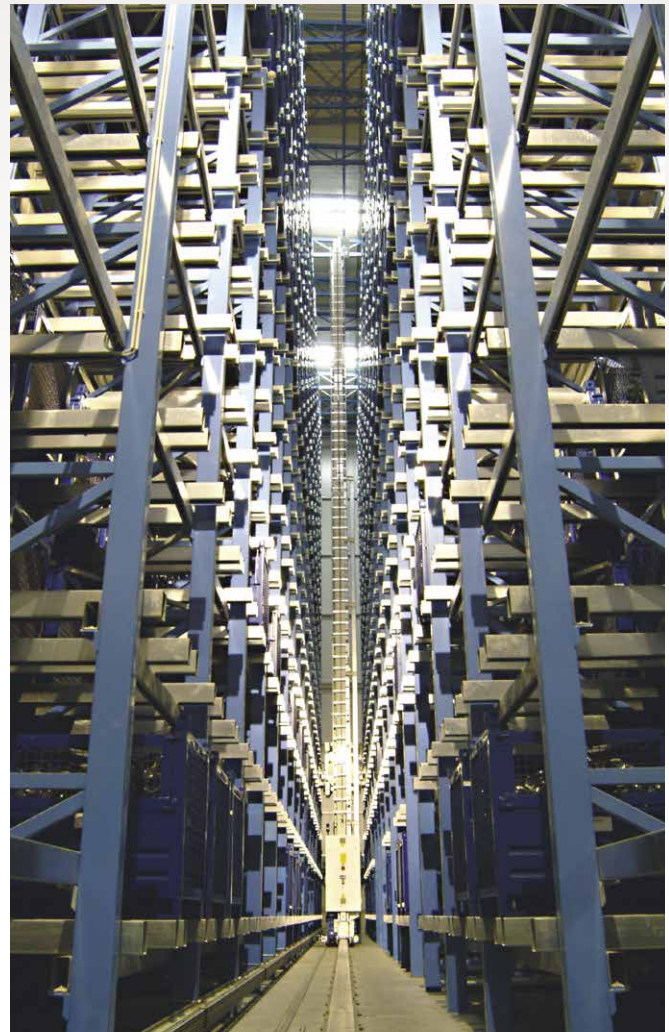
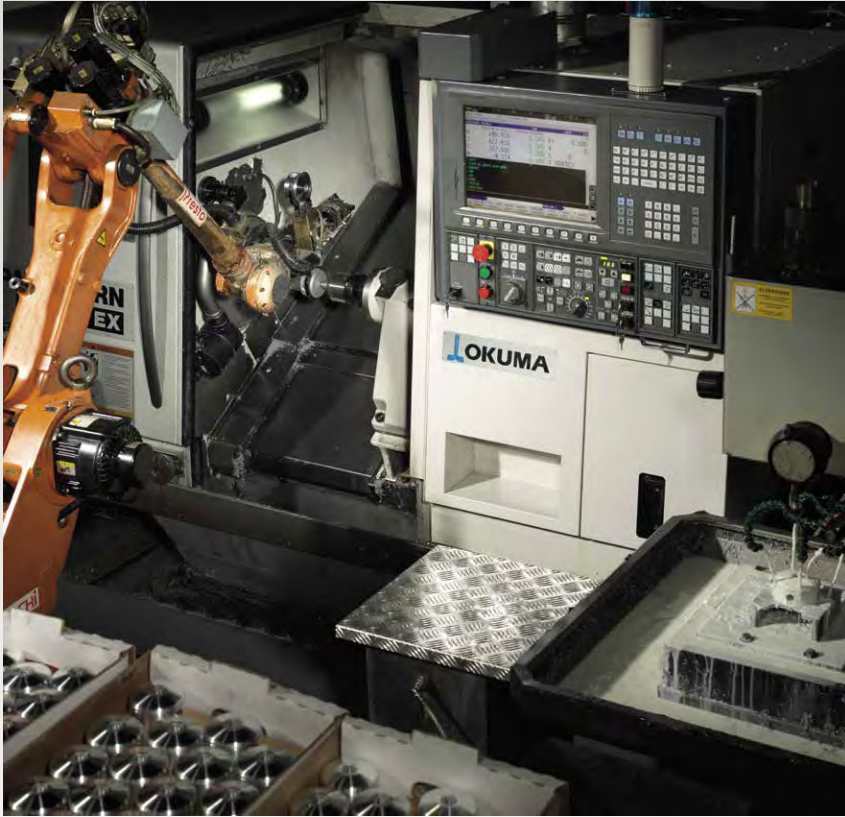




*World Leader in
Diaphragm and
Plunger Pumps*



PLUNGER PUMPS & ACCESSORIES
2019 CATALOG





APPLICATIONS



*AGRICULTURAL
SPRAYING*



LAWN CARE



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WASHING*



CAR WASHING



*SEWAGE AND
PIPE CLEANING*



ROAD WASHING



FIRE FIGHTING



DESALINATION



DEICING

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8	BK SERIES PUMPS
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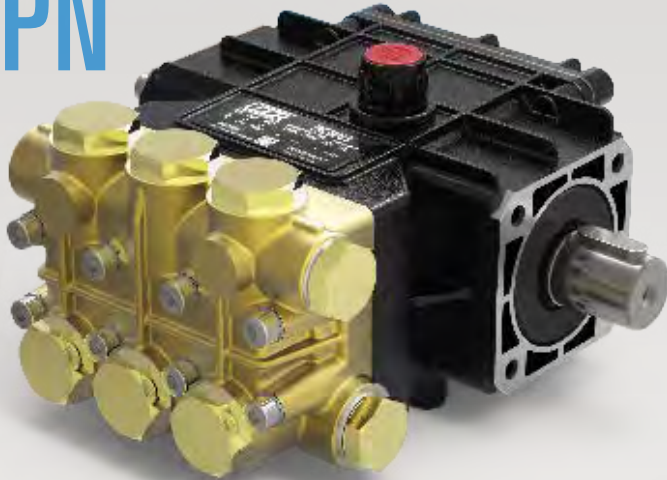


PUMPS

32	GEAR REDUCERS / MULTIPLIERS
33	MOUNTING FLANGES / DRIVE BUSHINGS
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ACCESSORIES



- Brass Manifold
- Heat Treated Crankshaft
- Stainless Steel Piston Guides
- High Strength Aluminum Alloy or Bronze Connecting Rods
- Industrial Quality Ball Bearings and Needle Bearings
- Solid Ceramic Plungers
- Stainless Steel Check Valves
- Heavy Duty Flat Base High Pressure Seals
- Dual Oil Sight Gauges
- 10 oz. Capacity Vented Oil Bath Crank Case
- 3/8" BSP-F Inlet. 3/8" BSP-F Outlet
- Max Fluid Temp, 160°F

Solid Shaft Models

24mm Keyed Solid Shaft

	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
1450 RPM	PNC 11/17-S	3.0	2500	5 HP Electric	UD-8	UD-1	12 LBS	\$ 628.30
	PNC 13/15-S	3.5	2000	5 HP Electric	UD-8	UD-1	12 LBS	\$ 628.30
1750 RPM	PND 3.0/20-S	3.0	2000	4 HP Electric	UD-7	UD-1	12 LBS	\$ 623.15
	PND 3.5/20-S	3.5	2000	5 HP Electric	UD-8	UD-1	12 LBS	\$ 628.30
	PND 4.0/15-S	4.0	1500	4 HP Electric	UD-8	UD-1	12 LBS	\$ 628.30
Rail Kit	8702.10	Standard 7/8" Rail Kit for P-Series Solid Shaft Pumps						\$ 14.32



Direct Drive, Gas Engine Flange Models

3/4" Hollow Shaft with Mounting Flange and Set Screw

	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
3400 RPM	PNL 3.0/20-T	3.0	2000	5.5 HP Gas	UD-7	UD-1	13 LBS	\$ 623.15
	PNL 3.0/25-T	3.0	2500	6.5 HP Gas	UD-7	UD-1	14 LBS	\$ 638.60
	PNL 3.5/22-T	3.5	2200	6.5 HP Gas	UD-7	UD-1	14 LBS	\$ 638.60



Gear Reduction, Gas Engine Models

3/4" Hollow Shaft. 2.2:1 Gear Reduction

	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
Gear Reduction	PNC 11/17-GR	3.0	2500	6.5 HP Gas	UD-8	UD-1	18 LBS	\$ 906.40
	PNC 13/15-GR	3.5	2000	6.5 HP Gas	UD-8	UD-1	18 LBS	\$ 906.40



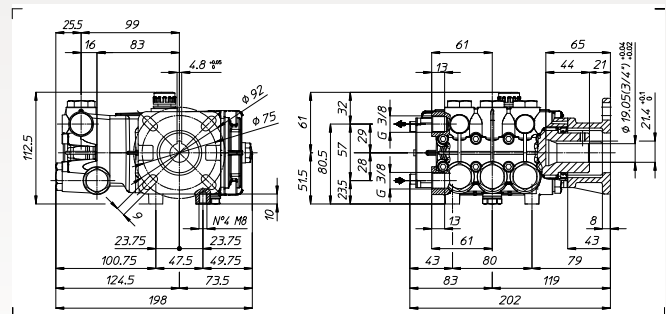
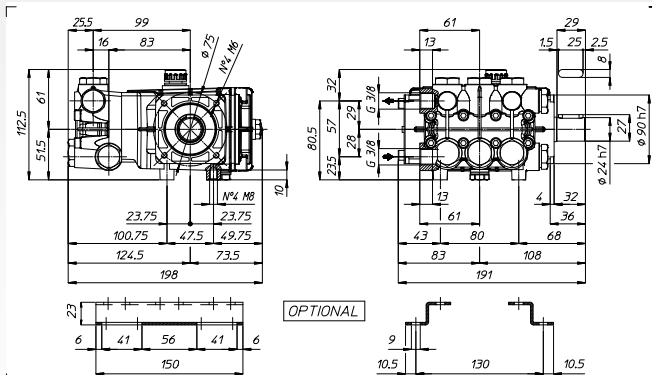
Direct Drive, Electric Flange Models

5/8" Hollow Shaft with NEMA 56C Mounting Flange

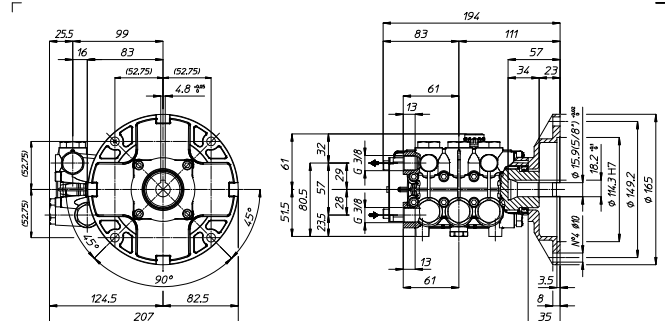
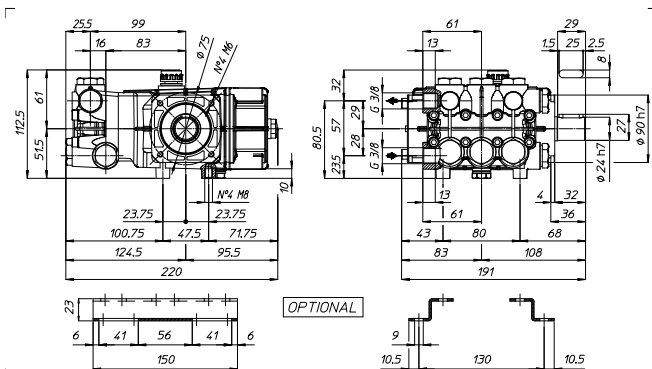
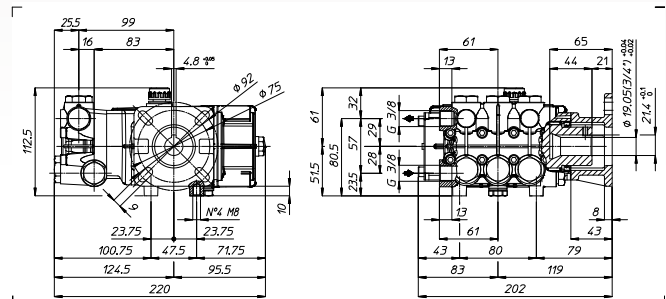
	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
1750 RPM	PND 1.0/20-Z	1.0	2000	1.5 HP Electric	UD-7	UD-1	13 LBS	\$ 623.15
	PND 1.5/20-Z	1.5	2000	2 HP Electric	UD-7	UD-1	13 LBS	\$ 623.15
	PND 2.0/20-Z	2.0	2000	3 HP Electric	UD-7	UD-1	13 LBS	\$ 623.15
	PND 3.0/15-ZA*	3.0	1500	3 HP Electric	UD-7	UD-1	11 LBS	\$ 525.30
	PND 3.0/20-Z	3.0	2000	4 HP Electric	UD-7	UD-1	13 LBS	\$ 628.30
	PND 4.0/15-Z	4.0	1500	4 HP Electric	UD-8	UD-1	13 LBS	\$ 638.60
3400 RPM	PNL 2.0/20-Z	2.0	2000	3 HP Electric	UD-7	UD-1	13 LBS	\$ 623.15
	PNL 3.0/20-Z	3.0	2000	4 HP Electric	UD-7	UD-1	13 LBS	\$ 628.30

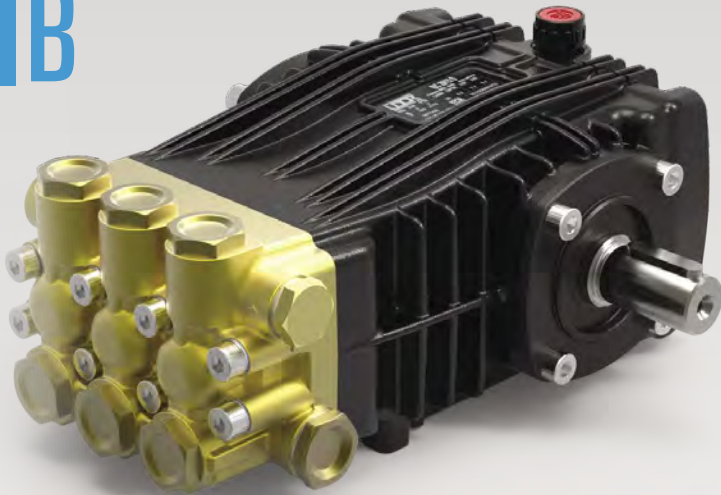
*'A' denotes Aluminum head. 'L' denotes Left-hand Shaft

P-Series Dimensional Drawings



Dimensional Drawings are
Shown in Millimeters.
To Convert to Inches,
Multiply Dimension x 0.03937



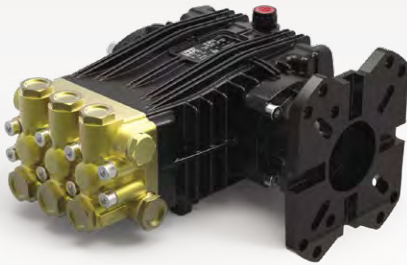


- Brass Manifold
- Heat Treated Crankshaft
- Stainless Steel Piston Guides
- High Strength Aluminum Alloy Connecting Rods
- Industrial Quality Tapered Roller Bearings
- Solid Ceramic Plungers
- Stainless Steel Check Valves
- Heavy Duty Flat Base High Pressure Seals
- Replaceable PTFE Coated Body Guides
- 16 oz. Capacity Vented Oil Bath Crank Case
- 1/2" BSP-F Inlet. 3/8" BSP-F Outlet
- Max Fluid Temp, 160°F

Solid Shaft Models

24mm Keyed Solid Shaft

	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
1450 RPM	BC 13/20-S	3.4	3000	7 HP Electric	UD-109	UD-2	20 LBS	\$ 813.70
	BC 15/20-S	4.0	3000	8 HP Electric	UD-28	UD-2	20 LBS	\$ 813.70
	BC 18/20-S	4.9	3000	9.5 HP Electric	UD-28	UD-2	20 LBS	\$ 865.20
	BC 21/20-S	5.5	3000	11 HP Electric	UD-28	UD-2	20 LBS	\$ 865.20
1750 RPM	BD 4.0/20-S	4.1	2030	6 HP Electric	UD-109	UD-2	20 LBS	\$ 813.70
	BD 4.0/30-S	4.1	3000	8 HP Electric	UD-109	UD-2	20 LBS	\$ 813.70
	BD 5.0/30-S	4.9	3000	9.5 HP Electric	UD-28	UD-2	20 LBS	\$ 865.20
	BD 6.0/30-S	6.0	3000	12 HP Electric	UD-28	UD-2	20 LBS	\$ 865.20
Rail Kit	8702.10		Standard 7/8" Rail Kit for B-Series Solid Shaft Pumps					\$ 14.32



Direct Drive, Gas Engine Flange Models

1" Hollow Shaft with Mounting Flange and Set Screw

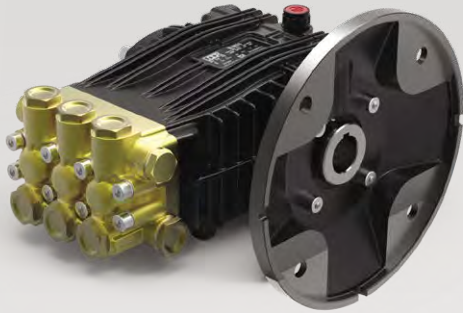
	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
3400 RPM	BL 4.0/30-W	4.1	3000	11 HP Gas	UD-109	UD-2	23 LBS	\$ 782.80
	BL 5.0/30-W	5.0	3000	14.5 HP Gas	UD-109	UD-2	23 LBS	\$ 829.15



Gear Reduction, Gas Engine Models

1" Hollow Shaft. 2.2:1 Gear Reduction

	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
Gear Reduction	BC 13/20-GR	3.5	3000	9 HP Gas	UD-109	UD-2	28 LBS	\$ 1,251.45
	BC 15/20-GR	4.0	3000	11 HP Gas	UD-28	UD-2	28 LBS	\$ 1,251.45
	BC 18/20-GR	5.0	3000	14.5 HP Gas	UD-28	UD-2	28 LBS	\$ 1,297.80

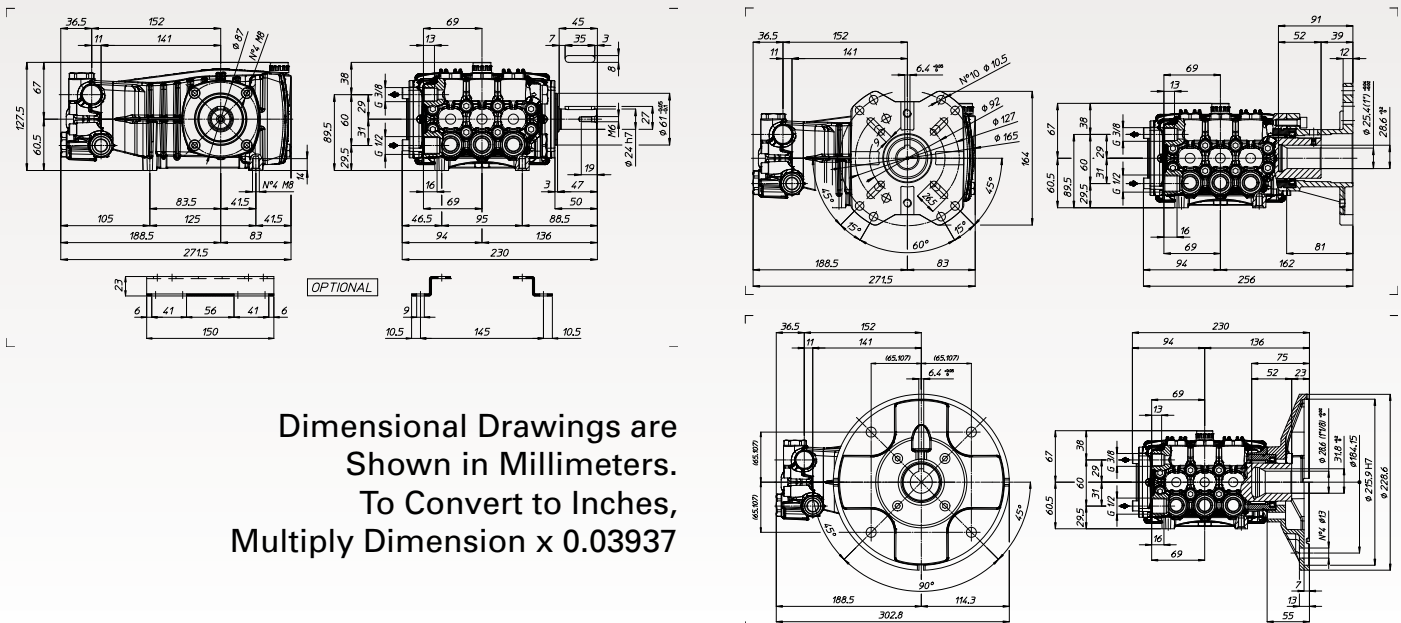


Direct Drive, Electric Flange Models

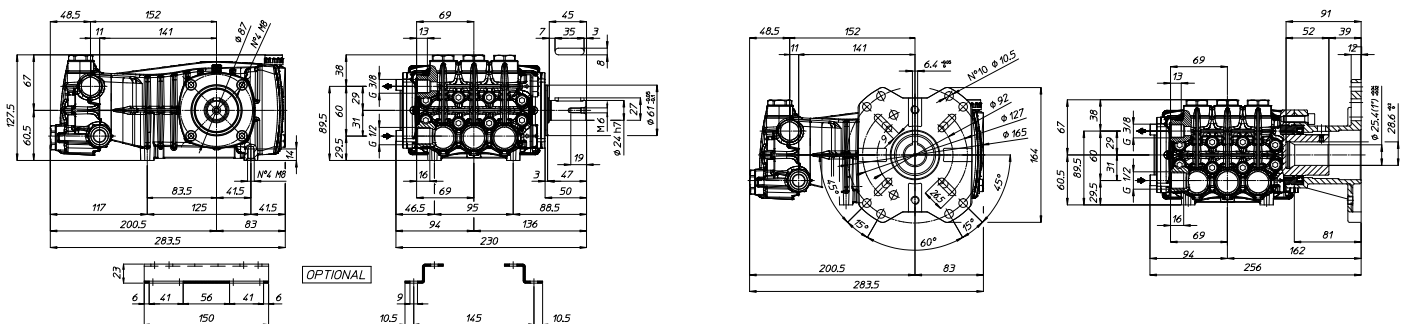
1-1/8" Hollow Shaft with 182/184 Mounting Flange

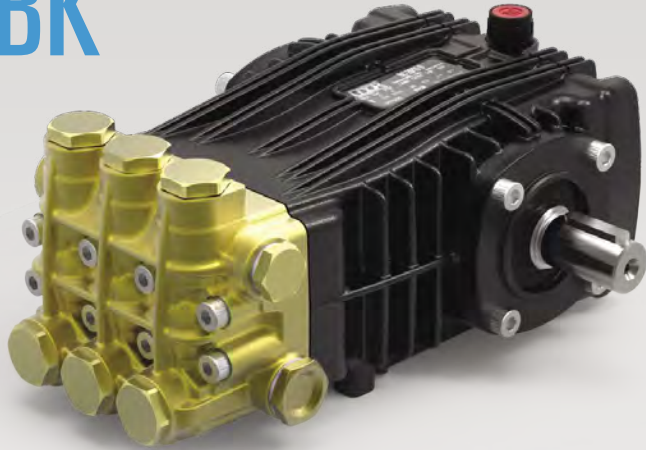
	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
1750 RPM	BD 4.0/20-U	4.0	2000	6 HP Electric	UD-109	UD-2	23 LBS	\$ 880.65
	BD 4.0/30-U	4.0	3000	8 HP Electric	UD-109	UD-2	23 LBS	\$ 880.65
	BD 5.0/30-U	5.0	3000	10 HP Electric	UD-28	UD-2	23 LBS	\$ 906.40

B-Series Dimensional Drawings



BK-Series Dimensional Drawings (see Next Page)



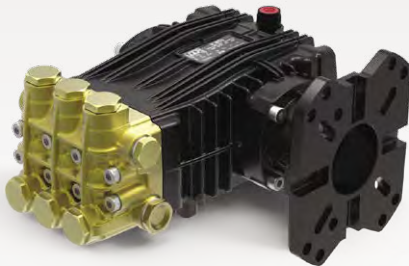


- Heavy Duty Brass Manifold with External and Internal Bracing
- Heavy Duty Bronze or High Strength Aluminum Alloy Connecting Rods.
- Large Diameter Brass Valve Caps with Increased Thread Depth
- Reinforcing Ring on Inlet and Discharge Ports
- Deeper Back Cover for Increased Oil Capacity
- 16 oz. Capacity Vented Oil Bath Crank Case
- 1/2" BSP-F Inlet. 3/8" BSP-F Outlet
- Max Fluid Temp, 160°F

Solid Shaft Models

24mm Keyed Solid Shaft

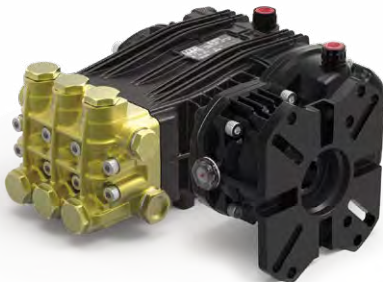
	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
1450 RPM	BKC 13/28-S	3.4	4060	9.5 HP Electric	UD-109	UD-30	23 LBS	\$ 937.30
	BKC 15/28-S	4.0	4060	11 HP Electric	UD-28	UD-30	23 LBS	\$ 937.30
	BKC 18/24-S	4.9	3500	11.5 HP Electric	UD-28	UD-30	23 LBS	\$ 993.95
	BKC 20/24-S	5.3	3500	12.5 HP Electric	UD-28	UD-30	23 LBS	\$ 1,024.85
1750 RPM	BKD 4.0/40-S	4.0	4060	11 HP Electric	UD-109	UD-30	23 LBS	\$ 937.30
	BKD 5.0/35-S	4.8	3500	11.5 HP Electric	UD-28	UD-30	23 LBS	\$ 993.95
Rail Kit	8702.10			Standard 7/8" Rail Kit for B-Series Solid Shaft Pumps				\$ 14.32



Direct Drive, Gas Engine Flange Models

1" Hollow Shaft with Mounting Flange and Set Screw

	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
3400 RPM	BKL 4.0/40-W	4.0	4000	14.5 HP Gas	UD-109	UD-30	26 LBS	\$ 937.30
	BKL 5.0/35-W	5.0	3500	16 HP Gas	UD-109	UD-30	26 LBS	\$ 993.95



Gear Reduction, Gas Engine Models

1" Hollow Shaft. 2.2:1 Gear Reduction

	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
Gear Reduction	BKC 13/28-GR	3.5	4000	14.5 HP Gas	UD-109	UD-30	30 LBS	\$ 1,354.45
	BKC 15/28-GR	4.0	4000	16 HP Gas	UD-28	UD-30	30 LBS	\$ 1,354.45
	BKC 18/24-GR	5.0	3500	16 HP Gas	UD-28	UD-30	30 LBS	\$ 1,411.10
	BKC 20/24-GR	5.5	3500	18 HP Gas	UD-28	UD-30	30 LBS	\$ 1,442.00



- Solid Ceramic Plungers
- Stainless Steel Check Valves
- Heavy Duty Brass Manifold with External and Internal Bracing
- High Strength Aluminum Alloy Connecting Rods.
- Large Diameter Brass Valve Caps with Increased Thread Depth
- Reinforcing Ring on Inlet and Discharge Ports
- Deeper Back Cover for Increased Oil Capacity
- 35 oz. Capacity Vented Oil Bath Crank Case
- 1/2" BSP-F Inlet. 3/8" BSP-F Outlet: 5.5 - 8.5 GPM
- 1/2" BSP-F Inlet. 1/2" BSP-F Outlet: 9.0 GPM & Above
- Max Fluid Temp, 160°F

Solid Shaft Models

24mm Keyed Solid Shaft

	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
1450 RPM	CC 21/20-S	5.5	3000	11 HP Electric	UD-10	UD-3	36 LBS	\$ 1,194.80
	CC 26/20-S	6.9	3000	13.5 HP Electric	UD-10	UD-3	36 LBS	\$ 1,266.90
	CC 30/20-S	7.9	3000	15.5 HP Electric	UD-11	UD-3	36 LBS	\$ 1,302.95
	CC 34/17-S	9.0	2500	15 HP Electric	UD-11	UD-3	36 LBS	\$ 1,302.95
1750 RPM	CD 5.5/30-S	5.5	3000	11 HP Electric	UD-10	UD-3	36 LBS	\$ 1,194.80
	CD 7.0/30-S	7.0	3000	12 HP Electric	UD-10	UD-3	36 LBS	\$ 1,266.90
	CD 7.5/30-S	7.4	3000	14.5 HP Electric	UD-10	UD-3	36 LBS	\$ 1,302.95
	CD 8.5/30-S	8.5	3000	16.5 HP Electric	UD-10	UD-3	36 LBS	\$ 1,302.95
	CD 9.5/25-S	9.5	2500	16 HP Electric	UD-10	UD-3	36 LBS	\$ 1,302.95
	CD 11.0/22-S	11.0	2200	16 HP Electric	UD-11	UD-3	36 LBS	\$ 1,319.50
	CD 12.0/20-S	12.0	2030	16.5 HP Electric	UD-11	UD-3	36 LBS	\$ 1,319.50
Rail Kit	8702.08	Standard 7/8" Rail Kit for C-Series Solid Shaft Pumps						\$ 15.35
	8702.07	Medium 1-3/4" Rail Kit for C-Series Solid Shaft Pumps						\$ 47.59
	8702.25	Tall 2-1/2" Rail Kit for C-Series Solid Shaft Pumps						\$ 49.23



- Solid Ceramic Plungers
- Stainless Steel Check Valves
- Heavy Duty Brass Manifold with External and Internal Bracing
- High Strength Aluminum Alloy Connecting Rods.
- Large Diameter Stainless Steel Valve Caps with Increased Thread Depth
- Reinforcing Ring on Inlet and Discharge Ports
- Deeper Back Cover for Increased Oil Capacity
- 35 oz. Capacity Vented Oil Bath Crank Case
- 3/4" BSP-F Inlet. 1/2" BSP-F Outlet
- Max Fluid Temp, 160°F

Solid Shaft Models

24mm Keyed Solid Shaft

	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
1450 RPM	CC 38/15-S	10.0	2200	15 HP Electric	UD-12	UD-3	36 LBS	\$ 1,462.60
	CC 42/14-S	11.6	2030	16 HP Electric	UD-12	UD-3	36 LBS	\$ 1,498.65
	CC 50/12-S	13.2	1740	15.5 HP Electric	UD-12	UD-3	36 LBS	\$ 1,665.20
Rail Kit	8702.08	Standard 7/8" Rail Kit for C-Series Solid Shaft Pumps						\$ 15.35
	8702.07	Medium 1-3/4" Rail Kit for C-Series Solid Shaft Pumps						\$ 47.59
	8702.25	Tall 2-1/2" Rail Kit for C-Series Solid Shaft Pumps						\$ 49.23



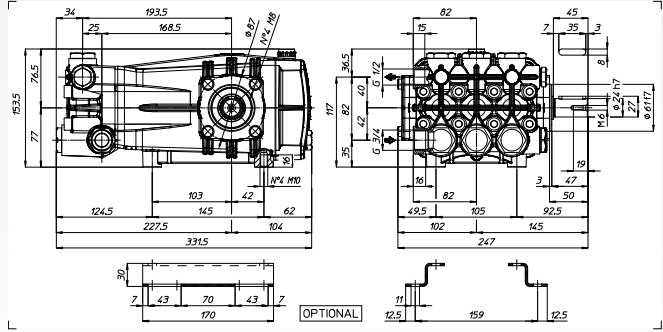
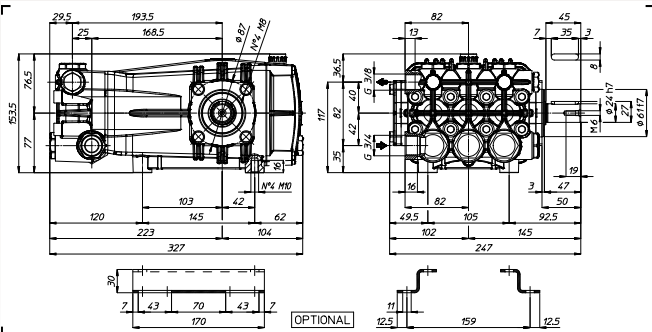
- Standard with 1" Hollow Shaft
 - Available with 1-1/8" Hollow Shaft.
- Add '1-1/8' to Model Number to Specify when Ordering

Gear Reduction, Gas Engine Models

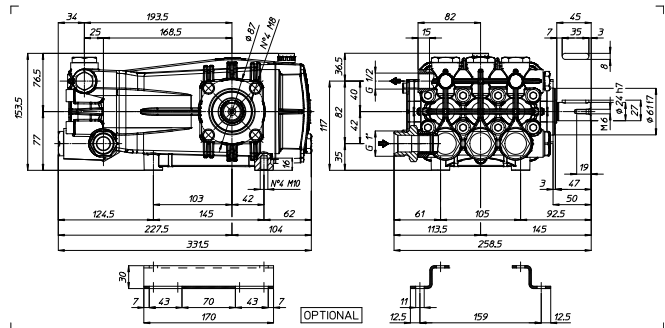
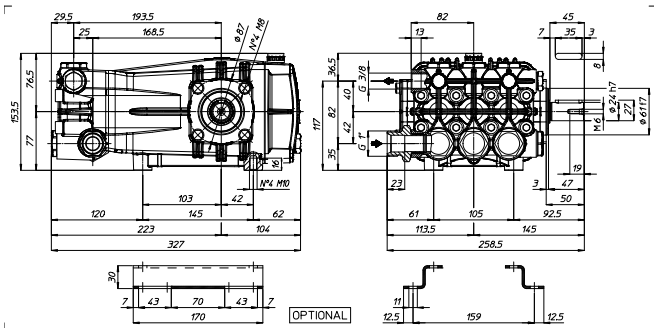
1" Hollow Shaft. 2.2:1 Gear Reduction

	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
Gear Reduction	CC 21/20-GR	5.5	3000	14.5 HP Gas	UD-10	UD-3	46 LBS.	\$ 1,596.50
	CC 26/20-GR	6.9	3000	16 HP Gas	UD-10	UD-3	46 LBS.	\$ 1,658.30
	CC 30/20-GR	7.9	3000	20 HP Gas	UD-11	UD-3	46 LBS.	\$ 1,709.80
	CC 34/17-GR	9.0	2500	20 HP Gas	UD-11	UD-3	46 LBS.	\$ 1,709.80
	CC 38/15-GR	10.0	2200	18 HP Gas	UD-12	UD-3	46 LBS.	\$ 1,869.45
	CC 42/14-GR	11.6	2030	20 HP Gas	UD-12	UD-3	46 LBS.	\$ 1,893.65
	CC 50/12-GR	13.2	1740	20 HP Gas	UD-12	UD-3	46 LBS.	\$ 2,060.20

C-Series Dimensional Drawings



Dimensional Drawings are
Shown in Millimeters.
To Convert to Inches,
Multiply Dimension x 0.03937



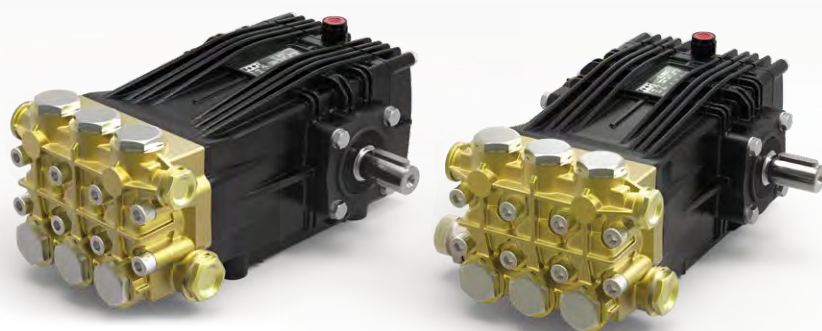


- Heavy Duty Brass Manifold with External and Internal Bracing
- Heavy Duty Bronze or Aluminum Connecting Rods
- Large Diameter Brass or Stainless Steel Valve Caps with Increased Thread Depth
- Reinforcing Ring on Inlet and Discharge Ports
- Stainless Steel Piston Guides and Check Valves
- Heat Treated Crank Shaft
- Industrial Quality Tapered Roller Bearings
- Deeper Back Cover for Increased Oil Capacity
- 35 oz. Capacity Vented Oil Bath Crank Case
- 3/4" BSP-F Inlet. 3/8" BSP-F Outlet
- Max Fluid Temp, 160°F

Solid Shaft Models

24mm Keyed Solid Shaft

	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
1450 RPM	CKC 17/36-S	4.5	5075	15.5 HP Electric	UD-129	UD-63	39 LBS	\$ 2,070.30
	CKC 21/36-S	5.5	5075	19 HP Electric	UD-129	UD-63	39 LBS	\$ 2,090.90
	CKC 17/28-S	4.5	4060	12.5 HP Electric	UD-10	UD-3	39 LBS	\$ 1,498.65
	CKC 21/28-S	5.5	4060	15 HP Electric	UD-10	UD-3	39 LBS	\$ 1,524.40
	CKC 26/28-S	6.9	4060	19 HP Electric	UD-10	UD-3	39 LBS	\$ 1,606.80
	CKC 30/24-S	7.9	3625	19.5 HP Electric	UD-11	UD-3	39 LBS	\$ 1,668.80
	CKC 34/20-S	9.0	3000	17.5 HP Electric	UD-11	UD-3	39 LBS	\$ 1,668.80
1750 RPM	CKD 4.5/51-S	4.5	5100	15.5 HP Electric	UD-129	UD-63	39 LBS	\$ 2,070.30
	CKD 6.0/51-S	6.0	5100	20.5 HP Electric	UD-129	UD-63	39 LBS	\$ 2,090.90
	CKD 5.5/40-S	5.5	4060	15 HP Electric	UD-10	UD-3	39 LBS	\$ 1,524.40
	CKD 7.0/40-S	7.0	4060	19 HP Electric	UD-10	UD-3	39 LBS	\$ 1,575.90
Rail Kit	8702.08	Standard 7/8" Rail Kit for C-Series Solid Shaft Pumps						\$ 15.35
	8702.07	Medium 1-3/4" Rail Kit for C-Series Solid Shaft Pumps						\$ 47.59
	8702.25	Tall 2-1/2" Rail Kit for C-Series Solid Shaft Pumps						\$ 49.23



- Same as Above, Except:
- 3/4" BSP-F Inlet. 1/2" BSP-F Outlet

Solid Shaft Models

24mm Keyed Solid Shaft

	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
1450 RPM	CKC 38/20-S	10	3000	19.5 HP Electric	UD-12	UD-3	39 LBS	\$ 1,720.10
	CKC 42/18-S	11.6	2610	20.5 HP Electric	UD-12	UD-3	39 LBS	\$ 1,761.30
	CKC 50/15-S	13.2	2500	19.5 HP Electric	UD-12	UD-3	39 LBS	\$ 1,828.25
Rail Kit	8702.08	Standard 7/8" Rail Kit for C-Series Solid Shaft Pumps						\$ 15.35
	8702.07	Medium 1-3/4" Rail Kit for C-Series Solid Shaft Pumps						\$ 47.59
	8702.25	Tall 2-1/2" Rail Kit for C-Series Solid Shaft Pumps						\$ 49.23



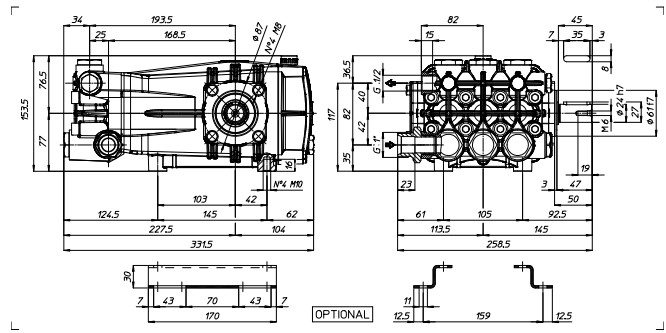
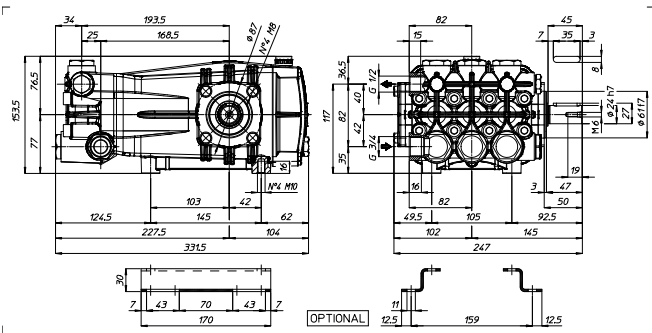
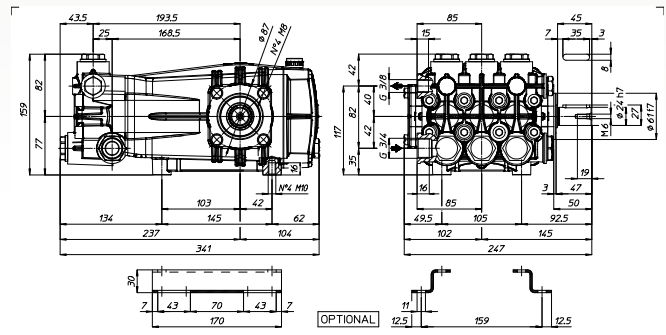
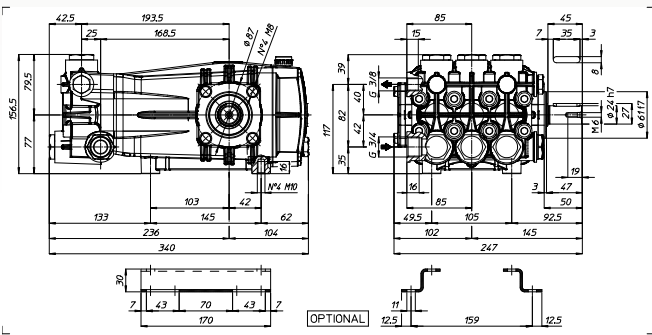
- Standard with 1" Hollow Shaft
- Available with 1-1/8" Hollow Shaft.
Add '1-1/8' to Model Number to Specify when Ordering

Gear Reduction, Gas Engine Models

1" Hollow Shaft. 2.2:1 Gear Reduction

	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
Gear Reduction	CKC 17/36-GR	4.5	5100	20 HP Gas	UD-129	UD-63	49 LBS	\$ 2,477.15
	CKC 21/36-GR	5.5	5100	24 HP Gas	UD-129	UD-63	49 LBS	\$ 2,508.05
	CKC 17/28-GR	4.5	4060	16 HP Gas	UD-10	UD-3	49 LBS	\$ 1,905.50
	CKC 21/28-GR	5.5	4060	20 HP Gas	UD-10	UD-3	49 LBS	\$ 1,931.25
	CKC 26/28-GR	6.9	4060	24 HP Gas	UD-10	UD-3	49 LBS	\$ 2,023.95
	CKC 30/24-GR	7.9	3625	25 HP Gas	UD-11	UD-3	49 LBS	\$ 2,142.40
	CKC 34/20-GR	9.0	3000	23 HP Gas	UD-11	UD-3	49 LBS	\$ 2,142.40
	CKC 38/20-GR	10	3000	25 HP Gas	UD-12	UD-3	49 LBS	\$ 2,193.90
	CKC 42/18-GR	11.6	2610	26 HP Gas	UD-12	UD-3	49 LBS	\$ 2,245.40
CKC 50/15-GR	13.2	2500	25 HP Gas	UD-12	UD-3	49 LBS	\$ 2,296.90	

CK-Series Dimensional Drawings





- Solid Ceramic Plungers
- Stainless Steel Check Valves
- Heavy Duty Brass Manifold
- Heavy Duty Bronze Connecting Rods
- Deeper Back Cover for Increased Oil Capacity
- 35 oz. Capacity Vented Oil Bath Crank Case
- 3/4" BSP-F Inlet. 3/8" BSP-F Outlet
- Max Fluid Temp, 160°F

Solid Shaft Models

24mm Keyed Solid Shaft

	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
1450 RPM	CXC 15/50-S	4.0	7250	19.5 HP Electric	UD-88	UD-224	52 LBS	\$ 2,688.70
	CXC 18/50-S	4.8	7250	23.5 HP Electric	UD-153	UD-224	52 LBS	\$ 2,878.85
	CXC 22/50-S	5.8	7250	28.5 HP Electric	UD-153	UD-224	52 LBS	\$ 2,878.85
Rail Kit	8702.08			Standard 7/8" Rail Kit for C-Series Solid Shaft Pumps				\$ 15.35
	8702.07			Medium 1-3/4" Rail Kit for C-Series Solid Shaft Pumps				\$ 47.59
	8702.25			Tall 2-1/2" Rail Kit for C-Series Solid Shaft Pumps				\$ 49.23



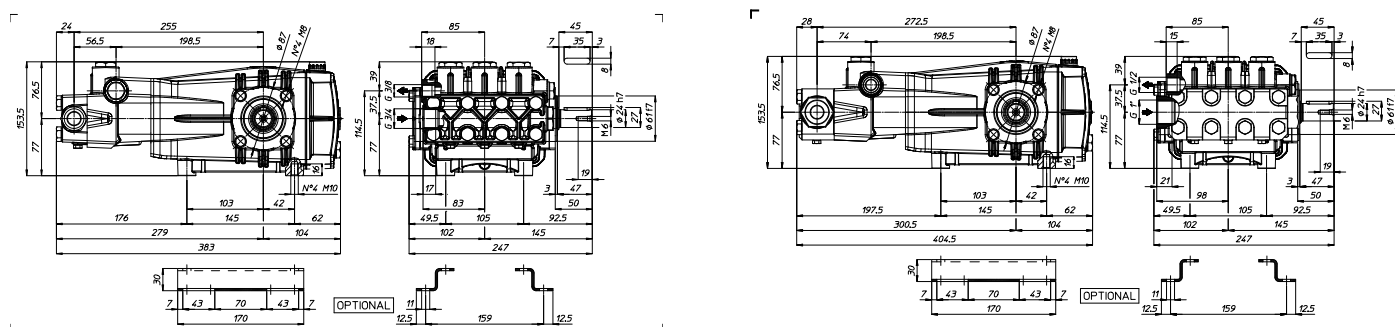
- Solid Ceramic Plungers
- Stainless Steel Check Valves
- Heavy Duty Brass Manifold
- Heavy Duty Bronze Connecting Rods
- Deeper Back Cover for Increased Oil Capacity
- 35 oz. Capacity Vented Oil Bath Crank Case
- 1" BSP-F Inlet. 3/4" BSP-F Outlet
- Max Fluid Temp, 160°F

Solid Shaft Models

24mm Keyed Solid Shaft

	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
1450 RPM	CXC 70/15-S	18.5	1740	21.5 HP Electric	UD-179	UD-225	55 LBS	\$ 3,590.30
	8702.08			Standard 7/8" Rail Kit for C-Series Solid Shaft Pumps				\$ 15.35
Rail Kit	8702.07			Medium 1-3/4" Rail Kit for C-Series Solid Shaft Pumps				\$ 47.59
	8702.25			Tall 2-1/2" Rail Kit for C-Series Solid Shaft Pumps				\$ 49.23

CX-Series Dimensional Drawings





- Solid Ceramic Plungers
- Stainless Steel Check Valves
- Stainless Steel Block Manifold with Nickel Plated Valve Covers
- Deeper Back Cover for Increased Oil Capacity
- 35 oz. Capacity Vented Oil Bath Crank Case
- 3/4" BSP-F Inlet. 3/8" BSP-F Outlet
- Max Fluid Temp, 160°F

Solid Shaft Models

24mm Keyed Solid Shaft

	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
1450 RPM	CHC 12/50-S	3.2	7250	15.5 HP Electric	UD-88	UD-152	49 LBS	\$ 3,661.65
	CHC 16/50-S	4.2	7250	20.5 HP Electric	UD-88	UD-152	49 LBS	\$ 3,661.65
	CHC 20/50-S	5.3	7250	26 HP Electric	UD-153	UD-152	49 LBS	\$ 3,661.65
1750 RPM	CHD 3.0/75-S	3.0	7250	15 HP Electric	UD-88	UD-152	49 LBS	\$ 3,661.65
	CHD 4.5/75-S	4.2	7250	20.5 HP Electric	UD-88	UD-152	49 LBS	\$ 3,661.65
Rail Kit	8702.08	Standard 7/8" Rail Kit for C-Series Solid Shaft Pumps						\$ 15.35
	8702.07	Medium 1-3/4" Rail Kit for C-Series Solid Shaft Pumps						\$ 47.59
	8702.25	Tall 2-1/2" Rail Kit for C-Series Solid Shaft Pumps						\$ 49.23



- Standard with 1" Hollow Shaft
- Available with 1-1/8" Hollow Shaft.
- Add '1-1/8' to Model Number to Specify when Ordering

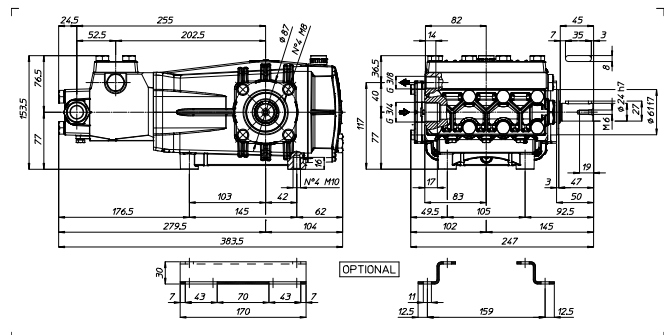
Gear Reduction, Gas Engine Models

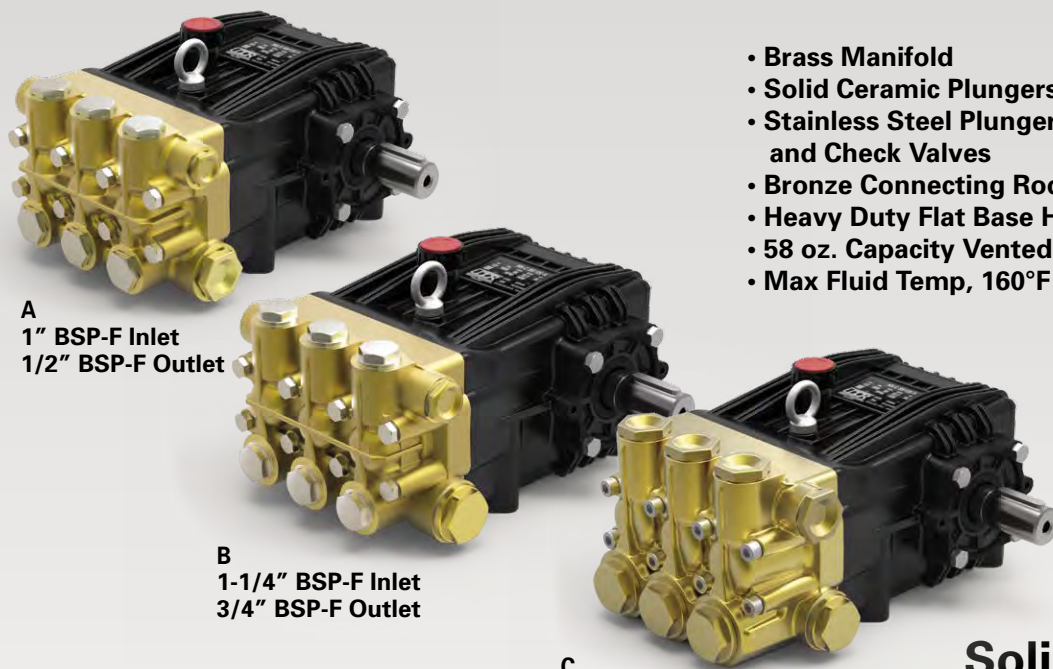
1" Hollow Shaft. 2.2:1 Gear Reduction

	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
Gear Reduction	CHC 12/50-GR	3.2	7250	20.0 HP Gas	UD-88	UD-152	59 LBS	\$ 4,166.35
	CHC 16/50-GR	4.2	7250	26.0 HP Gas	UD-88	UD-152	59 LBS	\$ 4,166.35
	CHC 20/50-GR	5.3	7250	34.0 HP Gas	UD-153	UD-152	59 LBS	\$ 4,166.35

CH-Series Dimensional Drawings

Dimensional Drawings are Shown in Millimeters. To Convert to Inches, Multiply Dimension x 0.03937





- Brass Manifold
- Solid Ceramic Plungers
- Stainless Steel Plunger Guides and Check Valves
- Bronze Connecting Rods
- Heavy Duty Flat Base High Pressure Seals
- 58 oz. Capacity Vented Oil Bath Crank Case
- Max Fluid Temp, 160°F

A
1" BSP-F Inlet
1/2" BSP-F Outlet

B
1-1/4" BSP-F Inlet
3/4" BSP-F Outlet

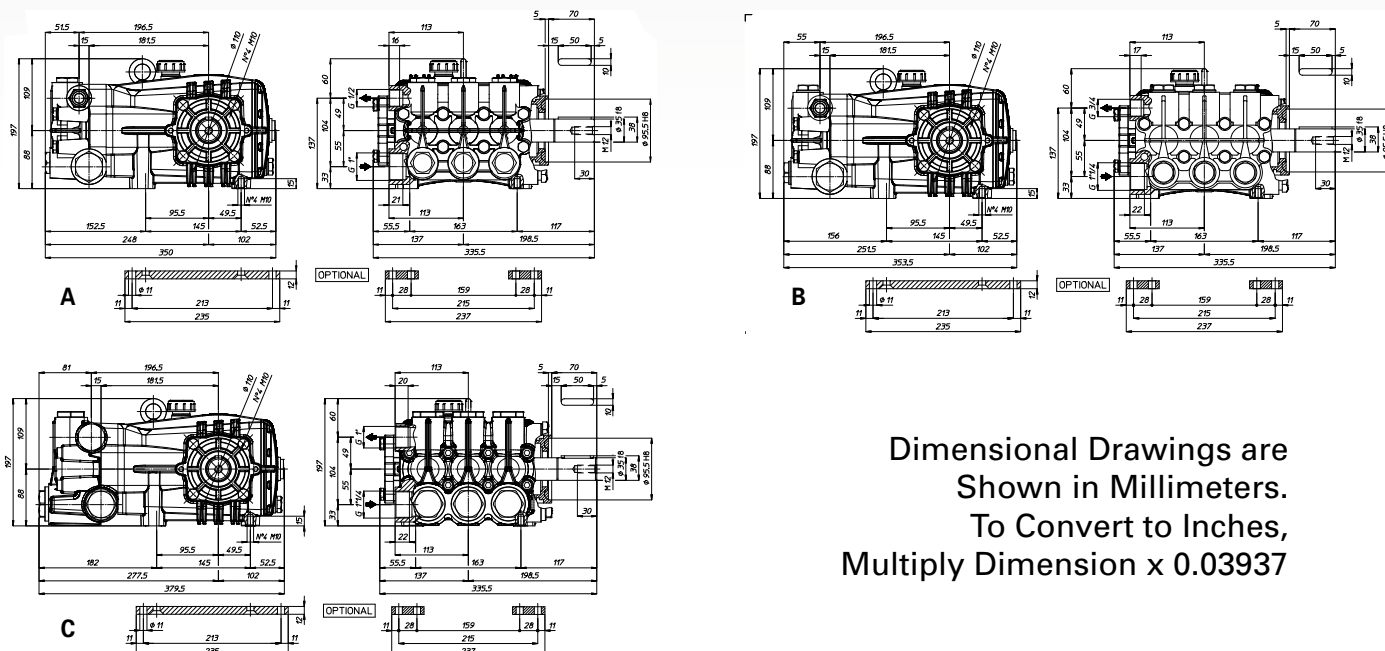
C
1-1/4" BSP-F Inlet
1" BSP-F Outlet

Solid Shaft Models

35mm Keyed Solid Shaft

	Ref.	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
1450 RPM	A	NX-C 35/300-R	9.0	4350	26.5 HP Electric	UD-10	UD-3	67 LBS	\$ 5,829.80
	A	NX-C 44/280-R	11.6	4060	31.5 HP Electric	UD-11	UD-3	67 LBS	\$ 5,829.80
	B	NX-C 55/200-R	14.8	3000	29 HP Electric	UD-12	UD-93	67 LBS	\$ 5,829.80
	B	NX-C 75/150-R	19.8	2200	29 HP Electric	UD-12	UD-93	67 LBS	\$ 5,829.80
	B	NX-C 100/120-R	26.4	1740	31 HP Electric	UD-183	UD-182	67 LBS	\$ 5,895.20
	C	NX-C 145/100-R	37.8	1450	37 HP Electric	UD-202	UD-226	75 LBS	\$ 5,996.40
Rail Kit		8702.35			Tall (2-1/2") Heavy Duty Rail Kit for NX-Series Solid Shaft Pumps				\$ 141.93

NX-Series Dimensional Drawings



Dimensional Drawings are
Shown in Millimeters.
To Convert to Inches,
Multiply Dimension x 0.03937

GAMMA



- Anodized Aluminum Crankcase
- Solid Ceramic Plungers
- Stainless Steel Check Valves
- High Strength Aluminum Connecting Rods
- 1-1/4" Hose Barb Inlet. (2) 3/4" BSP-F Outlet
- 58 oz. Capacity Vented Oil Bath Crank Case
- Max Fluid Temp, 160°F

TS 1C
1-3/8" PTO x
34mm Keyed



TS 2C
1-3/8" PTO x
1-3/8" PTO



TS GR
GR Model
Replacement



GAMMA Series Plunger Pumps

1-3/8" 6-Spline PTO Thru-Shaft

	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
600 RPM	GAMMA-62 TS 1C	17.7	725	9 HP Electric	UD-600	UD-564	49 LBS	\$ 2,039.40
	GAMMA-62 TS 2C	17.7	725	9 HP Electric	UD-600	UD-564	49 LBS	\$ 2,039.40
	GAMMA-62 TS GR	17.7	725	9 HP Electric	UD-600	UD-564	49 LBS	\$ 2,039.40



GAMMA Series Gear Reduction, Gas Engine Models

1" Hollow Shaft. 6.4:1 Gear Reduction

	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
600 RPM	GAMMA-62/GR	17.7	725	9-13 HP Gas	UD-600	UD-564	64 LBS	\$ 2,884.00
	GAMMA-62/GR-18	17.7	725	16-20 HP Gas	UD-600	UD-564	70 LBS	\$ 3,079.70

- Anodized Aluminum Crankcase
- High Strength Aluminum Connecting Rods
- Solid Ceramic Plungers
- Stainless Steel Check Valves
- 1-1/2" Hose Barb Inlet.
- (2) 3/4" BSP-F Outlet
- 128 oz. Capacity Vented Oil Bath Crank Case
- Max Fluid Temp, 160°F

TS 1C
1-3/8" PTO x
34mm Keyed



TS 2C
1-3/8" PTO x
1-3/8" PTO



GAMMA Series Plunger Pumps

1-3/8" 6-Spline PTO Thru-Shaft

	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
600 RPM	GAMMA-85 TS 1C	22.6	870	13.5 HP Electric	UD-549	UD-548	83 LBS	\$ 3,599.85
	GAMMA-85 TS 2C	22.6	870	13.5 HP Electric	UD-549	UD-548	83 LBS	\$ 3,599.85
	GAMMA-105 TS 1C	28.6	870	17 HP Electric	UD-549	UD-548	83 LBS	\$ 3,599.85
	GAMMA-105 TS 2C	28.6	870	17 HP Electric	UD-549	UD-548	83 LBS	\$ 3,599.85
	GAMMA-125 TS 1C	35.1	870	21 HP Electric	UD-549	UD-548	83 LBS	\$ 3,599.85
	GAMMA-125 TS 2C	35.1	870	21 HP Electric	UD-549	UD-548	83 LBS	\$ 3,599.85

GAMMA



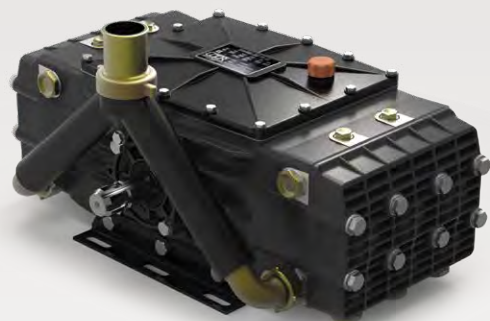
- Anodized Aluminum Crankcase
- High Strength Aluminum Connecting Rods
- Solid Ceramic Plungers
- Stainless Steel Check Valves
- 1-1/2" Hose Barb Inlet.
- (2) 3/4" BSP-F Outlet
- 128 oz. Capacity Vented Oil Bath Crank Case
- Max Fluid Temp, 160°F

TS 2C
1-3/8" PTO x
1-3/8" PTO



GAMMA Series Plunger Pumps 1-3/8" 6-Spline PTO Thru-Shaft

	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
600 RPM	GAMMA-155 TS 2C	40.4	725	20 HP Electric	UD-665	UD-205	84 LBS	\$ 3,895.40



- Anodized Aluminum Crankcase
- High Strength Aluminum Connecting Rods
- Solid Ceramic Plungers
- Stainless Steel Check Valves
- 2" Hose Barb Inlet.
- (4) 3/4" BSP-F Outlet
- 65 oz. Capacity Vented Oil Bath Crank Case
- Max Fluid Temp, 160°F

TS 1C
1-3/8" PTO x
34mm Keyed



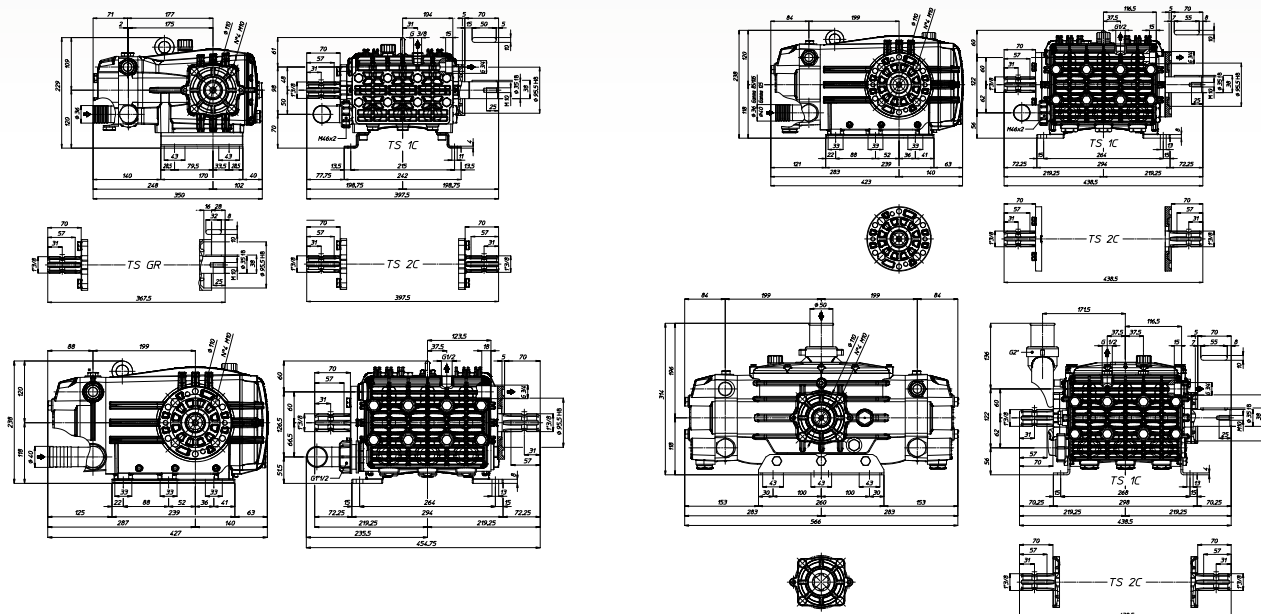
TS 2C
1-3/8" PTO x
1-3/8" PTO



GAMMA Series Plunger Pumps 1-3/8" 6-Spline PTO Thru-Shaft

	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
600 RPM	GAMMA-162 TS 1C	43.3	870	25.5 HP Electric	UD-570	UD-569	115 LBS	\$ 5,927.65
	GAMMA-162 TS 2C	43.3	870	25.5 HP Electric	UD-570	UD-569	115 LBS	\$ 5,927.65
	GAMMA-202 TS 1C	55.0	870	32 HP Electric	UD-570	UD-569	140 LBS	\$ 7,343.90
	GAMMA-202 TS 2C	55.0	870	32 HP Electric	UD-570	UD-569	115 LBS	\$ 5,927.65
	GAMMA-242 TS 1C	63.4	870	37 HP Electric	UD-570	UD-569	115 LBS	\$ 6,102.75
	GAMMA-242 TS 2C	63.4	870	37 HP Electric	UD-570	UD-569	115 LBS	\$ 6,102.75

Dimensional Drawings



GAMMA-IL



- Heavy Duty Brass Manifold
- Solid Ceramic Plungers
- Stainless Steel Plunger Guides and Check Valves
- Bronze Connecting Rods

- 1-1/4" Hose Barb Inlet
- (2) 3/4" BSP-F Outlet
- 128 oz. Capacity Vented Oil Bath Crank Case
- Max Fluid Temp, 160°F

TS 1C
1-3/8" PTO x
34mm Keyed



TS 2C
1-3/8" PTO x
1-3/8" PTO



GAMMA-IL Series Plunger Pumps

35 mm Solid Shaft x 1-3/8" 6-Spline PTO Thru-Shaft

	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
600 RPM	GAMMA-83 TS 1C	22.2	1450	21.5 HP Electric	UD-549	UD-548	118 LBS	\$ 5,392.05
	GAMMA-83 TS 2C	22.2	1450	21.5 HP Electric	UD-549	UD-548	118 LBS	\$ 5,392.05
	GAMMA-103 TS 1C	28.3	1450	27.5 HP Electric	UD-549	UD-548	118 LBS	\$ 5,392.05
	GAMMA-103 TS 2C	28.3	1450	27.5 HP Electric	UD-549	UD-548	118 LBS	\$ 5,392.05



- Heavy Duty Brass Manifold
- Solid Ceramic Plungers
- Stainless Steel Plunger Guides and Check Valves
- Bronze Connecting Rods

- 2" Hose Barb Inlet
- (4) 3/4" BSP-F Outlet
- 65 oz. Capacity Vented Oil Bath Crank Case
- Max Fluid Temp, 160°F

TS 1C
1-3/8" PTO x
34mm Keyed



TS 2C
1-3/8" PTO x
1-3/8" PTO

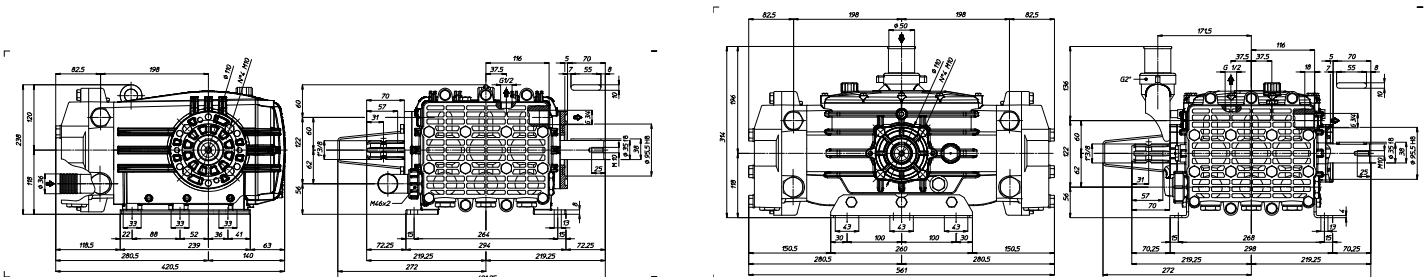


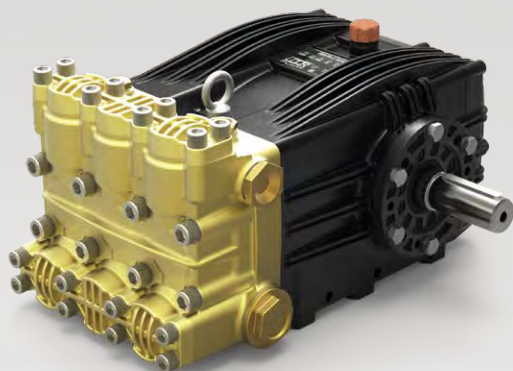
GAMMA-IL Series Plunger Pumps

35 mm Solid Shaft x 1-3/8" 6-Spline PTO Thru-Shaft

	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
600 RPM	GAMMA-160 TS 1C	43.1	1160	33.5 HP Electric	UD-570	UD-569	152 LBS	\$ 9,393.60
	GAMMA-200 TS 1C	54.5	1160	42.5 HP Electric	UD-570	UD-569	152 LBS	\$ 9,393.60
	GAMMA-200 TS 2C	54.5	1160	42.5 HP Electric	UD-570	UD-569	152 LBS	\$ 9,393.60

Dimensional Drawings





- Heavy Duty Brass Manifold
- Solid Ceramic Plungers
- Stainless Steel Plunger Guides and Check Valves
- Replaceable PTFE Coated Body Guides
- Bronze Connecting Rods
- Heavy Duty Flat Base High Pressure Seals
- 1-1/2" BSP-F Inlet. 1" BSP-F Outlet
- 128 oz. Capacity Vented Oil Bath Crank Case
- Max Fluid Temp, 160°F

VX Series Plunger Pumps

35 mm Solid Keyed Shaft

	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
1000 RPM	VX-100/200 R	25.9	3000	50.5 HP Electric	UD-139	UD-142	128 LBS	\$ 9,007.35
	VX-130/160 R	32.8	2320	51 HP Electric	UD-143	UD-142	128 LBS	\$ 9,007.35
	VX-160/130 R	41.0	1995	52 HP Electric	UD-145	UD-142	128 LBS	\$ 9,007.35
	VX-200/100 R	52.8	1450	51.5 HP Electric	UD-150	UD-142	128 LBS	\$ 9,007.35

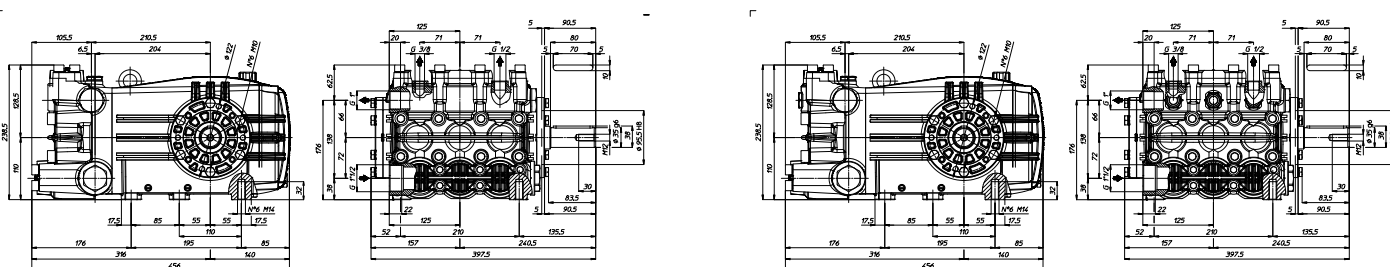


VX Series Plunger Pumps

35 mm Solid Keyed Shaft

	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
1000 RPM	VX-60/350 R	15.9	5075	54 HP Electric	UD-185	UD-186	128 LBS	\$ 9,007.35
	VX-75/280 R	19.8	4060	54 HP Electric	UD-185	UD-186	128 LBS	\$ 9,007.35
1250 RPM	VX-95/280 R	24.8	4060	70 HP Electric	UD-185	UD-186	128 LBS	\$ 9,007.35

Dimensional Drawings



PENTA



- Heavy Duty Brass Manifold
- Solid Ceramic Plungers
- Stainless Steel Plunger Rods and Check Valves
- Replaceable PTFE Coated Body Guides
- Heavy Duty Bronze Connecting Rods with Guide Pins for Perfect Cap Alignment.
- Heavy Duty Flat Base High Pressure Seals
- Dual Roller Bearings
- 118 oz. Oil Capacity
- 1" BSP-F Inlet. 1/2" BSP-F Outlet
- Max Fluid Temp, 160°F

PENTA Series Plunger Pumps 35 mm Solid Keyed Shaft

	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
1000 RPM	PENTA-B-25/400 R	6.6	5800	27 HP Electric	UD-9P	UD-63P	97 LBS	\$ 8,528.40
1450 RPM	PENTA-C-35/400 R	9.2	5800	36 HP Electric	UD-9P	UD-63P	97 LBS	\$ 8,528.40



- Heavy Duty Brass Manifold
- Solid Ceramic Plungers
- Stainless Steel Plunger Rods and Check Valves
- Replaceable PTFE Coated Body Guides
- Heavy Duty Bronze Connecting Rods with Guide Pins for Perfect Cap Alignment.
- Heavy Duty Flat Base High Pressure Seals
- Dual Roller Bearings
- 118 oz. Oil Capacity
- 1" BSP-F Inlet. 1/2" BSP-F Outlet
- Max Fluid Temp, 160°F

PENTA Series Plunger Pumps 35 mm Solid Keyed Shaft

	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
1000 RPM	PENTA-B-30/300 R	7.9	4350	23.5 HP Electric	UD-10P	UD-3P	97 LBS	\$ 8,528.40
	PENTA-B-40/300 R	10.6	4350	31 HP Electric	UD-10P	UD-3P	97 LBS	\$ 8,528.40
	PENTA-B-50/200 R	12.9	3000	25 HP Electric	UD-12P	UD-3P	97 LBS	\$ 8,528.40
1450 RPM	PENTA-C-43/300 R	11.4	4350	33 HP Electric	UD-10P	UD-3P	97 LBS	\$ 8,528.40
	PENTA-C-58/300 R	15.3	4350	45 HP Electric	UD-10P	UD-3P	97 LBS	\$ 8,528.40
	PENTA-C-70/200 R	18.8	3000	36.5 HP Electric	UD-12P	UD-3P	97 LBS	\$ 8,528.40
1750 RPM	PENTA-D-70/280 R	18.2	4000	50 HP Electric	UD-11P	UD-3P	97 LBS	\$ 8,528.40



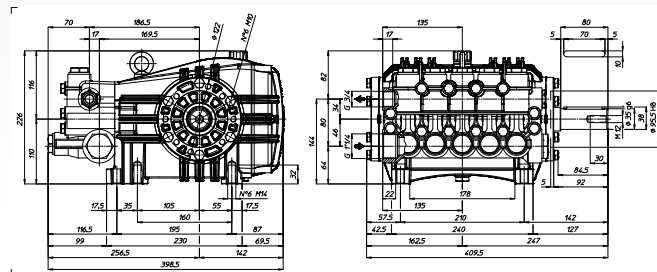
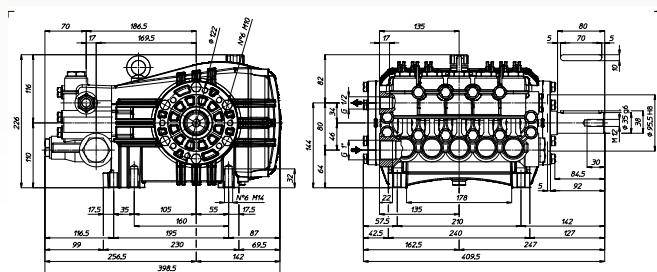
- 316 Stainless Steel Manifold
- Solid Ceramic Plungers
- Stainless Steel Plunger Rods and Check Valves
- Replaceable PTFE Coated Body Guides
- Heavy Duty Bronze Connecting Rods with Guide Pins for Perfect Cap Alignment.
- Heavy Duty Flat Base High Pressure Seals
- Dual Roller Bearings
- 118 oz. Oil Capacity
- 1" BSP-F Inlet. 1/2" BSP-F Outlet
- Max Fluid Temp, 160°F

PENTA Series Plunger Pumps

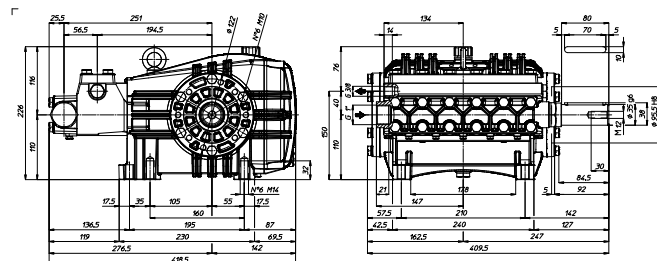
35 mm Solid Keyed Shaft

	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
1000 RPM	PENTA-B-21/500 R	5.5	7250	27 HP Electric	UD-155	UD-154	98 LBS	\$ 11,021.00
1450 RPM	PENTA-C-30/500 R	7.9	7250	38.5 HP Electric	UD-155	UD-154	98 LBS	\$ 11,021.00
1750 RPM	PENTA-D-28/500 R	7.4	7250	36 HP Electric	UD-155	UD-154	98 LBS	\$ 11,021.00

Dimensional Drawings



Dimensional Drawings are
Shown in Millimeters.
To Convert to Inches,
Multiply Dimension x 0.03937



VH



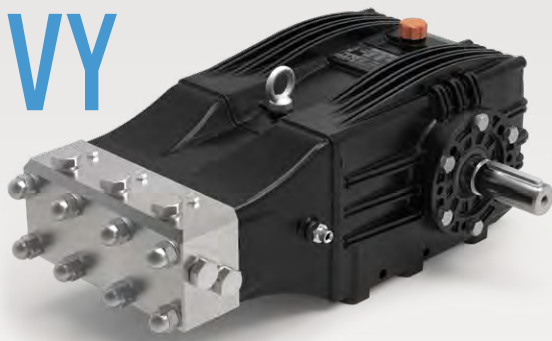
- Stainless Steel Manifold
- Solid Ceramic Plungers
- Stainless Steel Check Valves
- Heavy Duty Bronze Connecting Rods
- Heavy Duty Roller Bearings
- 1" BSP-F Inlet. 1/2" BSP-F Outlet
- 128 oz. Oil Capacity
- Max Fluid Temp, 160°F

VH Series Plunger Pumps

35 mm Solid Keyed Shaft

	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
600 RPM	VH-B-40/500 R	10.6	7250	51.5 HP Electric	UD-196	UD-199	145 LBS	\$ 9,586.40

VY



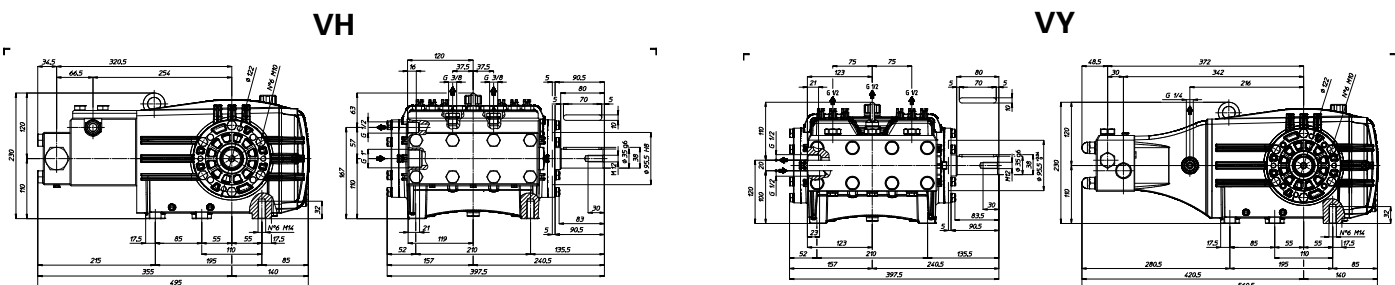
- Stainless Steel Manifold
- Solid Ceramic Plungers
- Stainless Steel Check Valves
- Heavy Duty Bronze Connecting Rods
- Heavy Duty Roller Bearings
- 1/2" BSP-F Inlet. 1/2" BSP-F Outlet
- 128 oz. Oil Capacity
- Max Fluid Temp, 160°F

VY Series Plunger Pumps

35 mm Solid Keyed Shaft

	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
1000 RPM	VY-B-15/1000 R	3.9	14500	37.5 HP Electric	UD-652	UD-654	136 LBS	\$ 14,195.00
	VY-B-14/1250 R	3.7	18130	45.5 HP Electric	UD-652	UD-654	136 LBS	\$ 14,195.00
	VY-B-20/800 R	5.3	11600	41 HP Electric	UD-652	UD-654	132 LBS	\$ 14,195.00
	VY-B-20/1000 R	5.2	14500	50 HP Electric	UD-652	UD-654	136 LBS	\$ 14,195.00
	VY-B-25/800 R	6.5	18130	50.5 HP Electric	UD-657	UD-654	132 LBS	\$ 14,195.00
1200 RPM	VY-F-15/1000 R	4.0	11600	38.5 HP Electric	UD-652	UD-654	136 LBS	\$ 14,195.00
	VY-F-15/1250 R	3.8	18130	46.5 HP Electric	UD-652	UD-654	136 LBS	\$ 14,195.00
	VY-F-20/800 R	5.3	11600	41 HP Electric	UD-657	UD-654	132 LBS	\$ 14,195.00
	VY-F-20/1000 R	5.2	14500	50 HP Electric	UD-657	UD-654	132 LBS	\$ 14,195.00
1450 RPM	VY-C-15/1000 R	4.0	14500	38.5 HP Electric	UD-657	UD-654	136 LBS	\$ 12,740.00
	VY-C-19/1000 R	4.9	14500	48 HP Electric	UD-657	UD-654	136 LBS	\$ 12,740.00
1750 RPM	VY-D-15/1000 R	4.1	14500	40 HP Electric	UD-657	UD-654	136 LBS	\$ 12,740.00
	VY-D-18/1000 R	4.8	14500	46.5 HP Electric	UD-657	UD-654	136 LBS	\$ 12,740.00
	VY-D-24/800 R	6.3	11600	49.5 HP Electric	UD-657	UD-654	136 LBS	\$ 12,740.00

Dimensional Drawings





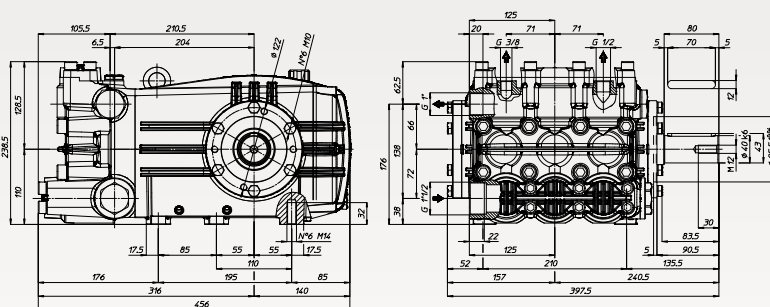
- Anodized Aluminum Crank Case
- Nickel-Plated Manifold
- Stainless Steel Check Valves
- Heavy Duty Bronze Connecting Rods
- Heavy Duty Roller Bearings
- 1-1/2" BSP-F Inlet. 1" BSP-F Outlet
- 128 oz. Oil Capacity
- Max Fluid Temp, 160°F

VXX Series Plunger Pumps

40 mm Solid Keyed Shaft

	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
1000 RPM	VXX-B-130/220 R	34.4	3190	73.5 HP Electric	UD-143	UD-142	130 LBS	\$ 10,186.70
	VXX-B-160/180 R	42.3	2610	74 HP Electric	UD-145	UD-142	137 LBS	\$ 10,186.70
	VXX-B-200/150 R	52.8	2200	76 HP Electric	UD-150	UD-142	137 LBS	\$ 10,186.70

Dimensional Drawings



ARRIVING LATE 2019 HX

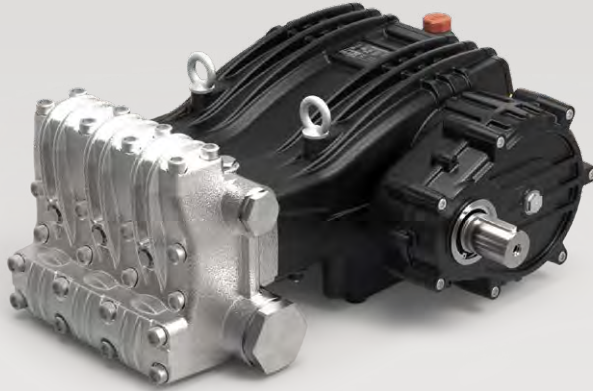
- Anodized Aluminum Crank Case
- Nickel-Plated Manifold
- Stainless Steel Check Valves
- Heavy Duty Bronze Connecting Rods
- Heavy Duty Roller Bearings
- 2-1/2" BSP-F Inlet. 1-1/4" BSP-F Outlet
- Max Fluid Temp, 160°F

HX Series Plunger Pumps

80 mm Solid Keyed Shaft

	Model	GPM	PSI	Power Requirements	Weight
800 RPM	HX-A-135/200 R	33.8	4350	98.5 HP Electric	367.5 LBS
	HX-A-160/240 R	42.8	3480	100 HP Electric	367.5 LBS
	HX-A-200/200 R	53.1	3000	103.5 HP Electric	367.5 LBS
	HX-A-250/160 R	67.1	2320	104.5 HP Electric	367.5 LBS
	HX-A-210/130 R	82.7	1885	104.5 HP Electric	367.5 LBS
	HX-A-400/100 R	100.0	1450	97.5 HP Electric	367.5 LBS

HXR ARRIVING LATE 2019



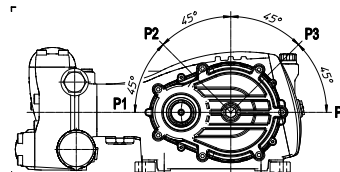
- Anodized Aluminum Crank Case
- Nickel-Plated Manifold
- Stainless Steel Check Valves
- Heavy Duty Bronze Connecting Rods
- Heavy Duty Roller Bearings
- 2-1/2" BSP-F Inlet. 1-1/4" BSP-F Outlet
- Max Fluid Temp, 160°F

HXR Series Plunger Pumps 50 mm Male Shaft

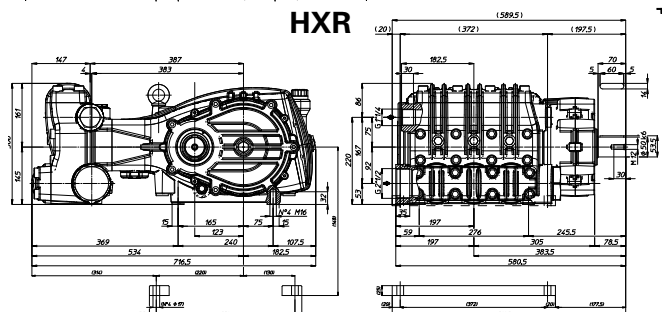
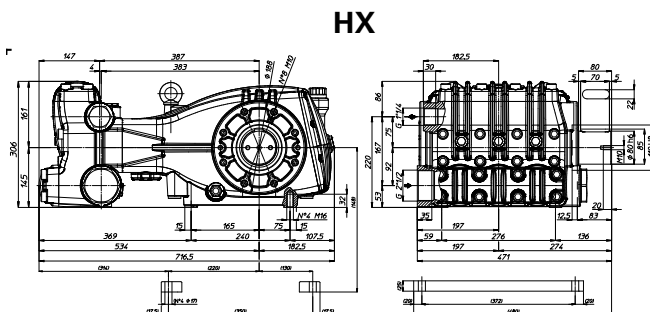
	Model	GPM	PSI	Power Requirements	Weight
1500 RPM	HXR-C 135/300 R	33.8	4350	98.5 HP Electric	411.5 LBS
	HXR-C 160/240 R	42.8	3480	100 HP Electric	411.5 LBS
	HXR-C 200/200 R	53.1	3000	103.5 HP Electric	411.5 LBS
	HXR-C 250/160 R	67.1	2320	104.5 HP Electric	411.5 LBS
	HXR-C 310/130 R	82.7	1885	104.5 HP Electric	411.5 LBS
	HXR-C 400/100 R	100.0	1450	97.5 HP Electric	411.5 LBS
1800 RPM	HXR-D 135/300 R	33.8	4350	98.5 HP Electric	411.5 LBS
	HXR-D 160/240 R	42.8	3480	100 HP Electric	411.5 LBS
	HXR-D 200/200 R	53.1	3000	103.5 HP Electric	411.5 LBS
	HXR-D 250/160 R	67.1	2320	104.5 HP Electric	411.5 LBS
	HXR-D 310/130 R	82.7	1885	104.5 HP Electric	411.5 LBS
	HXR-D 400/100 R	100.0	1450	97.5 HP Electric	411.5 LBS
2200 RPM	HXR-M 135/300 R	33.8	4350	98.5 HP Electric	411.5 LBS
	HXR-M 160/240 R	42.8	3480	100 HP Electric	411.5 LBS
	HXR-M 200/200 R	53.1	3000	103.5 HP Electric	411.5 LBS
	HXR-M 250/160 R	67.1	2320	104.5 HP Electric	411.5 LBS
	HXR-M 310/130 R	82.7	1885	104.5 HP Electric	411.5 LBS
	HXR-M 400/100 R	100.0	1450	97.5 HP Electric	411.5 LBS

Dimensional Drawings

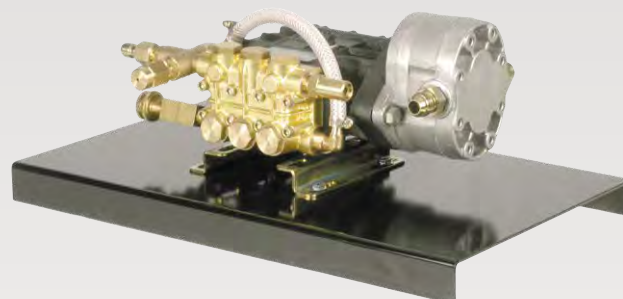
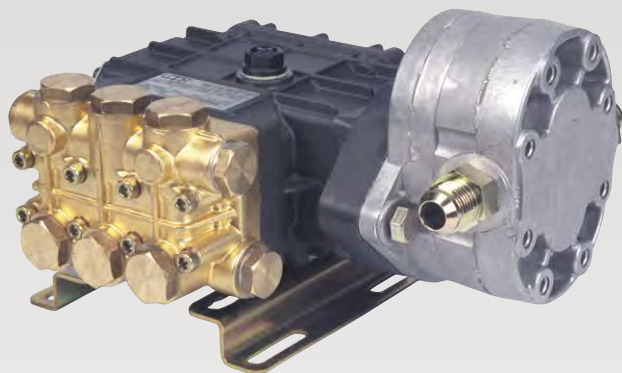
Dimensional Drawings are
Shown in Millimeters.
To Convert to Inches,
Multiply Dimension x 0.03937



Depending on specific needs, the Gearbox can be mounted in four different positions P1,P2,P3,P4 as shown in the picture at left.



HYDRAULIC DRIVE PLUNGER PUMPS



P Series Hydraulic Drive Pumps

Pump, Hydraulic Motor, Mounting Rails

	Model	GPM	PSI	Hydraulic Requirements	Weight	List Price
1750 RPM	PND 3.0/20-ZH	3.0	2000	5.0 GPM @ 2200 PSI	24 LBS	\$ 1,684.05
	PND 4.0/15-ZH	4.0	1500	5.0 GPM @ 2200 PSI	24 LBS	\$ 1,714.95
1750 RPM	PND 3.0/20-ZHK	P-Series Hydraulic Drive Plunger Pump with hydraulic gear motor, mounting rails, unloader, 3/4" hose barb inlet, safety pop-off valve and 14" x 20" base with rubber bumpers.			45 LBS	\$ 2,204.20
	PND 4.0/15-ZHK				45 LBS	\$ 2,245.40

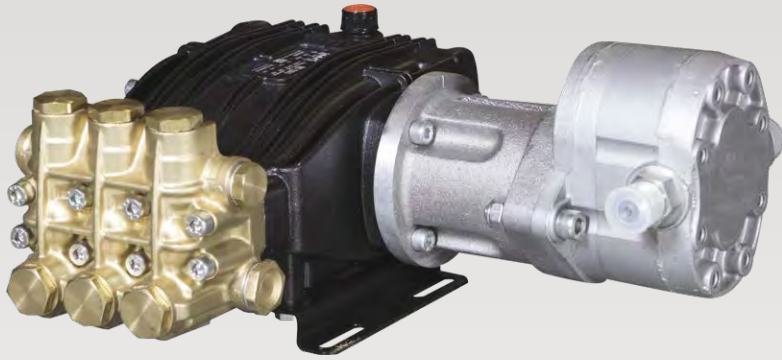


B Series Hydraulic Drive Pumps

Pump, Hydraulic Motor, Mounting Rails

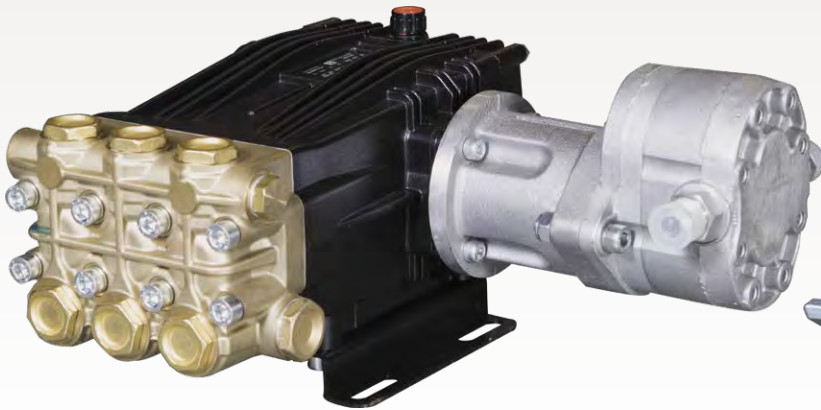
	Model	GPM	PSI	Hydraulic Requirements	Weight	List Price
1750 RPM	BD 4.0/30-SH	4.0	3000	12.0 GPM @ 1500 PSI	36 LBS	\$ 2,157.85
	BD 5.0/25-SH	5.0	2500	12.0 GPM @ 1500 PSI	36 LBS	\$ 2,240.25
1750 RPM	BD 4.0/30-SHK	B-Series Hydraulic Drive Plunger Pump with hydraulic gear motor, mounting rails, unloader, 1" hose barb inlet, thermal relief valve, safety pop-off valve and 14" x 20" base with rubber bumpers.			65 LBS	\$ 2,672.85
	BD 5.0/25-SHK				65 LBS	\$ 2,750.10

HYDRAULIC DRIVE PLUNGER PUMPS



BK Series Hydraulic Drive Pumps Pump, Hydraulic Motor, Mounting Rails

	Model	GPM	PSI	Hydraulic Requirements	Weight	List Price
1750 RPM	BKD 4.0/40-SH	4.0	4000	12.0 GPM @ 2000 PSI	39 LBS	\$ 2,322.65
	BKD 5.0/35-SH	5.0	3500	12.0 GPM @ 2000 PSI	39 LBS	\$ 2,394.75
1750 RPM	BKD 4.0/40-SHK	BK-Series Hydraulic Drive Plunger Pump with hydraulic gear motor, mounting rails, unloader, 1" hose barb inlet, thermal relief valve, safety pop-off valve and 14" x 20" base with rubber bumpers.			70 LBS	\$ 2,832.50
	BKD 5.0/35-SHK				70 LBS	\$ 2,914.19



C Series Hydraulic Drive Pumps Pump, Hydraulic Motor, Mounting Rails

	Model	GPM	PSI	Hydraulic Requirements	Weight	List Price
1750 RPM	CD 5.5/30-SH	5.5	3000	12.0 GPM @ 1700 PSI	48 LBS	\$ 2,446.25
	CD 7.0/22-SH	7.0	2200	12.0 GPM @ 2000 PSI	48 LBS	\$ 2,492.60
	CD 8.5/20-SH	8.5	2000	12.0 GPM @ 2000 PSI	48 LBS	\$ 2,559.55
1750 RPM	CD 5.5/30-SHK	C-Series Hydraulic Drive Plunger Pump with hydraulic gear motor, mounting rails, unloader, 1" hose barb inlet, thermal relief valve, safety pop-off valve and 14" x 20" base with rubber bumpers.			80 LBS	\$ 3,120.90
	CD 7.0/22-SHK				80 LBS	\$ 3,162.10
	CD 8.5/20-SHK				80 LBS	\$ 3,234.20

HYDRAULIC DRIVE PLUNGER PUMPS



CK Series Hydraulic Drive Pumps

Pump, Hydraulic Motor, Mounting Rails

	Model	GPM	PSI	Hydraulic Requirements	Weight	List Price
1450 RPM	CKC 21/28-SH	5.5	4000	20.0 GPM @ 2000 PSI	75 LBS	\$ 3,671.95
	CKC 21/36-SH	5.5	5000	20.0 GPM @ 2200 PSI	75 LBS	\$ 4,274.50
	CKC 26/28-SH	7.0	4000	20.0 GPM @ 2400 PSI	75 LBS	\$ 3,785.25
	CKC 30/24-SH	8.0	3500	20.0 GPM @ 2400 PSI	75 LBS	\$ 3,738.90
	CKC 38/20-SH	10.0	3000	20.0 GPM @ 2400 PSI	75 LBS	\$ 3,831.60
	CKC 42/18-SH	11.5	2500	20.0 GPM @ 2400 PSI	75 LBS	\$ 3,857.35
	CKC 50/15-SH	13.0	2000	20.0 GPM @ 2400 PSI	75 LBS	\$ 3,898.55
1450 RPM	CKC 21/28-SHK				100 LBS	\$ 4,346.60
	CKC 21/36-SHK				100 LBS	\$ 5,531.10
	CKC 26/28-SHK				100 LBS	\$ 4,501.10
	CKC 30/24-SHK				100 LBS	\$ 4,454.75
	CKC 38/20-SHK				100 LBS	\$ 4,495.95
	CKC 42/18-SHK				100 LBS	\$ 4,521.70
	CKC 50/15-SHK				100 LBS	\$ 4,562.90

CK-Series Hydraulic Drive Plunger Pump with hydraulic gear motor, mounting rails, unloader, (2) 1" hose barb inlets, thermal relief valve, safety pop-off valve and 14" x 20" base with rubber bumpers.



CHC Series Hydraulic Drive Pumps

Pump, Hydraulic Motor, Mounting Rails

	Model	GPM	PSI	Hydraulic Requirements	Weight	List Price
1450 RPM	CHC 12/50-SH	3.2	7300	20.0 GPM @ 2000 PSI	80 LBS	\$ 5,294.20
	CHC 16/50-SH	4.2	7300	20.0 GPM @ 2000 PSI	80 LBS	\$ 5,294.20

HYDRAULIC DRIVE PLUNGER PUMPS



NX Series
Hydraulic Drive Pumps
 Pump, Hydraulic Motor, Mounting Rails

	Model	GPM	PSI	Hydraulic Requirements	Weight	List Price
1450 RPM	NX-35/300-RH-HP	9.0	4500	28.0 GPM @ 2500 PSI	175 LBS	\$ 9,084.60
	NX-44/280-RH-HP	12.0	4000	28.0 GPM @ 2500 PSI	175 LBS	\$ 9,084.60
	NX-55/200-RH-HP	14.0	3000	28.0 GPM @ 2500 PSI	175 LBS	\$ 9,084.60
	NX-75/150-RH-HP	20.0	2200	28.0 GPM @ 2500 PSI	175 LBS	\$ 9,084.60



GAMMA Series
Hydraulic Drive Pumps
 Pump, Hydraulic Motor, Mounting Rails

	Model	GPM	PSI	Hydraulic Requirements	Weight	List Price
600 RPM	GAMMA-62/CC-HYD	17.0	850	14.0 GPM @ 1400 PSI	75 LBS	\$ 3,414.45
	GAMMA-105/CC-HYD	28.0	850	14.0 GPM @ 1800 PSI	100 LBS	\$ 4,985.20



PENTA Series
Hydraulic Drive Pumps
 Pump, Hydraulic Motor, Mounting Rails

	Model	GPM	PSI	Hydraulic Requirements	Weight	List Price
1450 RPM	PENTA-C 70/200 RH-HP	18.0	3000	28.0 GPM @ 3000 PSI	250 LBS	\$ 12,370.30
	PENTA-C 55/280 RH-HP	15.0	4000	28.0 GPM @ 3000 PSI	250 LBS	\$ 12,370.30
	PENTA-C 30/500 RH-HP	8.0	7300	28.0 GPM @ 3000 PSI	250 LBS	\$ 14,857.75
1750 RPM	PENTA-D 70/280 RH-HP	18.0	4000	32.0 GPM @ 3000 PSI	250 LBS	\$ 12,370.30
	PENTA-D 35/500 RH-HP	9.5	7300	32.0 GPM @ 3000 PSI	250 LBS	\$ 14,857.75

HYDRAULIC DRIVE PLUNGER PUMPS

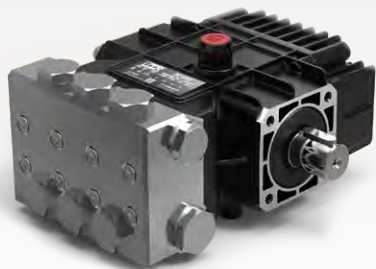


VX Series Hydraulic Drive Pumps

Pump, Hydraulic Motor, Mounting Rails

	Model	GPM	PSI	Hydraulic Requirements	Weight	List Price
1000 RPM	VX-100/200-RH-HP	26.0	3000	28.0 GPM @ 3200 PSI	300 LBS	\$ 13,034.65
	VX-130/160-RH-HP	33.0	2500	28.0 GPM @ 3200 PSI	300 LBS	\$ 13,034.65
	VX-160/130-RH-HP	40.0	2000	28.0 GPM @ 3200 PSI	300 LBS	\$ 13,034.65
	VX-75/280-RH-HP	20.0	4000	28.0 GPM @ 3200 PSI	300 LBS	\$ 13,034.65

AGGRESSIVE ENVIRONMENT PUMPS



- 316 Stainless Steel Manifolds
- 316 Stainless Steel Valves
- 316 Stainless Steel Plunger Rods & Nuts
- 304 Stainless Steel Exterior Bolts
- Solid Ceramic Plungers
- PTFE Style Packings
- 12 oz. Oil Capacity

PS Series Solid Shaft Models

24mm Keyed Solid Shaft

	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
1450 RPM	PSC 11/15-S	3.0	2000	5 HP Electric	UD-108	UD-132	15 LBS	\$ 2,688.60
	PSC 13/15-S	3.5	2000	5 HP Electric	UD-108	UD-132	15 LBS	\$ 2,688.60



- 316 Stainless Steel Manifolds
- 316 Stainless Steel Valves
- 316 Stainless Steel Plunger Rods & Nuts
- 304 Stainless Steel Exterior Bolts
- Solid Ceramic Plungers
- PTFE Style Packings
- 16 oz. Oil Capacity

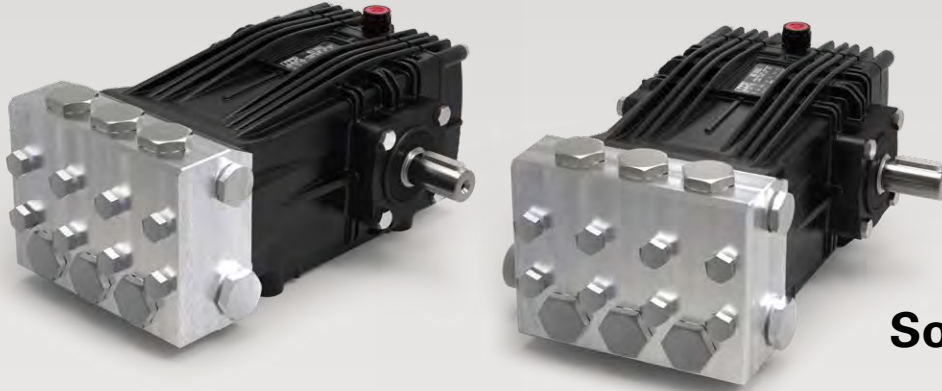
MS Series Solid Shaft Models

24mm Keyed Solid Shaft

	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
1450 RPM	MSC 16/20-S	4.2	3000	8.5 HP Electric	UD-110	UD-132	23 LBS	\$ 4,011.85
	MSC 20/20-S	5.3	3000	10.5 HP Electric	UD-110	UD-132	23 LBS	\$ 4,011.85

All Models available with Gas Engine Gear Reductions. Contact UDOR USA for pricing and availability.

AGGRESSIVE ENVIRONMENT PUMPS



**CS Series
Solid Shaft Models**
24mm Keyed Solid Shaft

	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
1450 RPM	CSC 27/20-S	7.1	3000	14.0 HP Electric	UD-118	UD-116	43 LBS	\$ 7,029.75
	CSC 34/20-S	9.0	3000	17.5 HP Electric	UD-118	UD-116	43 LBS	\$ 7,029.75
	CSC 42/15-S	11.6	2200	17.0 HP Electric	UD-118	UD-116	44 LBS	\$ 7,029.75
	CSC 50/15-S	13.2	2200	19.5 HP Electric	UD-118	UD-116	44 LBS	\$ 7,029.75

All Models available with Gas Engine Gear Reductions. Contact UDOR USA for pricing and availability.

AGGRESSIVE ENVIRONMENT HYDRAULIC DRIVE PUMPS



**MSC Series
Aggressive Environment
Hydraulic Drive Pumps**
Pump, Hydraulic Motor, Mounting Rails

	Model	GPM	PSI	Hydraulic Requirements	Weight	List Price
1450 RPM	MSC 16/20-SH	4.2	3000	10.0 GPM @ 1700 PSI	39 LBS	\$ 4,681.35
	MSC 20/20-SH	5.3	3000	10.0 GPM @ 1900 PSI	39 LBS	\$ 4,681.35



**CSC Series
Aggressive Environment
Hydraulic Drive Pumps**
Pump, Hydraulic Motor, Mounting Rails

	Model	GPM	PSI	Hydraulic Requirements	Weight	List Price
1450 RPM	CSC 27/15-SH	7.0	2200	10.0 GPM @ 1900 PSI	52 LBS	\$ 7,467.50
	CSC 34/20-SH	9.0	3000	20.0 GPM @ 2000 PSI	80 LBS	\$ 7,694.10
	CSC 42/15-SH	11.5	2200	20.0 GPM @ 2200 PSI	80 LBS	\$ 7,694.10

TOOL COOLANT



- Brass Manifolds
- PTFE Packings
- Solid Ceramic Plungers
- Stainless Steel Check Valves
- Heated Treated Crank Shafts
- Stainless Steel Piston Guides
- Replaceable PTFE Body Guides
- Industrial Quality Tapered Roller Bearings

TC Series Tool Coolant Plunger Pumps 24 mm Solid Keyed Shaft

	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
1750 RPM	TCB 5.0/25-S	5.0	2500	7.5 HP Electric	UD-95	UD-2	20 LBS	\$ 1,030.00
	TCC 8.0/22-S	8.0	2200	10 HP Electric	UD-97	UD-3	34.8 LBS	\$ 1,503.80
Rail Kits	8702.07	Medium (1-3/4") Rail Kit for C & CK-Series Solid Shaft Pumps (Including TCC 8.0/22-S)						\$ 47.59
	8702.08	Standard (1") Rail Kit for C & CK-Series Solid Shaft Pumps (Including TCC 8.0/22-S)						\$ 15.35
	8702.10	Standard (7/8") Rail Kit for P, B & BK-Series Solid Shaft Pumps (Including TCB 5.0/25-S)						\$ 14.32
	8702.20	Tall (2-1/2") Rail Kit for B & BK-Series Solid Shaft Pumps (Including TCB 5.0/25-S)						\$ 49.23
	8702.25	Tall (2-1/2") Rail Kit for C & CK-Series Solid Shaft Pumps (Including TCC 8.0/22-S)						\$ 49.23

- Brass Manifolds
- PTFE Packings
- Solid Ceramic Plungers
- Stainless Steel Check Valves
- Heated Treated Crank Shafts
- Stainless Steel Piston Guides
- Replaceable PTFE Body Guides
- Industrial Quality Tapered Roller Bearings



TC Series Tool Coolant Plunger Pumps 1-1/8" Hollow Shaft with 182/184 Mounting Flange and Set Screw

	Model	GPM	PSI	Power Requirements	Seal Kit	Valve Kit	Weight	List Price
1750 RPM	TCB 4.0/30-U	4.0	3000	7.5 HP Electric	UD-95	UD-2	23 LBS	\$ 1,096.95
	TCB 5.0/25-U	5.0	2500	7.5 HP Electric	UD-95	UD-2	23 LBS	\$ 1,127.85

GEAR REDUCTIONS



Model	Pump Series	Max. Power	Gear Ratio	Oil Capacity	Engine Shaft	List Price
5055.E7	PN - PS	6.5 HP	2.3 : 1	7.5 oz.	3/4"	\$ 295.51

* Use only 80/90W Gear Oil in Udor Gear Reductions



Model	Pump Series	Max. Power	Gear Ratio	Oil Capacity	Engine Shaft	List Price
5038.C2	B - MS - MWT - BK - C CS - CWT - CK - CX	24.0 HP	2.176 : 1	10.8 oz.	1"	\$ 393.87
5042.C2	B - MS - MWT - BK - C CS - CWT - CK - CX	24.0 HP	2.176 : 1	10.8 oz.	1-1/8"	\$ 426.63

* Use only 80/90W Gear Oil in Udor Gear Reductions



Model	Pump Series	Max. Power	Gear Ratio	Oil Capacity	Engine Shaft	List Price
5118.G8	NX	40.0 HP	2.176 : 1	15.2 oz.	1-1/8" Kohler	\$ 1,585.17
5115.G8	NX	40.0 HP	2.176 : 1	15.2 oz.	1-1/8" B&S, Honda	\$ 1,585.17
5118.G9	NX	40.0 HP	2.176 : 1	15.2 oz.	1-7/16" Kohler	\$ 1,585.17
5115.G9	NX	40.0 HP	2.176 : 1	15.2 oz.	1-7/16" B&S, Honda	\$ 1,585.17

* Use only 80/90W Gear Oil in Udor Gear Reductions



Model	Pump Series	Max. Power	Gear Ratio	Oil Capacity	Engine Shaft	List Price
5053.E5	GAMMA-62	16.0 HP	6.4 : 1	17.25 oz.	1"	\$ 722.55
5063.B5	GAMMA-62	20.0 HP	6.4 : 1	28.0 oz.	1"	\$ 994.16

* Use only 80/90W Gear Oil in Udor Gear Reductions



Model	Pump Series	Max. Power	Gear Ratio	Oil Capacity	Engine Shaft	List Price
5117.H2	PENTA - VX - VH - VY	60.0 HP	1.48 : 1	20.3 oz.	40.0 mm	\$ 1,595.20
5117.H3	PENTA - VX - VH - VY	60.0 HP	1.82 : 1	20.3 oz.	40.0 mm	\$ 1,595.20
5117.H4	PENTA - VX - VH - VY	60.0 HP	2.21 : 1	20.3 oz.	40.0 mm	\$ 1,595.20
5117.H5	VXX	75.0 HP	1.48 : 1	20.3 oz.	40.0 mm	\$ 1,595.20
5117.H6	VXX	75.0 HP	1.82 : 1	20.3 oz.	40.0 mm	\$ 1,595.20
5117.H7	VXX	75.0 HP	2.21 : 1	20.3 oz.	40.0 mm	\$ 1,595.20

* Use only 80/90W Gear Oil in Udor Gear Reductions

PTO MULTIPLIER GEARBOX

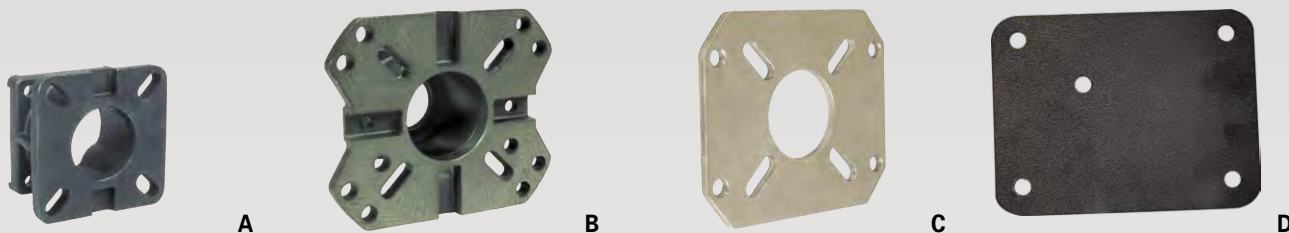


P.T.O. Step Up Gear Box Multiplier with 1-3/8" 6-spline male shaft. Designed to mount to C, CS - CW, CK, CX & CH-Series 1450 RPM UDOR plunger pumps.
540 RPM input = 1450 RPM output

Model	Pump Series	Max. Power	Gear Ratio	Oil Capacity	Engine Shaft	List Price
5102.G2	C - CS - CW - CK - CX - CH	27.0 HP	1 : 2.5	12 oz.	1-3/8" 6-Spline	\$ 785.38

* Use only 80/90W Gear Oil

GAS ENGINE FLANGES



Model	Description	List Price
A 0517.07	Gas Engine Flange for 3400 RPM P-Series Pumps	\$ 33.06
B 0517.16	Gas Engine Flange for 3400 RPM M & MK-Series Pumps	\$ 79.10
B 0517.27	Gas Engine Flange for 3400 RPM B & BK-Series Pumps	\$ 79.10
C 5030.S1	1/4" Spacer Flange for 1-1/8" Shaft Gas Engines with Shaft Longer than 3-1/2"	\$ 59.64
D 5030.S5	Heavy Duty Torque Plate for High Horsepower GR Drive Pumps Attaches to Bottom of Pump Crankcase to Maintain Proper Shaft Alignment	\$ 50.88

ELECTRIC MOTOR FLANGES



Model	Description	List Price
E 0517.08	NEMA 56C Electric Motor Flange for P-Series Pumps	\$ 41.30
F 0517.09	NEMA 182/184 Electric Motor Flange for M & MK-Series Pumps	\$ 82.30
F 0517.26	NEMA 182/184 Electric Motor Flange for B & BK-Series Pumps	\$ 82.30
G 0210.12	NEMA 182/184 Electric Motor Flange for Coupler Driving B & BK-Series Pumps	\$ 130.50
H 0210.14	NEMA 213/215 Electric Motor Flange for Coupler Driving B, BK, C & CK-Series Pumps	\$ 150.90

BELT DRIVE BUSHINGS



Model	Description	List Price
I 10H6	1-3/8", 6-Spline H-Bushing for Pulley Driving Pumps with 6-Spline Male PTO Shaft. 2 Groove Max	\$ 34.71
I 10H24	24 mm H-Bushing for Pulley Driving Pumps with 24 mm Solid Shaft	\$ 25.03
10H25	25 mm H-Bushing for Pulley Driving Pumps with 25 mm Solid Shaft	\$ 25.03
J 10Q1	1-3/8", 6-Spline Q-Bushing for Pulley Driving GAMMA & GAMMA-B Pumps. 3 Groove Max	\$ 93.94
10Q135	35 mm Q-Bushing for Pulley Driving PENTA, NX AND VX Series Pumps. 4 Groove Max	\$ 93.94
K 10Q2	1-3/8", 6-Spline Q-Bushing for Pulley Driving GAMMA & GAMMA-B Pumps. 5 Groove Max	\$ 100.53

HYDRAULIC MOTORS



A



B



C

	Model	Description	List Price
A	0632.39	Hydraulic Gear Motor for P-Series Plunger Pumps	\$ 639.94
A	0632.40	Hydraulic Gear Motor for B & C-Series Plunger Pumps	\$ 639.94
	0632.40/K	Hydraulic Motor Repair Kit for 0632.40 Hydraulic Motor	\$ 139.77
	0632.40/KC	Hydraulic Motor Repair Kit with Front Cover for 0632.40 Hydraulic Motor	\$ 232.88
B	OMP100	Hydraulic Motor for Use with GAMMA-62/CC and GAMMA-105/CC Pumps	\$ 702.15
C	0632.41	Hydraulic Gear for CK-Series Plunger Pumps	\$ 1,557.98
	0632.41/K	Hydraulic Motor Repair Kit for 0632.41 Hydraulic Motor	\$ 120.30
	0632.42	High Volume, Low Pressure Hydraulic Motor for NX, VX & PENTA Series Pumps	\$ 2,647.10
	0632.42/K	Hydraulic Motor Repair Kit for 0632.42 Hydraulic Motor	\$ 150.38
	0632.43	High Pressure, Low Volume Hydraulic Motor for NX & PENTA Series Pumps	\$ 2,647.10
	0632.44	High Pressure, Low Volume Hydraulic Motor for VX Series Pumps	\$ 2,647.10

HYDRAULIC COMPONENTS



D



E



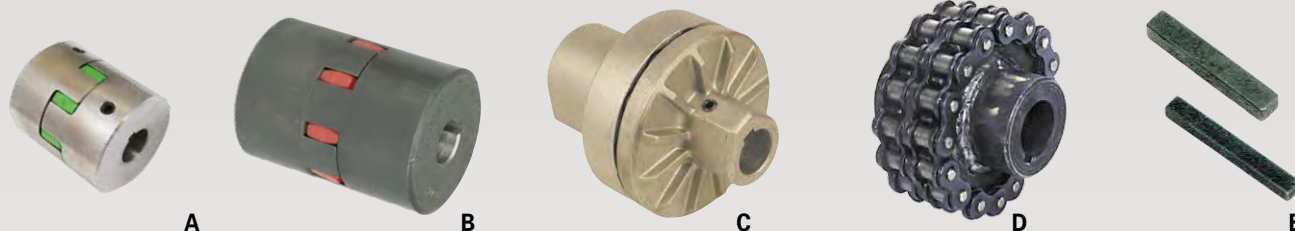
F



G

	Model	Description	List Price
D	0236.19	Hydraulic Flange for B, BK, C and CK Series Pumps	\$ 200.44
E	0517.12	Hydraulic Flange for P Series Pumps	\$ 82.30
F	0632.31	Hydraulic Fitting - 1/2" MNPT x JIC #10	\$ 12.67
F	0632.32	Hydraulic Fitting - 5/8" MNPT x JIC #10	\$ 13.39
F	0632.33	Hydraulic Fitting - 3/4" MNPT x JIC #10	\$ 19.26
G	4155.02	Hydraulic Motor Mounting Kit for GAMMA-62/CC & GAMMA-105/CC Pumps	\$ 296.64

SHAFT COUPLERS & KEYS



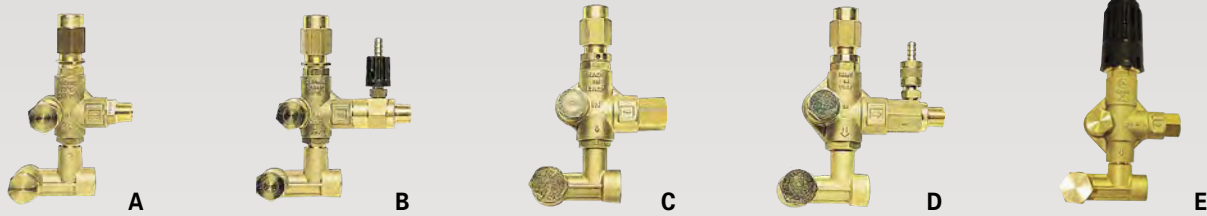
	Model	Description	List Price
A	0632.10	Coupler Set, 24 mm x 3/4", for M, MK, G & GK-Series Hydraulic Drive	\$ 69.22
A	0632.12	Coupler Set, 24 mm x 1"	\$ 69.22
B	0632.15	Coupler Set, 1-3/8" Six Spline x 1-1/4" for Driving GAMMA Series Hydraulic Drive	\$ 232.88
B	0632.21	Coupler Set, 24 mm x 1-3/8", for Electric Motors up to 15 HP	\$ 205.38
B	0632.25	Coupler Set, 35 mm x 1-1/4" for PENTA, NX & VX-Series Hydraulic Drive	\$ 232.88
C	0632.29	Coupler Set, 24 mm x 1-1/8", for Electric Motors up to 7.5 HP	\$ 129.99
C	0632.30	Coupler Set, 24 mm x 1-3/8", for Electric Motors up to 10 HP	\$ 146.47
D	CD 1-3/8x1	1-3/8" Six Spline x 1" Chain Drive Coupler Assembly for Driving 600 RPM GAMMA-62/CC or GAMMA-105/CC Pumps with 6:1 Gear Reduced Gas Engines or Hydraulic Motors	\$ 179.12
E	6914.83	1/4" x 2-1/4" Heat Treated Engine Key for use on 8 - 35 HP Gas Engines	\$ 8.65
E	6914.84	3/8" x 4-7/8" Heat Treated Engine Key	\$ 10.40
E	6921.91	3/16" x 1-3/4" Heat Treated Engine Key for use on 2.5 - 6.5 HP Gas Engines	\$ 7.00

RAIL KITS & MOUNTING HARDWARE



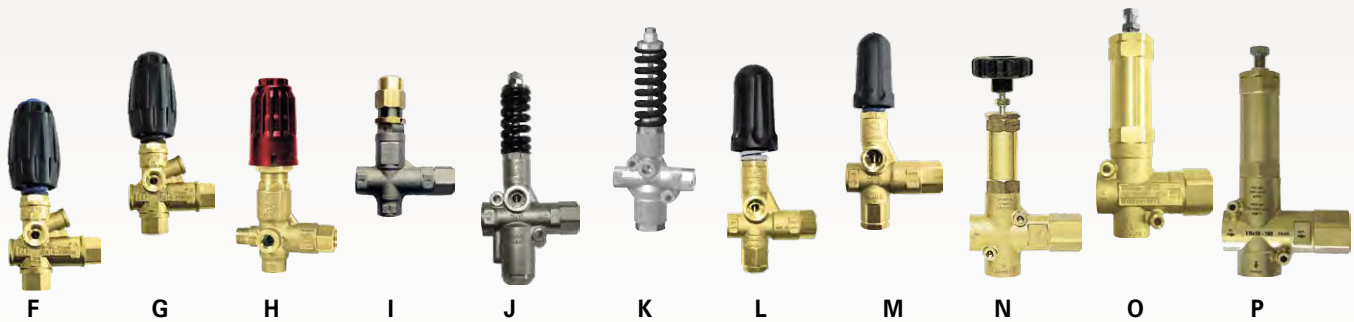
	Model	Description	List Price
F	8702.07	Medium (1-3/4") Rail Kit for C & CK-Series Solid Shaft Pumps	\$ 47.59
G	8702.08	Standard (1") Rail Kit for C & CK-Series Solid Shaft Pumps	\$ 15.35
G	8702.10	Standard (7/8") Rail Kit for P, B & BK-Series Solid Shaft Pumps	\$ 14.32
H	8702.20	Tall (2-1/2") Rail Kit for B & BK-Series Solid Shaft Pumps	\$ 49.23
H	8702.25	Tall (2-1/2") Rail Kit for C & CK-Series Solid Shaft Pumps	\$ 49.23
I	8702.30	Tall (2-1/2") Heavy Duty Rail Kit for PENTA & VX-Series Pumps	\$ 141.93
I	8702.35	Tall (2-1/2") Heavy Duty Rail Kit for NX Series Pumps	\$ 141.93
I	8702.40	Tall (2-1/2") Heavy Duty Rail Kit for VX/VY Series Pumps	\$ 141.93
J	C5429	Rubber Bushing w/ Molded-in Washer 1-3/4" H x 1-7/8" D for Pump, Base Plate or Engine Support	\$ 13.39
J	C8076	Rubber Bushing with Molded In Washer 3/4" H x 1-1/4" D for Pump, Base Plate or Engine Support	\$ 10.30
K	9700.00	Base Plate - 14" x 26"	\$ 142.96
K	9700.10	Base Plate - 17" x 30"	\$ 151.10
K	9700.20	Base Plate - 14" x 20" for P-Series Hydraulic Pump Assembly	\$ 134.72
K	9700.25	Base Plate - 25" x 36"	\$ 413.34
K	9700.40	Base Plate - 20" x 30" for PENTA, NX & VX-Series High-Pressure, Low-Flow Hydraulic Pump Ass'y	\$ 412.41

MONOBLOCK UNLOADERS



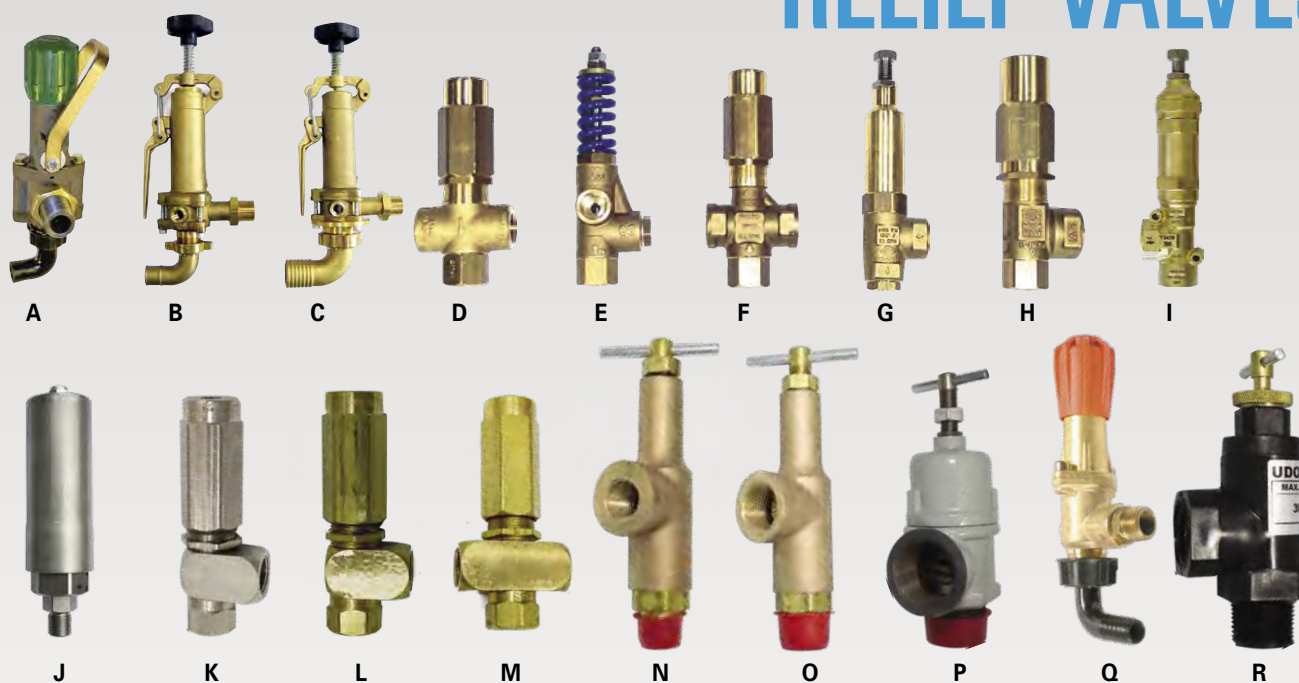
	Model	Pump Series	GPM	PSI	Inlet	Outlet	List Price
A	UB14	PN - PS	6.6	3190	1/2" Female	3/8" Male	\$ 111.03
B	UB114	PN - PS	6.6	3190	1/2" Female	3/8" Male	\$ 127.10
C	UB22	MS - MWT	7.9	3190	1/2" Female	3/8" Female	\$ 127.10
D	UBI22	MS - MWT	7.9	3190	1/2" Female	3/8" Male	\$ 143.38
C	UB23	B - BK	7.9	3190	1/2" Female	3/8" Female	\$ 127.10
D	UBI23	B - BK	7.9	3190	1/2" Female	3/8" Male	\$ 143.38
E	UB24	BK	7.9	4060	1/2" Female	3/8" Female	\$ 148.40

BYPASS UNLOADERS



	Model	GPM	PSI	Inlet	Outlet	Bypass	List Price
F	UD7100	10.5	1500	3/8" Female	3/8" Female	3/8" Female	\$ 99.81
F	UD7300	10.5	3625	3/8" Female	3/8" Female	3/8" Female	\$ 99.81
G	UD7400	10.5	4350	3/8" Female	3/8" Female	3/8" Female	\$ 99.81
H	UB351	10.5	5075	3/8" Male	3/8" Female	3/8" Female	\$ 254.82
I	UB501	21.0	7250	1/2" Female	1/2" Female	1/2" Female	\$ 1,208.29
J	UB600	15.9	8700	1/2" Female	1/2" Female	3/8" Female	\$ 1,249.75
K	UB1000	10.5	14,500	3/8" Female	3/8" Female	3/8" Female	\$ 2,979.00
L	UB150	21.0	2320	1/2" Female	1/2" Female	1/2" Female	\$ 263.47
M	UB280	21.0	4350	1/2" Female	1/2" Female	1/2" Female	\$ 263.47
M	UB280SV	21.0	4350	1/2" Female	1/2" Female	1/2" Female	\$ 263.47
N	UB1500	53.0	2200	1" Female	1" Female	1" Female	\$ 789.70
O	UB2000	53.0	4060	1" Female	1" Female	1" Female	\$ 1,055.13
P	U 450/20	119.0	3000	1-1/4" Female	1-1/4" Female	1-1/2" Female	\$ 1,889.90
P	U 450/30	119.0	4350	1-1/4" Female	1-1/4" Female	1-1/2" Female	\$ 2,005.15

RELIEF VALVES



	Model	GPM	PSI	Inlet	Outlet	Bypass	List Price
A	6005.31	31.7	725	3/4" Male BSP	-	3/4" Barb	\$ 199.71
A	6005.31/N	31.7	725	3/4" Male NPT	-	3/4" Barb	\$ 199.71
B	6005.15	40.0	1160	3/4" Male BSP	-	1" Barb	\$ 406.44
B	6005.15/N	40.0	1160	3/4" Male NPT	-	1" Barb	\$ 406.44
C	6005.14	66.0	1160	3/4" Male BSP	-	1-1/2" Barb	\$ 425.90
C	6005.14/N	66.0	1160	3/4" Male NPT	-	1-1/2" Barb	\$ 425.90
D	SV220	6.4	3190	3/8" Female	-	3/8" Female	\$ 85.39
E	SV7200	8.0	3190	3/8" Female	-	3/8" Female	\$ 84.35
F	SV350	6.6	5075	3/8" Female	-	3/8" Female	\$ 151.93
G	SV500	21.0	7250	1/2" Female	-	3/8" Female	\$ 541.68
H	UD600F	53.0	2610	3/4" Female	-	1/2" Female	\$ 307.46
I	SV400	119.0	4350	1-1/4" Female	-	1-1/4" Female	\$ 1,452.00
J	SV800	10.5	11600	1/2" Male	-	3/8" Female	\$ 1,067.45
J	SV1000	10.5	14500	1/2" Male	-	3/8" Female	\$ 1,067.45
J	SV1250	10.5	18130	1/2" Male	-	3/8" Female	\$ 1,067.45
K	UD555FSS	7.0	2000	3/8" Female	-	3/8" Female	\$ 323.32
L	UD500F	7.0	500	3/8" Female	-	3/8" Female	\$ 73.54
L	UD550F	7.0	1000	3/8" Female	-	3/8" Female	\$ 73.54
L	UD555F	7.0	2000	3/8" Female	-	3/8" Female	\$ 73.54
M	UD555FT	7.0	2000	3/8" Female	3/8" Female	3/8" Female	\$ 73.54
N	UD 1/2-300	20.0	300	1/2" Male	-	1/2" Female	\$ 69.01
O	UD 3/4-300	30.0	300	3/4" Male	-	3/4" Female	\$ 77.46
P	15-2740	80.0	300	1-1/4" Male	-	1-1/4" Female	\$ 238.24
Q	1238.N4	40.0	400	3/4" Male	-	3/4" Hose Barb	\$ 442.49
R	UD 3/4-60/P	30.0	70	3/4" Male	-	3/4" Female	\$ 54.49
R	UD 3/4-250/P	30.0	250	3/4" Male	-	3/4" Female	\$ 54.49

MOUNTING BLOCKS & ADAPTERS



A



B



C

	Model	Description	List Price
A	7705.00	Aluminum Mounting Block. (4) 3/4" FNPT, (3) 1/2" FNPT, (1) 1/4" FNPT Port. MAX. 2000 PSI	\$ 185.30
B	7705.10	Plated Steel Remote Mounting Block, 3/8" FNPT x 3/8" FNPT Ports. MAX. 4000 PSI	\$ 38.11
B	7705.20	Plated Steel Remote Mounting Block, 1/2" FNPT x 1/2" FNPT Ports. MAX. 4000 PSI	\$ 38.11
C	0508.11	Bypass adapter for 6005.14/15 regulators. Converts hose barb end to 1-1/4" FNPT.	\$ 100.53

CHEMICAL INJECTORS



D

	Model	GPM	PSI	Inlet	Outlet	Orifice	List Price
D	9510.00	2.5 - 4.0	4000	3/8" Male	3/8" Male	2.1 mm	\$ 22.97
D	9510.01	4.0 - 8.0	4000	3/8" Male	3/8" Male	2.4 mm	\$ 22.97

POP-OFF & EZ-START VALVES



E



F

	Model	Description	GPM	PSI	Inlet	Outlet	List Price
E	9540.00	Safety Pop-Off Valve	8.0	4000	3/8" Male	-	\$ 21.73
F	9530.00	EZ-Start Valve	8.0	4000	3/8" Male	1/4" Hose Barb	\$ 21.73

THERMAL RELIEF VALVES



G



H

	Model	Description	GPM	PSI	Inlet	Size	List Price
G	9520.01	Thermal Relief Valve - 140°F				3/8" Male	\$ 14.63
H	9520.02	Thermal Relief Valve - 140°F				1/2" Male	\$ 15.66

POLYPROPYLENE INLET FILTERS



A



B

	Model	Description	List Price
A	UD1-32	Inlet Filter. 32 Mesh. 1" FNPT Ports	\$ 54.49
B	UD1-1/4-32	Inlet Filter. 32 Mesh. 1-1/4" FNPT Ports	\$ 72.41
B	UD1-1/2-32	Inlet Filter. 32 Mesh. 1-1/2" FNPT Ports	\$ 72.41
-	3260.02	Replacement 32 Mesh Screen for 1-1/4" & 1-1/2" Filters	\$ 28.84
-	3260.04	Replacement 32 Mesh Screen for 1" Filters	\$ 21.01



C

HIGH PRESSURE FILTERS

High pressure, self cleaning strainer features brass construction, (2) 3/4" FNPT inlet & (2) 3/4" FNPT outlet ports. 40 mesh reinforced stainless screen is standard. 9" L including flush valve. 3" Diameter. Has mounting bracket with two 3/8" holes. 40 GPM Max. 1000 PSI Max.

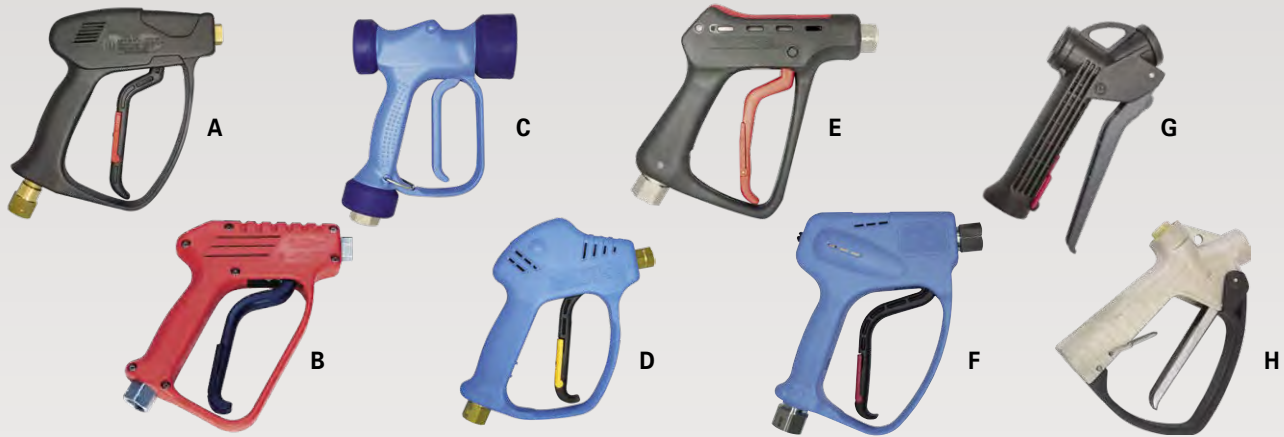
	Model	Description	List Price
C	144.504.6	Discharge Filter. 40 Mesh. 3/4" FNPT Ports	\$ 199.20
-	144.203.11	Replacement High Pressure Filter Screen	\$ 63.04
-	219P12	3/4" MNPT Allen Plug	\$ 10.51
-	209P12/8	3/4" MNPT x 1/2" FNPT Reducer Bushing	\$ 7.11



PRESSURE GAUGES

	Model	Description	List Price
	GG350	Gauge, Stainless Steel Case, Glycerin Filled. Bottom Mount, 350 PSI Max.	\$ 39.86
	GG350BM	Gauge, Stainless Steel Case, Glycerin Filled. Back Mount, 350 PSI Max.	\$ 39.86
	GG1000	Gauge, Stainless Steel Case, Glycerin Filled. Bottom Mount, 1000 PSI Max.	\$ 39.86
	GG1000BM	Gauge, Stainless Steel Case, Glycerin Filled. Back Mount, 1000 PSI Max.	\$ 39.86
	GG1500	Gauge, Stainless Steel Case, Glycerin Filled. Bottom Mount, 1500 PSI Max.	\$ 39.86
	GG3000	Gauge, Stainless Steel Case, Glycerin Filled. Bottom Mount, 3000 PSI Max.	\$ 33.06
	GG4000	Gauge, Stainless Steel Case, Glycerin Filled. Bottom Mount, 4000 PSI Max.	\$ 33.06

TRIGGER SPRAY GUNS



	Model	Max GPM	Max PSI	Inlet	Outlet	List Price
A	1215.18	10.0	4000	3/8" FNPT	1/4" FNPT	\$ 64.48
B	1215.26	10.5	5800	3/8" FNPT	1/4" FNPT	\$ 447.52
C	1215.29	16.0	350	1/2" FNPT	Adj. Pattern	\$ 177.16
D	1215.31	13.0	5000	3/8" FNPT	1/4" FNPT	\$ 144.82
E	ST3002	25.0	7000	1/2" FNPT	1/2" FNPT	\$ 578.04
F	1215.38	53.0	3000	3/4" FNPT	1/2" FNPT	\$ 453.35
G	15.0003.13	18.0	400	1/2" FNPT	1/2" FNPT	\$ 45.84
H	23.208.84	18.0	700	1/2" FNPT	1/2" FNPT	\$ 63.04

COMPLETE SPRAY GUNS



	Model	Max GPM	Max PSI	Description	List Price
I	26.901.162	15.0	850	High Performance Gun with 8" Barrel. 2.3 mm Orifice	\$ 183.75
J	26.901.400	15.0	850	High Perf. Gun, 8" Barrel, 1/2" MBSP Inlet 2.3 mm Orifice	\$ 199.41
K	7.901.103	25.0	850	High Performance Gun with 17" Barrel. 4.5 mm Orifice	\$ 249.78
L	13.901.151	30.0	850	High Performance Gun with 21" Barrel. 3.5 mm Orifice	\$ 349.38
M	22.901.161	10.0	3000	High Pressure Gun with 21" Barrel. 1.8 mm Orifice	\$ 357.31
N	22.901.163	25.0	3000	High Pressure Gun with 21" Barrel. 3.0 mm Orifice	\$ 748.19
O	1215.50	10.5	14500	High Pressure Gun with Lance and Arm Brace.	\$ 2,029.80
O	1215.51	10.5	18130	High Pressure Gun with Lance and Arm Brace.	\$ 3,320.16

FOAM SPRAY GUNS



A



B

	Model	Max GPM	Max PSI	Description	List Price
A	37.901.20	13.0	3000	High Pressure Foam Gun, 21" Barrel. 4.5 mm Orifice	\$ 722.65
B	37.901.30	25.0	3000	High Pressure High Flow Foam Gun, 21" Barrel. 4.5 mm Orifice	\$ 986.53

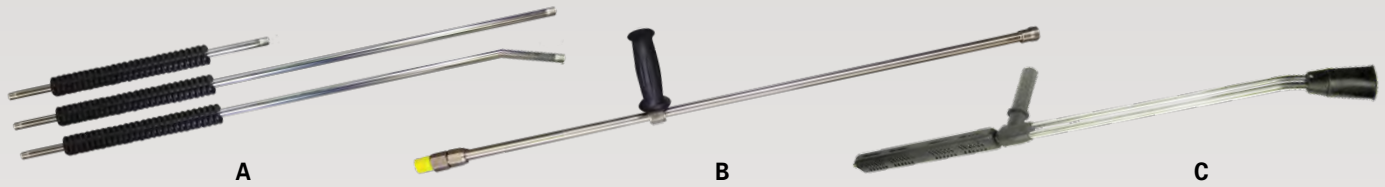
SPRAY TIP PERFORMANCE HIGH PERFORMANCE SPRAY GUNS

Model	Orifice (mm)	Material	Gallons per Minute / Maximum Spray Distance in Feet					List Price
			100 PSI	200 PSI	400 PSI	600 PSI	800 PSI	
68.1802.51	1.5	Ceramic	.78 / 17	1.1 / 20	1.5 / 23	1.8 / 25	2.1 / 27	\$ 14.63
68.1802.52	1.8	Ceramic	1.1 / 19	1.6 / 21	2.3 / 24	2.6 / 26	2.9 / 28	\$ 14.63
68.1802.53	2.0	Ceramic	1.4 / 21	2.0 / 24	2.8 / 26	3.4 / 29	3.8 / 32	\$ 14.63
68.1802.54	2.3	Ceramic	2.0 / 24	2.5 / 29	4.0 / 34	5.0 / 42	5.5 / 45	\$ 14.63
68.1802.16	2.5	Ceramic	2.5 / 23	3.0 / 28	4.5 / 32	5.5 / 40	6.5 / 44	\$ 14.63
68.1802.17	3.0	Ceramic	3.0 / 28	4.5 / 29	6.5 / 34	8.0 / 41	9.0 / 44	\$ 14.63
13.1802.73	3.5	S/S	4.5 / 31	6.0 / 36	8.5 / 41	11.0 / 50	12.0 / 54	\$ 24.31
13.1802.58	4.0	S/S	5.0 / 35	7.5 / 38	10.0 / 43	13.5 / 53	14.5 / 59	\$ 24.31
13.1802.59	4.5	S/S	6.5 / 37	9.0 / 39	12.5 / 44	16.5 / 54	18.0 / 62	\$ 24.31
13.1802.60	5.0	S/S	7.5 / 33	10.0 / 41	14.0 / 47	18.5 / 59	21.0 / 67	\$ 24.31
13.1802.61	5.5	S/S	8.0 / 35	11.5 / 42	16.0 / 47	21.0 / 59	23.0 / 70	\$ 24.31
13.1802.75	6.0	S/S	9.0 / 38	12.5 / 44	18.0 / 54	23.0 / 66	26.0 / 74	\$ 24.31
13.1802.74	7.0	S/S	9.5 / 21	13.5 / 47	19.0 / 57	24.0 / 70	27.0 / 77	\$ 24.31

SPRAY TIP PERFORMANCE HIGH PRESSURE SPRAY GUNS

Model	Orifice (mm)	Material	Gallons per Minute					List Price
			1000 PSI	1500 PSI	2000 PSI	2500 PSI	3000 PSI	
68.1802.50	1.2	Ceramic	2.0	2.4	2.6	2.9	3.5	\$ 14.63
68.1802.51	1.5	Ceramic	2.5	3.0	3.5	3.9	4.4	\$ 14.63
68.1802.52	1.8	Ceramic	3.5	4.1	4.7	5.3	5.9	\$ 14.63
68.1802.53	2.0	Ceramic	4.5	5.1	5.8	6.2	6.8	\$ 14.63
68.1802.54	2.3	Ceramic	6.0	7.0	8.0	9.0	10.0	\$ 14.63
68.1802.16	2.5	Ceramic	7.5	9.0	10.5	11.5	13.0	\$ 14.63
68.1802.17	3.0	Ceramic	10.0	12.0	14.0	16.0	18.0	\$ 14.63
13.1802.73	3.5	S/S	13.0	16.0	19.0	22.0	36.0	\$ 24.31

SPRAY WANDS



	Model	Max GPM	Max PSI	Description	List Price
A	0802.35	10.0	4000	14" Spray Wand with Molded Grip	\$ 21.94
A	0802.45	10.0	4000	36" Spray Wand with Molded Grip	\$ 29.05
A	0802.46	10.0	4000	36" Spray Wand with Molded Grip with Bend	\$ 29.05
B	ST3002L	25.0	7000	Spray Wand with 1/2" Female Inlet & 1/4" Female Outlet	\$ 255.65
C	0802.50	10.0	3500	Dual Lance Wand. High-Low Pressure for Chemical Injection	\$ 99.60

GUN, WAND & HOSE KIT



Model	Max PSI	Description	List Price
9100.09	4000	50' x 3/8" MNPT Hose Assembly, Spray Gun & 36" Molded Grip Wand, Nozzle Protector and Quick Connectors	\$ 253.28

HOSE ASSEMBLY



Model	Max PSI	Description	List Price
9100.02	4000	Hose Assembly, 50' x 3/8" MNPT Swivel x Rigid w/ Protectors	\$ 134.72

NOZZLE HOLDERS



D



E

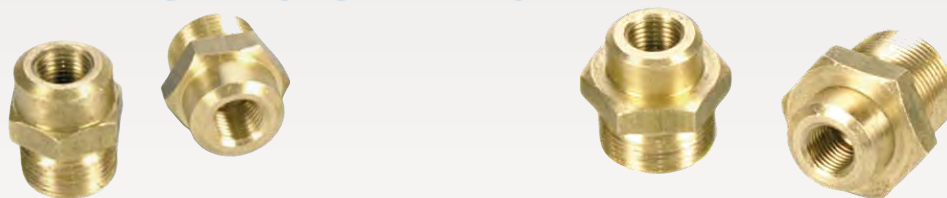
	Model	Max GPM	Max PSI	Description	List Price
D	9200.03	10.0	4000	Nozzle Protector	\$ 4.74
E	9200.08	8.0	3500	Adjustable Nozzle Holder Allows for Chemical Injection	\$ 24.82

PULSING VALVES



Model	Description	List Price
1603.60PV	Pulsing Valve Assembly for M-Series Pumps. MAX. 3000 PSI	\$ 116.80
1603.72PV	Pulsing Valve Assembly for P-Series Pumps. MAX. 2500 PSI	\$ 110.11
1603.93PV	Pulsing Valve Assembly for GK-Series Pumps up to 8 GPM. MAX. 4000 PSI	\$ 133.49
1603.94PV	Pulsing Valve Assembly for MK-Series Pumps. MAX. 4000 PSI	\$ 116.80
1603.B5PV	Pulsing Valve Assembly for CK/GK-Series Pumps over 10 GPM. MAX. 3000 PSI	\$ 133.49
1603.D2PV	Pulsing Valve Assembly for PENTA-Series Pumps w/Brass Head Only. MAX. 4000 PSI	\$ 227.01
1603.L9PV	Pulsing Valve Assembly for CK-Series Pumps up to 9 GPM. MAX. 4000 PSI	\$ 133.49
0208.A5PV	Pulsing Valve Kit. VX-75/95 Series Pumps	\$ 577.28

GAUGE PORT VALVE CAPS



Model	Description	List Price
1603.97	1/4" FNPT Gauge Port Valve Cap for P-Series Pumps	\$ 22.25
1603.98	1/4" FNPT Gauge Port Valve Cap for B/M-Series Pumps	\$ 23.90
1603.99	1/4" FNPT Gauge Port Valve Cap for C/G-Series Pumps	\$ 25.75
1603.A1	1/4" FNPT Gauge Port Valve Cap for MK-Series Pumps	\$ 30.59
1603.A2	1/4" FNPT Gauge Port Valve Cap for CK/GK-Series and NX-35/300 Pumps	\$ 35.74
1603.D5	1/4" FNPT Gauge Port Valve Cap for PENTA-Series Pumps. Brass Head Only	\$ 46.76
1603.F4	1/4" FNPT Gauge Port Valve Cap for NX-55/200 and NX-75/150 Pumps	\$ 46.76
1603.L3	1/4" FNPT Gauge Port Valve Cap for BK-Series Pumps	\$ 33.27
1603.L8	1/4" FNPT Gauge Port Valve Cap for CK-Series Pumps. HP 20 mm Models	\$ 32.56
1603.L9	1/4" FNPT Gauge Port Valve Cap for CK-Series Pumps. 22/25 mm Models	\$ 43.26

QUICK DISCONNECT COUPLERS



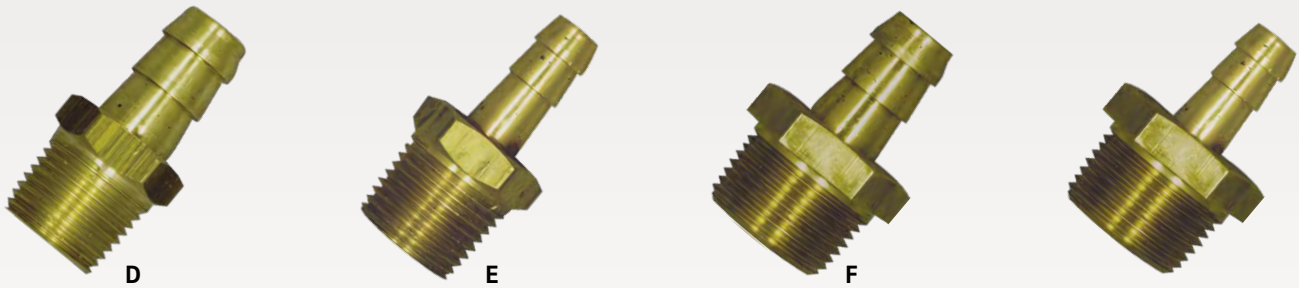
Model	Description	List Price
A 9200.01	3/8" FNPT Quick Disconnect Socket	\$ 7.11
B 9200.02	3/8" MNPT Quick Disconnect Plug	\$ 3.09
C 9200.09	3/8" FNPT Quick Disconnect Plug	\$ 3.09

SWIVELS



Model	Description	List Price
A 26.1502.45	Brass Swivel. 1/2" FBSP x 1/2" MBSP. Fits Std & Ind Turbo Gun. Max. 1000 PSI	\$ 25.65
B 9016F6M	Brass Swivel. 3/8" FNPT x 3/8" MNPT. 1000 PSI	\$ 25.65
C 9018F8M	Brass Swivel. 1/2" FNPT x 1/2" MNPT. 1000 PSI	\$ 29.25
C 9018F8M/T	Brass Swivel. 1/2" Female BSP x 1/2" MNPT for 7.901.103 & 13.901.151. 1000 PSI	\$ 31.72

HOSE BARB SWIVELS



Model	Description	List Price
A 7016.00	Brass Hose Barb Swivel. 1/2" MNPT x 1/2" Hose Barb. Max. 350 PSI	\$ 24.31
B 7016.01	Brass Hose Barb Swivel. 1/2" MNPT x 3/8" Hose Barb. Max. 350 PSI	\$ 24.31
C 7016.02	Brass Hose Barb Swivel. 3/4" MNPT x 1/2" Hose Barb. Max. 350 PSI	\$ 27.60
C 7016.03	Brass Hose Barb Swivel. 3/4" MNPT x 3/8" Hose Barb. Max. 350 PSI	\$ 27.60

HOSE REEL SWIVELS



Model	Description	List Price
A 2302.66	Brass Hose Barb Swivel. 1/2" MNPT x 1/2" Hose Barb. Max. 4000 PSI	\$ 79.10
B 2505.88	Brass Hose Barb Swivel. 1/2" MNPT x 3/8" Hose Barb. Max. 4000 PSI	\$ 83.95
C 2506.88	Brass Hose Barb Swivel. 3/4" MNPT x 1/2" Hose Barb. Max. 4000 PSI	\$ 83.95



STEEL PIPE FITTINGS

Model	Description	List Price
9800.00	Hex Nipple 1/4" MNPT Steel	\$ 3.40
9800.01	90 Degree Elbow 1/4" MNPT Steel	\$ 6.18
9800.02	Reducer 3/8" FPT x 1/4" MNPT Steel	\$ 3.91
9800.03	Hex Nipple 3/8" MNPT Steel	\$ 4.74
9800.04	90 Degree Elbow 3/8" MNPT x 3/8" MNPT Steel	\$ 6.59
9800.05	90 Degree Elbow 3/8" MNPT x 3/8" FNPT Steel	\$ 7.00
9800.06	Bushing 1/2" MNPT x 1/4" FNPT Steel	\$ 8.14
9800.07	90 Degree Elbow 1/2" MNPT x 3/8" FNPT Steel	\$ 11.12
9800.08	Hex Nipple 1/2" MNPT Steel	\$ 6.08
9800.09	90 Degree Elbow 1/2" MNPT x 1/2" FNPT Steel	\$ 11.12
9800.10	Reducer Coupling 3/8" FNPT x 1/4" FNPT Steel	\$ 9.79
9800.11	90 Degree Elbow 1/2" MNPT x 1/2" MNPT Steel	\$ 10.09



BRASS FITTINGS

Model	Description	List Price
9200.00	3/8" Hose Barb Elbow x 3/8" MNPT	\$ 3.40
9900.00	3/8" Hose Barb x 3/8" MNPT	\$ 3.19
9900.01	1/2" Hose Barb x 1/2" MNPT	\$ 4.33
9900.02	Garden Hose Swivel x 1/2" MNPT	\$ 12.26

HIGH FLOW INLET HOSE BARBS



High flow inlet hose barbs are made of polypropylene & feature high flow inlet passages. Specifically designed for use with plunger pumps being tank fed.

Model	Description	List Price
1290.B6	3/8" MNPT x 3/4" Hose Barb - Nylon	\$ 5.46
1290.B7	1/2" MNPT x 1" Hose Barb - Nylon	\$ 5.46
1290.B8	3/4" MNPT x 1" Hose Barb - Polypropylene	\$ 6.08

TOOLS



Model	Description	List Price
6064.01	Packing Insertion Tool 15mm. P Series	\$ 64.48
6064.02	Packing Insertion Tool 18mm. P Series	\$ 64.48
6064.03	Packing Insertion Tool 18mm. B/BK/M/MK Series	\$ 69.22
6064.04	Packing Insertion Tool 20mm. B/BK/M/MK Series	\$ 69.22
6064.05	Packing Insertion Tool 22mm. C/CK/G/GK Series	\$ 74.16
6064.06	Packing Insertion Tool 25mm. C/CK/G/GK Series	\$ 74.16
6064.07	Packing Insertion Tool 28mm. C/CK/G/GK Series	\$ 79.21
6064.08	Packing Insertion Tool 20mm. CK/GK-Series	\$ 79.21
8708.03	Plunger Pump Repair Tool Kit	\$ 811.95
8708.04	Extractor Kit	\$ 484.10
8708.04K	Extractor O-Ring Kit	\$ 11.74

UDOR LUBE

SAE 40W non-detergent lubricant. Specially formulated for use in UDOR diaphragm and plunger pumps.

- Non-Detergent. Non-Foaming
- Rust Inhibitors
- Anti-wear Agents
- Resists Breakdown Due to Oxidation



Model	Description	List Price
15.5823	UDOR LUBE - 1 Quart Bottle	\$ 14.21
15.5823G	UDOR LUBE - 1 Gallon Bottle	\$ 56.65
15.5823S	UDOR LUBE - Synthetic / Low Temp - 1 Quart Bottle	33.06

TROUBLESHOOTING GUIDE

REFER TO THE PROPER PUMP BREAKDOWN AND PLUNGER PUMP SERVICE GUIDE BEFORE PERFORMING ANY MAINTENANCE OR SERVICING OF THE PUMP. www.udorusa.com

UDOR plunger pumps “pump volume”, not pressure. The pressure is determined by adjusting the pressure relief valve or unloader valve and selecting the proper orifice size of spray nozzle or nozzles.

NEVER run any UDOR plunger pump without a pressure relief valve or unloader valve installed on the pump or in the discharge plumbing.

PROBLEM	CAUSE	REMEDY
<ul style="list-style-type: none"> • LOW PRESSURE 	<ol style="list-style-type: none"> 1) Worn or plugged nozzle 2) Belt Slippage 3) Air leak in inlet plumbing 4) Pressure gauge inoperative or not registering accurately 5) Relief/unloader valve worn, partially plugged or improperly adjusted 6) Inlet suction strainer clogged or improper size (too small) 7) Worn wet end seals; Abrasives in pumped fluid or severe cavitation; Inadequate water supply 8) Fouled or dirty inlet or discharge valves 9) Worn inlet or discharge valves 10) Leaky discharge hose 	<ul style="list-style-type: none"> • Replace or clean nozzle; check for proper size • Tighten or replace belts • Disassemble, reseal and reassemble; use blue threadlocker • Check with new gauge; replace worn or damaged gauge • Repair/replace and adjust relief/unloader valve • Clean; use a proper size; check more frequently • Install and maintain proper filter; replace seals; check inlet water supply; Max. 6 in. inlet vacuum • Clean inlet and discharge valve assemblies • Replace worn valves • Replace discharge hose
<ul style="list-style-type: none"> • PUMP RUNS EXTREMELY ROUGH • PRESSURE VERY LOW 	<ol style="list-style-type: none"> 1) Restricted inlet or air entering the inlet plumbing 2) Inlet restrictions and/or air leaks; stuck inlet or discharge valves 3) Plugged inlet filter 	<ul style="list-style-type: none"> • Proper size inlet plumbing; check for air tight seal at fittings and filter • Replace worn seals; clean out material in valves or replace worn valves • Clean or replace filter
<ul style="list-style-type: none"> • WATER LEAKAGE FROM UNDER THE MANIFOLD 	<ol style="list-style-type: none"> 1) Worn wet end seals 2) Cracked plungers 	<ul style="list-style-type: none"> • Replace seals • Replace plungers
<ul style="list-style-type: none"> • OIL LEAK BETWEEN CRANKCASE AND PUMP HEAD 	<ol style="list-style-type: none"> 1) Worn crankcase oil seals 2) Scored or damaged plunger rods 	<ul style="list-style-type: none"> • Replace crankcase oil seals • Replace plunger rods
<ul style="list-style-type: none"> • OIL LEAKING IN THE AREA OF CRANKSHAFT 	<ol style="list-style-type: none"> 1) Worn crankshaft seal or case o-ring 2) Bad bearing 	<ul style="list-style-type: none"> • Replace crankshaft seal or case o-ring • Replace bearing
<ul style="list-style-type: none"> • EXCESSIVE PLAY IN THE END OF THE CRANKSHAFT 	<ol style="list-style-type: none"> 1) Worn bearings 	<ul style="list-style-type: none"> • Replace bearings
<ul style="list-style-type: none"> • WATER IN CRANKCASE OIL 	<ol style="list-style-type: none"> 1) May be caused by humid air condensing into water inside the crankcase 2) Worn or improperly installed wet end seals 	<ul style="list-style-type: none"> • Change oil at 3 month or 500 hour intervals using UDOR LUBE (or SAE 30W non-detergent oil) • Replace seals; follow proper installation procedures (refer to UDOR USA Plunger Pump Service Guide) or contact UDOR pump supplier for servicing
<ul style="list-style-type: none"> • OIL LEAKING AT THE REAR PORTION OF THE CRANKCASE 	<ol style="list-style-type: none"> 1) Damaged or improperly installed sight glass or crankcase rear cover gasket or drain plug gasket 	<ul style="list-style-type: none"> • Replace sight glass, crankcase cover gasket or drain plug gasket
<ul style="list-style-type: none"> • LOUD KNOCKING NOISE IN PUMP 	<ol style="list-style-type: none"> 1) Pulley loose on crankshaft 2) Broken or worn bearing 	<ul style="list-style-type: none"> • Check shaft key and tighten set screw or bolts • Replace bearings
<ul style="list-style-type: none"> • FREQUENT OR PREMATURE FAILURE OF THE WET END SEALS 	<ol style="list-style-type: none"> 1) Scored plungers 2) Over-pressure to inlet manifold 3) Abrasive material in the fluid being pumped 4) Excessive temperature of fluid being pumped 5) Running pump dry 	<ul style="list-style-type: none"> • Replace plungers • Reduce inlet pressure; Max. 75 PSI • Install proper filtration on pump inlet plumbing • Assure fluid inlet temperature is within specified range; Max. 160° F • DO NOT run pump without fluid / Replace seals
<ul style="list-style-type: none"> • STRONG SURGING AND LOW PRESSURE DISCHARGE 	<ol style="list-style-type: none"> 1) Foreign particles in the inlet or discharge valves or worn inlet and/or discharge valves 2) Worn wet end seals 	<ul style="list-style-type: none"> • Clean valves or replace worn valves; check supply tank for contamination; install and regularly clean filter; never pump abrasive fluids • Replace seals

INSTALLATION GUIDE

WARNING! UDOR Plunger Pumps are positive displacement pumps, therefore a properly designed pressure relief valve or unloader valve must be installed on the pump or in the discharge plumbing. A secondary safety relief valve is also recommended. Failure to install a pressure relief valve or unloader valve could result in personal injury, property damage or damage to the pump or system and void any warranty. In no way does UDOR USA assume any liability or responsibility for the construction or operation of a customer's or potential customer's high pressure system.

LOCATION: If the pump is used in dirty or humid conditions, it is recommended that the pump be enclosed. Do not store or operate in excessively high temperature areas or without proper ventilation.

MOUNT: Mount the pump on a rigid, horizontal surface in such a way as to permit drainage of crankcase. An uneven mounting surface will cause damage to the pump. Use appropriate flexible hose to the inlet and discharge ports. Use the proper belts, making sure pulleys are aligned. Excessive belt tension can be harmful to bearings. For CK-Series gear reduction applications, pump must have support rail with vibration isolators or an UDOR torque plate installed. Contact UDOR U.S.A. for information.

PUMP ROTATION: UDOR Plunger Pumps are designed for forward rotation to allow optimum lubrication of the crosshead area. Reverse rotation is acceptable if the crankcase oil level is increased slightly above the center dot to assure proper lubrication.

PUMP SPEED: Do not over speed the pump. UDOR Plunger Pumps are designed to operate at or below a specific RPM. Over speeding will cause valves and seals to prematurely fail and could cause other internal damage. Refer to the performance chart or breakdown of your specific pump for maximum operating RPM

LUBRICATION: Fill the crankcase with UDOR LUBE Premium Pump Oil or SAE 30W non-detergent oil per pump specifications. DO NOT run pump without oil in crankcase. Change oil after initial 50 hour break-in and every 500 hours or 3 months there-after. For any pump with a gear reduction, make sure the gear box is filled to the center of the sight glass with 90 wt. gear lube before operating.

PUMPED FLUIDS: Some fluids may require a flush between operations or before storing. For information regarding pumping fluids other than water, please contact UDOR U.S.A.

INLET CONDITIONS: Ensure proper inlet flow. DO NOT STARVE THE PUMP OR RUN PUMP DRY!

DISCHARGE PLUMBING: DO NOT START PUMP UNLESS A PRESSURE RELIEF VALVE OR UNLOADER VALVE IS INSTALLED. OPEN ALL VALVES BEFORE STARTING THE SYSTEM TO AVOID DEADHEAD OVERPRESSURE CONDITION AND SEVERE DAMAGE TO THE PUMP OR SYSTEM.

PULSATION DAMPENERS: (Optional) Install dampener directly into discharge line. Make sure the pulsation dampener is properly pre-charged for the system pressure.

PRESSURE GAUGE: Install pressure gauge near the discharge outlet of the high pressure manifold or in the discharge plumbing. This is extremely important for adjusting the pressure relief valve / unloader valve and for proper sizing of the nozzle or restricting orifice. The pump is rated for a maximum pressure, which should be read at the discharge manifold of the pump only, not at the gun or nozzle.

PRESSURE RELIEF VALVE/UNLOADER VALVE: A pressure relief valve or unloader valve must be installed to prevent over pressurizing and severely damaging the pump if the discharge is turned off or becomes plugged. Pressure relief valves / unloader valves should be at minimum pressure setting at start-up. On any high pressure system, secondary protection, such as a pop-off valve or safety valve, is recommended. Start system with all valves open or in the low pressure setting.

CAUTION: FAILURE TO INSTALL A PRESSURE RELIEF VALVE OR UNLOADER VALVE WILL VOID THE WARRANTY ON THE PUMP.

NOZZLES: A worn nozzle will result in loss of pressure. Do not adjust the pressure relief valve / unloader valve to compensate for pressure loss. Replace nozzle and reset the pressure relief valve / unloader valve to proper system pressure.

STORING: For extended storage or between use in cold climates, drain all pumped fluids from the pump and complete system and flush with a 50/50 mixture of anti-freeze and water to prevent freezing and damage to the pump. DO NOT run pump with frozen fluid. Before restarting the pump after anti-freezing, make sure to purge all anti-freeze from pump and complete system at low pressure only. Anti-freeze will foam under high pressure and can cause severe damage to the pump and pressure regulator. FAILURE TO FOLLOW THIS STEP WILL VOID ANY AND ALL WARRANTIES.

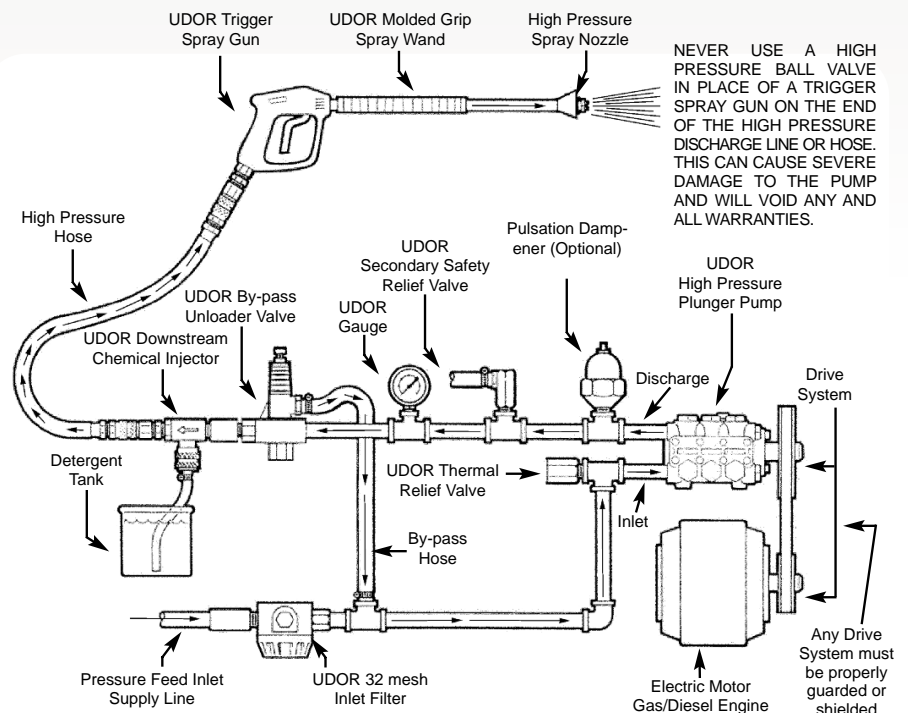
UDOR USA BASIC PRESSURE FEED HIGH PRESSURE CLEANING SYSTEM PLUMBING DIAGRAM

NOTE: This is a basic pressure feed plumbing diagram and is not recommended for all systems. Consult UDOR USA for specific system requirements and components.

On any multiple gun system never use a standard unloader style valve; these valves are designed for full on or full off only. A balance relief valve must be used for multiple gun systems.

Use blue threadlocker or equivalent on all plumbing components, fittings and accessories.

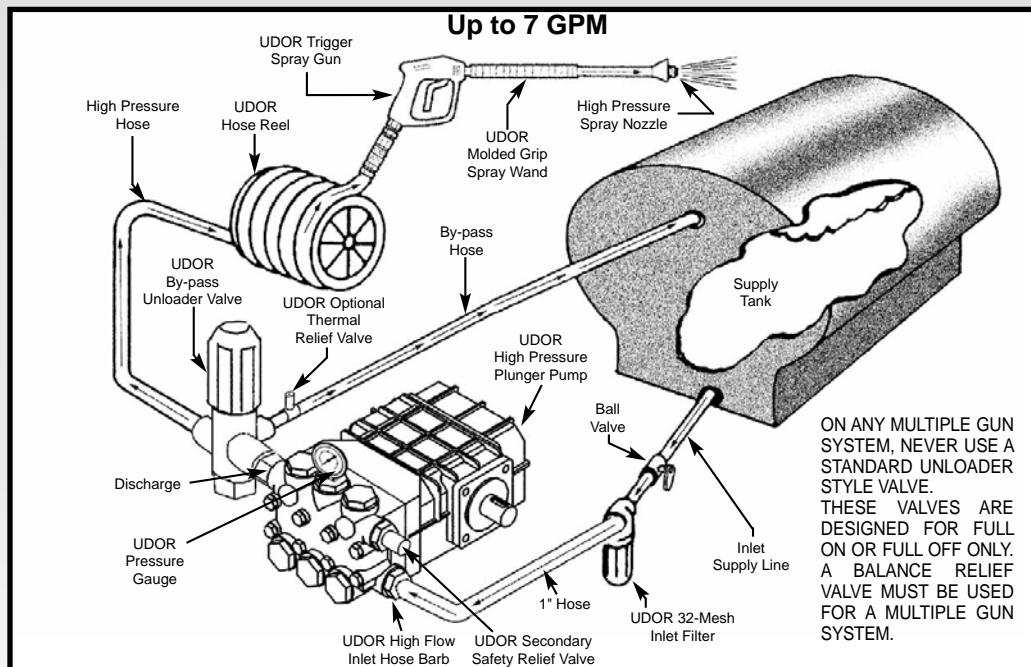
WARNING!: DO NOT PUMP OR FLUSH PUMP WITH ANY FLAMMABLE, EXPLOSIVE, CAUSTIC OR CORROSIVE FLUIDS. DO NOT USE ANY OF THESE PRODUCTS IN AN EXPLOSIVE ATMOSPHERE. FAILURE TO FOLLOW THIS WARNING CAN RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE AND WILL VOID ANY AND ALL WARRANTIES.



INSTALLATION GUIDE

BASIC PLUNGER PUMP TANK FEED HIGH PRESSURE CLEANING SYSTEM PLUMBING DIAGRAMS

These are basic tank feed plumbing diagrams and are not recommended for all systems. Consult UDOR USA for specific system requirements and components.



NOTE: On any tank feed system each pump must be fed by its own separate feed line only. Never feed multiple pumps with one common feed line.

FEED TANK SIZE: A recommended minimum feed tank size is 6-10 times the maximum GPM output rating of the pump or pumps being used.

SAMPLE: 10 GPM PUMP x 6= 60 GALLON MINIMUM FEED TANK SIZE.

MAKE SURE ALL FEED TANKS HAVE PROPER BAFFLES AND VENTING.

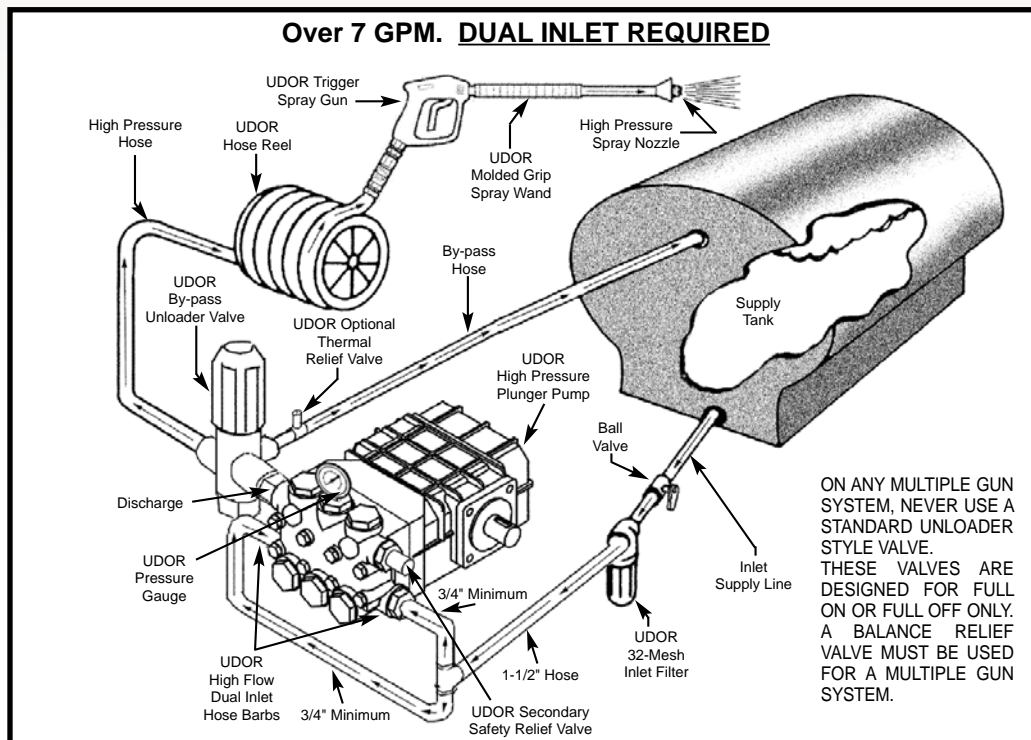
USE BLUE THREADLOCKER OR EQUIVALENT ON ALL PLUMBING COMPONENTS, FITTINGS AND ACCESSORIES.

NEVER USE A HIGH PRESSURE BALL VALVE IN PLACE OF A TRIGGER SPRAY GUN ON THE END OF THE HIGH PRESSURE DISCHARGE LINE OR HOSE. THIS CAN CAUSE SEVERE DAMAGE TO THE PUMP AND WILL VOID ANY AND ALL WARRANTIES.

Always keep the by-pass line as far away as possible from the inlet supply line to prevent aeration or cavitation of the fluid being pumped.

MINIMUM PLUMBING REQUIREMENTS	Pump GPM	Min. Feed Line Size	Inlet Filter (40 Mesh Max.)	NOTE:
	2 - 4 GPM	3/4"	3/4" 20-40 Mesh Screen	All plumbing accessories should be the same or greater diameter as the feed line. All ball valves should be full port valves only.
	5 - 7 GPM	1"	1" 20-40 Mesh Screen	
	8 - 19 GPM	1-1/4"	1-1/4" 20-40 Mesh Screen	
	20 - 30 GPM	1-1/2"	1-1/2" 20-40 Mesh Screen	

WARNING: Consult UDOR U.S.A. for plumbing requirements on high speed, 3400 RPM Direct Drive Pumps.



NOTE: On any tank feed system each pump must be fed by its own separate feed line only. Never feed multiple pumps with one common feed line.

NOTE: For Tank Feed Systems over 7 GPM, feed pumps through BOTH inlets to ensure proper flow and prevent cavitation and damage to the pump.

FEED TANK SIZE: A recommended minimum feed tank size is 6-10 times the maximum GPM output rating of the pump or pumps being used.

SAMPLE: 10 GPM PUMP x 6= 60 GALLON MINIMUM FEED TANK SIZE.

MAKE SURE ALL FEED TANKS HAVE PROPER BAFFLES AND VENTING.

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Always keep the by-pass line as far away as possible from the inlet supply line to prevent aeration or cavitation of the fluid being pumped.

SERVICE GUIDE

REPLACING PUMP VALVES

1. All inlet and discharge valves can be serviced without disrupting the inlet or discharge plumbing.
2. To service the valves, remove valve caps.
3. Remove the valve assembly from the valve cavity.
4. Remove o-ring from valve cavity.
5. Only one valve kit is necessary to replace all the valves in the pump. The kit includes new valve o-rings and valve assemblies.
6. Install o-ring into cavity.
7. Insert valve assembly into valve cavity.
8. Install valve cap and torque to specifications. NOTE: Use "blue" threadlocker or equivalent on all valve caps.

REMOVING PUMP HEAD

1. Remove the bolts from the pump head.
2. Separate the head from the crankcase. NOTE: It may be necessary to tap head lightly with a plastic or rubber mallet to loosen.

CAUTION: Do not damage plungers when removing the head.

3. The packing assemblies typically come off with the head. At this point, inspect ceramic plungers. Plunger surfaces should be smooth and free from scoring and cracks. IF NOT, replace plunger.

REPLACING CERAMIC PLUNGERS

1. Remove plunger nut or bolt, then remove plunger from piston rod.
2. If slinger washer comes off with the plunger, be certain this is reinstalled or replaced before a new plunger is installed.
3. Separate plunger bolt from plunger.
4. Install new o-ring, PTFE back-up ring and washer on plunger bolt or stem. NOTE: A film of grease on the outside of the o-rings ensures a better installation.
5. Carefully insert plunger bolt into plunger. NOTE: Use "red" threadlocker or equivalent on all plunger nuts or bolts.
6. Slide new plunger over the piston guide and torque to specifications.

REPLACING WET END SEAL KIT

1. Insert proper seal stack extractor tool or reversible pliers through seal retainer. Extract retainers, packings and spreader rings.
2. Only one seal kit is necessary to replace the wet end seals in the pump. The kit includes low pressure seals, high pressure seals, spreader rings and long life rings.
3. Place proper seal insertion sleeve into cylinder and install plastic spreader ring into bottom of the cylinder flat side down. Insert brown high pressure seal into seal insertion sleeve flat side up and tap firmly into place. Remove insertion sleeve.
4. Install long life ring on top of the high pressure seal and insert middle brass ring.
5. Install the black low pressure seal into upper brass ring (flat side goes into the upper brass ring), lightly grease the outer o-ring and insert into cylinder.
6. Coat each plunger and seal stack with grease and carefully reinstall the pump head. NOTE: It may be necessary to tap pump head lightly with a plastic or rubber mallet. Install head bolts and torque to specifications.

CHANGING PUMP OIL

1. Change pump oil after the first 50 hour break-in period, then change pump oil after every 500 hours of use.
2. Remove oil drain plug from back cover or under pump. Drain oil.
3. Re-install oil drain plug.
4. Fill pump crankcase with UDOR LUBE Premium Pump Oil or SAE 30W non-detergent oil to the recommended mark on the oil sight glass/gauge, about halfway on the oil sight glass/gauge.

WARNING! UDOR Plunger Pumps are positive displacement pumps, therefore a properly designed pressure relief valve or unloader valve must be installed on the pump or in the discharge plumbing. A secondary safety relief valve is also recommended. Failure to install a pressure relief valve or unloader valve could result in personal injury, property damage or damage to the pump or system and void any warranty. In no way does UDOR USA assume any liability or responsibility for the construction or operation of a customer's or potential customer's high pressure system.

RETURN POLICY

- 1) A Return Merchandise Authorization (RMA) number is required for all products being returned for warranty evaluation, repair or credit. To obtain an RMA number, please contact UDOR USA customer service at 651-785-0666.
- 2) Flush pump to remove any and all chemicals. Drain all pump oil and gear lube.
- 3) The RMA number must appear on the outside of all packages being returned.
- 4) All RMA numbers will be valid for 60 days from date issued. If product is not received within 60 days a new RMA number must be issued.
- 5) Freight for return product is the responsibility of the customer; all products returned must be freight prepaid. Ship to:

UDOR USA
500 Apollo Drive
Lino Lakes, MN 55014.

Any collect shipments or any product returned without an RMA number will be refused and returned to sender.

- 6) Any product being returned for warranty evaluation must not be disassembled. Disassembly of the product will void any and all warranties.
- 7) UDOR USA will repair or replace products qualified as defective upon inspection that are judged to be defective due to workmanship or material failure under UDOR USA limited product warranty.
- 8) Customers requiring immediate product replacement for items submitted for warranty evaluation will be invoiced at current price. Limited product warranty will apply to all return products.
- 9) Any product that has been left here past 60 days after contact from UDOR USA will become property of UDOR USA and will be properly disposed.

NOTE:

All pumps and accessories being returned to UDOR USA for repair or warranty evaluation must be flushed of any and all chemicals. This also pertains to crankcases that have contaminated oil. Any pump received that has not been properly flushed will be immediately returned to sender freight collect. This policy has been put into place to protect our personnel from possible exposure to hazardous or unknown substances.



PRODUCT WARRANTY

In the course of marketing or servicing the customer or potential customer's needs, UDOR USA will use its best judgement in its product recommendations. However, the ultimate responsibility for product application decisions shall rest with the customer. The sole and only warranty made by UDOR USA is the limited warranty described below.

LIMITED PRODUCT WARRANTY UDOR Plunger Pumps & Accessories

UDOR Standard Series P, PK, B, BK, C, CK, CH, CX and TC Plunger Pumps are warranted by the manufacturer to the original purchaser to be free from defects in materials and workmanship under normal use and service for a period of five (5) years.

UDOR Industrial Series GAMMA, NX, PENTA, VH, VX, VXX, VY, HX and HXR Plunger Pumps are warranted by the manufacturer to the original purchaser to be free from defects in materials and workmanship under normal use and service for a period of one (1) year.

UDOR Accessories are warranted to be free from defects in materials and workmanship under normal use and service for a period of ninety (90) days.

"Normal use and service" is defined as applications not in excess of recommended maximum speeds, pressures, temperatures or vacuums, only handling fluids which are compatible with pump or accessory materials and maintaining proper oil change intervals.

"Proper oil change intervals" for Plunger Pumps is changing PUMP OIL after the first 50 hour break-in period, and after every 500 hours of use thereafter using UDOR LUBE Premium Pump Oil and UDOR USA original equipment parts.

This Warranty DOES NOT APPLY to freight damage, damage due to freezing, running pump dry or improper lubrication of crankcase, normal wear of moving parts, damage due to misuse or misapplication, defects caused by the fault or negligence of the buyer or third party, or damage due to use of parts or accessories not obtained from or approved by UDOR USA.

This Warranty also does not apply to any pump or accessory which has been altered or modified to affect its performance or reliability or any pump or accessory that has been returned disassembled.

This Warranty excludes "normal wear items" such as elastomers, seals and valves.

All pumps and accessories being returned to UDOR USA for repair or warranty evaluation must be flushed of any and all chemicals. This also pertains to crankcases that have contaminated oil. Any pump received that has not been properly flushed will be immediately returned to sender freight collect. This policy has been put into place to protect our personnel from possible exposure to hazardous or unknown substances.

All warranty evaluation returns must be accompanied by the original purchase invoice and a RMA number. If invoice is not included, UDOR USA will determine warranty by manufacturer's serial number and date of manufacture on the pump label. Any collect shipments or any product returned without a RMA number will be refused and returned to sender.

UDOR USA's obligation under this warranty is limited to repair or replacement of product in question, at UDOR's option, upon return of the product, freight prepaid, to UDOR USA. UDOR USA agrees to be responsible for return shipping costs ONLY on any approved warranty repair or replacement product via ground transportation ONLY. This warranty is in lieu of all other warranties expressed or implied, including any warranty of merchantability and any warranty of fitness for a particular purpose.

IN NO EVENT SHALL UDOR USA BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES OR EXPENSES OF ANY KIND. This includes lost income, travel time and expenses, lodging expenses, labor expenses, down time, shipping costs and any other INCIDENTAL or CONSEQUENTIAL damages or expenses.

The only and total liability of UDOR USA under this limited warranty or in any claim regarding or involving UDOR USA is expressly limited to the repair, replacement or purchase price of the product.

WARNING!: DO NOT PUMP OR FLUSH PUMP WITH ANY FLAMMABLE, EXPLOSIVE, CAUSTIC OR CORROSIVE FLUIDS. DO NOT USE ANY OF THESE PRODUCTS IN AN EXPLOSIVE ATMOSPHERE. FAILURE TO FOLLOW THIS WARNING CAN RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE AND WILL VOID ANY AND ALL WARRANTIES.

This Warranty supersedes any and all previous Warranties.



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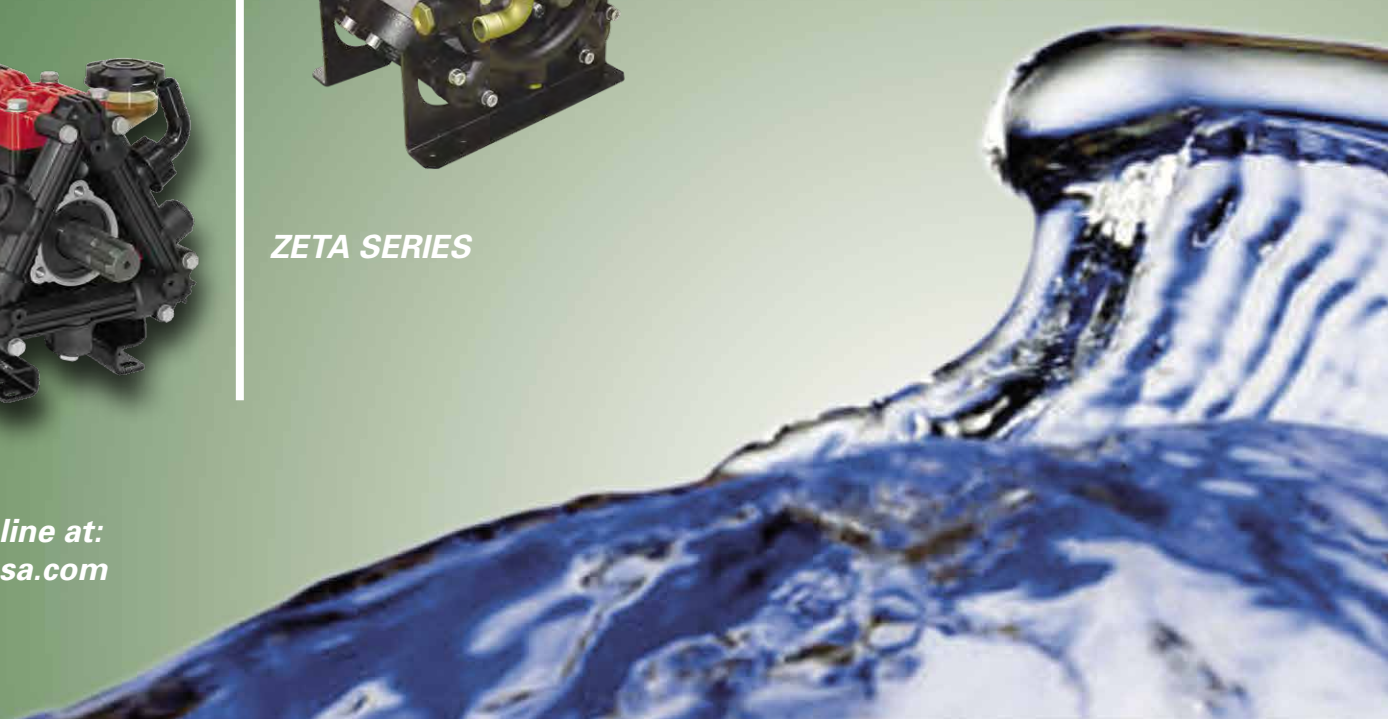
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