



MAXIMATOR® AIR DRIVEN Liquid Pumps

PPO SERIES

PRESSURES FROM 60 TO 14,500 PSI

S & S-D SERIES

PRESSURES FROM 105 TO 14,500 PSI

PP SERIES

PRESSURES FROM 60 TO 60,000 PSI

L SERIES

PRESSURES FROM 165 TO 101,000 PSI

L-D SERIES

PRESSURES FROM 165 TO 38,425 PSI

GX SERIES

PRESSURES FROM 540 TO 22,500 PSI

GPD SERIES

PRESSURES FROM 450 to 43,500 PSI

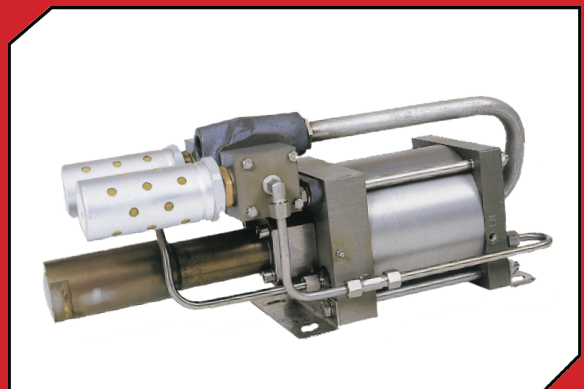
PPSF SERIES

PRESSURES FROM 60 TO 14,500 PSI

LSF SERIES

PRESSURES FROM 165 TO 23,200 PSI

MAXPRO CUSTOM DESIGNED
Power Packs, Pump Skids,
Portable Test Carts and Test Benches



Liquid Pumps

AIR DRIVEN FROM 60 PSI TO 101,000 PSI

Maximator high efficiency pumps are ideal for a broad variety of oil, water, and chemical applications. They feature a large air piston joined to a smaller diameter plunger. The pressure ratio is the ratio of these two areas and is the method of determining maximum output pressure. Higher pressures are obtained by using higher pressure ratios. Maximator model numbers reflect the pump's nominal pressure ratios, while the technical data indicates exact ratios.

Maximator air driven pumps cycle automatically. The pump stops automatically when the output pressure forces and the air drive forces are equal. The pump restarts with a slight drop in the outlet pressure or an increase in the air drive pressure.

FEATURES

- **Easy to install and operate**
- **Pressure maintained without energy consumption**
- **A safe option for hazardous areas...no electrical power required**
- **Pilot air control for remote operation standard on many models**
- **External spool valve for quick maintenance on most models**
- **Dry Air Spool valve option available for severe service application**
- **Chemical service pumps are standard with separation fitting**
- **Optional seal materials, port connections, double acting, multiple air heads, single stroke, adjustable stroke, special pumps, just ask!**

HOW TO SELECT A MAXIMATOR PUMP

1. Consider the type of fluid to be pumped and compatible materials.
2. Know the available minimum plant air pressure
3. Determine the required outlet pressure.
4. Determine the required flow rate.
5. Feel free to consult your distributor or MAXPRO for application assistance.

Flow rates for each pump, at various air drive pressures and outlet pressures, are provided in the catalog. These pumps run very rapidly at no load and slow down as pressure increases. The pump will eventually come to a stop at the "stall" pressure, which is the air drive pressure times the pressure ratio of the pump. At this "stall" point there is no flow and no air consumption. The pump will hold the outlet pressure indefinitely and will only stroke if the outlet pressure drops or the air drive pressure is increased.

INSTALLATION AND MAINTENANCE

- Maximator pumps can be installed in any position, but vertical is best for longest seal life.
 - All connections to the pump, both liquid (inlet and outlet) and air drive lines, must be run with equal or greater size than the connections to the pump.
 - The maximum recommended height of a pump suction above the fluid level is 10 ft. for L pumps, 7 ft. for S pumps, and 3 ft. for PPO and PP pumps. Operate pump slowly during initial prime.
 - Drive air should be filtered between 5μ and 40μ and have a maximum dewpoint of 50°F. Very wet air will wash out lubricant and cause exhaust icing. Very dry air (dew point below 0°F) will dry out lubricant and cause premature failure of spool O-rings and requires the use of the Dry Air Spool option.
 - Pumped liquids should be filtered at 100μ or better, viscosity between 1-100 cst.
 - Pump performance is affected by many operating conditions. Extreme temperatures, pressures, and high duty cycles will increase maintenance frequency.
 - All units are lubricated at the factory with silicone free semi-synthetic grease. After 2-3 months of normal (50% duty) operation, the standard spool seals should be inspected for wear and re-lubricated. Based on this inspection, future maintenance intervals can be planned and further disassembly and lubrication of other moving seals may be necessary. Optional Dry Air Spool seals require less maintenance.
 - MAXPRO offers complete technical and service support for all Maximator pumps
- Customer service is our priority!

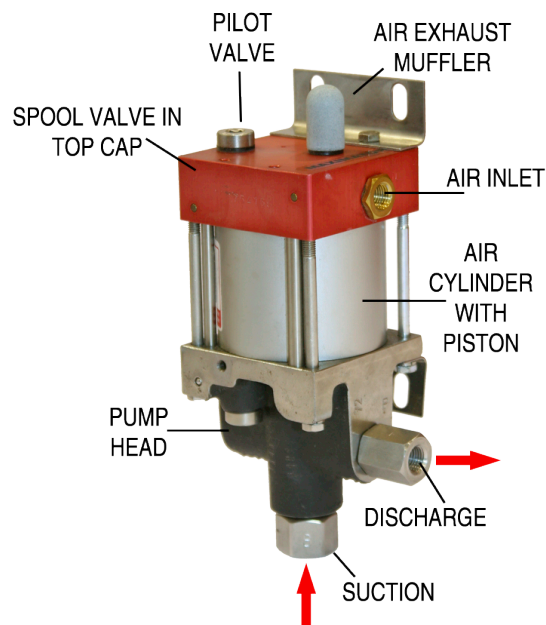
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PPO pumps are lightweight and rugged making them ideal for portable power packs and are available in eight pressure ratios as listed below. PPO pumps are single acting, single air drive head.

- Anodized aluminum pump heads on the PPO4-PPO12, cast iron pump heads on the PPO22-PPO189. Tool steel plungers and polyurethane seals on all.
- All PPO series pumps are standard with bottom inlet. For a side inlet, add -S to the catalog number. (PPO22 and above only.)
- Maximum air drive pressure is 145 psi. PPO pumps require less drive pressure because the pump is driven in both directions with no spring under the piston.
- This design reduces noise and provides less chance of cavitation.
- Minimum air drive pressure 15 psi.
- For air control option, add -ACM to the catalog number.
- Double acting are available as a special order.

PPO

SERIES
**PRESSURES FROM
60 TO 14,500 PSI**


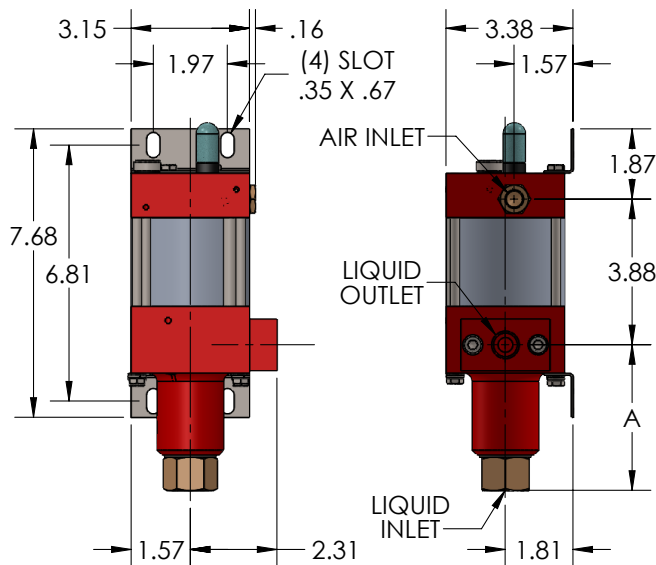
TECHNICAL DATA

| CATALOG NUMBER | PRESSURE RATIO | MAXIMUM OUTLET PRESSURE (PSI) | DISPL. PER CYCLE (IN. ³) | CONNECTIONS (FNPT - IN.) | | WEIGHT (LBS.) |
|----------------|----------------|-------------------------------|--------------------------------------|--------------------------|--------|---------------|
| | | | | INLET | OUTLET | |
| PPO4 | 1:4 | 580 | 1.86 | 1 | 1/2 | 6 |
| PPO8 | 1:9 | 1,305 | 0.90 | 3/4 | 1/2 | |
| PPO12 | 1:14 | 2,030 | 0.57 | 3/4 | 1/4 | |
| PPO22 | 1:29 | 4,205 | 0.28 | 3/8 | 1/4 | 7 |
| PPO37 | 1:47 | 6,815 | 0.17 | 3/8 | 1/4 | |
| PPO72 | 1:88 | 12,760 | 0.09 | 3/8 | 1/4 | |
| PPO111 | 1:133 | 14,500 | 0.06 | 3/8 | 1/4 | |
| PPO189 | 1:225 | 14,500 | 0.04 | 3/8 | 1/4 | |

NOTE: Air drive inlet connection on all PPO pumps is 1/4" FNPT.
Maximum allowable oil temperature is 140°F.
Air section temperature rating: 0°F to 140°F.

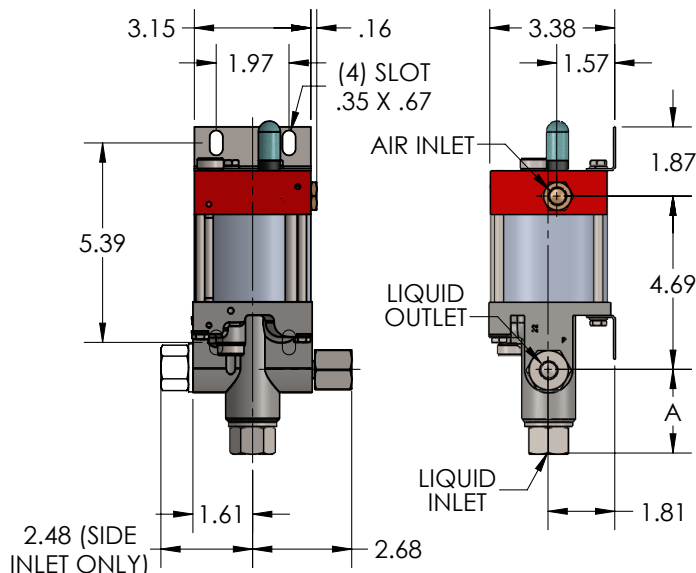
See page 7 PP Pump Flow Page for PPO Flow Chart

DIMENSIONS (inches) - PPO4 - PPO12



| CATALOG NUMBER | A |
|----------------|------|
| PPO4 | 4.44 |
| PPO8, PPO12 | 3.88 |

DIMENSIONS (inches) - PPO22 - PPO189



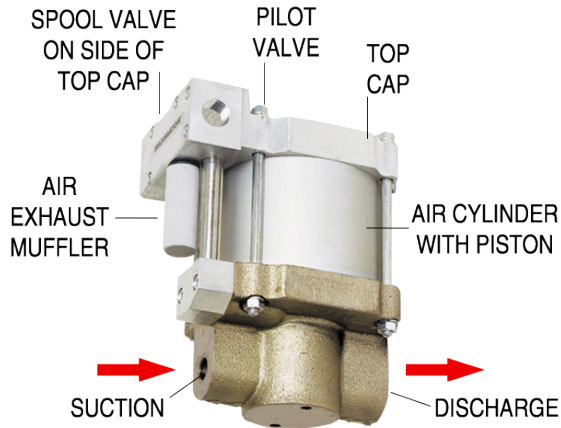
| CATALOG NUMBER | A | |
|----------------|--------------|------------|
| | BOTTOM INLET | SIDE INLET |
| PP22-PP189 | 2.26 | .66 |

OIL or OIL/WATER SERVICE

S

SERIES

PRESSURES FROM
105 TO 14,500 PSI



S pumps are compact and lightweight and are designed for simple installation in both static and portable applications. Available in six pressure ratios, S pumps are ideal for applications demanding fast response times.

- S pumps are single acting, single air drive head types.
- Cast iron pump heads, carbon steel plungers and polyurethane seals.
- All S pumps are standard with side inlet only.
- Maximum air drive pressure is 145 psi.
- Minimum air drive pressure 15 psi.
- For air control option, add -AC to the catalog number.
- No pilot port. Internally piloted.

TECHNICAL DATA S PUMPS

| CATALOG NUMBER | PRESSURE RATIO | MAXIMUM OUTLET PRESSURE (PSI) | DISPL. PER CY-CLE (IN. ³) | CONNECTIONS (FNPT - IN.) | | WEIGHT (LBS.) |
|----------------|----------------|-------------------------------|---------------------------------------|--------------------------|--------|---------------|
| | | | | INLET | OUTLET | |
| S15 | 1:17 | 2,465 | 1.73 | 3/4 | 1/2 | 20 |
| S25 | 1:25 | 3,625 | 1.20 | 1/2 | 1/2 | |
| S35 | 1:39 | 5,655 | 0.77 | 1/2 | 1/2 | |
| S60 | 1:61 | 8,845 | 0.49 | 1/2 | 1/2 | |
| S100 | 1:108 | 14,500 | 0.27 | 1/2 | 1/2 | |
| S150 | 1:156 | 14,500 | 0.19 | 1/2 | 1/2 | |

S-D pumps are compact and lightweight and are designed for simple installation in both static and portable applications. Available in six pressure ratios, S-D pumps are ideal for high flow applications. The S-D pumps are the double acting version of the S pumps.

- S-D pumps are double acting, single air drive head types.
- Cast iron pump heads, carbon steel plungers and polyurethane seals.
- All S-D pumps are standard with side inlets only.
- There are two inlets (same side) and two outlets (same side).
- Maximum air drive pressure is 145 psi.
- Minimum air drive pressure 15 psi.
- For air control option, add -ACP to the catalog number.
- All S-D pumps come with an unregulated pilot port, 1/8" FNPT, in the top cap. This feature provides more accurate pressure control and is an ideal location for control instrumentation.

TECHNICAL DATA S-D PUMPS

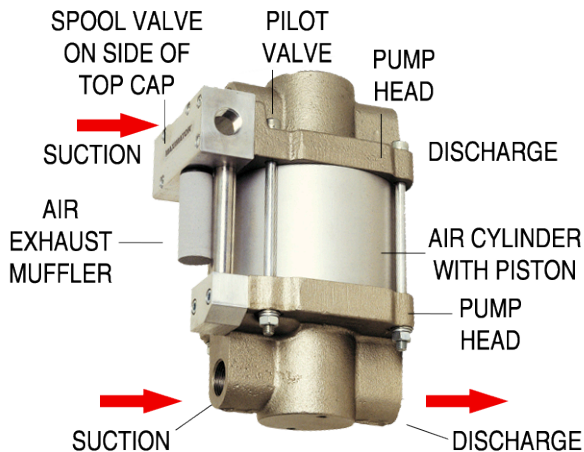
| CATALOG NUMBER | PRESSURE RATIO | MAXIMUM OUTLET PRESSURE (PSI) | DISPL. PER CYCLE (IN. ³) | CONNECTIONS (FNPT - IN.) | | WEIGHT (LBS.) |
|----------------|----------------|-------------------------------|--------------------------------------|--------------------------|--------|---------------|
| | | | | INLET | OUTLET | |
| S15-D | 1:16 | 2,320 | 3.48 | 3/4 | 1/2 | 32 |
| S25-D | 1:24 | 3,480 | 2.39 | 1/2 | 1/2 | |
| S35-D | 1:38 | 5,510 | 1.54 | 1/2 | 1/2 | |
| S60-D | 1:60 | 8,700 | 0.98 | 1/2 | 1/2 | |
| S100-D | 1:107 | 14,500 | 0.55 | 1/2 | 1/2 | |
| S150-D | 1:155 | 14,500 | 0.38 | 1/2 | 1/2 | |

NOTE: Air drive inlet connection on all S and S-D pumps is 1/2" FNPT.
Maximum allowable oil temperature is 140°F.
Air section temperature rating: 0°F to 140°F.

S-D

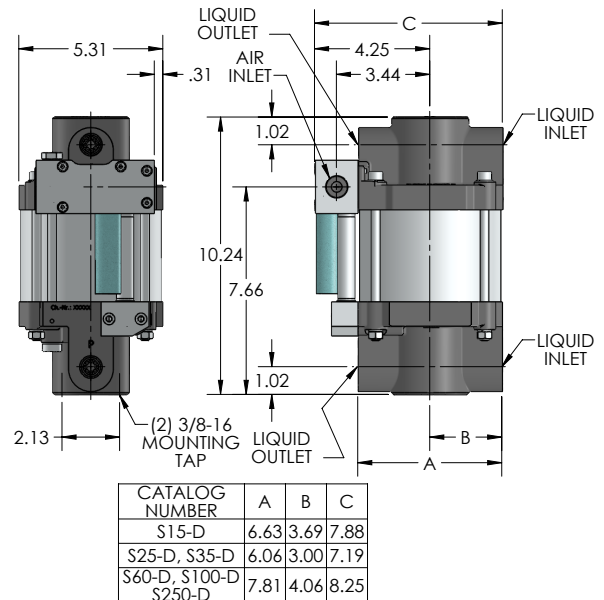
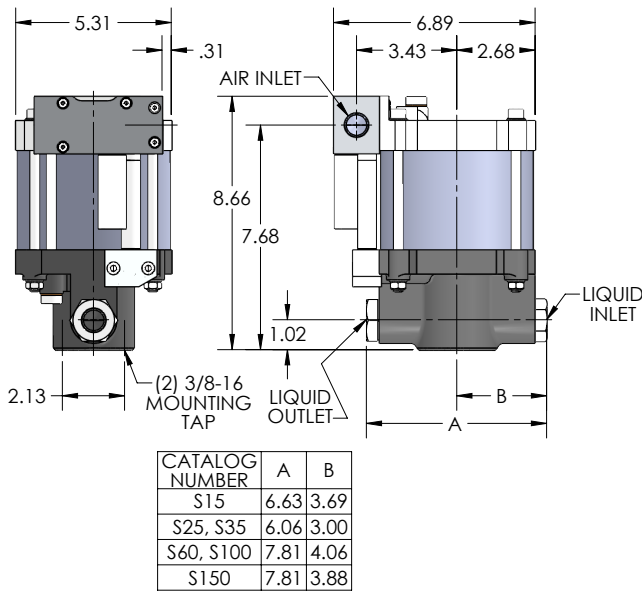
SERIES

PRESSURES FROM
105 TO 14,500 PSI



FLOW CHART - S SERIES

| CATALOG NUMBER | SAMPLE AIR DRIVE PRESSURE (PSI) | OUTLET PRESSURE (PSI) | | | | | | | | | |
|----------------|---------------------------------|-----------------------|-----|------|------|------|------|------|------|------|-------|
| | | 0 | 500 | 1000 | 1500 | 2000 | 3000 | 4000 | 5000 | 7500 | 10000 |
| S15 | 60 | 555 | 380 | 25 | | | | | | | |
| | 90 | 575 | 480 | 310 | 60 | | | | | | |
| S25 | 60 | 400 | 330 | 175 | | | | | | | |
| | 90 | 410 | 370 | 305 | 205 | 80 | | | | | |
| S35 | 60 | 255 | 230 | 185 | 125 | 50 | | | | | |
| | 90 | 265 | 250 | 228 | 200 | 165 | 65 | | | | |
| S60 | 60 | 162 | 153 | 138 | 120 | 90 | 35 | | | | |
| | 90 | 168 | 163 | 156 | 147 | 137 | 108 | 71 | 25 | | |
| S100 | 60 | 92 | 89 | 86 | 82 | 76 | 60 | 43 | 26 | | |
| | 90 | 95 | 94 | 92 | 89 | 87 | 82 | 73 | 63 | 36 | |
| S150 | 60 | 62 | 61 | 60 | 59 | 56 | 53 | 47 | 42 | 20 | |
| | 90 | 65 | 64 | 63 | 62 | 61 | 60 | 57 | 53 | 42 | 27 |



FLOW CHART - S-D SERIES

| CATALOG NUMBER | SAMPLE AIR DRIVE PRESSURE (PSI) | OUTLET PRESSURE (PSI) | | | | | | | | | |
|----------------|---------------------------------|-----------------------|-----|------|------|------|------|------|------|------|-------|
| | | 0 | 500 | 1000 | 1500 | 2000 | 3000 | 4000 | 5000 | 7500 | 10000 |
| S15-D | 60 | 1050 | 650 | | | | | | | | |
| | 90 | 1075 | 900 | 520 | | | | | | | |
| S25-D | 60 | 715 | 575 | 280 | | | | | | | |
| | 90 | 730 | 660 | 530 | 340 | 90 | | | | | |
| S35-D | 60 | 455 | 405 | 315 | 205 | 75 | | | | | |
| | 90 | 465 | 440 | 400 | 345 | 280 | 90 | | | | |
| S60-D | 60 | 285 | 270 | 240 | 210 | 160 | 60 | | | | |
| | 90 | 290 | 285 | 270 | 265 | 235 | 185 | 120 | 40 | | |
| S100-D | 60 | 160 | 153 | 147 | 141 | 130 | 110 | 80 | 50 | | |
| | 90 | 165 | 163 | 157 | 154 | 150 | 140 | 126 | 111 | 60 | |
| S150-D | 60 | 110 | 105 | 105 | 102 | 100 | 90 | 80 | 70 | 35 | |
| | 90 | 120 | 115 | 115 | 110 | 107 | 100 | 95 | 90 | 70 | 45 |

FLOW RATE IN CUBIC INCHES PER MINUTE.
MAXIMUM AIR CONSUMPTION: 33 SCFM @ 90 PSI (WITH 0 PSI OUTLET).

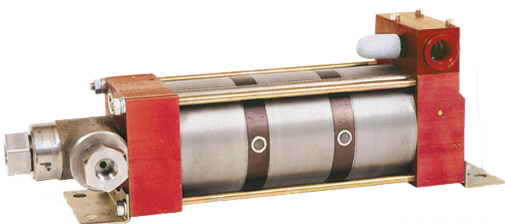
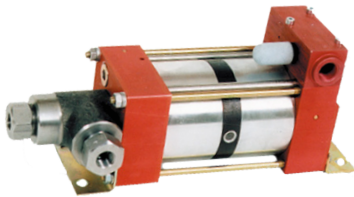
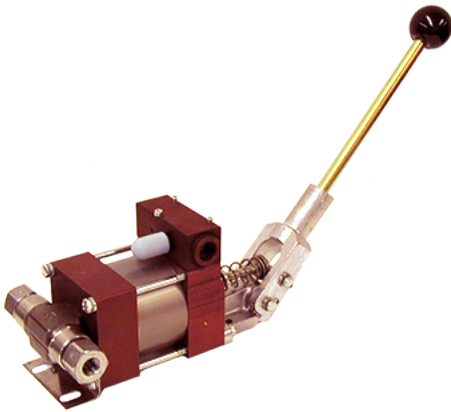
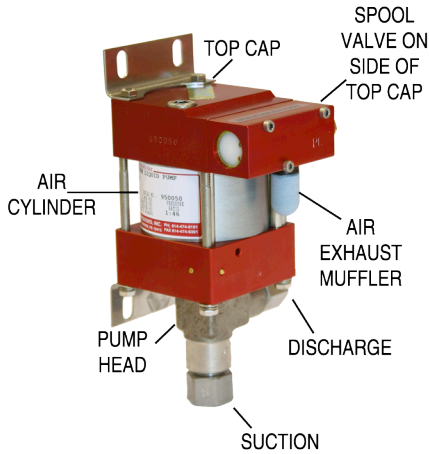
FLOW RATES SHOWN ARE FOR 1-10 CST FLUIDS.

WATER or OIL SERVICE

PP

SERIES

PRESSURES FROM
60 TO 60,000 PSI



PP pumps are compact and lightweight and feature rugged construction. They are available as single acting with either single, double, or triple air drive heads and double acting with single air drive head.

- PP4 through PP12 pumps have anodized aluminum pump heads and stainless steel plungers. PP22 through PP189 have stainless steel pump heads and plungers. All PP pumps have polyurethane seals with Buna-N O-rings standard.
- All PP series pumps are standard with a bottom inlet. For a side inlet, add -S to the catalog number. For a hand lever, add -HL (PP22 and above only.).
- Air drive pressure range is 15 - 145 psi.
- For air control option, add -ACM to the catalog number.
- With the hand lever option, the pump can operate with air or hand lever.
- Multiple air heads increase the effective pressure ratio of the pump. This provides higher pressure capabilities using less air pressure to achieve a given outlet pressure.

TECHNICAL DATA

Single Air Drive Head

| CATALOG NUMBER | PRESSURE RATIO | MAXIMUM OUTLET PRESSURE (PSI) | DISPL. PER CYCLE (IN. ³) | CONNECTIONS (FNPT - IN.) | | WEIGHT (LBS.) |
|----------------|----------------|-------------------------------|--------------------------------------|--------------------------|--------|---------------|
| | | | | INLET | OUTLET | |
| PP4 | 1:4 | 580 | 1.86 | 1 | 1/2 | 7 |
| PP8 | 1:9 | 1,305 | 0.90 | 3/4 | 1/2 | |
| PP12 | 1:14 | 2,030 | 0.57 | 3/4 | 1/2 | |
| PP22 | 1:28 | 4,060 | 0.28 | 3/8 | 1/4 | |
| PP37 | 1:46 | 6,670 | 0.17 | 3/8 | 1/4 | |
| PP72 | 1:86 | 12,470 | 0.09 | 3/8 | 1/4 | |
| PP111 | 1:130 | 15,000 | 0.06 | 3/8 | 1/4 | |
| PP189 | 1:220 | 31,900 | 0.04 | 3/8 | 1/4 HP | |

Single Air Drive Head with Hand Lever

| CATALOG NUMBER | PRESSURE RATIO | MAXIMUM OUTLET PRESSURE (PSI) | DISPL. PER CYCLE (IN. ³) | CONNECTIONS (FNPT - IN.) | | WEIGHT (LBS.) |
|----------------|----------------|-------------------------------|--------------------------------------|--------------------------|--------|---------------|
| | | | | INLET | OUTLET | |
| PP22-HL | 1:28 | 4,060 | 0.28 | 3/8 | 1/4 | 9 |
| PP37-HL | 1:46 | 6,670 | 0.17 | 3/8 | 1/4 | |
| PP72-HL | 1:86 | 12,470 | 0.09 | 3/8 | 1/4 | |
| PP111-HL | 1:130 | 15,000 | 0.06 | 3/8 | 1/4 | |
| PP189-HL | 1:220 | 31,900 | 0.04 | 3/8 | 1/4 HP | |

Double Air Drive Head

| CATALOG NUMBER | PRESSURE RATIO | MAXIMUM OUTLET PRESSURE (PSI) | DISPL. PER CYCLE (IN. ³) | CONNECTIONS (FNPT - IN.) | | WEIGHT (LBS.) |
|----------------|----------------|-------------------------------|--------------------------------------|--------------------------|--------|---------------|
| | | | | INLET | OUTLET | |
| PP111-2 | 1:261 | 36,250 | 0.06 | 3/8" | 1/4 HP | 9 |
| PP189-2 | 1:440 | 60,000 | 0.04 | 3/8" | 1/4 HP | |

Triple Air Drive Head

| CATALOG NUMBER | PRESSURE RATIO | MAXIMUM OUTLET PRESSURE (PSI) | DISPL. PER CYCLE (IN. ³) | CONNECTIONS (FNPT - IN.) | | WEIGHT (LBS.) |
|----------------|----------------|-------------------------------|--------------------------------------|--------------------------|--------|---------------|
| | | | | INLET | OUTLET | |
| PP111-3 | 1:391 | 36,250 | 0.06 | 3/8" | 1/4 HP | 9 |
| PP189-3 | 1:660 | 60,000 | 0.04 | 3/8" | 1/4 HP | |

NOTE: Air drive inlet connection on all PP pumps is 1/4" FNPT. All connections listed are FNPT unless otherwise noted. Maximum allowable oil temperature is 140°F. Air section temperature rating: 0°F to 140°F.

FLOW CHART - PP SERIES

| CATALOG NUMBER | SAMPLE AIR DRIVE PRESSURE (PSI) | OUTLET PRESSURE (PSI) | | | | | | | | | | |
|----------------|---------------------------------|-----------------------|-----|------|------|------|------|-------|-------|---|-------|-------|
| | | 0 | 500 | 1500 | 3000 | 5000 | 7500 | 10000 | 15000 | 25000 | 40000 | 55000 |
| PP4 | 60 | 885 | | | | | | | | | | |
| | 90 | 905 | | | | | | | | | | |
| PP8 | 60 | 422 | 50 | | | | | | | | | |
| | 90 | 430 | 240 | | | | | | | | | |
| PP12 | 60 | 272 | 160 | | | | | | | | | |
| | 90 | 275 | 218 | | | | | | | | | |
| PP22 | 60 | 132 | 110 | 22 | | | | | | Above 35,000 psi for intermittent duty only | | |
| | 90 | 136 | 126 | 82 | | | | | | | | |
| PP37 | 60 | 81 | 74 | 47 | | | | | | | | |
| | 90 | 83 | 80 | 68 | 37 | | | | | | | |
| PP72 | 60 | 43 | 42 | 37 | 22 | 3 | | | | | | |
| | 90 | 44 | 43 | 41 | 36 | 24 | 3 | | | | | |
| PP111 | 60 | 28 | 27 | 26 | 20 | 12 | 2 | | | | | |
| | 90 | 29 | 28 | 27 | 26 | 22 | 16 | 8 | | | | |
| PP189 | 60 | 17 | 15 | 14 | 13 | 12 | 9 | 5 | | | | |
| | 90 | 17 | 17 | 17 | 16 | 15 | 12 | 11 | 6 | | | |
| PP111-2 | 60 | 21 | 20 | 20 | 20 | 19 | 16 | 15 | 9 | | | |
| | 90 | 21 | 21 | 20 | 20 | 19 | 17 | 16 | 12 | | | |
| PP189-2 | 60 | 12 | 12 | 12 | 11 | 11 | 10 | 10 | 7 | 1 | | |
| | 90 | 12 | 12 | 12 | 12 | 12 | 11 | 11 | 10 | 7 | | |
| PP111-3 | 60 | 18 | 18 | 18 | 17 | 17 | 15 | 14 | 10 | | | |
| | 90 | 19 | 19 | 19 | 18 | 18 | 16 | 16 | 14 | 8 | | |
| PP189-3 | 60 | 11 | 11 | 11 | 10 | 10 | 10 | 9 | 9 | 6 | | |
| | 90 | 11 | 11 | 11 | 11 | 11 | 11 | 10 | 10 | 8 | 5 | |

FLOW RATE IN CUBIC INCHES PER MINUTE.

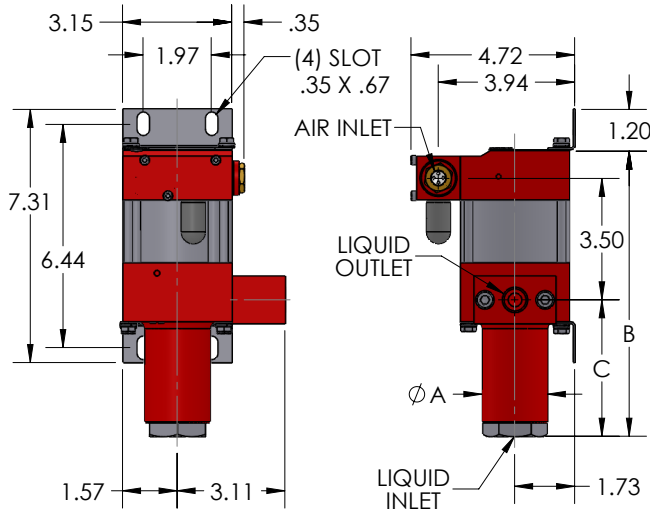
MAXIMUM AIR CONSUMPTION FOR "PP" pumps: 20 SCFM @ 90 PSI (WITH 0 PSI OUTLET).

MAXIMUM AIR CONSUMPTION FOR "PP-2" pumps: 30 SCFM @ 90 PSI (WITH 0 PSI OUTLET).

MAXIMUM AIR CONSUMPTION FOR "PP-3" pumps: 35 SCFM @ 90 PSI (WITH 0 PSI OUTLET).

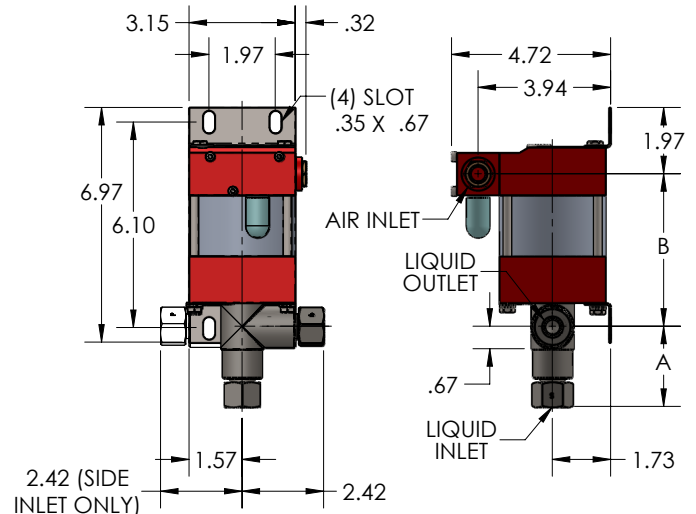
FLOW RATES SHOWN ARE FOR 1-10 CST FLUIDS.

PP4, PP8, PP12 DIMENSIONS (inches)



| CATALOG NUMBER | A | B | C |
|----------------|------|------|------|
| PP4 | 2.13 | 8.50 | 4.22 |
| PP8 | 1.88 | 8.25 | 3.94 |
| PP12 | 1.88 | 8.25 | 3.94 |

PP22-189 DIMENSIONS (inches)

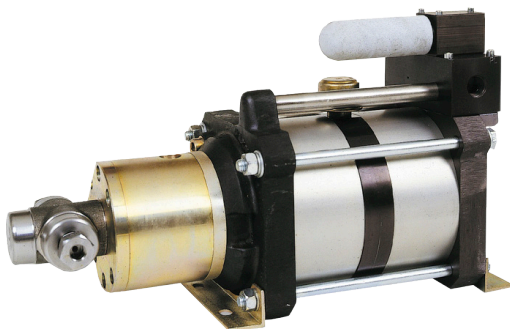
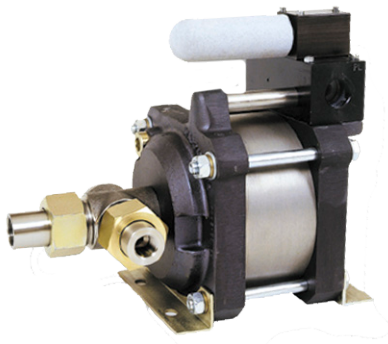
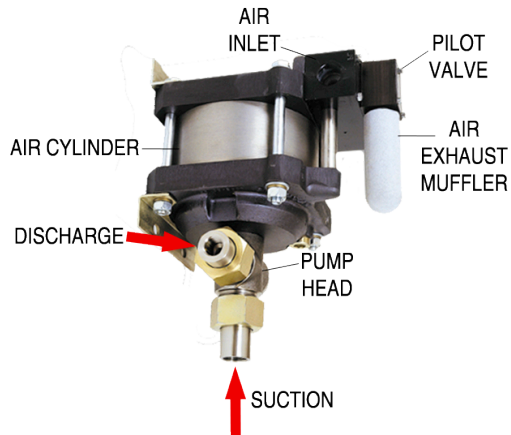


| CATALOG NUMBER | A | | B |
|------------------|--------------|------------|------|
| | BOTTOM INLET | SIDE INLET | |
| PP22-PP189 | 2.38 | .71 | 4.53 |
| PP111-2, PP189-2 | 2.38 | .71 | 6.93 |
| PP111-3, PP189-3 | 2.38 | .71 | 9.33 |

WATER OR OIL SERVICE

L SERIES

PRESSURES FROM
165 to 101,000 PSI



NOTE: L500 pumps have polyurethane seals and Buna-N O-rings and are available side inlet only.
 *These pumps have UHMWPE seals and Buna-N O-rings.
 Maximum allowable oil/water temperature is 140°F.
 Air section temperature rating: 0°F to 140°F.
 Viton is a registered trademark of E.I. DuPont de Nemours & Co., Inc.

L pumps are available as single acting pumps with either a single or double air drive head and double acting with single air drive head (See L-D).

- L pumps have stainless steel pump heads and 17-4 plungers.
- All L pumps have UHMWPE (Ultra High Molecular Weight Polyethylene) seals and Viton² O-rings (-VE), except as noted.
- L pumps come standard with bottom or side inlet. For a side inlet, add -S to the catalog number.
- Air drive pressure range is 15-145 psi unless limited by outlet pressure.
- Air drive inlet is 1/2" FNPT.
- For air control option, add -ACP to the catalog number.
- All L pumps come with an unregulated pilot port, 1/8" FNPT, in the top cap. This feature provides more accurate pressure control and is an ideal location for control instrumentation.
- All L pumps are available with a double air drive head. This doubles the pressure rating of the pump, allowing the use of a lower ratio base pump, to provide higher flow rates. It is also used to achieve a given outlet pressure with less air drive pressure.

TECHNICAL DATA

Single Air Drive Head

| CATALOG NUMBER | PRESSURE RATIO | MAXIMUM OUTLET PRESSURE (PSI) | DISPL. PER CY- CLE (IN. ³) | CONNECTIONS (FNPT - IN.) | | WEIGHT (LBS.) |
|----------------|----------------|-------------------------------|---|--------------------------|---------------------|---------------|
| | | | | INLET | OUTLET ¹ | |
| L10-VE | 1:11 | 1,595 | 5.49 | 1 | 1/2 | 36 |
| L15-VE | 1:16 | 2,320 | 3.78 | 1 | 1/2 | |
| L25-VE | 1:28 | 4,060 | 2.15 | 1/2 | 1/2 | 32 |
| L35-VE | 1:40 | 5,800 | 1.49 | 1/2 | 1/2 | |
| L60-VE | 1:63 | 9,135 | 0.94 | 1/2 | 1/2 | 30 |
| L100-VE | 1:113 | 15,000 | 0.54 | 1/2 | 1/2 | |
| L150-VE | 1:151 | 21,025 | 0.40 | 1/2 | 1/4 HP | |
| L250-VE* | 1:265 | 38,425 | 0.23 | 1/2 | 1/4 HP | |
| L300-VE* | 1:314 | 45,530 | 0.20 | 1/2 | 1/4 HP | |
| L400-VE* | 1:398 | 57,710 | 0.15 | 1/2 | 1/4 HP | |
| L500-S | 1:519 | 65,250 | 0.12 | 1/2 | 1/4 HP | |

Double Air Drive Head

| CATALOG NUMBER | PRESSURE RATIO | MAXIMUM OUTLET PRESSURE (PSI) | DISPL. PER CYCLE (IN. ³) | CONNECTIONS (FNPT - IN.) | | WEIGHT (LBS.) |
|----------------|----------------|-------------------------------|--------------------------------------|--------------------------|---------------------|---------------|
| | | | | INLET | OUTLET ¹ | |
| L10-2-VE | 1:22 | 3,190 | 5.49 | 1 | 1/2 | 46 |
| L15-2-VE | 1:32 | 4,640 | 3.78 | 1 | 1/2 | |
| L25-2-VE | 1:56 | 8,120 | 2.15 | 1/2 | 1/2 | 42 |
| L35-2-VE | 1:80 | 11,600 | 1.49 | 1/2 | 1/2 | |
| L60-2-VE | 1:126 | 15,000 | 0.94 | 1/2 | 1/2 | 40 |
| L100-2-VE* | 1:226 | 30,450 | 0.54 | 1/2 | 1/4 HP | |
| L150-2-VE* | 1:300 | 42,050 | 0.40 | 1/2 | 1/4 HP | |
| L250-2-VE* | 1:530 | 60,000 | 0.23 | 1/2 | 1/4 HP | |
| L300-2-VE* | 1:628 | 60,000 | 0.20 | 1/2 | 1/4 HP | 49 |
| L400-2-VE* | 1:796 | 60,000 | 0.15 | 1/2 | 1/4 HP | |
| L400-2S-5U | 1:796 | 79,750 | 0.15 | 1/2 | 5/16 UHP | |
| L500-2S-5U-771 | 1:1038 | 101,500 | 0.12 | 1/2 | 5/16 UHP | |

FLOW CHART - L SERIES

| CATALOG NUMBER | SAMPLE AIR DRIVE PRESSURE (PSI) | OUTLET PRESSURE (PSI) | | | | | | | | | | |
|----------------|---------------------------------|-----------------------|-----|------|------|------|------|-------|-------|-------|---|-------|
| | | 0 | 500 | 1500 | 3000 | 5000 | 7500 | 10000 | 15000 | 25000 | 40000 | 55000 |
| L10-VE | 60 | 1100 | 350 | | | | | | | | | |
| | 90 | 1125 | 790 | | | | | | | | | |
| | 120 | 1150 | 915 | | | | | | | | | |
| L15-VE | 60 | 775 | 540 | | | | | | | | | |
| | 90 | 790 | 650 | | | | | | | | | |
| | 120 | 800 | 705 | 280 | | | | | | | | |
| L25-VE | 60 | 435 | 365 | 60 | | | | | | | | |
| | 90 | 445 | 410 | 265 | | | | | | | | |
| | 120 | 450 | 425 | 340 | 90 | | | | | | | |
| L35-VE | 60 | 300 | 270 | 150 | | | | | | | | |
| | 90 | 305 | 290 | 240 | 95 | | | | | | | |
| | 120 | 310 | 300 | 270 | 180 | | | | | | | |
| L60-VE | 60 | 192 | 182 | 145 | 45 | | | | | | | |
| | 90 | 195 | 190 | 173 | 130 | 43 | | | | | | |
| | 120 | 200 | 195 | 185 | 158 | 105 | 10 | | | | | |
| L100-VE | 60 | 108 | 105 | 97 | 78 | 37 | | | | | Above 35,000 psi for intermittent duty only | |
| | 90 | 110 | 108 | 105 | 95 | 78 | 47 | 5 | | | | |
| | 120 | 113 | 110 | 107 | 103 | 92 | 73 | 48 | | | | |
| L150-VE | 60 | 81 | 79 | 76 | 66 | 49 | 19 | | | | | |
| | 90 | 83 | 82 | 80 | 75 | 67 | 53 | 35 | | | | |
| | 120 | 84 | 83 | 82 | 78 | 73 | 66 | 55 | 25 | | | |
| L250-VE | 60 | 46 | 45 | 44 | 42 | 37 | 26 | 20 | 2 | | | |
| | 90 | 47 | 46 | 45 | 44 | 43 | 40 | 36 | 26 | | | |
| | 120 | 48 | 47 | 47 | 46 | 45 | 43 | 41 | 34 | 17 | | |
| L300-VE | 60 | 39 | 38 | 37 | 36 | 33 | 29 | 23 | 10 | | | |
| | 90 | 40 | 39 | 38 | 38 | 37 | 35 | 32 | 26 | 8 | | |
| | 120 | 41 | 40 | 39 | 38 | 38 | 37 | 36 | 32 | 21 | | |
| L400-VE | 60 | 30 | 29 | 29 | 28 | 27 | 26 | 23 | 15 | | | |
| | 90 | 31 | 31 | 31 | 30 | 30 | 29 | 27 | 24 | 15 | | |
| | 120 | 32 | 32 | 31 | 31 | 31 | 30 | 29 | 27 | 22 | 8 | |
| L500-S | 60 | 23 | 23 | 22 | 21 | 21 | 20 | 19 | 16 | 8 | | |
| | 90 | 24 | 24 | 23 | 23 | 23 | 22 | 22 | 20 | 15 | 6 | |
| | 120 | 24 | 24 | 24 | 23 | 23 | 23 | 23 | 22 | 19 | 13 | 5 |
| L10-2-VE | 60 | 880 | 720 | | | | | | | | | |
| | 90 | 890 | 800 | 350 | | | | | | | | |
| | 120 | 900 | 840 | 570 | | | | | | | | |
| L15-2-VE | 60 | 615 | 550 | 200 | | | | | | | | |
| | 90 | 625 | 575 | 410 | | | | | | | | |
| | 120 | 630 | 600 | 500 | 225 | | | | | | | |
| L25-2-VE | 60 | 345 | 330 | 265 | 60 | | | | | | | |
| | 90 | 350 | 335 | 300 | 208 | 15 | | | | | | |
| | 120 | 355 | 345 | 320 | 265 | 150 | | | | | | |
| L35-2-VE | 60 | 240 | 230 | 210 | 115 | | | | | | | |
| | 90 | 242 | 232 | 225 | 190 | 115 | | | | | | |
| | 120 | 245 | 235 | 230 | 210 | 170 | 95 | | | | | |
| L60-2-VE | 60 | 150 | 148 | 145 | 120 | 70 | 2 | | | | | |
| | 90 | 155 | 152 | 147 | 136 | 117 | 80 | 33 | | | | |
| | 120 | 157 | 154 | 152 | 145 | 133 | 112 | 82 | 8 | | | |
| L100-2-VE | 60 | 86 | 84 | 82 | 77 | 72 | 53 | 30 | | | | |
| | 90 | 87 | 86 | 84 | 82 | 78 | 70 | 61 | 36 | | | |
| | 120 | 89 | 88 | 86 | 84 | 82 | 77 | 72 | 57 | 13 | | |
| L150-2-VE | 60 | 64 | 64 | 63 | 60 | 57 | 50 | 38 | 14 | | | |
| | 90 | 65 | 65 | 64 | 62 | 60 | 57 | 53 | 41 | 9 | | |
| | 120 | 66 | 66 | 65 | 64 | 63 | 61 | 58 | 51 | 32 | | |
| L250-2-VE | 60 | 37 | 36 | 36 | 35 | 35 | 34 | 32 | 27 | 12 | | |
| | 90 | 37 | 36 | 36 | 36 | 36 | 35 | 34 | 31 | 25 | 10 | |
| | 120 | 37 | 37 | 36 | 36 | 36 | 36 | 35 | 34 | 30 | 21 | 9 |
| L300-2-VE | 60 | 31 | 31 | 30 | 30 | 29 | 29 | 28 | 26 | 16 | | |
| | 90 | 31 | 31 | 31 | 30 | 30 | 30 | 29 | 27 | 23 | 14 | 2 |
| | 120 | 31 | 31 | 31 | 31 | 30 | 30 | 30 | 29 | 27 | 21 | 14 |
| L400-2-VE | 60 | 24 | 24 | 23 | 23 | 23 | 22 | 22 | 21 | 14 | 5 | |
| | 90 | 24 | 24 | 24 | 24 | 24 | 23 | 23 | 23 | 20 | 15 | |
| | 120 | 25 | 25 | 25 | 24 | 24 | 24 | 23 | 23 | 22 | 19 | 10 |
| L500-2-S | 60 | 18 | 18 | 18 | 18 | 18 | 17 | 17 | 17 | 14 | 11 | 5 |
| | 90 | 19 | 18 | 18 | 18 | 18 | 18 | 18 | 17 | 16 | 14 | 11 |
| | 120 | 19 | 19 | 18 | 18 | 18 | 18 | 18 | 18 | 17 | 16 | 14 |

FLOW RATE IN CUBIC INCHES PER MINUTE.

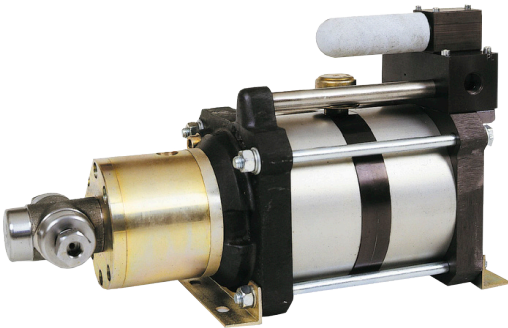
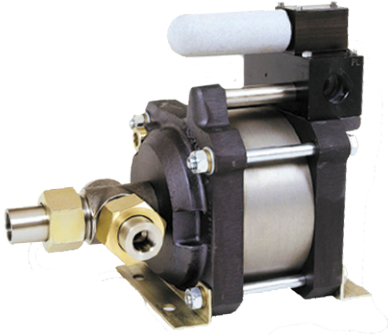
MAXIMUM AIR CONSUMPTION FOR "L" pumps: 45 SCFM @ 90 PSI (WITH 0 PSI OUTLET).

MAXIMUM AIR CONSUMPTION FOR "L-2" pumps: 80 SCFM @ 90 PSI (WITH 0 PSI OUTLET).

FLOW RATES SHOWN ARE FOR 1-10 CST FLUIDS.

WATER OR OIL SERVICE

L
SERIES
PRESSURES FROM
165 to 101,000 PSI



DIMENSIONS (inches) Single Air Drive Head

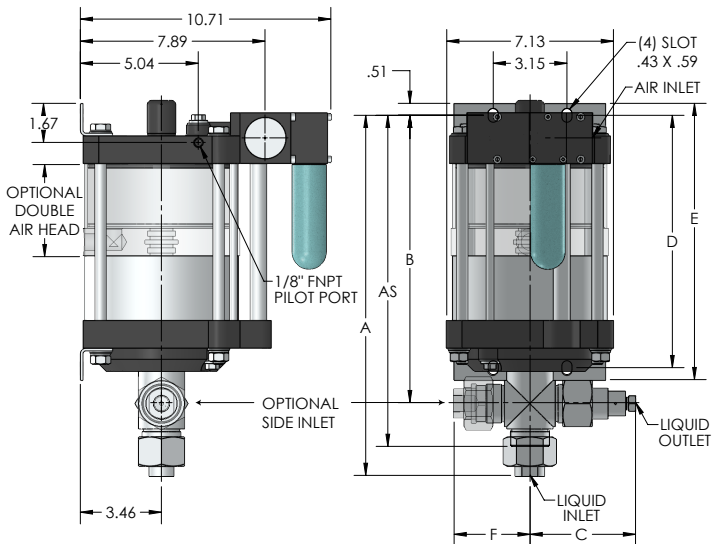
| CATALOG NUMBER | A | AS | B | C | D | E | F |
|-------------------------------|-------|-------|-------|------|------|------|------|
| L10-VE L15-VE | 12.19 | -- | 8.25 | 5.06 | 6.88 | 7.81 | -- |
| L25-VE L35-VE | 11.62 | 9.75 | 8.25 | 3.63 | 6.88 | 7.81 | 3.19 |
| L60-VE L100-VE L150-VE | 12.13 | 10.19 | 8.38 | 3.44 | 6.88 | 7.81 | 3.81 |
| L250-VE L300-VE L400-VE | 11.81 | 10.25 | 8.38 | 4.00 | 6.88 | 7.81 | 3.31 |
| L500-S | 15.69 | -- | 12.38 | 4.00 | 6.88 | 7.81 | -- |

Double Air Drive Head

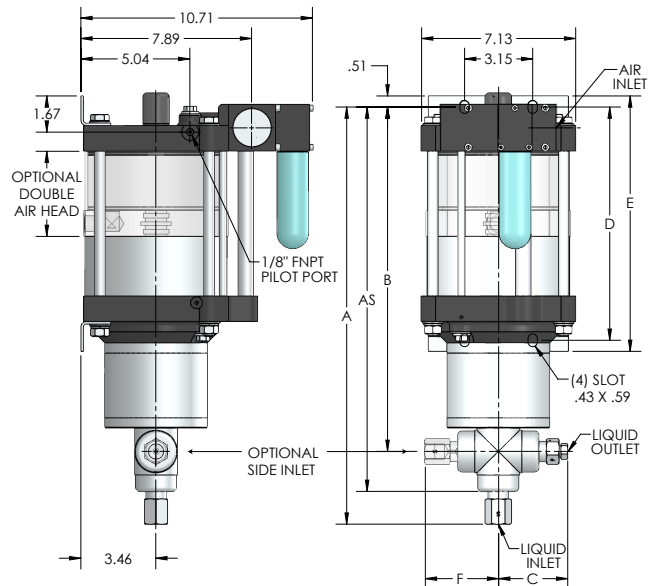
| CATALOG NUMBER | A | AS | B | C | D | E | F |
|---|-------|-------|-------|------|-------|-------|------|
| L10-2-VE L15-2-VE | 16.12 | 13.63 | 12.13 | 3.88 | 10.81 | 11.81 | 4.38 |
| L25-2-VE L35-2-VE | 15.50 | 13.75 | 12.13 | 3.63 | 10.81 | 11.81 | 3.19 |
| L60-2-VE | 16.00 | 14.06 | 12.38 | 3.44 | 10.81 | 11.81 | 3.81 |
| L100-2-VE L150-2-VE | 15.50 | 14.00 | 12.25 | 4.00 | 10.81 | 11.81 | 3.81 |
| L250-2-VE L300-2-VE L400-2-VE L500-2-S | 19.63 | 18.13 | 16.25 | 2.75 | 10.81 | 11.75 | 3.38 |

NOTE: ¹ Mounting hole dimensions.
Dimension are subject to change. Consult factory.

L10-VE THROUGH L400-VE AND L10-2-VE THROUGH L150-2-VE



L500-S AND L250-2-VE THROUGH L500-2-S



L-D pumps are double acting versions of the workhorse L series pumps.

- L-D pumps deliver approximately 50% more flow with less pulsation.
- All are single air head style, 8 pressure ratios available.
- Stainless steel bodies and plunger with UHMWPE (Ultra High Molecular Weight Polyethylene) seals and Viton² O-rings (-VE).
- L10D-L35D pumps are standard with bottom inlet. For a side inlet, add -S.
- L60-DS - L250DS pumps are only available with side inlet.
- Operating pressure range is 15-145 psi.
- For air control option, add -ACP to the catalog number.
- All L-D pumps come with an unregulated pilot port, 1/8" FNPT. This standard feature allows easy on/off pump control with a very small valve or pilot port.

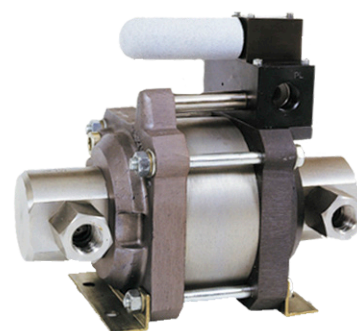
L-D

SERIES

**PRESSURES FROM
165 TO 38,425 PSI**

TECHNICAL DATA

| CATALOG NUMBER | PRESSURE RATIO | MAXIMUM OUTLET PRESSURE (PSI) | DISPL. PER CYCLE (IN. ³) | CONNECTIONS FNPT (IN.) | | WEIGHT (LBS.) |
|----------------|----------------|-------------------------------|--------------------------------------|------------------------|------------|---------------|
| | | | | INLET (2) | OUTLET (2) | |
| L10D-VE | 1:10 | 1,450 | 10.98 | 1 | ½ | 48 |
| L15D-VE | 1:15 | 2,175 | 7.56 | 1 | ½ | |
| L25D-VE | 1:27 | 3,915 | 4.31 | ½ | ½ | 42 |
| L35D-VE | 1:40 | 5,800 | 2.99 | ½ | ½ | |
| L60DS-VE | 1:63 | 9,135 | 1.92 | ½ | ½ | 37 |
| L100DS-VE | 1:113 | 15,225 | 1.07 | ½ | ½ | |
| L150DS-VE | 1:151 | 21,025 | 0.81 | ½ | ¼ HP | |
| L250DS-VE | 1:265 | 38,425 | 0.46 | ½ | ¼ HP | |



NOTE: Air drive inlet connection on all L-D pumps is 1/2" FNPT.
Air pilot connection is 1/8" and is required for operation.
Maximum allowable liquid temperature is 140°F.
Air section temperature rating: 0°F to 140°F.
Consult factory for L-D pump dimensions.
²Viton is a registered trademark of E.I DuPont de Nemours & Co., Inc.

FLOW CHART - L-D SERIES

| CATALOG NUMBER | SAMPLE AIR DRIVE PRESSURE (PSI) | OUTLET PRESSURE (PSI) | | | | | | | | | | |
|----------------|---------------------------------|-----------------------|------|------|------|------|------|------|------|------|-------|-------|
| | | 0 | 500 | 1000 | 1500 | 2000 | 3000 | 4000 | 5000 | 7500 | 10000 | 15000 |
| L10D-VE | 60 | 1700 | 650 | | | | | | | | | |
| | 90 | 1750 | 1200 | | | | | | | | | |
| L15D-VE | 60 | 1150 | 775 | | | | | | | | | |
| | 90 | 1200 | 1000 | 550 | | | | | | | | |
| L25D-VE | 60 | 660 | 580 | 385 | 120 | | | | | | | |
| | 90 | 680 | 630 | 540 | 220 | 220 | | | | | | |
| L35D-VE | 60 | 460 | 420 | 350 | 250 | 140 | | | | | | |
| | 90 | 460 | 450 | 415 | 370 | 300 | 140 | | | | | |
| L60DS-VE | 60 | 300 | 285 | 260 | 230 | 190 | 100 | | | | | |
| | 90 | 300 | 290 | 285 | 270 | 250 | 200 | 135 | | | | |
| L100DS-VE | 60 | 165 | 162 | 155 | 150 | 140 | 120 | 97 | 65 | | | |
| | 90 | 165 | 163 | 161 | 160 | 157 | 134 | 132 | 120 | 69 | | |
| L150DS-VE | 60 | 125 | 123 | 120 | 116 | 113 | 103 | 90 | 77 | 32 | | |
| | 90 | 125 | 124 | 123 | 122 | 121 | 117 | 110 | 103 | 76 | 50 | |
| L250DS-VE | 60 | 70 | 69 | 68 | 67 | 66 | 63 | 62 | 60 | 50 | 38 | 7 |
| | 90 | 72 | 71 | 70 | 69 | 68 | 67 | 66 | 66 | 62 | 56 | 38 |

FLOW RATE IN CUBIC INCHES PER MINUTE.
MAXIMUM AIR CONSUMPTION: 45 SCFM @ 90 PSI (WITH 0 PSI OUTLET).

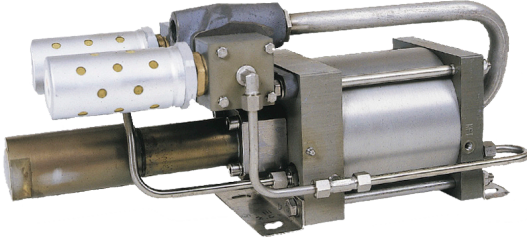
FLOW RATES SHOWN ARE FOR 1-10 CST FLUIDS.

WATER OR OIL SERVICE

GX

SERIES

PRESSURES FROM
540 TO 22,500 PSI



GX pumps are high-flow pumps designed for rugged installations and built with environmental resistant materials. They are ideal for offshore applications with stainless steel wetted parts and corrosive resistant external components.

- GX series pumps have stainless steel bodies and plunger with UHMWPE (Ultra High Molecular Weight Polyethylene) seals and Viton® O-rings.
- Inlet is in end of head and outlet is on side of head.
- Operating pressure range is 15 - 145 psi.
- For air control option, add -ACG to the catalog number.
- All GX pumps come with a pre-plumbed pilot port.

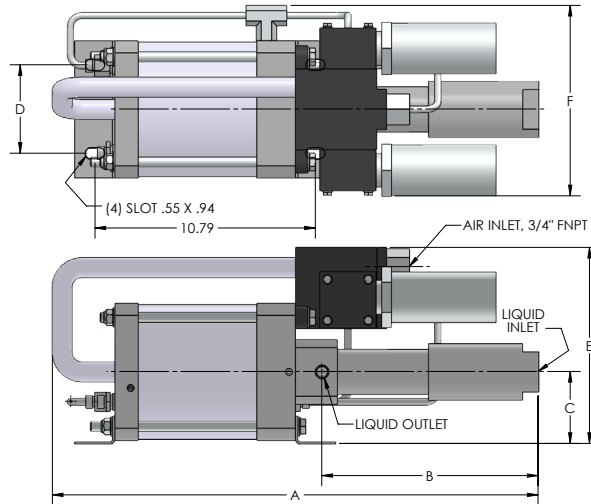
TECHNICAL DATA

| CATALOG NUMBER | PRESSURE RATIO | MAXIMUM OUTLET PRESSURE (PSI) | DISPL. PER CYCLE (IN. ³) | CONNECTIONS (FNPT -IN.) | | WEIGHT (LBS.) |
|----------------|----------------|-------------------------------|--------------------------------------|-------------------------|--------|---------------|
| | | | | INLET | OUTLET | |
| GX35 | 1:36 | 5,220 | 6.71 | 1 | 3/8 | 53 |
| GX60 | 1:66 | 8,700 | 3.97 | 1 | 3/8 | |
| GX100 | 1:117 | 14,500 | 2.20 | 1 | 3/8 | |
| GX170 | 1:177 | 22,500 | 2.20 | 1 | 3/8 MP | 66 |

NOTE: All connections listed are FNPT unless otherwise noted.
Air drive inlet connection on all GX pumps is 3/4" FNPT.
Maximum allowable liquid temperature is 140°F.
Air section temperature rating: 0°F to 140°F.
*Viton is a registered trademark of E.I DuPont de Nemours & Co., Inc.

DIMENSIONS (inches)

| CATALOG NUMBER | GX35 GX60 GX100 | GX170 |
|----------------|-----------------------|-------|
| A | 23.88 | 24.50 |
| B | 10.63 | 10.83 |
| C | 3.50 | 4.33 |
| D | 4.33 | 5.51 |
| E | 9.69 | 10.79 |
| F | 9.33 | 9.80 |



FLOW CHART - GX SERIES

| CATALOG NUMBER | SAMPLE AIR DRIVE PRESSURE (PSI) | OUTLET PRESSURE (PSI) | | | | | | | | | |
|----------------|---------------------------------|-----------------------|------|------|------|------|------|------|------|-------|-------|
| | | 0 | 500 | 1000 | 2000 | 3000 | 4000 | 5000 | 7500 | 10000 | 15000 |
| GX35 | 60 | 1525 | 1400 | 1100 | 180 | | | | | | |
| | 90 | 1525 | 1450 | 1360 | 635 | 150 | | | | | |
| GX60 | 60 | 850 | 820 | 750 | 570 | 310 | | | | | |
| | 90 | 850 | 840 | 815 | 720 | 590 | 420 | 180 | | | |
| GX100 | 60 | 470 | 465 | 460 | 410 | 360 | 280 | 210 | | | |
| | 90 | 470 | 465 | 460 | 455 | 430 | 390 | 350 | 220 | | |
| GX170 | 60 | 335 | 329 | 323 | 314 | 287 | 261 | 232 | 153 | 18 | |
| | 90 | 335 | 332 | 330 | 329 | 319 | 308 | 293 | 254 | 183 | 30 |

FLOW RATE IN CUBIC INCHES PER MINUTE.
MAXIMUM AIR CONSUMPTION: 190 SCFM @ 90 PSI (WITH 0 PSI OUTLET).

FLOW RATES SHOWN ARE FOR 1-10 CST FLUIDS.

WATER OR OIL SERVICE

GPD pumps are high-flow pumps designed for rugged installations and built with environmental resistant materials. They are ideal for offshore applications with stainless steel wetted parts and corrosive resistant external components.

- GPD series pumps have stainless steel bodies and plungers, UHMWPE (Ultra High Molecular Weight Polyethylene) seals and Viton² O-rings.
- Double acting design for high flow rate
- Separation sleeves to prevent contamination of the air drive.

GPD

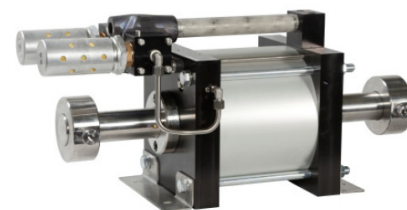
SERIES

**PRESSURES FROM
450 TO 43,500 PSI**

TECHNICAL DATA

GPD Single Air Drive Head

| CATALOG NUMBER | PRESSURE RATIO | MAXIMUM OUTLET PRESSURE (PSI) | DISPL. PER CYCLE (IN³) | CONNECTIONS (FNPT -IN.) | | WEIGHT (LBS) |
|---------------------------|-------------------|----------------------------------|---------------------------|-------------------------|----------------|-----------------|
| | | | | INLET (2) | OUTLET (2) | |
| GPD30 | 1:30 | 4350 | 31 | ¾ | ¾ | 128 |
| GPD60 | 1:60 | 8700 | 15.7 | ¾ | ¾ | |
| GPD120 | 1:129 | 17400 | 7.4 | ¾ | 13/16-16 (9MF) | |
| GPD180 | 1:192 | 27840 | 4.2 | ¼ | 3/4-16 (6HF) | |
| GPD260 | 1:277 | 40165 | 2.9 | ¼ | 3/4-16 (6HF) | |
| GPD Double Air Drive Head | | | | | | |
| GPD30-2 | 1:60 | 8700 | 31 | ¾ | ¾ | 172 |
| GPD60-2 | 1:120 | 17400 | 15.7 | ¾ | 13/16-16 (9MF) | |
| GPD120-2 | 1:258 | 37400 | 7.4 | ¾ | 3/4-16 (6HF) | |
| GPD180-2 | 1:384 | 43500 | 4.2 | ¼ | 3/4-16 (6HF) | |
| GPD260-2 | 1:554 | 43500 | 2.9 | ¼ | 3/4-16 (6HF) | |



NOTE: All connections listed are FNPT unless otherwise noted.
Air drive inlet connection on all GPD pumps is 3/4" FNPT.
Maximum allowable liquid temperature is 140°F.
Air section temperature rating: 0°F to 140°F.
²Viton is a registered trademark of E.I DuPont de Nemours & Co., Inc.

FLOW CHART - GPD SERIES

| CATALOG NUMBER | SAMPLE AIR DRIVE PRESSURE (PSI) | OUTLET PRESSURE (PSI) | | | | | | | | | | |
|----------------|---------------------------------|-----------------------|------|------|------|------|------|-------|-------|-------|-------|-------|
| | | 0 | 500 | 1500 | 3000 | 5000 | 7500 | 10000 | 15000 | 20000 | 30000 | 40000 |
| GPD30 | 60 | 2550 | 1750 | 375 | | | | | | | | |
| | 80 | 2775 | 2050 | 900 | | | | | | | | |
| GPD60 | 60 | 1125 | 950 | 600 | 175 | | | | | | | |
| | 80 | 1200 | 1025 | 750 | 375 | | | | | | | |
| GPD120 | 60 | 590 | 560 | 440 | 310 | 160 | 10 | | | | | |
| | 80 | 630 | 600 | 500 | 400 | 260 | 120 | | | | | |
| GPD180 | 60 | 395 | 390 | 360 | 255 | 190 | 105 | 25 | | | | |
| | 80 | 425 | 420 | 390 | 300 | 250 | 180 | 110 | | | | |
| GPD260 | 60 | 255 | 250 | 240 | 200 | 165 | 125 | 90 | 20 | | | |
| | 80 | 275 | 270 | 260 | 220 | 200 | 165 | 135 | 75 | 20 | | |
| GPD30-2 | 60 | 1375 | 1150 | 750 | 225 | | | | | | | |
| | 80 | 1450 | 1250 | 925 | 500 | | | | | | | |
| GPD60-2 | 60 | 690 | 640 | 520 | 370 | 200 | | | | | | |
| | 80 | 740 | 700 | 600 | 470 | 320 | 140 | | | | | |
| GPD120-2 | 60 | 330 | 320 | 300 | 250 | 210 | 150 | 100 | 10 | | | |
| | 80 | 350 | 355 | 330 | 280 | 250 | 200 | 160 | 80 | 10 | | |
| GPD180-2 | 60 | 235 | 225 | 210 | 190 | 165 | 135 | 105 | 55 | 10 | | |
| | 80 | 250 | 245 | 235 | 215 | 195 | 175 | 150 | 115 | 80 | 10 | |
| GPD260-2 | 60 | 150 | 150 | 145 | 135 | 125 | 105 | 95 | 75 | 55 | 10 | |
| | 80 | 160 | 160 | 155 | 150 | 140 | 130 | 120 | 100 | 85 | 50 | 20 |

FLOW RATE IN CUBIC INCHES PER MINUTE.
MAXIMUM AIR CONSUMPTION: 190 SCFM @ 90 PSI (WITH 0 PSI OUTLET).

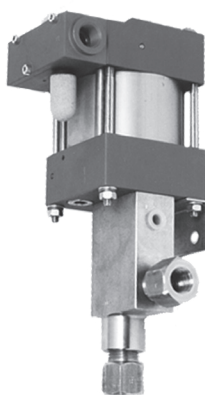
FLOW RATES SHOWN ARE FOR 1-10 CST FLUIDS.

CHEMICAL SERVICE

PPSF

SERIES

PRESSURES FROM
60 TO 14,500 PSI



PPSF pumps are rugged and designed for chemical service applications. These pumps are available as single acting pumps with single air drive head and distance piece which provides a separation between the liquid and air drive sections.

- **PPSF pumps have stainless steel pump heads and plungers.**
- **PPSF pumps have PTFE seals with Viton² O-rings.**
- **PPSF pumps are standard with bottom inlet. For a side inlet, add -S to the catalog number.**
- **Maximum air drive pressure is 145 psi. PPSF pumps require less drive pressure because the pump is driven in both directions with no spring under the piston. This design reduces noise and provides less chance of cavitation.**
- **Minimum air drive pressure 15 psi.**
- **For air control option, add -ACM to the catalog number.**

TECHNICAL DATA

PPSF Single Air Drive Head and Distance Piece

| CATALOG NUMBER | PRESSURE RATIO | MAXIMUM OUTLET PRESSURE (PSI) | DISPL. PER CYCLE (IN. ³) | CONNECTIONS (FNPT - IN.) | | WEIGHT (LBS.) |
|----------------|----------------|-------------------------------|--------------------------------------|--------------------------|--------|---------------|
| | | | | INLET | OUTLET | |
| PPSF4 | 1:4 | 580 | 1.86 | 1 | ½ | 15 |
| PPSF8 | 1:9 | 1,305 | 0.90 | ¾ | ½ | |
| PPSF12 | 1:14 | 2,030 | 0.57 | 3/8 | ¼ | |
| PPSF22 | 1:28 | 4,060 | 0.28 | 3/8 | ¼ | 8 |
| PPSF37 | 1:46 | 6,670 | 0.17 | 3/8 | ¼ | |
| PPSF72 | 1:86 | 12,470 | 0.09 | 3/8 | ¼ | |
| PPSF111 | 1:130 | 14,500 | 0.06 | 3/8 | ¼ | |

NOTE: Air drive inlet connection on all **PPSF** pumps is 1/4" FNPT.
All connections listed are FNPT unless otherwise noted.
Maximum allowable liquid temperature is 140°F.
Air section temperature rating: 0°F to 140°F.

FLOW CHART - PPSF Series

| CATALOG NUMBER | SAMPLE AIR DRIVE PRESSURE (PSI) | OUTLET PRESSURE (PSI) | | | | | | | |
|----------------|---------------------------------|-----------------------|-----|------|------|------|------|-------|-------|
| | | 0 | 500 | 1500 | 3000 | 5000 | 7500 | 10000 | 14500 |
| PPSF4 | 60 | 885 | | | | | | | |
| | 90 | 905 | | | | | | | |
| PPSF8 | 60 | 422 | 50 | | | | | | |
| | 90 | 430 | 240 | | | | | | |
| PPSF12 | 60 | 272 | 160 | | | | | | |
| | 90 | 275 | 218 | | | | | | |
| PPSF22 | 60 | 132 | 110 | 22 | | | | | |
| | 90 | 136 | 126 | 82 | | | | | |
| PPSF37 | 60 | 81 | 74 | 47 | | | | | |
| | 90 | 83 | 80 | 68 | 37 | | | | |
| PPSF72 | 60 | 43 | 42 | 37 | 22 | 3 | | | |
| | 90 | 44 | 43 | 41 | 36 | 24 | 3 | | |
| PPSF111 | 60 | 28 | 27 | 26 | 20 | 12 | 2 | | |
| | 90 | 29 | 28 | 27 | 26 | 22 | 16 | 8 | |

FLOW RATE IN CUBIC INCHES PER MINUTE.

MAXIMUM AIR CONSUMPTION: 20 SCFM @ 90 PSI (WITH 0 PSI OUTLET).

FLOW RATES SHOWN ARE FOR 1-10 CST FLUIDS.

CHEMICAL SERVICE

LSF series pumps are rugged and designed for chemical service applications. These pumps are available as single acting pumps with single or double air drive head and distance piece which provides a separation between the liquid and air drive sections.

- LSF pumps have stainless steel pump heads and plungers.
- LSF pumps have PTFE seals with Viton² O-rings.
- Pumps are standard with bottom inlet. For a side inlet, add -S.
- Maximum air drive pressure is 145 psi.
- Minimum air drive pressure 15 psi.
- For air control option, add -ACP to LSF catalog number.

TECHNICAL DATA

LSF Single Air Drive Head and Distance Piece

| CATALOG NUMBER | PRESSURE RATIO | MAXIMUM OUTLET PRESSURE (PSI) | DISPL. PER CYCLE (IN. ³) | CONNECTIONS (FNPT - IN.) | | WEIGHT (LBS.) |
|----------------|----------------|-------------------------------|--------------------------------------|--------------------------|--------|---------------|
| | | | | INLET | OUTLET | |
| LSF10 | 1:11 | 1,595 | 5.49 | 1 | ½ | 44 |
| LSF15 | 1:16 | 2,320 | 3.78 | 1 | ½ | |
| LSF25 | 1:28 | 4,060 | 2.15 | ½ | ½ | 42 |
| LSF35 | 1:40 | 5,800 | 1.49 | ½ | ½ | |
| LSF60 | 1:63 | 9,135 | 0.94 | ½ | ½ | 40 |
| LSF100 | 1:113 | 15,225 | 0.54 | ½ | ½ | |
| LSF150 | 1:151 | 21,025 | 0.40 | ½ | ¼ HP | |
| LSF250 | 1:265 | 23,200 | 0.23 | ½ | ¼ HP | |

LSF Double Air Drive Head and Distance Piece

| | | | | | | |
|----------|-------|--------|------|---|------|----|
| LSF10-2 | 1:22 | 3,190 | 5.49 | 1 | ½ | 50 |
| LSF15-2 | 1:32 | 4,640 | 3.78 | 1 | ½ | |
| LSF25-2 | 1:56 | 8,120 | 2.15 | ½ | ½ | |
| LSF35-2 | 1:80 | 11,600 | 1.49 | ½ | ½ | |
| LSF60-2 | 1:126 | 15,000 | 0.94 | ½ | ½ | |
| LSF100-2 | 1:226 | 23,200 | 0.54 | ½ | ¼ HP | |



NOTE: Air drive inlet connection on all LSF pumps is 1/2" FNPT.
Air pilot connection on all LSF pumps is 1/8" FNPT.
All connections listed are FNPT unless otherwise noted.
Maximum allowable liquid temperature is 140°F.
Air section temperature rating: 0°F to 140°F.
²Viton is a registered trademark of E.I. DuPont de Nemours & Co., Inc.

FLOW CHART - LSF Series

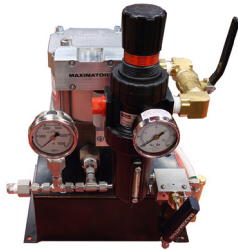
| CATALOG NUMBER | SAMPLE AIR DRIVE PRESSURE (PSI) | OUTLET PRESSURE (PSI) | | | | | | | |
|----------------|---------------------------------|-----------------------|-----|------|------|------|------|-------|-------|
| | | 0 | 500 | 1500 | 3000 | 5000 | 7500 | 10000 | 15000 |
| LSF10 | 60 | 1100 | 350 | | | | | | |
| | 90 | 1125 | 790 | | | | | | |
| LSF15 | 60 | 775 | 540 | | | | | | |
| | 90 | 790 | 650 | | | | | | |
| LSF25 | 60 | 435 | 365 | 60 | | | | | |
| | 90 | 445 | 410 | 265 | | | | | |
| LSF35 | 60 | 300 | 270 | 150 | | | | | |
| | 90 | 305 | 290 | 240 | 95 | | | | |
| LSF60 | 60 | 192 | 182 | 145 | 45 | | | | |
| | 90 | 195 | 190 | 173 | 130 | 43 | | | |
| LSF100 | 60 | 108 | 105 | 97 | 78 | 37 | | | |
| | 90 | 110 | 108 | 105 | 95 | 78 | 47 | 5 | |
| LSF150 | 60 | 81 | 79 | 76 | 66 | 49 | 19 | | |
| | 90 | 83 | 82 | 80 | 75 | 67 | 53 | 35 | |
| LSF250 | 60 | 46 | 45 | 44 | 42 | 37 | 26 | 20 | 2 |
| | 90 | 47 | 46 | 45 | 44 | 43 | 40 | 36 | 26 |
| LSF10-2 | 60 | 880 | 720 | | | | | | |
| | 90 | 890 | 800 | 350 | | | | | |
| LSF15-2 | 60 | 615 | 550 | 200 | | | | | |
| | 90 | 625 | 575 | 410 | | | | | |
| LSF25-2 | 60 | 345 | 330 | 265 | 60 | | | | |
| | 90 | 350 | 335 | 300 | 208 | 15 | | | |
| LSF35-2 | 60 | 240 | 230 | 210 | 115 | | | | |
| | 90 | 242 | 232 | 225 | 190 | 115 | | | |
| LSF60-2 | 60 | 150 | 148 | 145 | 120 | 70 | 2 | | |
| | 90 | 155 | 152 | 147 | 136 | 117 | 80 | 33 | |
| LSF100-2 | 60 | 86 | 84 | 82 | 77 | 72 | 53 | 30 | |
| | 90 | 87 | 86 | 8 | 82 | 78 | 70 | 61 | 36 |

PORTABLE SYSTEMS

POWER PACKS

Portable systems are ideal for generating elevated hydraulic or water pressures, using only shop air, at a variety of locations throughout a facility. They are completely portable and require only a shop air line to operate if the reservoir option is selected.

A variety of pressure ranges are available to fit your specific requirements, from low pressures of 1,000 psi to high pressures of 101,000 psi. You may choose from a number of options to complete the test system best suited for your application.



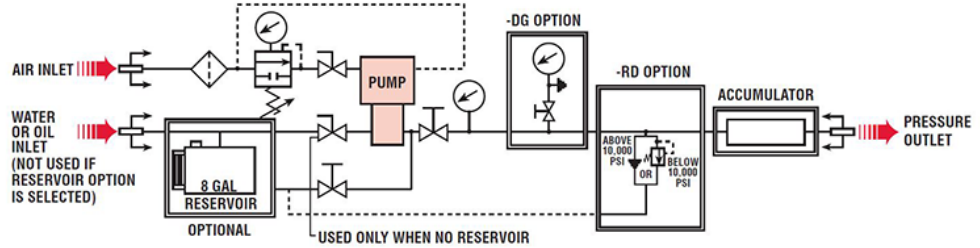
Power Packs - OIL OR WATER

- ◆ Lightweight, portable
- ◆ Economical hydraulic power
- ◆ Totally self-contained package

ORDERING INFORMATION*

| | MTTP | 03 | - | O | - | PPO | - | 1G | - | G |
|----|---------------------|---------|---|---------------|---|------------------------------|---|--|---|---|
| | Max. Req'd Pressure | Service | | Pump | | Reservoir | | Options | | |
| 01 | 1,000 psi | O Oil | | PPO or S Oil | | N None, plate mounted | | G Outlet gauge | | |
| 02 | 2,000 psi | W Water | | PP or L Water | | | | V Vent valve | | |
| 03 | 3,000 psi | | | | | 1G 1 gallon S.S. | | RD Relief Device | | |
| 05 | 5,000 psi | | | | | 2G 2 gallon S.S. | | Call to discuss your specific application. | | |
| 10 | 10,000 psi | | | | | 8G 8 gallon S.S. | | | | |
| 60 | 60,000 psi | | | | | 1.5G 1.5 gallon carbon steel | | | | |

FLOW SCHEMATIC



TEST CARTS

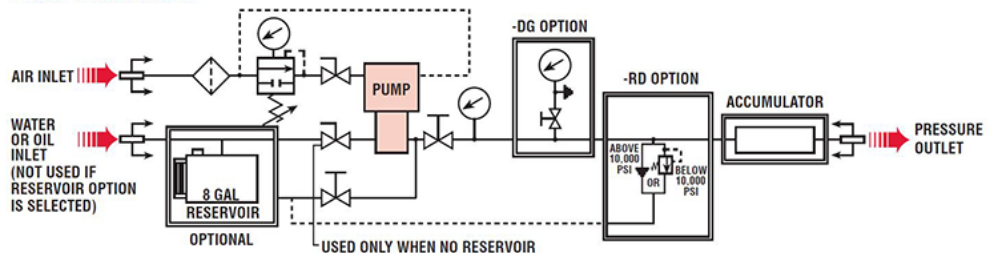
Test Carts - OIL OR WATER

- ◆ Hydrostatic testing
- ◆ Hydraulic power
- ◆ Cycle testing
- ◆ Leak testing

ORDERING INFORMATION*

| | MTTC | 10 | - | O | - | L | - | 8GP | - | RD |
|----|---------------------|---------|---|----------------|---|--------------------------|---|------------------|---|----|
| | Max. Req'd Pressure | Service | | Pump | | Reservoir | | Options | | |
| 01 | 1,000 psi | O Oil | | PPO or S Oil | | N None | | ACC Outlet gauge | | |
| 03 | 3,000 psi | W Water | | PP, L or Water | | 2G 2 gallon S.S. | | DG Vent valve | | |
| 05 | 5,000 psi | | | GX | | 8G 8 gallon polyethylene | | DV Relief Device | | |
| 10 | 10,000 psi | | | | | | | | | |
| 60 | 60,000 psi | | | | | 8GSS 8 gallon S.S. | | RD | | |

FLOW SCHEMATIC



PUMP SKIDS

Pump Skids - OIL OR WATER

- ◆ Compact, complete packaged systems
- ◆ Standard powder coated or stainless steel frame

Pump skids are compact systems with most components mounted within the boundaries of the frame. The systems can be built for water or oil service and have a control panel to contain all gauges and valves.

A variety of pressure ranges and flows are available, for testing components, ranging from 500 psi to 60,000 psi. These systems can be supplied with a reservoir or a city water valved inlet. Reservoirs come with a fill/breather cap, liquid level sight gauge and drain connection.

ORDERING INFORMATION*

| MTPS | 05 | - | W | - | PP72 | - | 2G | - | RD |
|---------------------|---------|---|---------------|---|------------------------------|---|------------------|---|----|
| Max. Req'd Pressure | Service | | Pump | | Reservoir | | Options | | |
| 01 1,000 psi | O Oil | | PPO or S Oil | | N None, plate mounted | | G Outlet gauge | | |
| 02 2,000 psi | W Water | | PP or L Water | | | | V Vent valve | | |
| 03 3,000 psi | | | | | 1G 1 gallon S.S. | | RD Relief Device | | |
| 05 5,000 psi | | | | | 2G 2 gallon S.S. | | Call to discuss | | |
| 10 10,000 psi | | | | | 8G 8 gallon S.S. | | your specific | | |
| 60 60,000 psi | | | | | 1.5G 1.5 gallon carbon steel | | application. | | |

POWER CUBE

FLOW SCHEMATIC (See Test Carts)

TEST BENCHES

Test Benches - OIL OR WATER, AIR OR GAS

- ◆ Hydrostatic testing
- ◆ Burst testing
- ◆ Cycle/fatigue testing
- ◆ Leak testing

MAXPRO test benches are designed for durability, ease of use and accessibility. These test benches can be equipped for use with oil, water, air, gas or any combination of test medium. The same test bench could be set up for hydrostatic testing with water and/or leak testing with gas.

MAXPRO test benches can be provided with manual control or push button PLC control to handle your specific application.

Test chambers can be included and can be horizontal or vertical. When specifying a test bench that is to include a test chamber with a windowed door, please specify the required chamber size.

ORDERING INFORMATION*

| MTTB | 10 | - | W | - | G | - | M | - | L | - | N | - | DLE | - | RS | - | |
|---------------|-----------------------------|---|---------------|---|---------------|---|-----------------|---|---|---|---|---|-----|---|----|---|--|
| Pressure | Service | | Operation | | Pump | | Gas Boosters | | Options | | | | | | | | |
| 05 1,000 psi | O Oil | | M Manual | | L Water Pumps | | DLE Gas booster | | RI Remote operating isolation valve | | | | | | | | |
| 10 2,000 psi | W Water | | R Push Button | | N None | | N None | | RS Remote operating pump shut-off valve | | | | | | | | |
| 15 3,000 psi | A Air to 5,000 psi maximum | | | | | | | | RV Remote operating vent valve | | | | | | | | |
| 20 5,000 psi | G Gas to 21,000 psi maximum | | | | | | | | T Pressure transducer specify 0-10V or 4-20 ma output | | | | | | | | |
| 30 10,000 psi | N None - for second service | | | | | | | | DP Digital pressure indicator | | | | | | | | |
| 60 60,000 psi | | | | | | | | | PI Peak pressure indicator | | | | | | | | |

* The photos and ordering information are shown to indicate capabilities and options. Each system is custom designed to meet specific operating requirements.

ACCESSORIES

HIGH PRESSURE RELIEF VALVES

MT10RV - PRESSURES FROM 1,000 TO 10,000 PSI

MT25RV - PRESSURES FROM 2,500 TO 25,000 PSI

MT10RV

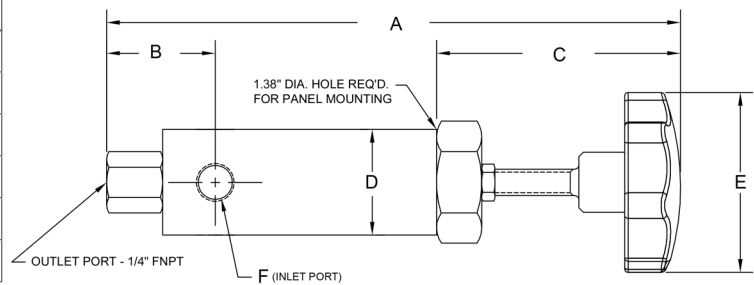


MT25RV



| Dimension | MT10RV | MT25RV |
|-----------|---------------|--------------------|
| A | 8.13" | 9.94" |
| B | 1.56" | 2.13" |
| C | 3.50" | 1.68" |
| D | 1.50" | 2.00" |
| E | 2.50" | 5/16" Allen Wrench |
| F | 1/4" FNPT (2) | 1/4" H.P. |

DIMENSIONS (inches)



| Catalog Number | Connection Size | | Orifice (in.) | Service | Pressure Rating (psi) @ R.T. | | Valve Panel Hole | Body Diameter |
|----------------|-----------------|----------|---------------|-------------|------------------------------|-----------------|------------------|---------------|
| | Inlet | Outlet | | | Minimum Setting | Maximum Setting | | |
| MT10RV | 1/4" FNPT | 1/4 FNPT | 0.070 | Liquid/Gas | 1,000 | 10,000 | 1.38 | 1.50 |
| MT25RV | 1/4" H.P. | 1/4 FNPT | 0.070 | Liquid/Gas* | 2,500 | 25,000 | 1.625 | 2.00 |

All dimensions are for reference only and are subject to change.

When selecting multiple items, the pressure rating would be that of the lowest rated components.

* Not bubble tight on gas service.

All general terms and conditions of sale, including limitations of our liability, apply to all products and services sold.

DRY AIR SPOOLS For severe duty service

In applications where very dry air or nitrogen is used to drive Maximator pumps or boosters, there is a spool seal option available to provide longer duty between maintenance.

This Dry Air Spool (DAS) option should be considered for extreme operating conditions involving air or gas drive mediums below 0°F. dewpoint, and similarly, very cold climate applications (-40°C.).

This design can be retrofitted to existing pumps and boosters as it only involves the spool, spool sleeve, and seals. The spool block remains the same. Be sure to use an appropriate tool to pull the spool sleeve! Minimum air drive with this option is 30 psig.

To order with a pump simply add - DAS to model number. To retrofit to an existing pump, order "Dry Air Spool" and specify the pump model and serial number.



HIGH PRESSURE DATA LOGGER

Maxpro Technologies offers an electronic pressure logger to simplify the recording of testing data.

The unit is designed to digitally record pressure during tests, complementing Maxpro pump and booster packaged power systems as well as other types of power systems.

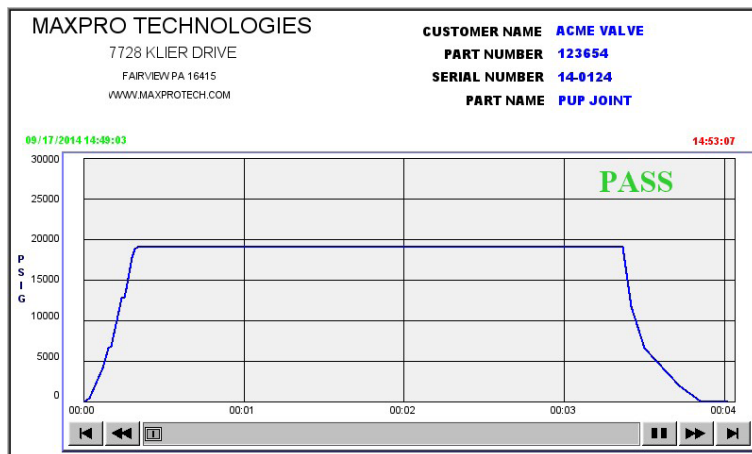
- Pressure loggers are useful in any industry that has need for an easy, accurate way to record pressure tests.
- The complete Pressure Logger comes with a pressure transducer, 2 pre-formatted jump drives and instructions, including step by step instructions on how to create customized test reports.

Pressure Logger Features:

- 7" Color touch screen
- Instant Test Report
- USB Memory Port
- Ethernet Port
- 120 V 60 Hz or 230 V 50/60 Hz
- Digital Indication of Realtime Pressure and Peak Pressure
- Trending On screen
- Data Storage for import into Spreadsheets or Test Report
- Auto Peak Reset
- Pressure ranges available from 0-100 psi to 0-100,000 psi



| Dimensions | |
|------------------|-------------------------|
| | Maxpro Pressure Logger: |
| Height | 12" |
| Width | 10" |
| Depth | 8" |
| Weight | 12 lb. |
| Transducer Cable | 2 feet long |



Options Available:

- Keyboard with touchpad
- Thermocouple and RTD temperature sensors
- Multiple transducers for different pressure ranges
- Single channel logger standard, up to 10 channels optional



AIR CONTROL PACKAGES

Consisting of a filter, regulator with gauge, shut-off valve and required fittings

- ACM....For all PPO, PP & PPSF pumps, and MPLV air amplifiers
- AC.....For all S Pumps
- ACP.....For all L & LSF pumps, DLA & GPLV air amplifiers and DLE gas boosters
- ACG....For all GX pumps



PUMP CYCLE COUNTERS

To order: add suffix to pump P/N, eg. PPO12-CCW

- CCP....Panel mount, 0 - 999,999 max. cycles, 1" high x 2" wide hole
- CCW....Wall mount, 0 - 999,999 max cycles
- Reset button on both models
- Direct pump mounting is available



OTHER PRODUCTS

Valves, Fittings & Tubing

- Highest quality for superior product performance
- Standard material high strength stainless steel
- Pressures to 152,000 PSI



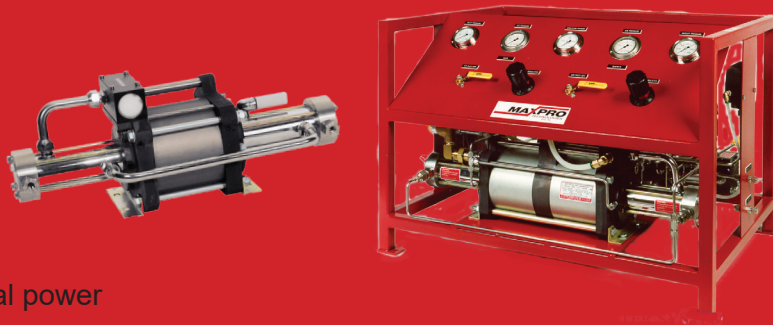
Air Amplifiers & Systems

- Air driven to 4,350 PSI
- Deliver increased air pressure to shop floor equipment and work stations
- Require no electrical power
- Single or double acting models



Gas Boosters & Systems

- Air driven to 36,000 PSI
- Ideal for gas salvage
- Units are contaminant free
- For use with a variety of gases
- Require no lubrication or electrical power



Repair Service Available

- Guaranteed quality workmanship
- Cost effective quick turnaround
- Use original manufacturer parts
- Factory support



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