

# HYPRO<sup>®</sup> CAR WASH & PRESSURE CLEANING PRODUCTS

# Popular Products from Hypro



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## 2535S/2545S

Hypro's innovative design on the 2535S and 2545S stainless steel series triplex plunger pumps allows for easy installation into most brands of car washes. The 100% 316 stainless steel head provides superior life over brass and nickel-plated heads and comes with an industry leading lifetime warranty. The pump carries the same mounting configurations as the leading competitors and is a drop-in replacement for the CAT PUMPS® 3535 & 3545.



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## HIGH FLOW PRESSURE REGULATOR/RELIEF VALVE

The high flow pressure regulator/relief valves have the longest life in the industry, outperforming the competition by up to 5 times. Our patent-pending design allows you to repair/rebuild the valve to 100% new performance without removing it from the system. Great for use with Hypro's 38 gpm 2535S and 47 gpm 2545S triplex plunger pumps.

**25%  
WATER  
SAVINGS!**



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## SUDDEN IMPACT NOZZLE

Sudden Impact rotating nozzles provide a controlled rotation 0° water stream with much greater impact and cleaning ability than the competition. Car wash owners who use the Sudden Impact nozzles have discovered that they enhance their washing operation by allowing them to:

- Downsize their current nozzle size for equal cleaning performance with up to 25% water consumption savings
- Use the same nozzle size and significantly increase their wash's cleaning power
- Or use the same nozzle size and increase wash speeds for faster thru-put
- 5 X Longer life

**10X LIFE!**



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## UAS NOZZLE

Hypro's UAS nozzles are made with premium-quality ceramic orifices mounted in stainless steel carriers. They offer extended operating life and precise spraying, while reducing operating and maintenance costs by providing up to 10 times the life of hardened stainless steel nozzles.

**GREAT  
VALUE!**



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## HP NOZZLE

Maximize performance and economy with HP nozzles. HP nozzles outperform the competition with up to 16% greater impact than any other nozzles in its class. Made from hardened stainless steel to deliver the life you expect, with engineered performance that will revive your cleaning capability back to new. Large, user-friendly markings on the tip of the nozzles clearly identify spray angle and nozzle size.

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# MAKING A BIG DIFFERENCE IN YOUR BOTTOM LINE

## Hypro: Innovation since 1947

For over six decades, Hypro has been designing and building superior quality pumps. Hypro's experienced engineers perfected and introduced the industry's first car wash pump. Today they continue the development of innovative new products to ensure that Hypro products maintain their position of industry leadership. Based in New Brighton, MN, Hypro manufactures a complete line of pumps for the pressure cleaning, car wash, agricultural, and food service markets.

## Hypro Plunger Pumps

When it comes to increasing your bottom line, nothing comes close to Hypro plunger pumps. Hypro pumps are designed to deliver higher pressure while providing increased reliability. Hypro's patented cartridge assembly for the PowerLine® series also allows preventive maintenance to be easily performed by removing only the pump head. All maintenance is easy and fast.

### Hypro Plunger Pumps for a variety of car wash and pressure cleaning applications

Application	Typical Flow Range	Typical Operating Range	Hypro Pump Model
Carpet Cleaning	2-3.5 GPM (7.57-13.24 LPM)	900-1300 PSI (62-90 BAR)	2200 Series
Self-Serve Car Wash	3-6 GPM (11.4 -22.7 LPM)	900-1300 PSI (62-90 BAR)	2300 or 2400 Series
Prep Gun (Single)	3-6 GPM (11.4 -22.7 LPM)	900-1300 PSI (62-90 BAR)	2300 or 2400 Series
Prep Gun	4-8 GPM (15.1 -30.3 LPM)	900-1300 PSI (62-90 BAR)	2400 Series
In-Bay Automatic (Touchless)	25-47 GPM (94.6 -177.9 LPM)	900-1300 PSI (62-90 BAR)	2500 Series
Tunnel (Touchless)	25-47 GPM (94.6 -177.9 LPM)	900-1300 PSI (62-90 BAR)	2500 Series

# Pump Cross Reference Guide

Over time, pumps wear out and need replacing. When it comes time to replace or upgrade your current pump, do so with a new Hypro pump. The unparalleled support of a 5-year warranty on material and workmanship makes Hypro the best choice.

Use the cross reference guide below to easily find the Hypro model that is most similar to your current pump model. If you have any questions, call our technical and service department at 1-800-445-8360.

Model Number	GPM	PSI	RPM	Weight (lbs.)
Hypro 2230B-P	3.0	2000	1725	14
General HTX1810S	2.7/3.1	2000	1450/1750	18
Comet LW3020S	3.0	2000	1450	13.4

Model Number	GPM	PSI	RPM	Weight (lbs.)
Hypro 2359B-P	3.5	3000	1725	19
General TX1513S17	3.0	3000	1750	19

Model Number	GPM	PSI	RPM	Weight (lbs.)
Hypro 2351B-P	4.0	3000	1725	19
Cat 4SF40ELS	4.0	3500	1725	24.31
General T9211-N	4.0	3000	1750	32

Model Number	GPM	PSI	RPM	Weight (lbs.)
Hypro 2434B-P	7.9	2500	1725	41
Comet TWN8025S	8.0	2500	1000	44

Model Number	GPM	PSI	RPM	Weight (lbs.)
Hypro 2314B-P/2414B-P	4/4	1200/1800	1450/1100	20/41
Cat 310/5CP2120	4/4	2200/2500	950/950	19.8/19.14
General CW2040	5	1500	1250	30

Model Number	GPM	PSI	RPM	Weight (lbs.)
Hypro 2411B-P	5.3	2500	1725	41
Cat 530	5	2500	1100	25.5

Model Number	GPM	PSI	RPM	Weight (lbs.)
Hypro 2414B-P	6/8	1800	1200/1725	41
Cat 623	6	1200	850	34.6

Model Number	GPM	PSI	RPM	Weight (lbs.)
Hypro 2412B-P	5.9	2500	1725	41
General TS1021	5.6	1700	1450	32

Model Number	GPM	PSI	RPM	Weight (lbs.)
Hypro 2414B-P	8	1800	1725	41
General TS1041	8	1600	1450	46

Model Number	GPM	PSI	RPM	Weight (lbs.)
Hypro 2535S	38	1200	800	141
Cat 3535	36	1200	800	139

Model Number	GPM	PSI	RPM	Weight (lbs.)
Hypro 2545S	47	1200	800	141
Cat 3545	47	1000	765	139

# 2535S/2545S Pumps



Shown with optional mounting kit (kit P/N 3430-0645)

The Hypro stainless steel series triplex plunger pumps are designed for durability, top performance, and convenient servicing.

The 316 stainless steel two-piece manifold minimizes washout and corrosion. A strong power end including oversized crankshaft, bearings, and connecting rods easily handles abuse caused by start-up and intermittent operation.

## HEAD

- 100% 316 stainless steel head and two-piece manifold resists washout and corrosion
- Stainless steel fasteners provide additional protection against environmental elements
- Heavy-duty, high pressure seals and back-up washers are included to guard against corrosion and continuous duty fatigue
- Precision-machined, stainless steel valve and seats provide higher resistance to chemical attack
- Self-adjusting, spring-loaded, double V-packings maintain constant high pressure seal compression and extend seal and plunger life
- High density ceramic plungers increase the high pressure seal life
- Lifetime warranty on the stainless steel head

## BODY

- Oversized crankshaft, bearings and bronze connecting rod can handle the abuse of cold start-ups and intermittent operation
- Forged stainless steel plunger rod stepped between plunger guide and oil seal eliminates seal failure due to plunger rod wear
- Heavy-duty oil seals for longer life
- 5-year warranty on material & workmanship

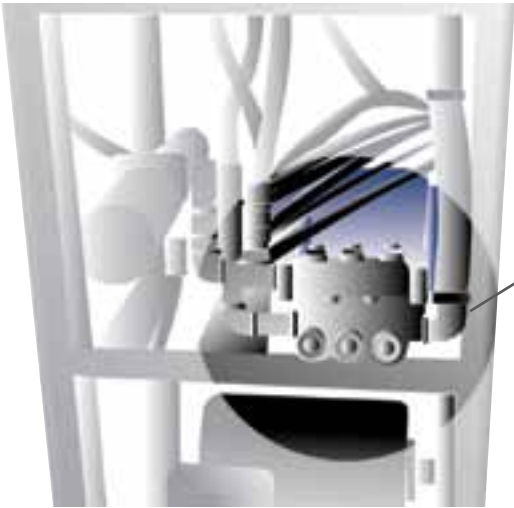
### 2535S Triplex Plunger Pump

Model Number	Max. GPM	Max. PSI	Max. RPM	Inlet Port	Outlet Port
2535S	38	1200	800	1 1/2" NPT	1" NPT

### 2545S Triplex Plunger Pump

Model Number	Max. GPM	Max. PSI	Max. RPM	Inlet Port	Outlet Port
2545S	47	1200	800	1 1/2" NPT	1" NPT

# High Performance, Low Maintenance



Hypro's innovative design features allow for easy installation into most brands of car washes. The pump carries the same mounting configurations as the leading competitors and is a drop-in replacement for CAT PUMPS® 3535 & 3545.

Base rail kit # 3430-0645 is also available for applications that require some modifications.

### 2535S Mobile Repair Kit Model Number: 3430-0699

- Complete kit to rebuild the wet-end of the 2535S plunger pump
- Replace individual parts as needed or the entire wet-end
- As parts are used, reorder to keep mobile kit fully stocked
- Save time and money by having all the parts at your finger tips in an easy-to-carry case

**Contains:**

- 3010-0168 Tool Box
- 3430-0640 Valve Kit
- 3430-0641 Packing Kit
- 3430-0643 Plunger Seal Kit
- 3430-0644 Rod Oil Seal Kit
- 9910-621010 Bolt to Remove Valves
- 2160-0061 Anti-Seize Tube
- 3010-0250 Tool for Installing Cups
- L-1500 Repair Manual



### HIGH FLOW PRESSURE REGULATOR/RELIEF VALVE

- Longest life pressure regulator available in the industry, outperforming the competition by up to 5 times
- Heavy-duty design for maximum durability
- Patent-pending design lets you rebuild valve to 100% new performance
- New cartridge design allows you to repair the valve without removing it from the system
- Balance design allows for smooth transitioning from regulating to relief without damaging pressure spikes to the pump system
- Provides system pressure setting and protection for single or multiple gun and pump systems from 20 gpm to 55 gpm
- Two port size options (3/4" and 1") to easily retrofit into most car wash systems
- Can be setup for use as a pressure regulator or a relief valve
- Max pressure: 2000 psi

**Order Information**

1	Model Number	3300-0102	3/4" x 1/2" Version	260-2000 PSI
2	Model Number	3300-0103	1" x 1" Version	260-2000 PSI



# 2400B-P Series Pump



## HEAD

- Single-piece forged brass heads
- Quick and easy pump packing replacement
- Precision-machined stainless steel valve and seats provide higher resistance to chemical attack
- 100% ceramic plungers
- Dual low pressure packing design for improved priming capabilities
- Lifetime warranty on single-piece forged brass heads

## POWERLINE® PLUS OPTIONS

- Left-hand shaft extension - Add suffix "L" - example 2414B-LP

## BODY

- Hypro's state-of-the-art, patented cartridge technology allows the crankcase oil seals and all wet-end seals to be easily serviced by removing only the pump head
- Hardened stainless steel lower plungers offer superior corrosion and wear resistance
- Longer lasting drive system with heavy-duty ball bearings
- Bronze piston guides give you larger bearing surface for extended life on oil seals and plungers
- Heavy-duty oil seals
- O-ring sealed dipstick
- 5-year warranty on material & workmanship

## 1" OD Solid Shaft Forged Brass Head Triplex Pumps with Rail Mounting Kit

Model Number	Max. GPM	Max. PSI	Max. RPM	Inlet Port	Outlet Port
2410B-P	4.4	2500	1725	3/4"	1/2"
2411B-P	5.3	2500	1725	3/4"	1/2"
2412B-P	5.9/4.0	2500	1725/1100	3/4"	1/2"
2413B-P	7.2	1800	1725	3/4"	1/2"
2414B-P	8.0/4.0	1800	1725/1100	3/4"	1/2"

## 2430B-P Triplex Plunger Pump

Model Number	Max. GPM	Max. PSI	Max. RPM	Inlet Port	Outlet Port
2430B-P	4.3	3600	1725	3/4"	1/2"
2431B-P	5.1	3600	1725	3/4"	1/2"
2432B-P	5.8	3600	1725	3/4"	1/2"
2433B-P	7.1	2500	1725	3/4"	1/2"
2434B-P	7.9	2500	1725	3/4"	1/2"

## SUGGESTED ACCESSORIES



**Gear Box** page 29

Model Number
8000-0015
8000-0021



**Unloaders** page 23

Model Number
3390-0102
3390-0076



**Base Rails**

Model Number	Outlet Port
3430-0304	for CAT 310
3430-0305	for CAT 530



**Flange Kit** page 28

Model Number
8000-0017
8000-0018



# 2300B-P Series Pump



## POWERLINE® PLUS OPTIONS

- Left-hand shaft extension - Add suffix "L" - example 2351B-LP

### 3/4" OD Solid Shaft Forged Brass Head Triplex Pumps with Rail Mounting Kit

Model Number	Max. GPM	Max. PSI	Max. RPM	Inlet Port	Outlet Port
2303B-P	3.1	1200	1725	1/2"	3/8"
2304B-P	4.2	1200	1725	1/2"	3/8"
2314B-P	4.0/3.0	1200	1450/1100	1/2"	3/8"

### 3/4" OD Solid Shaft With M6X1" Tapped Thread Forged Brass Head Triplex Pumps with Rail Mounting Kit

Model Number	Max. GPM	Max. PSI	Max. RPM	Inlet Port	Outlet Port
2359B-P	3.5	3000	1725	1/2"	3/8"

## SUGGESTED ACCESSORIES



Unloaders page 25

Model Number
3390-0104/3A
3390-0104/3B
3390-0105



Flange Kit page 28

Model Number
8000-0003
8000-0010
8000-0043



Pulsation Dampener page 29

Model Number
3375-0015-x
3375-0017-x

**Note:** Add # after - for Maximum charge designation example 3375-0015-**8** = 800 psi, 3375-0017-**7** = 700 psi (in 100 psi increments beginning at 200 psi)

## HEAD

- Single-piece forged brass heads
- Quick and easy pump packing replacement
- Precision-machined stainless steel valve and seats provide higher resistance to chemical attack
- 100% ceramic plungers
- Dual low pressure packing design for improved priming capabilities
- Lifetime warranty on single-piece forged brass heads

## BODY

- Hypro's state-of-the-art, patented cartridge technology allows the crankcase oil seals and all wet-end seals to be easily serviced by removing only the pump head
- Hardened stainless steel lower plungers offer superior corrosion and wear resistance
- Heavy-duty oil seals
- O-ring sealed dipstick
- 5-year warranty on material & workmanship

### 3/4" OD Solid Shaft Forged Brass Head Triplex Pumps with Rail Mounting Kit

Model Number	Max. GPM	Max. PSI	Max. RPM	Inlet Port	Outlet Port
2330B-P	3.1	2500	1725	1/2"	3/8"
2359B-P	3.5	3000	1725	1/2"	3/8"
2351B-P	4.0	3000	1725	1/2"	3/8"
2340B-P	4.2	2500	1725	1/2"	3/8"
2345B-P	4.8	2500	1725	1/2"	3/8"

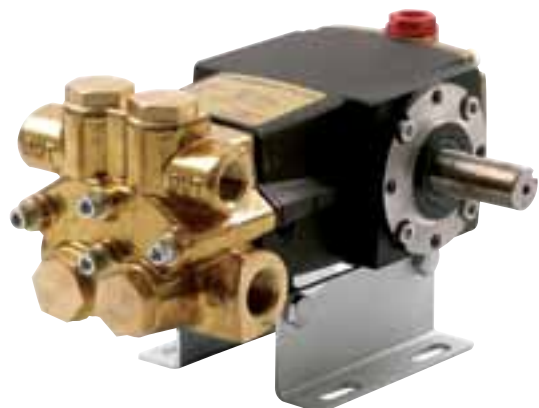
### 3/4" ID Hollow Shaft Forged Brass Head Triplex Pumps Flanged for Direct Couple to Gasoline Engines

Model Number	Max. GPM	Max. PSI	Max. RPM	Inlet Port	Outlet Port
2354B-CP	2.7	2000	3450	1/2"	3/8"
2331B-CP	3.0	1500	3450	1/2"	3/8"

### 3/4" OD Solid Shaft Forged Brass Head Triplex Pumps with 6" Electric Clutch Assembly and Rail Mounting Kit

Model Number	Max. GPM	Max. PSI	Max. RPM	Inlet Port	Outlet Port
2359B-PY	3.5	3000	1725	1/2"	3/8"

# 2200B-P Series Pump



## POWERLINE® PLUS OPTIONS

- Left-hand shaft extension - Add suffix "L" - example 2220B-LP

## HEAD

- Single-piece forged brass heads
- Quick and easy pump packing replacement
- Precision-machined stainless steel valve and seats provide higher resistance to chemical attack
- 100% ceramic plungers
- Dual low pressure packing design for improved priming capabilities
- Lifetime warranty on single-piece forged brass heads

## BODY

- Hypro's state-of-the-art, patented cartridge technology allows the crankcase oil seals and all wet-end seals to be easily serviced by removing only the pump head
- Hardened stainless steel lower plungers offer superior corrosion and wear resistance
- Heavy-duty oil seals
- O-ring sealed dipstick
- 5-year warranty on material & workmanship

## 3/4" OD Solid Shaft Forged Brass Head Duplex Pumps with Rail Mounting Kit

Model Number	Max. GPM	Max. PSI	Max. RPM	Inlet Port	Outlet Port
2220B-P	2.1	2000	1725	1/2"	3/8"
2221B-P	2.1	1500	3450	1/2"	3/8"
2230B-P	3.0	2000	1725	1/2"	3/8"
2231B-P	3.0	1500	3450	1/2"	3/8"

## 5/8" ID Hollow Shaft Forged Brass Head Duplex Pumps with Torque Arm

Model Number	Max. GPM	Max. PSI	Max. RPM	Inlet Port	Outlet Port
2220B-HP	2.1	2000	1725	1/2"	3/8"
2221B-HP	2.1	1500	3450	1/2"	3/8"
2230B-HP	3.0	2000	1725	1/2"	3/8"
2231B-HP	3.0	1500	3450	1/2"	3/8"

## 5/8" ID Hollow Shaft Forged Brass Head Duplex Pumps Flanged for Direct Couple to Electric Motors (NEMA 56C)

Model Number	Max. GPM	Max. PSI	Max. RPM	Inlet Port	Outlet Port
2220B-AP	2.1	2000	1725	1/2"	3/8"
2221B-AP	2.1	1500	3450	1/2"	3/8"
2230B-AP	3.0	2000	1725	1/2"	3/8"
2231B-AP	3.0	1500	3450	1/2"	3/8"

## 3/4" ID Hollow Shaft Forged Brass Head Duplex Pumps Flanged for Direct Couple to Gasoline Engines

Model Number	Max. GPM	Max. PSI	Max. RPM	Inlet Port	Outlet Port
2231B-CP	3.0	1500	3450	1/2"	3/8"

## SUGGESTED ACCESSORIES



Unloaders page 25

Model Number
3390-0104/3A
3390-0104/3B
3390-0105



Flange Kit page 28

Model Number
8000-0003
8000-0010
8000-0043



Pulsation Dampener page 29

Model Number
3375-0015-x
3375-0017-x

**Note:** Add # after - for Maximum charge designation example 3375-0015-**8** = 800 psi, 3375-0017-**7** = 700 psi (in 100 psi increments beginning at 200 psi)

For technical information, see page 39.

# 5300 Series Small Twin Pump



## PISTON PUMP

- Port sizes: 1/2" inlet, 1/2" outlet
- Max. fluid temperature: 140°F/60°C
- Weight: 10 lbs./4.5 kg
- Pump shaft rotation: bi-rotational
- Cups: Leather (-X) standard for 5300 Series [Buna-N (-RX), Teflon (-CX) available]
- Models require a pulsation dampener (such as a 3375-0012 pulse hose) on the discharge side

## PLUNGER PUMP

- Port sizes: 1/2" inlet, 1/2" outlet
- Max. fluid temperature: 180°F/82°C
- Weight: 11 lbs./5 kg
- Pump shaft rotation: bi-rotational
- Models 5321 and 5322 require a pulsation dampener (such as a 3375-0012 pulse hose) on the discharge side

### 5/8" ID Hollow Shaft Cast Iron Small Twin Piston Pumps with Torque Arm

Model Number	Max. GPM	Max. PSI	Max. RPM	CUP Material	NPT Ports
Max. Temperature is 140° F					
5315C-HX	1.5	500	1800	Leather	1/2"
5315C-HRX	1.5	500	1800	Buna-N	1/2"
5315C-CHX	1.5	500	1800	Teflon	1/2"
5320C-HX	2.0	500	1800	Leather	1/2"
5320C-HRX	2.0	500	1800	Buna-N	1/2"
5320C-CHX	2.0	500	1800	Teflon	1/2"
5325C-HX	2.5	500	1800	Leather	1/2"
5325C-HRX	2.5	500	1800	Buna-N	1/2"
5325C-CHX	2.5	500	1800	Teflon	1/2"
5330C-HX	3.0	500	1800	Leather	1/2"
5330C-HRX	3.0	500	1800	Buna-N	1/2"
5330C-CHX	3.0	500	1800	Teflon	1/2"

### 5/8" ID Hollow Shaft Cast Iron Small Twin Plunger Pumps with Torque Arm and Buna-N Seals

Model Number	Max. GPM	Max. PSI	Max. RPM	Plunger Material	NPT Ports
Max. Temperature is 180° F					
5321C-H	2.2	1000	1800	S.S	1/2"
5322C-H	2.2	1000	1800	Ceramic	1/2"
Max. Temperature is 140° F					
5324C-H	2.9	800	1800	S.S	1/2"

## SUGGESTED ACCESSORIES



Pulsation Dampener page 29

Model Number
3375-0015-x
3375-0017-x



Injection Head page 26

Model Number
3396-0014



Unloaders page 23

Model Number
3390-0062D
3390-0063D
3390-0067D

Note: Add # after - for Maximum charge designation example 3375-0015-8 = 800 psi, 3375-0017-7 = 700 psi (in 100 psi increments beginning at 200 psi)

For technical information, see pages 43-44.

### 5/8" OD Solid Shaft Cast Iron Small Twin Piston Pumps with Base

Model Number	Max. GPM	Max. PSI	Max. RPM	CUP Material	NPT Ports
Max. Temperature is 140° F					
5315C-X	1.5	500	1800	Leather	1/2"
5315C-RX	1.5	500	1800	Buna-N	1/2"
5315C-CX	1.5	500	1800	Teflon	1/2"
5320C-X	2.0	500	1800	Leather	1/2"
5320C-RX	2.0	500	1800	Buna-N	1/2"
5320C-CX	2.0	500	1800	Teflon	1/2"
5325C-X	2.5	500	1800	Leather	1/2"
5325C-RX	2.5	500	1800	Buna-N	1/2"
5325C-CX	2.5	500	1800	Teflon	1/2"
5330C-X	3.0	500	1800	Leather	1/2"
5330C-RX	3.0	500	1800	Buna-N	1/2"
5330C-CX	3.0	500	1800	Teflon	1/2"

### 5/8" OD Solid Shaft Cast Iron Small Twin Plunger Pumps with Base and Buna-N Seals

Model Number	Max. GPM	Max. PSI	Max. RPM	Plunger Material	NPT Ports
Max. Temperature is 180° F					
5321C	2.2	1000	1800	S.S	1/2"
5322C	2.2	1000	1800	Ceramic	1/2"
Max. Temperature is 140° F					
5324C	2.9	800	1800	S.S	1/2"

### Hollow Shaft Cast Iron Small Twin Plunger Pumps with Torque Arm, Buna-N Seals and Ceramic Plungers

Model Number	Max. GPM	Max. PSI	Max. RPM	Shaft ID Size	NPT Ports
Max. Temperature is 140° F					
53702	2.2	1000	3450	5/8"	1/2"
53703*	2.3	1000	3100	5/8"	1/2"

\* Packaged in quantities of 6. For single packs, replace "8000-" with "8009."

# Hydraulically-Driven Pressure Washers

Offering 3-4 gpm Cleaning Power



- Anodized, die-cast aluminum crankcase
- Heavy-duty, corrosion-resistant brass manifold
- One-piece, forged-bronze connecting rods
- Stainless steel valves
- Hardened, stainless steel piston guides
- Solid ceramic plungers
- High pressure and low pressure packings of high-quality buna textile
- Heavy-duty, ball bearing supported crankshaft
- Sight glass and oil-level dipstick
- Hydraulic ports: 1/2" NPT inlet, 3/4" NPT outlet

The hydraulically-driven pressure washers are ideally suited for remote and explosion-proof environments where electricity cannot be used. These models are equipped with a hydraulic motor-driven, triplex plunger pump; and include an unloader, gauge and quick disconnect. Some models include a chemical injector, 50' pressure wash hose, trigger gun and insulated wand with adjustable Hi-Lo and Variable-Angle cleaning nozzle. See chart below for details.

Model Number	Max	Max	Hydraulic Motor Requirements		Description	Weight
	GPM	PSI	GPM	PSI		LBS
	LPM	BAR	LPM	BAR		KG
1802C*	3.0	1000	5.0	1300	Forged Brass Head Triplex Pumps with hydraulic motor, adjustable unloader, gauge, 1/2" NPT input, 3/8" quick disconnect output	38
	11.4	68.9	18.9	89.6		17.2
1803C	3.0	1000	5.0	1300		28
	11.4	68.9	18.9	89.6		12.7
1804C*	3.0	1500	8.0	1900	Forged Brass Head Triplex Pumps with hydraulic motor, chemical injector, adjustable unloader, gauge, 3/4" GH input, 3/8" quick disconnect output	41
	11.4	103.4	30.3	131.0		18.6
1805C	3.0	1500	8.0	1900		26
	11.4	103.4	30.3	131.0		11.8
1806C*	3.0	2000	11.0	1300	Forged Brass Head Triplex Pumps with hydraulic motor, chemical injector, adjustable unloader, gauge, 3/4" GH input, 3/8" quick disconnect output	41
	11.4	137.9	41.6	89.6		18.6
1807C	3.0	2000	11.0	1300		26
	11.4	137.9	41.6	89.6		11.8
1824C*	4.0	1500	8.5	2000	Forged Brass Head Triplex Pumps with hydraulic motor, chemical injector, adjustable unloader, gauge, 3/4" GH input, 3/8" quick disconnect output	49
	15.1	103.4	32.2	137.9		22.2
1825C	4.0	1500	8.5	2000		33
	15.1	103.4	32.2	137.9		14.9
1826C*	4.0	2000	8.5	2000	Forged Brass Head Triplex Pumps with hydraulic motor, chemical injector, adjustable unloader, gauge, 3/4" GH input, 3/8" quick disconnect output	49
	15.1	137.9	32.2	137.9		22.2
1827C	4.0	2000	8.5	2000		33
	15.1	137.9	32.2	137.9		14.9

\*Includes 50 ft. hose and gun assembly.

# Nozzles

Selecting the correct material and type of nozzle for your application can help reduce costs, improve productivity and decrease environmental impact.

Worn nozzles can decrease pump life, waste chemical and decrease the effectiveness of your equipment, resulting in higher maintenance and chemical costs and reduced customer satisfaction.

Hypro's line of nozzles are available in a variety of materials to meet your pressure and chemical requirements:

- Ceramic for superior wear
- Hardened stainless steel for high pressure
- PVDF for acid and alkaline applications



**SPRAY TIP SELECTION GUIDE**

			Turbo Nozzles - High Pressure Rotary - Sudden Impact™	UAS - Ceramic	HP - Hardened Stainless Steel	APM - Wide-Angle Flat Flood	AVI - Air Induced	DT - DeflecTip™ Wide-Angle Flat Flood	FP - FulcoJet™ Full Cone PVDF	FanJet - Flat Fan PVDF
Page Number			12	13	14	16	16	17	17	18
<b>Pre-soak</b>	Pressure: Flow Rate: Impact: Angle: Drop Size:	low low low wide large								
<b>Wash</b>	Pressure: Flow Rate: Impact: Angle: Drop Size:	high medium high narrow large								
<b>Rinse</b>	Pressure: Flow Rate: Impact: Angle: Drop Size:	low high medium medium large								
<b>Wax</b>	Pressure: Flow Rate: Impact: Angle: Drop Size:	low low low medium fine								
<b>Final Rinse</b>	Pressure: Flow Rate: Impact: Angle: Drop Size:	low low low medium to wide medium to fine								
<b>Self Service</b>	Pressure: Flow Rate: Impact: Angle: Drop Size:	low low to medium high narrow medium to large								

# Sudden Impact®

## High Impact Car Wash Nozzle

**25% WATER SAVINGS!  
5X'S THE LIFE!**



- Provides a high impact, controlled rotation 0° water stream with much greater impact and cleaning efficiency than other nozzles which reduces wash time & increases thru-put
- Lasts up to five times longer than other rotating nozzles on the market, reducing operating costs over the life of the car wash
- Improved cleaning efficiency over other rotating nozzles reduces water consumption by up to 25%
- Tungsten carbide seat and nozzle provide unmatched wear and shatter resistance over ceramic material commonly utilized in other nozzles
- High strength, forged housing available in economical brass or corrosion-resistant 304 stainless steel
- Elastomer cover protects vehicles and nozzles
- Precision-machined bearing in rotor offers very high wear resistance and optimal impact
- Available with 24° pattern for maximum impact or 30° pattern for extra coverage
- BSP-style connection available in 24° brass (sizes 2.0, 3.5, 4.5) for use in Mark VII® washes

Sample Part Number: **TUR324B-2.0**

Breakdown:

**TUR 324 B - 2.0**  
series material size  
brass 2.0

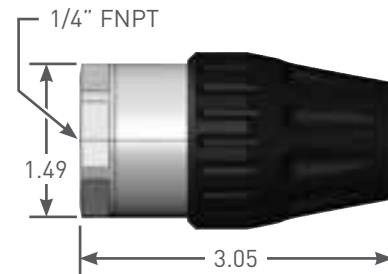
### Nozzle Specifications

Series	Pressure*	Ideal Impact Distance	Material	Angle	Temperature
TUR324B-x.x	1750	20"-30"	Brass	24°	180° F
TUR324S-x.x	3000	20"-30"	Stainless	24°	180° F
TUR330B-x.x	1300	15"-25"	Brass	30°	180° F
TUR330S-x.x	3000	15"-25"	Stainless	30°	180° F

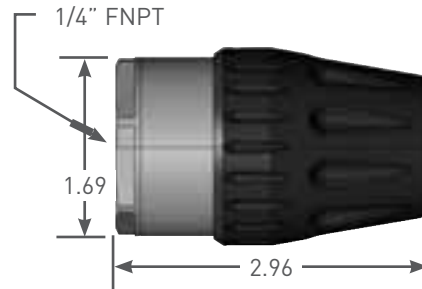
\*See rate chart below for specific information

Spray Nozzle Size	Flow Rate (US GPM)										
	Pressure (PSI)										
	800	900	1000	1100	1200	1500	2000	2250	2500	2750	3000
2.0	0.89	0.95	1.00	1.05	1.10	1.22	1.41	1.50	1.58	1.66	1.73
3.0	1.34	1.42	1.50	1.57	1.64	1.84	2.12	2.25	2.37	2.49	2.60
3.5	1.57	1.66	1.75	1.84	1.92	2.14	2.47	2.63	2.77	2.90	3.03
4.0	1.79	1.90	2.00	2.10	2.19	2.45	2.83	3.00	3.16	3.32	3.46
4.5	2.01	2.13	2.25	2.36	2.46	2.76	3.18	3.38	3.56	3.73	3.90
5.0	2.24	2.37	2.50	2.62	2.74	3.06	3.54	3.75	3.95	4.15	4.33
5.5	2.46	2.61	2.75	2.88	3.01	3.37	3.89	4.13	4.35	4.56	4.76
6.0	2.68	2.85	3.00	3.15	3.29	3.67	4.24	4.50	4.74	4.97	5.20

### 324



### 330



### Sample Part Number

TUR	3	24	B	-	2.0
Model	Size	Angle	Material	Dash	Nozzle Number
Turbo (NPT)	3	24° or 30°	"B" Brass or "S" Stainless	-	2.0, 3.0, 3.5, 4.0, 4.5, 5.0, 5.5, 6.0
Turbo (BSP) for Mark VII® Washes*	3	24°	"B" Brass	-	2.0, 3.5, 4.5

Note: BSP Models: Add suffix "BSP" -example TUR324B-2.0BSP

# UAS - Ceramic Nozzle

**10X'S THE LIFE  
OVER  
STAINLESS!**



Sample Part Number: UAS1/4-25-04

Breakdown:

**UAS 1/4 - 25 - 04**  
 model connection spray angle size  
 UAS 1/4" NPT 25° 04

- Ceramic inserts provide up to 10 times the life of hardened stainless steel, maximizing your return on investment and decreasing downtime for nozzle replacement
- Extra long-life ceramic orifice is nearly diamond-hard to resist wear
- Molded ceramic virtually eliminates chemical and mineral buildup in the orifice area
- Wear characteristics make the UAS nozzle ideal for reclaim systems
- The U-shaped outlet provides a high-impact spray without additional inserts
- Wedge-shaped orifice insert seats tightly as spray pressures increase
- Precision-machined stainless steel carriers resist corrosion and damage
- High quality components easily withstand wash pressures of 800 to 5000 psi
- 1/4" NPT connection fits all common applications
- Permanent laser-etched part number markings ease identification
- Comes in spray angles of 0°, 15°, 25°, 40°

Spray Nozzle Size	Flow Rate (US GPM)												
	Pressure (PSI)												
	800	900	1000	1200	1500	1800	2000	2500	3000	3500	4000	4500	5000
015	0.67	0.71	0.75	0.82	0.92	1.01	1.06	1.19	1.30	1.40	1.50	1.59	1.68
02	0.89	0.95	1.00	1.10	1.22	1.34	1.41	1.58	1.73	1.87	2.00	2.12	2.24
025	1.12	1.19	1.25	1.37	1.53	1.68	1.77	1.98	2.17	2.34	2.50	2.65	2.80
03	1.34	1.42	1.50	1.64	1.84	2.01	2.12	2.37	2.60	2.81	3.00	3.18	3.35
035	1.57	1.66	1.75	1.92	2.14	2.35	2.47	2.77	3.03	3.27	3.50	3.71	3.91
04	1.79	1.90	2.00	2.19	2.45	2.68	2.83	3.16	3.46	3.74	4.00	4.24	4.47
045	2.01	2.13	2.25	2.46	2.76	3.02	3.18	3.56	3.90	4.21	4.50	4.77	5.03
05	2.24	2.37	2.50	2.74	3.06	3.35	3.54	3.95	4.33	4.68	5.00	5.30	5.59
055	2.46	2.61	2.75	3.01	3.37	3.69	3.89	4.35	4.76	5.14	5.50	5.83	6.15
06	2.68	2.85	3.00	3.29	3.67	4.02	4.24	4.74	5.20	5.61	6.00	6.36	6.71
065	2.91	3.08	3.25	3.56	3.98	4.36	4.60	5.14	5.63	6.08	6.50	6.89	7.27
07	3.13	3.32	3.50	3.83	4.29	4.70	4.95	5.53	6.06	6.55	7.00	7.42	7.83
08	3.58	3.79	4.00	4.38	4.90	5.37	5.66	6.32	6.93	7.48	8.00	8.49	8.94
09	4.02	4.27	4.50	4.93	5.51	6.04	6.36	7.12	7.79	8.42	9.00	9.55	10.06
10	4.47	4.74	5.00	5.48	6.12	6.71	7.07	7.91	8.66	9.35	10.00	10.61	11.18
12	5.37	5.69	6.00	6.57	7.35	8.05	8.49	9.49	10.39	11.22	12.00	12.73	13.42



# HP - High Pressure Nozzle

Hardened Stainless Steel



- Achieves up to 16%\* greater impact than competitive high pressure nozzles, making them the best value on the market today
- Hardened 416 stainless steel, the industry standard for long-life
- Reliable performance in high pressure applications up to 4000 psi
- High impact spray in a tightly formed fan pattern
- Consistent, even distribution provides uniform cleaning without overlapping
- Protected outlet design guards the orifice during installation and use
- Versatile 1/4" and 1/8" NPT connections suit a variety of applications
- Comes in spray angles of 0°, 5°, 15°, 25°, 40°
- Improved marking for easy identification and replacement

\*Commissioned with an independent tester

## Available Spray Angles\*\*

In Stock    Available    Contact Factory

Degree	Size														
	02	03	035	04	045	05	055	06	065	07	075	08	085	09	
1/8" NPT	0°	X	X	X	X	X	X	X	X	X	X	X	X		
	5°	X			X		X		X						
	15°	X	X	X	X	X	X	X	X	X	X	X	X	X	
	25°	X	X	X	X	X	X	X	X	X	X	X	X		
	40°	X	X	X	X	X	X	X	X	X	X	X	X		
1/4" NPT	0°	X	X	X	X	X	X	X	X	X	X	X	X		
	5°				X		X					X		X	
	15°	X	X	X	X	X	X	X	X	X	X	X	X		
	25°	X	X	X	X	X	X	X	X	X	X	X	X		
	40°	X	X	X	X	X	X	X	X	X	X	X	X		

Sample Part Number: HP1/4-2504

Breakdown:			
<b>HP</b>	<b>1/4</b>	<b>- 25</b>	<b>- 04</b>
model HP	connection 1/4" NPT	spray angle 25°	size 04

\*\*For additional sizes, please contact Technical/Applications at 1-800-445-8360

Spray Nozzle Size	1/8" NPT	1/4" NPT	Flow Rate (US GPM)													
			Pressure (PSI)													
			300	400	500	600	700	800	1000	1250	1500	2000	2500	3000	3500	4000
02	X	X	0.55	0.63	0.71	0.77	0.84	0.89	1.00	1.12	1.22	1.41	1.58	1.73	1.87	2.00
03	X	X	0.82	0.95	1.60	1.16	1.25	1.34	1.50	1.68	1.84	2.12	2.37	2.06	2.81	3.00
035	X	X	0.96	1.11	1.24	1.36	1.46	1.57	1.75	1.96	2.14	2.47	2.77	3.03	3.27	3.50
04	X	X	1.10	1.26	1.41	1.55	1.67	1.79	2.00	2.24	2.45	2.83	3.16	3.46	3.74	4.00
045	X	X	1.23	1.42	1.59	1.74	1.88	2.01	2.25	2.52	2.76	3.18	3.56	3.90	4.21	4.50
05	X	X	1.37	1.58	1.77	1.94	2.09	2.24	2.50	2.80	3.06	3.54	3.95	4.33	4.68	5.00
055	X	X	1.51	1.74	1.94	2.13	2.30	2.46	2.75	3.07	3.37	3.89	4.35	4.76	5.14	5.50
06	X	X	1.64	1.90	2.12	2.32	2.51	2.68	3.00	3.35	3.67	4.24	4.74	5.20	5.61	6.00
065	X	X	1.78	2.06	2.30	2.52	2.72	2.91	3.25	3.68	3.98	4.60	5.14	5.63	6.08	6.50
07	X	X	1.92	2.21	2.47	2.71	2.93	3.13	3.50	3.91	4.29	4.95	5.53	6.06	6.55	7.00
075	X	X	2.05	2.37	2.65	2.90	3.14	3.35	3.75	4.19	4.59	5.30	5.93	6.50	7.02	7.50
08	X	X	2.19	2.53	2.83	3.10	3.35	3.58	4.00	4.47	4.90	5.66	6.32	6.93	7.48	8.00
085	X		2.33	2.69	3.01	3.29	3.56	3.80	4.25	4.75	5.21	6.01	6.72	7.36	7.95	8.50
09		X	2.46	2.85	3.18	3.49	3.76	4.02	4.50	5.03	5.51	6.36	7.12	7.79	8.42	9.00

# Car Wash Nozzle Kits



Save time by not having to order each replacement tip individually, just order one part number for your model of car wash to receive the entire replacement kit. When you install Hypro spray tips, your wash will be brought back to life with increased performance, making your car wash better than new!

## Oasis® Typhoon Car and Van Wash Kits

Car Wash Kits	Kit Description	Quantity	Contains:
HPTYPHOONCAR	Oasis Typhoon Car Wash 1/8" Hardened Stainless Steel Nozzles	19	HP1/8-1504
		10	HP1/8-15085
		16	HP1/8-2504
HPTYPHOONVAN	Oasis Typhoon Van Wash 1/8" Hardened Stainless Steel Nozzles	7	HP1/8-1503
		14	HP1/8-1504
		10	HP1/8-15085
		4	HP1/8-2503
		14	HP1/8-2504

## PDQ® Laser 4000 Kits

Car Wash Kits	Kit Description	Quantity	Contains:
UASPDQ4000	PDQ Laser 4000 Stainless/Ceramic Nozzles	11	UAS1/4-15-04
		5	UAS1/4-15-05
		1	UAS1/4-25-03
		1	UAS1/4-40-03
HPPDQ4000	PDQ Laser 4000 Arch 1/4" Hardened Stainless Steel Nozzles	11	HP1/4-1504
		5	HP1/4-1505
		1	HP1/4-2503
		1	HP1/4-4003

## Washworld High Velocity® Arch & Under Carriage Kits

Car Wash Kits	Kit Description	Quantity	Contains:
HPWWHV	Wash World High Velocity Arch Nozzles, Hardened Stainless Steel	1	HP1/4-4003
		1	HP1/4-2503
		14	HP1/4-1504
		2	HP1/4-1505
		1	HP1/4-4004
HPWWHVUC	Wash World High Velocity Under-Carriage Nozzles, Hardened Stainless Steel	7	HP1/4-1508
		4	HP1/4-4003
UASWWHV	Wash World High Velocity Arch Nozzles, Premium Ceramic Orifice	1	UAS1/4-40-03
		1	UAS1/4-25-03
		14	UAS1/4-15-04
		2	UAS1/4-15-05
		1	UAS1/4-40-04
UASWWHVUC	Wash World High Velocity Under-Carriage Nozzles, Premium Ceramic Orifice	7	UAS1/4-15-08
		4	UAS1/4-40-03

## D&S 5000™, Super 5000 & Quicksilver, Arch & Wheel Blaster Kits

Car Wash Kits	Kit Description	Quantity	Contains:
HPDS5000	D&S 5000, Super 5000, Quicksilver 38 GPM Arch Nozzles	4	HP1/4-0508
		4	HP1/4-0509
		4	HP1/4-1502
		4	HP1/4-2504
		6	HP1/4-2507
		6	HP1/4-4006
HPDSQ20WB	D&S Quicksilver Wheel Blaster Option Nozzles	4	HP1/8-00065
		4	HP1/8-0504

## APM - Wide-Angle Flat Fan



- Large orifice reduces the chances of blocking and produces coarser droplets
- Pressures from 10 to 60 PSI
- Wide spray angles for close-up coverage
- Wear-resistant Albuz® ceramic orifice and deflectors
- Ideal for low pressure pre-rinse and final rinse

Spray Nozzle Size	Color	Flow rate, US GPM					
		Pressure (PSI)					
		10	20	30	40	50	60
APM-YELLOW	Yellow	0.120	0.170	0.208	0.240	0.268	0.294
APM-ORANGE	Orange	0.200	0.283	0.346	0.400	0.447	0.490
APM-RED	Red	0.31	0.44	0.54	0.62	0.69	0.76
APM-GREEN	Green	0.41	0.58	0.71	0.82	0.92	1.00
APM-BLUE	Blue	0.51	0.72	0.88	1.02	1.14	1.25
APM-GRAY	Gray	0.72	1.02	1.25	1.44	1.61	1.76
APM-BLACK	Black	0.94	1.33	1.63	1.88	2.10	2.30

Sample Part Number: APM - YELLOW

Breakdown:

**APM** - **YELLOW**  
model color  
 APM yellow

## AVI - Air - Induced Nozzle



- Internal venturi draws in air
- Large passages resist plugging
- Wear-resistant Albuz® ceramic orifice
- Pressures from 30 to 150 PSI
- Available in spray angles 80° and 110°
- Ideal for low pressure pre-soak, wax, and final rinse applications

Spray Nozzle Size	Color	Flow rate, US GPM									
		Pressure (PSI)									
		30	40	50	60	70	80	90	100	120	150
01	Orange	0.09	0.10	0.11	0.12	0.13	0.14	0.15	0.16	0.17	0.19
015	Green	0.13	0.15	0.17	0.18	0.20	0.21	0.23	0.24	0.26	0.29
02	Yellow	0.17	0.20	0.22	0.24	0.26	0.28	0.30	0.32	0.35	0.39
025	Lilac	0.22	0.25	0.28	0.31	0.33	0.35	0.38	0.40	0.43	0.48
03	Blue	0.26	0.30	0.34	0.37	0.40	0.42	0.45	0.47	0.52	0.58
04	Red	0.35	0.40	0.45	0.49	0.53	0.57	0.60	0.63	0.69	0.77
05	Brown	0.43	0.50	0.56	0.61	0.66	0.71	0.75	0.79	0.87	0.97
06	Gray	0.52	0.60	0.67	0.73	0.79	0.85	0.90	0.95	1.04	1.16
08	White	0.69	0.80	0.89	0.98	1.06	1.13	1.20	1.26	1.39	1.55
10	Lt. Blue	0.87	1.00	1.12	1.22	1.32	1.41	1.50	1.58	1.73	1.94

Sample Part Number: AVI-11004

Breakdown:

**AVI 110 - 04**  
model spray angle nozzle size  
 AVI 110° 04

# FP - FulcoJet™ Full Cone Nozzle



- Precision-molded orifice provides accurate and consistent full cone spray pattern
- Widely used 1/8" and 1/4" NPT connections
- Available in a variety of standard flow and cone angle options to fit application requirements
- Color coded by flow rate to simplify nozzle installation and replacement
- Excellent wear and chemically-resistant Solef® Polyvinylidene Fluoride (PVDF) polymer
- Ideal for low pressure rinsing, washing, coating, cooling, and additive application

Nozzle	Thread	Color	Cone Angle	Flow Rate (Gallons per Minute) of Water at 68°F											
				Pressure (PSI)											
				10	20	30	40	50	60	70	80	90	100	125	150
90A1FP1.0	1/8" NPT	Orange	45°	0.10	0.14	0.16	0.19	0.21	0.22	0.24	0.25	0.27	0.28	0.31	0.34
90A1FP1.5	1/8" NPT	Red	55°	0.15	0.20	0.25	0.28	0.31	0.34	0.36	0.38	0.40	0.42	0.47	0.51
90A1FP2.0	1/8" NPT	Light Blue	60°	0.20	0.27	0.33	0.37	0.41	0.45	0.48	0.51	0.54	0.56	0.62	0.68
90A1FP3.0	1/8" NPT	Lime Green	50°	0.30	0.41	0.49	0.56	0.62	0.67	0.72	0.76	0.81	0.85	0.93	1.01
90A1FP3.5	1/8" NPT	Terracotta	60°	0.35	0.48	0.57	0.65	0.72	0.78	0.84	0.89	0.94	0.99	1.09	1.18
90A1FP5.0	1/8" NPT	Blue	80°	0.50	0.68	0.82	0.93	1.03	1.12	1.20	1.27	1.34	1.41	1.56	1.69
90A2FP6.5	1/4" NPT	Purple	50°	0.65	0.89	1.07	1.21	1.34	1.46	1.56	1.66	1.75	1.83	2.03	2.20
90A2FP10	1/4" NPT	Olive Green	70°	1.00	1.37	1.64	1.87	2.06	2.24	2.40	2.55	2.69	2.82	3.12	3.38

Sample Part Number: 90A1FP2.0

Breakdown:

<b>90</b>	<b>A1</b>	<b>FP</b>	<b>2.0</b>
material	thread	family	nozzle size
90 = PVDF	A1 = 1/8" NPT A2 = 1/4" NPT	FP	see table

# DT - DeflectTip™ Wide-Angle Flat Flood Nozzle



- Large orifice produces coarser droplets
- Pressures from 10 to 60 PSI
- Large circular orifice reduces the chances of blocking
- Wide spray angles for close-up coverage
- Precision-molded in tough and durable polyacetal
- Ideal for low pressure pre-soak and final rinse applications

Spray Nozzle Size	Color	Flow rate, US GPM					
		Pressure (PSI)					
		10	20	30	40	50	60
0.5	Orange	0.05	0.07	0.09	0.10	0.11	0.12
0.75	Green	0.08	0.11	0.13	0.15	0.17	0.18
1.0	Yellow	0.10	0.14	0.17	0.20	0.22	0.24
1.5	Blue	0.15	0.21	0.26	0.30	0.34	0.37
2.0	Red	0.20	0.28	0.35	0.40	0.45	0.49
2.5	Brown	0.25	0.35	0.43	0.50	0.56	0.61
3.0	Gray	0.30	0.42	0.52	0.60	0.67	0.73
4.0	White	0.40	0.57	0.69	0.80	0.89	0.98
5.0	Lt. Blue	0.50	0.71	0.87	1.00	1.12	1.22
7.5	Lime Green	0.75	1.06	1.30	1.50	1.68	1.84
10	Black	1.00	1.41	1.73	2.00	2.24	2.45
15	Pink	1.50	2.12	2.60	3.00	3.35	3.67
20	Purple	2.00	2.83	3.46	4.00	4.47	4.90

Sample Part Number: 30DT4.0

Breakdown:

<b>30DT</b>	-	<b>4.0</b>
model		nozzle size
30DT		see table

# FanJet™ - Flat Fan PVDF Nozzle



- Most popular selling nozzle for lower pressure car wash applications
- Chemically-resistant Polyvinylidene Fluoride (PVDF) polymer
- Pressures up to 500 PSI
- Available spray angles ranging from 0,15, 25, 40, 65, 80, 95, 110
- One-piece male 1/4" and 1/8" NPT
- Hex body prevents distortion of the orifice and provides quick and easy installation

Sample Part Number: 90A2CM04E80

Breakdown:					
90	A2	CM	04	E	80
material	thread	model	nozzle size	pattern	fan angle
90 = PVDF	A1 = 1/8" NPT A2 = 1/4" NPT	NPT		even fan	degrees

Spray Nozzle Size	Color	Flow rate, US GPM											
		Pressure (PSI)											
		30	40	50	60	70	80	100	150	200	300	400	500
01	Pink	0.09	0.10	0.11	0.12	0.13	0.14	0.16	0.19	0.22	0.27	0.32	0.35
015	Brown	0.13	0.15	0.17	0.18	0.20	0.21	0.24	0.29	0.34	0.41	0.47	0.53
02	Orange	0.17	0.20	0.22	0.24	0.26	0.28	0.32	0.39	0.45	0.55	0.63	0.71
025	Gray	0.22	0.25	0.28	0.31	0.33	0.35	0.40	0.48	0.56	0.68	0.79	0.88
03	Red	0.26	0.30	0.34	0.37	0.40	0.42	0.47	0.58	0.67	0.82	0.95	1.06
04	Lt. Blue	0.35	0.40	0.45	0.49	0.53	0.57	0.63	0.77	0.89	1.10	1.26	1.41
05	Yellow	0.43	0.50	0.56	0.61	0.66	0.71	0.79	0.97	1.12	1.37	1.58	1.77
06	Lime Green	0.52	0.60	0.67	0.73	0.79	0.85	0.95	1.16	1.34	1.64	1.90	2.12
07	Terracotta	0.61	0.70	0.78	0.86	0.93	0.99	1.11	1.36	1.57	1.92	2.21	2.47
08	Moss Green	0.69	0.80	0.89	0.98	1.06	1.13	1.26	1.55	1.79	2.19	2.53	2.83
09	Yellow	0.78	0.90	1.01	1.10	1.19	1.27	1.42	1.74	2.01	2.46	2.85	3.18
10	Blue	0.87	1.00	1.12	1.22	1.32	1.41	1.58	1.94	2.24	2.74	3.16	3.54
14	Purple	1.21	1.40	1.57	1.71	1.85	1.98	2.21	2.71	3.13	3.83	4.43	4.95
15	Emerald Green	1.30	1.50	1.68	1.84	1.98	2.12	2.37	2.90	3.35	4.11	4.74	5.30
20	Olive Green	1.73	2.00	2.24	2.45	2.65	2.83	3.16	3.87	4.47	5.48	6.32	7.07
30	Red	2.60	3.00	3.35	3.67	3.97	4.24	4.74	5.81	6.71	8.22	9.49	10.61
40	Lt. Blue	3.46	4.00	4.47	4.90	5.29	5.66	6.32	7.75	8.94	10.95	12.65	14.14
50	Yellow	4.33	5.00	5.59	6.12	6.61	7.07	7.91	9.68	11.18	13.69	15.81	17.68

## Available Spray Angles\*

Available  Contact Factory

Degree	Size														
	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	1	1.5	2	3	4	5
1/8" NPT	0°			X	X		X		X	X					
	15°									X		X			
	25°			X	X					X					
	40°			X	X	X				X	X				
	65°			X	X	X				X					
	80°	X		X	X	X	X								
	95°														
	110°			X						X					
1/4" NPT	0°			X	X	X	X	X	X	X	X	X	X	X	
	15°			X	X	X	X		X	X	X	X	X		
	25°	X	X	X	X	X	X	X	X	X	X	X	X	X	
	40°	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	65°	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	80°	X	X	X	X	X	X		X	X	X	X	X	X	
	95°				X					X					
	110°				X	X				X				X	

\*For additional sizes, please contact Technical/Applications at 1-800-445-8360

# ProFlo™ Nozzle Bodies

**ProFlo™**

Nozzle Bodies with the Highest Flow Rates in the Industry



## BENEFITS

- Designed to deliver the highest flow rates across the spraying pressure range
- Unique DCV (diaphragm check valve) design reduces restrictions in the flow path, enabling 2.6 gpm with a 5 psi pressure drop through the nozzle
- Automatic spray alignment using flat fan spray tips
- ProFlo nozzle bodies come standard with an 8 psi (.55 bar) diaphragm check valve. 4 psi, 12 psi, 20 psi, and 25 psi checks are available as options.

## FEATURES

- Provides lowest pressure drop at any given flow in the industry
- 2.6 gpm (9.84 lpm) with a 5 psi (.345 bar) pressure drop
- Positive shutoff between each spray position



# ProFlo™ Nozzle Bodies

## Threaded Single Nozzle Bodies-with DCV



Seal Options/ Housing Reference	1/4" MNPT x 1/4" FNPT			1/4" MNPT x Bayonet	11/16" UNF x Bayonet
	4 PSI	8 PSI	25 PSI	8 PSI	8 PSI
EPDM/Red	4240N-F110	4240N-F120	4240N-F150	4240N-B020	4241N-B120U
Viton/Green	4240N-F110V	4240N-F120V	4240N-F150V	4240N-B020V	-

## Single Drop Nozzle Body for Wet Boom



Seal Options/ Housing Reference	(to clamp on) Pipe Size				
	1/2"	3/4"	1"	20mm	25mm
EPDM/Red	4221N-B122	4221N-B123	4221N-B124	4221N-B127	4221N-B128
Viton/Green	4221N-B122V	4221N-B123V	4221N-B124V	4221N-B127V	4221N-B128V

1/4" FNPT Outlet- Substitute B with F (i.e.: 4221N-F122)  
 Sold in Quantities of 100  
 For Individual Bags, Add Suffix -00 (i.e.: 4221N-B322-00)

## Wet Boom Single Nozzle Bodies-No DCV



Single hose barb P/N	Hose ID
4201N-B102	1/2" clamp
4201N-B103	3/4" clamp
4201N-B104	1" clamp

## Replacement Check Valve (DCV) includes Flynut, Housing and Spring



Housing Reference	Spring Pressure (PSI)/Plunger Reference Color				
	4 PSI/Orange	8 PSI/Black	12 PSI/Yellow	20 PSI/Gray	25 PSI/Blue
Red	4200-0010	4200-0020	4200-0030	4200-0040	4200-0050
Green	4200-0010V	4200-0020V	4200-0030V	4200-0040V	4200-0050V

Red housing indicates for use with EPDM Seals. Green housing indicates for use with Viton Seals.  
 Note: Diaphragms are sold separately.

## Replacement Diaphragm Seal Options for check valves



Option	Part Number	Color Reference
EPDM	4200-0004E	Black
Viton	4200-0004V	Green

## Series 404 Swivel and Threaded-Swivel Nozzle Bodies



Part Number	Description
4200N-0020	Single Swivel 1/4" FNPT X Quick Attach
4200N-0021	Double Swivel 1/4" FNPT X 2 Quick Attach
4200N-0023	Single 1/4" FNPT X 11/16" - 16UN(M)
4200N-0024	Double 1/4" FNPT X 11/16" - 16UN(M)
4200N-0025	Red Retaining Cap 11/16" - 16UN(F)
4200N-0026	Black Retaining Cap 11/16" - 16UN(F)

## Ball Nozzle Holders



Part Number	Ball Thread	Attach Method
40867BN	1/4" FNPT	Handlock Clamp 1" pipe
40868BN	1/4" FNPT	Handlock Clamp 1-1/4" pipe
4081B0N	1/4" FNPT	Threaded 1/4" MNPT



# Spray Guns



3381-0017W

**Order Information**

<b>Model Number</b>	3381-0017	3381-0017W; weep version
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**Hypro 17**

- Max. pressure: 2150 psi
- Max. flow: 7.0 gpm, max. temp: 210°F
- 150 bar, 25 L/min., 100°C
- 3/8" (F) NPT inlet; 1/4" (F) NPT outlet
- Stainless steel ball and seat
- Lightweight, yet durable
- Front entry; Thumb set safety
- Consistent weep control at 1/4 gpm (+/-15%) on "W" version



3381-0018W

**Order Information**

<b>Model Number</b>	3381-0018	3381-0018W; weep version
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**Hypro 18**

- Max. pressure: 4000 psi
- Max. flow: 9.0 gpm, max. temp: 300°F
- 280 bar, 30 L/min., 150°C
- 3/8" (F) NPT inlet; 1/4" (F) NPT outlet
- Fast, easy servicing
- Stainless steel ball, seat, spring and glands
- Durable insulated handle; Rear entry
- Reduced trigger pressure; Less operator fatigue
- Consistent weep control at 1/4 gpm (+/-15%) on "W" version



3381-0032W

**Order Information**

<b>Model Number</b>	3381-0032	3381-0032W; weep version
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**Hypro 32**

- Max. pressure: 4000 psi
- Max. flow: 7.0 gpm, max. temp: 300°F
- 280 bar, 27 L/min., 150°C
- 3/8" (F) NPT inlet; 1/4" (F) NPT outlet
- Stainless steel ball, seat, spring and glands
- Durable insulated handle; Rear entry
- Reduced trigger pressure; Less operator fatigue
- Consistent weep control at 1/4 gpm (+/-15%) on "W" version



**Order Information**

<b>Model Number</b>	3365-0002 Chrome Plated
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**Dual Lances**

- Max. pressure: 3000 psi
- Max. flow: 10.5 gpm
- Max. temperature: 300°F
- 1/4" (M) NPT inlet; dual 1/4" (M) outlet
- Insulated lance; insulated selector handle
- Dual-molded nozzle protectors
- 40" length, rotating handle for proper hi/lo nozzle control
- "W" version

# Spray Lances

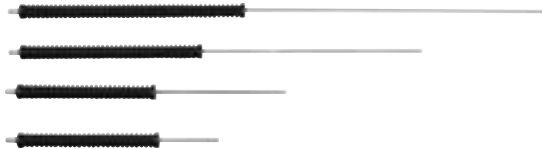


## Zinc-Plated Bent Single Lances

- Max. pressure: 3600 psi
- Max. flow: 10.5 gpm
- Max. temp: 300°F
- 1/4" (M) NPT inlet and outlet
- Insulated handle

### Order Information

Model Number	24"	36"	47"
	3365-0004/24	3365-0004/36	3365-0004/47



## Zinc-Plated Straight Single Lances

- Max. pressure: 3600 psi
- Max. flow: 10.5 gpm
- Max. temp: 300°F
- 1/4" (M)NPT inlet by 1/4" (F)NPT outlet on 24", 36", and 47" lances
- 1/4" (M)NPT inlet by 1/8" (F)NPT outlet on 18" lance
- Insulated handle

### Order Information

Model Number	18"	24"	36"	47"
	3365-0008/18	3365-0005/24	3365-0005/36	3365-0005/47

Note: 3365-0008/18 includes 1/4" (M) inlet and 1/8" (F) outlet



## Rear Entry Spray Gun with Black Lances & Coupler

- Max. pressure: 3500 psi (250 bar)
- Max. flow: 7.0 gpm (27 L/min)
- Max. temp: 300°F (150°C)
- 3/8" (F) NPT inlet; Quick coupling outlet (screw type)
- Stainless steel ball, seat, spring and glands
- Durable insulated handle
- Reduce trigger pressure; Less operator fatigue
- 16" Insulated lance length w/screw coupling

### Order Information

Model Number	3381-0034
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## Zinc-Plated Lance Extensions for previous Gun

- Max. pressure: 3500 psi
- Max. flow: 10.5 gpm
- Max. temp: 300°F
- Quick Coupling inlet; 1/4" (M) NPT outlet

### Order Information

Model Number	14"	24"	36"
	3365-0007/14	3365-0007/24	3365-0007/36

# Unloaders



## Pressure-Activated 3 Port Unloaders

- Works well with 5300 series pumps
- Max. pressure: 200-1500 psi
- Max. flow: 5 gpm
- 3/8" (M) NPT inlet and outlet
- 1/4" (F) NPT bypass
- Buna-N cup

### Order Information

Model Number	200-600 psi	400-1000 psi	800-1500 psi	400-1000 psi	800-1500 psi
	3390-0062D	3390-0063D	3390-0067D	3390-0071D*	3390-0072D*

\* For close-coupled bypass operation with Hypro 2200 and 2300 PowerLine PLUS pumps.  
Bypass not NPT. Use only with 8000-0007 and 8000-0008.



## Pressure-Activated 3 Port Unloaders

- Max. pressure: 2000 psi
- Max. flow: 8 gpm
- Max. temp: 200°F
- 3/8" (M) NPT inlet and outlet
- 3/8" (F) NPT bypass
- Adjustment knob

### Order Information

Model Number	3390-0079
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## Pressure-Activated 3 Port Unloaders

- Max. pressure: 2600 psi
- Max. flow: 8 gpm
- Max. temp: 200°F
- 3/8" (M) NPT inlet and outlet
- 1/4" (F) NPT bypass
- Adjustment knob

### Order Information

Model Number	3390-0102
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## Pressure-Activated 3 Port Unloaders

- Max. pressure: 3600 psi
- Max. flow: 8 gpm
- Max. temp: 200°F
- 3/8" (F) NPT inlet and outlet
- 1/4" (F) NPT bypass
- Adjustment knob

### Order Information

Model Number	3390-0076
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# Unloaders



### Pressure-Activated 5 Port Unloaders

- Max. pressure: 3600 psi
- Max. flow: 8 gpm
- Max. temp: 200°F
- (2) 3/8" (F) NPT inlet
- 3/8" (F) NPT outlet
- (2) 1/4" (F) NPT bypass
- Adjustment knob

#### Order Information

Model Number	3390-0081
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### Pressure-Activated 3 Port Unloaders

- Max. pressure: 200-1000
- Max. flow: 5-6 gpm
- Max. temp: 160°F
- 1/2" (F) NPT inlet and outlet
- 1/2" (F) NPT bypass

#### Order Information

Model Number	Pressure (psi)	GPM	Cup Material
3390-0006	200-500	5	Buna-N
3390-0007	200-500	5	Leather
3390-0037	300-1000	6	Buna-N/Teflon



### Pressure-Activated 3 Port Unloaders

- Max. pressure: 100 to 2000
- Max. flow: 15 gpm
- Max. temp: 200°F
- 3/4" (F) NPT inlet and outlet
- 3/4" (F) NPT bypass

#### Order Information

Model Number	Pressure (psi)	Cup Material
3390-0053	1000-2000	Buna-N

# Unloaders



## Pressure-Activated Unloader/Bypass Kits

- Max. pressure: 400 to 1500
- Max. flow: 5.0 gpm
- Max. temp: 200°F
- Includes complete unloader and bypass assembly
- Kits available for 2200 and 2300 Series PowerLine PLUS pumps

### Order Information

Model Number	Pressure (psi)
8000-0007	400-1000
8000-0008	800-1500



### Order Information

Model Number	GPM Range
3390-0104/3A	2.0-3.2
3390-0104/3B	3.2-4.0

## Closed-Coupled Unloader

- For 2200 & 2300 PowerLine PLUS Pumps
- Max. pressure: 2600 psi
- Max. flow: 8.0 gpm
- Max. temp: 200°F
- 3/8" (M) NPT outlet
- 1/2" (F) NPT inlet
- Bypass to inlet of pump
- Injector orifice: 2 to 4 gpm



### Order Information

Model Number	
	3390-0105

## Closed-Coupled Unloader

- For 2351B-P & 2359B-P PowerLine PLUS Pumps
- Max. pressure: 3200 psi
- Max. flow: 8.0 gpm
- Max. temp: 200°F
- 3/8" (M) NPT outlet
- 1/2" (F) NPT inlet
- Bypass to inlet of pump
- Injector orifice

# Chemical Injectors



## Adjustable & Fixed Chemical Injectors

- Max. pressure: 3200 psi
- Max. temp: 200°F
- 3/8" (F) NPT inlet  
3/8" (M) NPT outlet
- Stainless steel ball and spring
- Forged brass body

### Order Information

Ref. Number		Model Number	GPM Range
1	Adjustable	3396-0031/2.1	3.0 to 4.0
2	Fixed	3396-0034/1.8	0 to 2.9



## Power Adjustable Injector for 2200/2300 Pump

- Max. pressure: 1500-3000 psi
- Max. flow: 2-4.8 gpm
- Max. temp: 140°F - 160°F
- 1/8" (F) NPT inlet
- Quality brass/stainless steel injector assembly
- 9-step calibrated metering for Hypro Series 2200 and 2300 plunger pumps

### Order Information

Model Number	For Models	PSI	Temperature
3396-0011	2200 & 2300	1500	140° F
3396-0025	2200B-P & 2300B-P PowerLine Plus	3000	160° F



## Power Adjustable Injector for 5300 Pump

- Max. temp: 140°F
- 1/8" (F) NPT inlet
- Replaces standard head on Series 5300 and Series 5321 pumps
- Allows precise metering of soaps and liquids
- Features cast iron cylinder head
- 9 step adjustable, needle-type metering assembly
- Long-life brass and stainless steel internal components

### Order Information

Model Number	PSI	GPM Range
3396-0014	500	1.5 to 3 GPM (for 5300CX Pump)
3396-0033/2.3	1000	2 GPM (for 5321 & 5342C Pump)



## Regulator/Relief Valve

- Max. pressure: 2000 psi
- Balanced pressure from 200-2000 psi
- Max. flow: 7.0 gpm
- Max. temp: 160°F
- 3/8" (F) NPT inlet and outlet
- Brass body with stainless steel plunger and seat
- Provides smooth, constant pressure regulation

### Order Information

Model Number	
	3300-0084

# Accessories



## Hi-Lo Variable Nozzle

- Max. pressure: 3000 psi
- Max. temp: 300°F
- 1/4" (F) NPT inlet
- Variable fan pattern, 0° to 80° fan
- Push/pull for pressure adjustment to draw soap
- Twist for fan adjustment
- See tip chart below for gallon @ psi required

## 3324 - Nozzle Capacity

Hypro Part Number		Nozzle Capacity (GPM) at Pump Pressure (PSI)													
Variable	Hi-Lo Variable	Nozzle No.	Orifice Diameter		PSI										
			mm	inches	600	700	800	900	1000	1200	1500	1800	2000	2500	3000
3324-1000.85	3324-2000.85	2.0	.085	.033	.077	0.80	.089	.095	1.00	1.10	1.20	1.35	1.40	1.40	.033
3324-1001.05	3324-2001.05	3.0	1.05	.041	1.22	1.30	1.37	1.45	1.52	1.66	1.86	2.04	2.16	2.42	2.64
3324-1001.1	3324-2001.1	3.5	1.10	.043	1.35	1.43	1.52	1.60	1.68	1.84	2.06	2.26	2.39	2.67	2.91
3324-1001.15	3324-2001.15	3.7	1.15	.045	1.55	1.63	1.72	1.80	1.88	2.03	2.25	2.46	2.59	2.90	3.17
3324-1001.2	3324-2001.2	4.0	1.20	.047	1.60	1.70	1.80	1.90	2.00	2.19	2.45	2.69	2.84	3.17	3.44
3324-1001.25	3324-2001.25	4.3	1.25	.049	1.72	1.83	1.94	2.05	2.16	2.36	2.64	2.90	3.06	3.41	3.70
3324-1001.3	3324-2001.3	4.6	1.30	.051	1.85	1.97	2.09	2.21	2.32	2.54	2.84	3.12	3.29	3.66	3.96
3324-1001.35	3324-2001.35	5.0	1.35	.053	1.97	2.10	2.23	2.36	2.48	2.71	3.04	3.34	3.52	3.92	4.23
3324-1001.4	3324-2001.4	5.3	1.40	.055	2.09	2.23	2.37	2.50	2.63	2.89	3.23	3.55	3.74	4.16	4.49
3324-1001.45	3324-2001.45	5.6	1.45	.057	2.22	2.37	2.52	2.66	2.80	3.06	3.43	3.77	3.97	4.41	4.79
3324-1001.5	3324-2001.5	6.0	1.50	.059	2.34	2.50	2.66	2.81	2.96	3.24	3.63	3.99	4.20	4.66	5.02

Note: Capacity figures shown are representative with water at 70°F. There may be variations due to power supply, temperature, viscosity, additives, etc.

### Variable Order Information

Part Number	Max. PSI	Max. GPM	Max. Temp.	Nozzle No.	Inlet (NPT)	Estimated Weight Ea.
3324-1000.85	3000	8.0	300° F	2.0	1/4" (F)	6 oz.
3324-1001.05	3000	8.0	300° F	3.0	1/4" (F)	6 oz.
3324-1001.1	3000	8.0	300° F	3.5	1/4" (F)	6 oz.
3324-1001.15	3000	8.0	300° F	3.7	1/4" (F)	6 oz.
3324-1001.2	3000	8.0	300° F	4.0	1/4" (F)	6 oz.
3324-1001.25	3000	8.0	300° F	4.3	1/4" (F)	6 oz.
3324-1001.3	3000	8.0	300° F	4.6	1/4" (F)	6 oz.
3324-1001.35	3000	8.0	300° F	5.0	1/4" (F)	6 oz.
3324-1001.4	3000	8.0	300° F	5.3	1/4" (F)	6 oz.
3324-1001.45	3000	8.0	300° F	5.6	1/4" (F)	6 oz.
3324-1001.5	3000	8.0	300° F	6.0	1/4" (F)	6 oz.

### HI/LO Variable Order Information

Part Number	Max. PSI	Max. GPM	Max. Temp.	Nozzle No.	Inlet (NPT)	Estimated Weight Ea.
3324-2000.85	3000	8.0	300° F	2.0	1/4" (F)	6 oz.
3324-2001.05	3000	8.0	300° F	3.0	1/4" (F)	6 oz.
3324-2001.1	3000	8.0	300° F	3.5	1/4" (F)	6 oz.
3324-2001.15	3000	8.0	300° F	3.7	1/4" (F)	6 oz.
3324-2001.2	3000	8.0	300° F	4.0	1/4" (F)	6 oz.
3324-2001.25	3000	8.0	300° F	4.3	1/4" (F)	6 oz.
3324-2001.3	3000	8.0	300° F	4.6	1/4" (F)	6 oz.
3324-2001.35	3000	8.0	300° F	5.0	1/4" (F)	6 oz.
3324-2001.4	3000	8.0	300° F	5.3	1/4" (F)	6 oz.
3324-2001.45	3000	8.0	300° F	5.6	1/4" (F)	6 oz.
3324-2001.5	3000	8.0	300° F	6.0	1/4" (F)	6 oz.



# Accessories



## Thermal Relief Valves (with Barb fittings)

Easy mount valve that safeguards pump from damaging heat generated within recirculating water systems

- Temperature relief: 145°F (63°C)
- Max. psi: 200 (27 mm x 43 mm)
- Brass, stainless steel and Buna-N
- Easy serviceability without removing
- Thermal Relief Valve from pump

### Order Information

Model Number	Description	Max PSI	Relief Temp.	Dimensions
3312-0004	1/2" (M) NPT inlet	200	145°	11/16" hex x 111/16" length
3312-0005*	1/2" (M) NPT inlet	200	145°	11/16" hex x 21/2" length

\* Barb Fittings



## Screw Couplings

- Max. pressure: 3500 psi
- Max. flow: 12 gpm
- Max. temp: 300°F

### Order Information

Model Number	Description	Model Number	Description
3341-0001	3/8" (F) inlet	3341-0003	3/8" (M) inlet
3341-0002	1/4" (F) inlet	3341-0004	1/4" (M) inlet



## Connecting Nipples for Previous Screw Couplings

- Max. pressure: 3500 psi
- Max. flow: 12 gpm
- Max. temp: 300°F

### Order Information

Model Number	Description	Model Number	Description
3341-0005	3/8" (F) inlet	3341-0007	3/8" (M) inlet
3341-0006	1/4" (F) inlet	3341-0008	1/4" (M) inlet



## Flange Kits

### Order Information

Model Number	Description
8000-0003	C-Flange kit; fits NEMA 56C, 143TC and 145TC motors (2200, 2300 and 2350)
8000-0010	C-Flange kit; fits NEMA 182TC and 184TC motors (2200, 2300 and 2350)
8000-0043	C-Flange kit; fits NEMA 213TC and 215TC motors (2200B-P and 2300B-P pumps)
8000-0017	C-Flange kit; fits NEMA 213TC and 215TC motors (2400 and 2430)
8000-0018	C-Flange kit; fits NEMA 182TC and 184TC (2400 and 2430)

# Accessories



## Pulsation Dampeners

These quality-built pulsation dampeners protect your system from damage due to pulsation and vibration. Choose the size and capacity that meets your system's needs. In most applications, the recommended dampener charge is 1/2 of the operating pressure with a 2-piston pump and 2/3 of the operating pressure with a 3-piston pump.

### Order Information

Model Number	Description	Max GPM	Max Charge PSI	Pump
3375-0015-x	1" (F) NPT	35	1000	2500 Series
3375-0017-x	1/2" (F) NPT	6	1000	2000 Series

Note: Add # after - for Maximum charge designation example 3375-0015-8 = 800 psi, 3375-0017-7 = 700 psi (in 100 psi increments beginning at 200 psi)



## Pulsation Dampener Checker

For testing the charge pressure in pulsation dampeners. The proper charge will ensure maximum life and performance of pressure systems.

- Max. pressure: 2000 psi
- 5/16" 32 UNEF (F) connection thread

### Order Information

Model Number	2642-0001
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## Gear Boxes

- Max. pressure: 3200 psi
- Max. temp: 200°F
- 3/8" (F) NPT inlet  
3/8" (M) NPT outlet
- Stainless steel ball and spring
- Forged brass body

### Order Information

Model Number	Description
8000-0015	1.8:1 gearbox kit for mounting 10 hp-18 hp gas engines with a 1 1/8" solid shaft to 2400 and 2430 pumps. Kohler engines.
8000-0021	1.8:1 gearbox kit for mounting 8 hp-18 hp gas engines with a 1" solid shaft to 2400 and 2430 pumps. B & S and Honda engines.



## Pulse Hoses

Quality pulsation dampener hoses constructed of special Hi-Flex horizontally-braided hose.

### Order Information

Model Number	Length	Max PSI	Description
3375-0008	24" length	1500	3/8" (F) NPT x 3/8" (M) NPT
3375-0012	24" length	1500	3/8" (F) NPT (with one plugged end)
3375-0021	25" length	1500	1/4" (M) NPT (with one plugged end)

# Accessories



## Zinc-Plated Steel Port Adapters

### Order Information

Model Number	Port Openings (NPT)			
	1*	2	3	4
2404-0030	1/2"	1/2"	1/2"	1/2"
2404-0019	3/4"	1/2"	1/2"	3/4"

\* Male thread, others female thread. No. 1 and 4 are end openings, 2 and 3 are side openings.



## Float Tank Strainer

### Order Information

Part Number	Tank Outlet Filter	Outlet
3800-0074	1/2"	1/2" M



## Vacuum Switches

- Switches can be used with either AC or DC motors in the ratings shown:
  - DC (32-115-230V): up to 1/2 hp
  - Single or 3 Phase at 110V: up to 2 hp/ 220V: up to 2 hp
- VAC-ON switch automatically shuts off motor when liquid is depleted or vacuum drops to a specific level

### Order Information

Model Number	Max Temp	Description
2510-0001	140° F	VAC-ON; 1.5 Hg vac.
2510-0007	140° F	VAC-ON; 2.5 Hg vac.
2510-0017	140° F	VAC-ON; 4.5 Hg vac.



## Pump Oil

- Reduces scuff and wear in piston and plunger pumps
- Inhibits moisture that causes damage
- Prevents oxidation that could lead to sludge formation
- Resists foaming and aeration that can cause equipment to operate erratically and oil to oxidize
- Provides smooth pump operation in a variety of temperatures

### Order Information

Model Number	Description
2160-0038	1 qt. (12 per carton)
2160-0047	1 gallon (bulk)
2160-0048	2-1/2 gallon (bulk)

# Accessories



## Nylon Line Strainers

150 PSI@70°F, 100 PSI@125°F, 140°F max.

- Available in multiple sizes and screen mesh to suit your system requirements
- Nylon body and cap
- Choice of Buna-N or Viton gasket material
- Stainless steel screens
- Clear polyamide bowls are also available (add letter "P" to model #)



Available in Clear Bowl Only

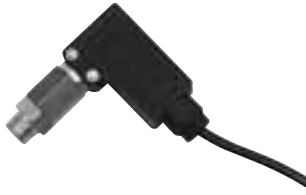


Clear Bowl Shown

Part Number	NPT Threads	Replacement Parts for Nylon Line Strainers				
		Cap	Bowl	Screen	Mesh	Gasket
3350-0085	1/4 I.D. (F) & 1/2 O.D. (M)	3351-0022	3351-0020 (Clear)	3800-0048	20 s.s.	1700-0064 Buna-N
3350-0085F		3351-0022		3800-0048	20 s.s.	1700-0065 Viton
3350-0079		3351-0022		3800-0046	50 s.s.	1700-0064 Buna-N
3350-0079F		3351-0022		3800-0046	50 s.s.	1700-0065 Viton
3350-0082		3351-0022		3800-0047	80 s.s.	1700-0064 Buna-N
3350-0082F	3351-0022	3800-0047	80 s.s.	1700-0065 Viton		
3350-0056	1/2" (F)	3351-0007	3351-0005 (White) or 3351-0015* (Clear)	3800-0029	20 s.s.	1700-0044 Buna-N
3350-0131		3351-0007		3800-0029	20 s.s.	1700-0045 Viton
3350-0046		3351-0007		3800-0025	50 s.s.	1700-0044 Buna-N
3350-0042		3351-0007		3800-0025	50 s.s.	1700-0045 Viton
3350-0043		3351-0007		3800-0026	80 on 20 s.s.	1700-0044 Buna-N
3350-0068		3351-0007		3800-0026	80 on 20 s.s.	1700-0045 Viton
3350-0040	3/4" (F)	3351-0006	3351-0005 (White) or 3351-0015* (Clear)	3800-0029	20 s.s.	1700-0044 Buna-N
3350-0132		3351-0006		3800-0029	20 s.s.	1700-0045 Viton
3350-0034		3351-0006		3800-0025	50 s.s.	1700-0044 Buna-N
3350-0044		3351-0006		3800-0025	50 s.s.	1700-0045 Viton
3350-0035		3351-0006		3800-0026	80 on 20 s.s.	1700-0044 Buna-N
3350-0045		3351-0006		3800-0026	80 on 20 s.s.	1700-0045 Viton
3350-0057	1" (F)	3351-0014	3351-0013 (White) or 3351-0024* (Clear)	3800-0040	20 s.s.	1700-0057 Buna-N
3350-0060		3351-0014		3800-0040	20 s.s.	1700-0058 Viton
3350-0058		3351-0014		3800-0041	50 s.s.	1700-0057 Buna-N
3350-0061		3351-0014		3800-0041	50 s.s.	1700-0058 Viton
3350-0059		3351-0014		3800-0042	80 on 20 s.s.	1700-0057 Buna-N
3350-0062		3351-0014		3800-0042	80 on 20 s.s.	1700-0058 Viton
3350-0071	1 1/4" (F)	3351-0016	3351-0013 (White) or 3351-0024* (Clear)	3800-0043	20 s.s.	1700-0057 Buna-N
3350-0074		3351-0016		3800-0043	20 s.s.	1700-0058 Viton
3350-0072		3351-0016		3800-0044	50 s.s.	1700-0057 Buna-N
3350-0075		3351-0016		3800-0044	50 s.s.	1700-0058 Viton
3350-0073		3351-0016		3800-0045	80 on 20 s.s.	1700-0057 Buna-N
3350-0076		3351-0016		3800-0045	80 on 20 s.s.	1700-0058 Viton
3350-0112	1 1/2" (F)	3351-0026	3351-0013 (White) or 3351-0024* (Clear)	3800-0065	20 s.s.	1700-0057 Buna-N
3350-0115		3351-0026		3800-0065	20 s.s.	1700-0058 Viton
3350-0113		3351-0026		3800-0066	50 s.s.	1700-0057 Buna-N
3350-0116		3351-0026		3800-0066	50 s.s.	1700-0058 Viton
3350-0114		3351-0026		3800-0067	80 on 20 s.s.	1700-0057 Buna-N
3350-0117		3351-0026		3800-0067	80 on 20 s.s.	1700-0058 Viton

\* Clear Polyimide Bowl - Add Suffix "P" - (ie.: 3350-0057P) - 1/2", 3/4", 1", 1 1/4" and 1 1/2".  
1/2", 3/4", 1", 1 1/4" and 1 1/2" have internal (NPT) Female Ports, Type 6 nylon cap bowl.

# Accessories



## Pressure Switch

- Max. Pressure: 3500 psi
- Max. Temp: 200 °F
- Voltage: 12-250 V
- Max. Amp vertical and horizontal mount: 15A
- 3/8" (M) NPT inlet

### Order Information

Model Number	2510-0029
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## Float Switch

- Max. Pressure: 3500 psi
- Max. Flow: 7.8 gpm
- Max. Temp: 180 °F
- Voltage: 12-250 V

### Order Information

Model Number	Mount	Inlet	Outlet
2510-0030	Vertical	3/8" (F)	3/8" (F)
2510-0031	Horizontal	3/8" (M)	3/8" (M)



## Aluminum Line Strainer

- Max. pressure: 100 psi
- Max. flow: 8 gpm
- 1/2" BPS (F) inlet; 1/2" BPS (M) outlet
- Aluminum housing
- 50 mesh screen
- Added bypass hose port G 1/4"

### Order Information

Model Number	3350-0134
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## Suction Strainer

### Order Information

Model Number	Size	Mesh	Material	Opening Size	Overall Dia.
3350-0021	1/4" (ID) plastic tubing	50 mesh	ss screen	(D) .330"	1.25"
3350-0022	1/4" (ID) plastic tubing	50 mesh	ss screen	(D) .330"	1.00"
3350-0033	5/8" (ID) x 61/64" (OD) garden hose	50 mesh	ss screen	(D) .940"	2.187"
3800-0035	(F) garden hose end	50 mesh	ss screen	-	-



## Chemical Injector Strainer

### Plastic

- Chemical-resistant plastic body and components
- 1/4" and 3/8" hose barb
- Check valve optional

### Stainless Steel

- Corrosion-resistant stainless steel and brass construction
- 1/4" hose barb
- Check valve standard

### Order Information

#### For 2200 & 2300 PowerLine PLUS Pumps

Model Number	Material	Description
3350-0126	Plastic	with check valve
3350-0127	Plastic	without check valve
3350-0128	Stainless Steel	with check valve

# Gauges



**Order Information**

2-1/2" Stainless Steel, Liquid Filled, Brass Internals, 1/4" Bottom Stem

Graduation				
Part Number	Number	Major	Minor	PSI Range
GG30	5	5	1	0-30
GG60	10	10	2	0-60
GG100	10	10	2	0-100
GG160	20	20	5	0-160
GG200	20	20	5	0-200
GG300	50	50	10	0-300
GG400	50	50	10	0-400
GG600	100	100	20	0-600
GG1000	200	100	20	0-1000
GG1500	300	300	50	0-1500
GG2000	200	200	50	0-2000
GG3000	500	500	100	0-3000
GG4000	500	500	100	0-4000
GG5000	1000	1000	100	0-5000
GG6000	1000	1000	200	0-6000
GG10000	2000	2000	200	0-10000
GG15000	3000	3000	500	0-15000



Part Number	PSI	BAR
2640-0009	0-60	4
2640-0010	0-100	7
2640-0011	0-200	14
2640-0007	0-300	21
2640-0008	0-600	42
2640-0001	0-1000	70
2640-0002	0-1500	105
2640-0003	0-2000	140
2640-0004	0-3000	210
2640-0005	0-5000	350
2640-0014	0-10000	700
2640-0006	30" Hg/ 30 psi/1x2	-
2640-0015	30" Hg/ 100 psi/1x2	-



**Series GG**

304 stainless steel case, bronze tube, brass stem and internals, white enameled aluminum dial face, black enameled aluminum pointer, acrylic window, liquid filled, built-in restrictor.

**Order Information**

1/4" Bottom Stem

Graduation				
Part Number	Number	Major	Minor	PSI Range
GG604	10	10	2	0-60
GG1004	10	10	2	0-100

**Order Information**

2-1/2" Stainless Steel, Liquid Filled, Brass Internals, 1/4" Center Back Mount

Graduation				
Part Number	Number	Major	Minor	PSI Range
WGG60C	10	10	2	0-30
WGG100C	10	10	2	0-60
WGG160C	20	20	2	0-100
WGG200C	20	20	5	0-160
WGG300C	50	50	10	0-200
WGG400C	50	50	10	0-300
WGG600C	50	50	20	0-400
WGG1000C	100	100	20	0-600
WGG1500C	100	100	50	0-1000
WGG2000C	300	300	50	0-1500
WGG3000C	200	200	100	0-2000
WGG5000C	500	500	100	0-3000
WGG10000C	1000	1000	200	0-4000
WGG15000C	3000	3000	500	0-6000

Includes Clamp

**Glycerin-Filled Pressure Gauge**

This series is designed for use with air, gas, oil, and water or any medium not corrosive to brass or bronze. Liquid-filled gauges are recommended for reducing shock waves caused by pressure or vibration fluctuations.

- Movement: Brass
- Bourdon Tube: Phosphor bronze
- Pointer: Black-enameled aluminum
- Dial: White background
- Window: Acrylic
- Liquid Fill: 99.5% pure virgin Glycerin
- Connection: 1/4" NPT Brass connection
- Accuracy: ASME/ANSI B40.1 Grade B (3-2-3%)

**Standard Gauge Dampner**

Stem size: 1/4" (M) NPT, 1/4" (F) NPT

**Order Information**

Model Number	2404-0047
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# Valves



## Series 90

- Chromed brass ball, stem and body with Teflon seat and Viton seals
- Equipped with either butterfly or lever handle in tough nylon
- Rated to 300 PSI (20.7 bar)
- Maximum temperature 212° F (100°C)
- Available with two female ports or one female and one male port
- Part number indicates port arrangement
- All ports are National Pipe Thread (NPT)

## Order Information

Part Number	Size
90FFB14	1/4" FNPT X 1/4" FNPT
90FMB14	1/4" FNPT X 1/4" MNPT
90FFB38	3/8" FNPT X 3/8" FNPT

Note: Substitute "B" with "L" when ordering Lever handle (i.e. : 90FFL14)

## Replacement Part #

90-HBF Butterfly handle  
R1167 Lever handle

# Couplers



## Ordering Instructions:

To order one 1/2" x 3/4" Series 2738 coupling, specify the following:

## Order Information

Quantity	Part Number	Description
1	2738-1001	1/2" coupling end
1	2738-1003	3/4" coupling end
1	2728-1001	Center disc

Note: It is not necessary to order in complete sets, parts can be ordered individually.

Series	Part Number	Description	Estimated Weight Each
2738 (2.0 hp limit)*  Replaces L-075	2738-1001	1/2" coupling end, with 1/8" keyway	6 oz.
	2738-1002	5/8" coupling end, with 3/16" keyway	6 oz.
	2738-1003	3/4" coupling end, with 3/16" keyway	6 oz.
	2738-1004	7/8" coupling end, with 3/16" keyway	6 oz.
	2728-1001	Center disc	1 oz.
2739 (5.0 hp limit)*  Replaces L-095	2739-1001	5/8" coupling end, with 3/16" keyway	11 oz.
	2739-1002	3/4" coupling end, with 3/16" keyway	11 oz.
	2739-1003	7/8" coupling end, with 3/16" keyway	11 oz.
	2739-1004	15/16" coupling end, with 1/4" keyway	11 oz.
	2739-1005	1" coupling end, with 1/4" keyway	11 oz.
	2739-1006	1 1/8" coupling end, with 1/4" keyway	11 oz.
	2739-1009	24 mm coupling end, with 8mm keyway	11 oz.
	2729-1001	Center disc	1 oz.
2741 (10.5 hp limit)*  Replaces L-100	2729-1005	Heavy-duty center disc, urethane material	1 oz.
	2741-1001	3/4" coupling end, with 3/16" keyway	1 lb. 5 oz.
	2741-1004	15/16" coupling end, with 1/4" keyway	1 lb. 5 oz.
	2741-1002	1" coupling end, with 1/4" keyway	1 lb. 5 oz.
	2741-1005	1 1/4" coupling end, with 1/4" keyway	1 lb. 5 oz.
	2741-1007	1 3/8" coupling end, with 5/16" keyway	1 lb. 5 oz.
	2741-1003	1 1/8" coupling end, with 1/4" keyway	1 lb. 5 oz.
	2729-1002	Center disc	1 oz.
2740 (18.0 hp limit)*  Replaces L-110	2729-1006	Heavy-duty center disc, urethane material	1 oz.
	2740-1001	3/4" coupling end, with 3/16" keyway	3 lbs. 11 oz.
	2740-1002	1" coupling end, with 1/4" keyway	3 lbs. 8 oz.
	2740-1005	1 3/8" coupling end, with 5/16" keyway	3 lbs.
	2740-1007	1 1/8" coupling end, with 1/4" keyway	2 lbs. 15 oz.
2729-1003	Center disc	3 oz.	

\* HP limit is electric motor hp at 1725 rpm for driving a steady uniform load. For an uneven load, stop-start and moderate shock loads, divide hp by a 1.5 service factor.

# Technical Information

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With over 95 combined years of experience, Hypro's Technical Department has truly learned the wide array of Hypro products from the ground up. This team of experts supports our customers and end users over the phone troubleshooting issues in the field, helping with product selection, and supplying application information. They also conduct in-house service schools, allowing hands-on training on our products for our customers. The Technical team leads the way in building product knowledge.

Partnered with the Technical team is Hypro's Service Department. With over 80 years of combined experience, they are a dedicated department focused on keeping Hypro pumps well maintained and performing above the standards we know our customers expect. They are able to evaluate, diagnose, and repair Hypro products in-house for a smoother, more reliable service experience.

If you have questions on any Hypro products, from pumps and spray tips to maintenance and applications; please call on over 175 years of experience!

## Contact Information:

Technical/Application.....800-445-8360  
Service/Warranty .....800-468-3428  
Online ..... [www.hypropumps.com](http://www.hypropumps.com)

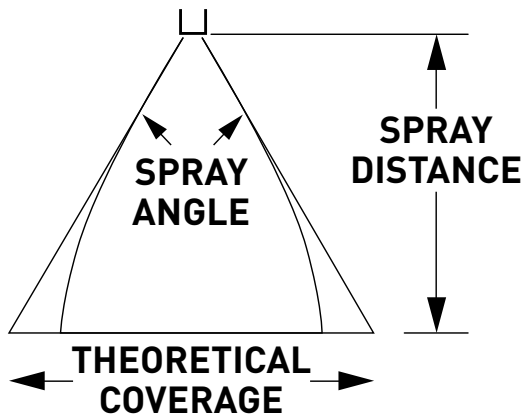




# Technical Information

## Nozzle Pattern Chart

Included Spray Angle	THEORETICAL COVERAGE AT VARIOUS DISTANCES (IN INCHES) FROM NOZZLE ORIFICE											
	2"	4"	6"	8"	10"	12"	15"	18"	24"	30"	36"	48"
5°	0.2	0.4	0.5	0.7	0.9	1.1	1.3	1.5	2.1	2.6	3.1	4.2
10°	0.4	0.7	1.1	1.4	1.8	2.1	2.6	3.1	4.2	5.2	6.3	8.4
15°	0.5	1.1	1.6	2.1	2.6	3.2	3.9	4.7	6.3	7.9	9.5	12.6
20°	0.7	1.4	2.1	2.8	3.5	4.2	5.3	6.4	8.5	10.6	12.7	16.9
25°	0.9	1.8	2.7	3.5	4.4	5.3	6.6	8.0	10.6	13.3	15.9	21.2
30°	1.1	2.1	3.2	4.3	5.4	6.4	8.1	9.7	12.8	16.1	19.3	25.7
35°	1.3	2.5	3.8	5.0	6.3	7.6	9.5	11.3	15.5	18.9	22.7	30.3
40°	1.5	2.9	4.4	5.8	7.3	8.7	10.9	13.1	17.5	21.8	26.2	34.9
45°	1.7	3.3	5.0	6.6	8.3	9.9	12.4	14.9	19.9	24.8	29.8	39.7
50°	1.9	3.7	5.6	7.5	9.3	11.2	14.0	16.8	22.4	28.0	33.6	44.8
55°	2.1	4.2	6.3	8.3	10.3	12.5	15.6	18.7	25.0	31.2	37.5	50.0
60°	2.3	4.6	6.9	9.2	11.5	13.8	17.3	20.6	27.7	34.6	41.6	55.4
65°	2.5	5.1	7.6	10.2	12.7	15.3	19.2	22.9	30.5	38.2	45.8	61.2
70°	2.8	5.6	8.4	11.2	14.0	16.8	21.0	25.2	33.6	42.0	50.4	67.2
75°	3.1	6.1	9.2	12.3	15.3	18.4	23.0	27.6	36.8	46.0	55.2	73.6
80°	3.4	6.7	10.1	13.4	16.8	20.2	25.2	30.3	40.3	50.4	60.4	80.6
85°	3.7	7.3	11.0	14.7	18.3	22.0	27.5	33.0	44.0	55.0	66.0	88.0
90°	4.0	8.0	12.0	16.0	20.0	24.0	30.0	36.0	48.0	60.0	72.0	96.0
95°	4.4	8.7	13.1	17.5	21.8	26.2	32.8	39.3	52.4	65.5	78.6	105
100°	4.8	9.5	14.3	19.1	23.8	28.6	35.8	43.0	57.2	71.6	85.9	114
110°	5.7	11.4	17.1	22.8	28.5	34.3	42.8	51.4	68.5	85.6	103	-
120°	6.9	13.9	20.8	27.7	34.6	41.6	52.0	62.4	83.2	104	-	-
130°	8.6	17.2	25.7	34.3	42.9	51.5	64.4	77.3	103	-	-	-
140°	10.9	21.9	32.9	43.8	54.8	65.7	82.2	98.6	-	-	-	-
150°	14.9	29.8	44.7	59.6	74.5	89.5	112	-	-	-	-	-
160°	22.7	45.4	68.0	90.6	113	-	-	-	-	-	-	-
170°	45.8	91.6	-	-	-	-	-	-	-	-	-	-



### Nozzles

<b>Nozzle # =</b>	GPM	X	$\sqrt{\frac{4000}{\text{PSI}}}$
<b>GPM =</b>	Nozzle #	X	$\sqrt{\frac{\text{PSI}}{4000}}$
<b>PSI =</b>	$\left(\frac{\text{GPM}}{\text{Nozzle}}\right)^2$	X	4000

# Technical Information

$$\text{Electric Brake Horsepower required} = \frac{\text{GPM} \times \text{PSI}}{1460} \times \text{Standard 85\% Mech. Efficiency}$$

$$\text{Desired RPM} = \text{Desired GPM} \times \frac{\text{Rated RPM}}{\text{Rated GPM}}$$

$$\text{Desired GPM} = \text{Desired RPM} \times \frac{\text{Rated RPM}}{\text{Rated GPM}}$$

$$\text{Impact Force/Cleaning Power} = .0526 \times \text{GPM} \times \sqrt{\text{PSI}}^*$$

Example:

2.7 @ 1200 PSI = .0526 x 2.7 x √1200 = 4.92 lbs. force

2.0 @ 1500 PSI = .0526 x 2.0 x √1500 = 4.07 lbs. force

\*Impact = cleaning force of water hitting a surface.

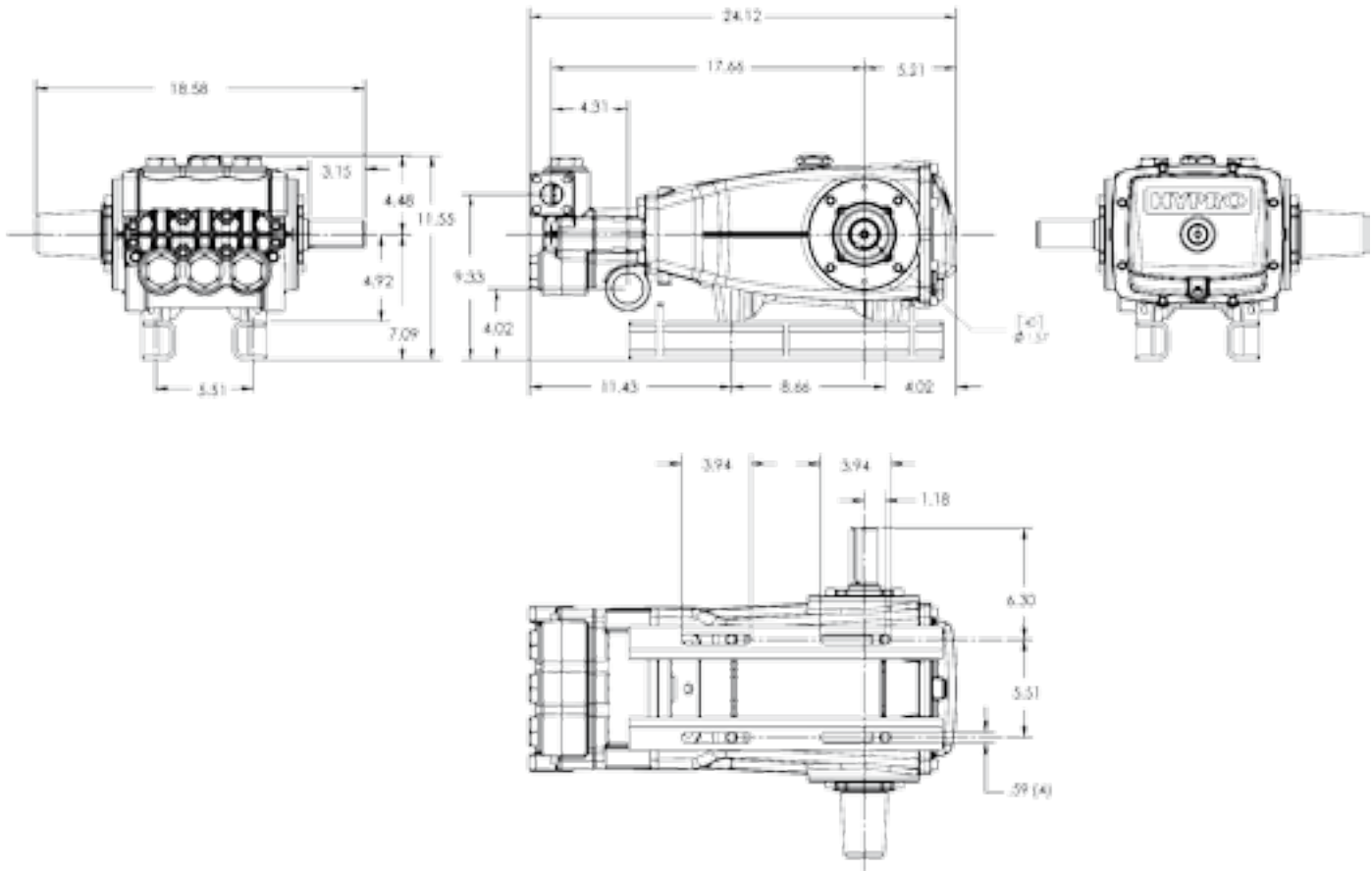
## Pulley Chart

Pump Pulley Diameter	Motor Pulley Outside Diameter														
	1 1/2"	1 3/4"	2"	2 1/4"	2 1/2"	2 3/4"	3"	3 1/4"	3 1/2"	3 3/4"	4"	4 1/4"	4 1/2"	4 3/4"	5"
1 1/2"	1750	2100	2450	2800	3150	3500	3850	-	-	-	-	-	-	-	-
1 3/4"	1460	1750	2042	2355	2625	2915	3210	3500	3795	-	-	-	-	-	-
2"	1250	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000	-	-	-
2 1/4"	1095	1310	1530	1750	1970	2185	2410	2625	2845	3065	3250	3500	3720	3935	-
2 1/2"	974	1167	1360	1555	1750	1945	2140	2330	2530	2725	2915	3110	3305	3500	3690
2 3/4"	876	1050	1225	1400	1574	1750	1925	2100	2275	2450	2625	2800	2970	3150	3325
3"	797	955	1113	1275	1431	1590	1750	1910	2070	2225	2385	2545	2700	2865	3022
3 1/4"	731	875	1020	1165	1310	1460	1604	1750	1895	2045	2190	2330	2485	2625	2770
3 1/2"	674	808	947	1077	1210	1346	1480	1615	1750	1885	2020	2155	2290	2420	2555
3 3/4"	626	750	875	1000	1125	1250	1375	1500	1625	1750	1875	2000	2125	2250	2375
4"	584	700	817	935	1050	1168	1283	1400	1518	1634	1750	1865	1985	2100	2215
4 1/4"	548	657	765	875	985	1094	1201	1311	1420	1530	1640	1750	1855	1965	2075
4 1/2"	516	618	720	824	926	1030	1131	1235	1339	1440	1543	1650	1750	1850	1995
4 3/4"	487	584	682	779	876	974	1070	1168	1265	1362	1460	1558	1652	1750	1845
5"	462	554	646	7337	830	822	1013	1105	1198	1290	1382	1473	1568	1660	1750
5 1/4"	438	525	613	700	788	875	963	1050	1137	1225	1312	1400	1487	1575	1662
5 1/2"	417	500	584	667	750	834	917	1000	1082	1167	1250	1333	1417	1500	1581
5 3/4"	398	478	557	636	715	795	875	955	1032	1113	1192	1272	1350	1430	1510
6"	381	456	533	610	685	760	837	913	990	1065	1140	1217	1290	1370	1445
6 1/2"	350	420	490	560	630	700	771	840	910	980	1050	1120	1190	1260	1330
7"	324	389	454	518	584	648	713	778	843	907	976	1039	1102	1166	1231
8"	282	339	394	451	507	564	620	676	734	789	845	902	959	1016	1072
9"	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950
10"	224	270	315	360	405	450	495	540	585	630	675	720	765	810	855
11"	203	244	285	326	366	407	448	488	530	570	610	652	692	733	774
12"	186	224	261	298	336	373	410	446	485	522	560	596	634	671	708
13"	172	206	240	275	309	343	378	412	447	480	515	549	584	618	652
14"	159	191	223	255	286	318	350	382	414	445	477	509	540	573	605
15"	148	178	208	247	267	297	326	358	386	415	445	475	505	534	564
16"	139	167	194	222	250	278	306	333	361	389	416	445	473	500	528

Desired RPM

# Technical Information

## Pumps 2535, 2545



### U.S. Units

2535S	PSI	800		1000		1200	
	RPM	GPM	HP	GPM	HP	GPM	HP
400	19.8	11.2	19.7	13.0	19.5	15.2	
500	24.3	13.1	24.2	15.8	24.1	18.8	
600	29.2	15.3	29.2	18.8	29.0	22.2	
700	33.6	18.1	33.5	22.2	33.5	25.8	
800	38.1	20.0	38.0	25.0	38.0	29.8	

### Metric Units

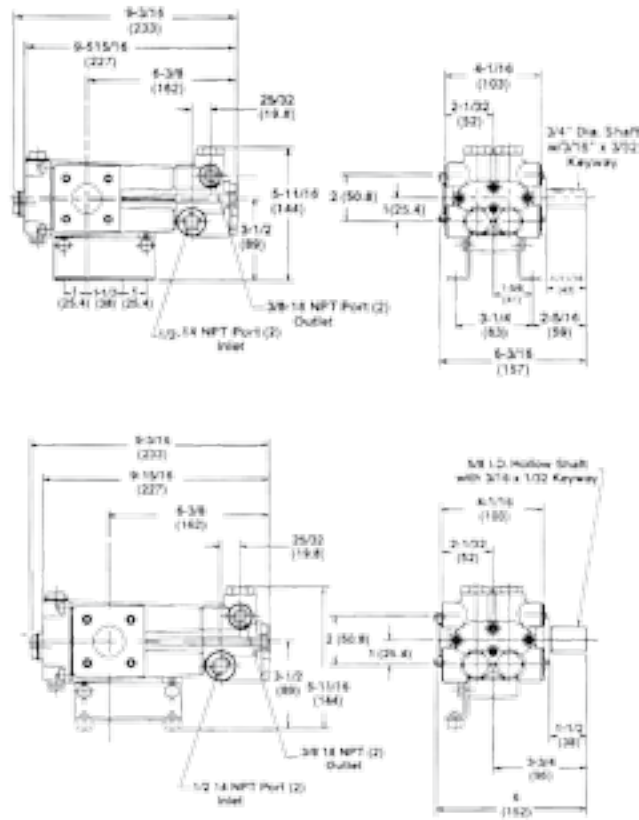
2535S	BAR	55		69		83	
	RPM	L/m	Kw	L/m	Kw	L/m	Kw
400	75.0	8.4	74.6	9.7	73.8	11.3	
500	92.0	9.8	91.6	11.8	91.2	14.0	
600	110.5	11.4	110.5	14.0	109.8	16.6	
700	127.2	13.5	126.8	16.6	126.8	19.2	
800	144.2	14.9	143.8	18.6	143.8	22.2	

2545S	PSI	800		1000		1200	
	RPM	GPM	HP	GPM	HP	GPM	HP
400	24.4	13.2	24.2	16.0	24.1	18.9	
500	30.4	16.1	30.3	19.6	30.2	23.1	
600	36.5	19.2	36.5	23.2	36.4	27.5	
700	42.1	22.1	42.1	27.1	42.0	32.3	
800	46.8	25.1	46.8	30.4	46.7	36.1	

2545S	BAR	55		69		83	
	RPM	L/m	Kw	L/m	Kw	L/m	Kw
400	92.4	9.8	91.6	11.9	91.2	14.1	
500	115.1	12.0	114.7	14.6	114.3	17.2	
600	138.2	14.3	138.2	17.3	137.8	20.5	
700	159.4	16.5	159.4	20.2	159.0	24.1	
800	177.2	18.7	177.2	22.7	176.8	26.9	

# Technical Information

Pumps 2220, 2221, 2230, 2231



## U.S. Units

2220B-P, 2220B-AP 2220B-HP	PSI	500	700	1000	1300	1500	2000						
	RPM	GPM	HP	GPM	HP	GPM	HP	GPM	HP	GPM	HP	GPM	HP
	1000	1.2	0.5	1.2	0.7	1.2	0.9	1.2	1.1	1.2	1.2	1.2	1.6
	1450	1.7	0.8	1.7	1.0	1.7	1.4	1.7	1.6	1.7	1.8	1.7	2.3
	1600	1.9	0.9	1.9	1.1	1.9	1.5	1.9	1.8	1.9	2.1	1.9	2.7
1725	2.1	0.8	2.1	1.1	2.1	1.5	2.0	1.9	2.0	2.1	2.0	2.9	

2221B-P, 2221B-AP 2221B-HP	PSI	500	700	1000	1300	1500					
	RPM	GPM	HP	GPM	HP	GPM	HP	GPM	HP		
	1800	1.2	0.8	1.2	0.9	1.1	1.1	1.1	1.3	1.1	1.5
	2600	1.7	1.1	1.7	1.4	1.6	1.5	1.6	1.9	1.6	2.2
	2875	1.8	1.3	1.8	1.5	1.8	1.8	1.8	2.3	1.7	2.5
3450	2.1	1.6	2.1	1.9	2.1	2.1	2.1	2.6	2.0	2.9	

2230B-P, 2230B-AP 2230B-HP	PSI	500	700	1000	1300	1500	2000						
	RPM	GPM	HP	GPM	HP	GPM	HP	GPM	HP				
	1000	1.9	0.8	1.9	1.0	1.9	1.3	1.8	1.7	1.8	1.9	1.8	2.4
	1450	2.7	1.1	2.7	1.4	2.7	2.0	2.7	2.4	2.7	2.8	2.7	3.6
	1600	3.0	1.2	3.0	1.6	3.0	2.3	3.0	2.8	2.9	3.1	2.9	4.1
1725	3.2	1.4	3.2	1.9	3.2	2.4	3.1	3.0	3.1	3.4	3.1	4.4	

2231B-P, 2231B-AP 2231B-HP, 2231B-CP	PSI	500	700	1000	1300	1500					
	RPM	GPM	HP	GPM	HP	GPM	HP	GPM	HP		
	1800	1.8	0.8	1.8	1.0	1.8	1.4	1.7	1.7	1.7	1.9
	2600	2.5	1.2	2.5	1.5	2.5	2.0	2.5	2.4	2.5	2.7
	2875	2.8	1.2	2.8	1.6	2.7	2.1	2.7	2.7	2.7	2.9
3450	3.2	1.5	3.2	1.9	3.2	2.5	3.2	3.2	3.1	3.5	

## Metric Units

2220B-P, 2220B-AP 2220B-HP	BAR	34	48	69	90	103	138						
	RPM	L/m	Kw	L/m	Kw	L/m	Kw	L/m	Kw				
	1000	4.5	0.4	4.5	0.5	4.5	0.7	4.5	0.8	4.5	0.9	4.5	1.2
	1450	6.4	0.6	6.4	0.7	6.4	1.0	6.4	1.2	6.4	1.3	6.4	1.7
	1600	7.2	0.7	7.2	0.8	7.2	1.1	7.2	1.3	7.2	1.6	7.2	2.0
1725	7.9	0.6	7.9	0.8	7.9	1.1	7.6	1.4	7.6	1.6	7.6	2.2	

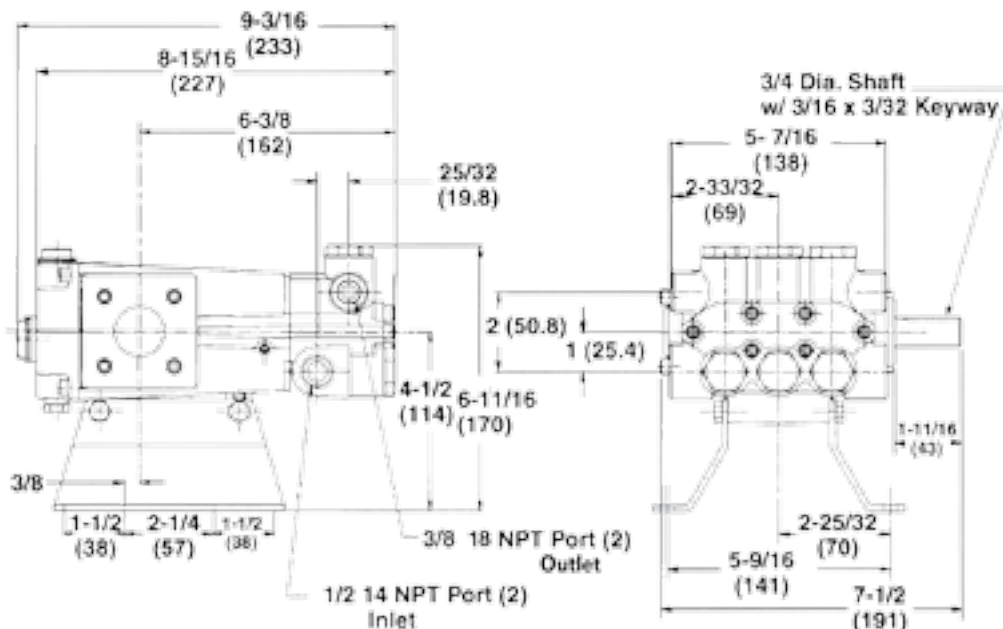
2221B-P, 2221B-AP 2221B-HP	BAR	34	48	69	90	103					
	RPM	L/m	Kw	L/m	Kw	L/m	Kw				
	1800	4.5	0.6	4.5	0.7	4.2	0.8	4.2	1.0	4.2	1.1
	2600	6.4	0.8	6.4	1.0	6.1	1.1	6.1	1.4	6.1	1.6
	2875	6.8	1.0	6.8	1.1	6.8	1.3	6.8	1.7	6.4	1.9
3450	7.9	1.2	7.9	1.4	7.9	1.6	7.9	1.9	7.6	2.2	

2230B-P, 2230B-AP 2230B-HP	BAR	34	48	69	90	103	138						
	RPM	L/m	Kw	L/m	Kw	L/m	Kw	L/m	Kw				
	1000	7.2	0.6	7.2	0.7	7.2	1.0	6.8	1.3	6.8	1.4	6.8	1.8
	1450	10.2	0.8	10.2	1.0	10.2	1.5	10.2	1.8	10.2	2.1	10.2	2.7
	1600	11.4	0.9	11.4	1.2	11.4	1.7	11.4	2.1	11.0	2.3	11.0	3.1
1725	12.1	1.0	12.1	1.4	12.1	1.8	11.7	2.2	11.7	2.5	11.7	3.3	

2231B-P, 2231B-AP 2231B-HP, 2231B-CP	BAR	34	48	69	90	103					
	RPM	L/m	Kw	L/m	Kw	L/m	Kw				
	1800	6.8	0.6	6.8	0.7	6.8	1.0	6.4	1.3	6.4	1.4
	2600	9.5	0.9	9.5	1.1	9.5	1.5	9.5	1.8	9.5	2.0
	2875	10.6	0.9	10.6	1.2	10.2	1.6	10.2	2.0	10.2	2.2
3450	12.1	1.1	12.1	1.4	12.1	1.9	12.1	2.4	11.7	2.6	

# Technical Information

Pumps 2330, 2331, 2340, 2345, 2350, 2351, 2354, 2359



## U.S. Units

2303B-P, 2304B-P 2314B-P	PSI	500		700		1000		1200	
	RPM	GPM	HP	GPM	HP	GPM	HP	GPM	HP
1100	3.1	1.3	3.1	1.6	3.1	2.1	3.1	2.4	
1450*	4.1	1.5	4.0	2.0	4.0	2.7	4.0	3.2	
1725**	3.1	1.2	3.1	1.7	3.1	2.2	3.1	2.6	
1725***	4.3	1.6	4.3	2.0	4.2	2.9	4.2	3.4	

\* 2314 only, \*\* 2303 only, \*\*\* 2304 only

## Metric Units

2303B-P, 2304B-P 2314B-P	BAR	34		48		69		83	
	RPM	L/m	Kw	L/m	Kw	L/m	Kw	L/m	Kw
1100	11.7	1.0	11.7	1.2	11.7	1.6	11.7	1.8	
1450*	15.5	1.1	15.1	1.5	15.1	2.0	15.1	2.4	
1725**	11.7	0.9	11.7	1.3	11.7	1.6	11.7	1.9	
1725***	16.3	1.2	16.3	1.5	15.9	2.2	15.9	2.5	

\* 2314 only, \*\* 2303 only, \*\*\* 2304 only

2330B-P	PSI	500		700		1000		1300		1500		2000	
	RPM	GPM	HP	GPM	HP	GPM	HP	GPM	HP	GPM	HP	GPM	HP
1000	1.8	0.7	1.8	1.0	1.8	1.3	1.8	1.6	1.8	1.9	1.8	2.9	
1450	2.7	1.0	2.7	1.4	2.6	1.9	2.6	2.3	2.6	2.7	2.5	4.2	
1600	2.9	1.1	2.9	1.5	2.9	2.0	2.9	2.5	2.8	2.8	2.8	4.6	
1725	3.1	1.2	3.1	1.7	3.1	2.2	3.1	2.8	3.1	3.2	3.0	5.0	

2330B-P	BAR	34		48		69		90		103		172	
	RPM	L/m	Kw	L/m	Kw	L/m	Kw	L/m	Kw	L/m	Kw	L/m	Kw
1000	6.8	0.5	6.8	0.7	6.8	1.0	6.8	1.2	6.8	1.4	6.8	2.2	
1450	10.2	0.7	10.2	1.0	9.8	1.4	9.8	1.7	9.8	2.0	9.5	3.1	
1600	11.0	0.8	11.0	1.1	11.0	1.5	11.0	1.9	10.6	2.1	10.6	3.4	
1725	11.7	0.9	11.7	1.3	11.7	1.6	11.7	2.1	11.7	2.4	11.4	3.7	

2340B-P	PSI	500		700		1000		1300		1500		2000	
	RPM	GPM	HP	GPM	HP	GPM	HP	GPM	HP	GPM	HP	GPM	HP
1000	2.5	1.0	2.5	1.3	2.5	1.8	2.5	2.2	2.5	2.5	2.4	4.0	
1450	3.6	1.3	3.6	1.8	3.6	2.4	3.6	3.1	3.5	3.6	3.5	5.6	
1600	4.0	1.5	4.0	1.9	3.9	2.7	3.9	3.3	3.9	3.8	3.8	6.2	
1725	4.3	1.6	4.3	2.0	4.2	2.9	4.2	3.6	4.2	4.1	4.1	6.6	

2340B-P	BAR	34		48		69		90		103		172	
	RPM	L/m	Kw	L/m	Kw	L/m	Kw	L/m	Kw	L/m	Kw	L/m	Kw
1000	9.5	0.7	9.5	1.0	9.5	1.3	9.5	1.6	9.5	1.9	9.1	3.0	
1450	13.6	1.0	13.6	1.3	13.6	1.8	13.6	2.3	13.2	2.7	13.2	4.2	
1600	15.1	1.1	15.1	1.4	14.8	2.0	14.8	2.5	14.8	2.8	14.4	4.6	
1725	16.3	1.2	16.3	1.5	15.9	2.2	15.9	2.7	15.9	3.1	15.5	4.9	

2345B-P	PSI	500		700		1000		1300		1500		2000	
	RPM	GPM	HP	GPM	HP	GPM	HP	GPM	HP	GPM	HP	GPM	HP
1000	2.8	1.2	2.8	1.5	2.8	2.0	2.8	2.5	2.8	2.8	2.7	4.5	
1450	4.1	1.7	4.1	2.2	4.0	2.9	4.0	3.7	4.0	4.1	4.0	6.5	
1600	4.5	1.8	4.4	2.4	4.4	3.2	4.4	4.1	4.4	4.6	4.3	7.2	
1725	4.8	2.0	4.7	2.6	4.7	3.4	4.7	4.4	4.7	4.9	4.6	7.6	

2345B-P	BAR	34		48		69		90		103		172	
	RPM	L/m	Kw	L/m	Kw	L/m	Kw	L/m	Kw	L/m	Kw	L/m	Kw
1000	10.6	0.9	10.6	1.1	10.6	1.5	10.6	1.9	10.6	2.1	10.2	3.4	
1450	15.5	1.3	15.5	1.6	15.1	2.2	15.1	2.8	15.1	3.1	15.1	4.8	
1600	17.0	1.3	16.7	1.8	16.7	2.4	16.7	3.1	16.7	3.4	16.3	5.4	
1725	18.2	1.5	17.8	1.9	17.8	2.5	17.8	3.3	17.8	3.7	17.4	5.7	

# Technical Information

Pumps 2330, 2331, 2340, 2345, 2350, 2351, 2354, 2359

## U.S. Units

2350B-P, 2359B-PY	PSI	500		700		1000		1300		2000		3000	
	RPM	GPM	HP	GPM	HP	GPM	HP	GPM	HP	GPM	HP	GPM	HP
1000	2.1	1.0	2.1	1.6	2.1	2.0	2.1	2.3	2.0	2.8	2.0	2.0	4.0
1450	3.0	1.4	3.0	2.3	3.0	2.8	2.9	3.2	2.9	4.1	2.9	2.9	5.6
1600	3.3	1.6	3.3	2.6	3.3	3.2	3.3	3.4	3.2	4.4	3.2	3.2	6.2
1725	3.6	1.6	3.6	2.7	3.5	3.3	3.5	3.8	3.5	4.8	3.4	3.4	6.8

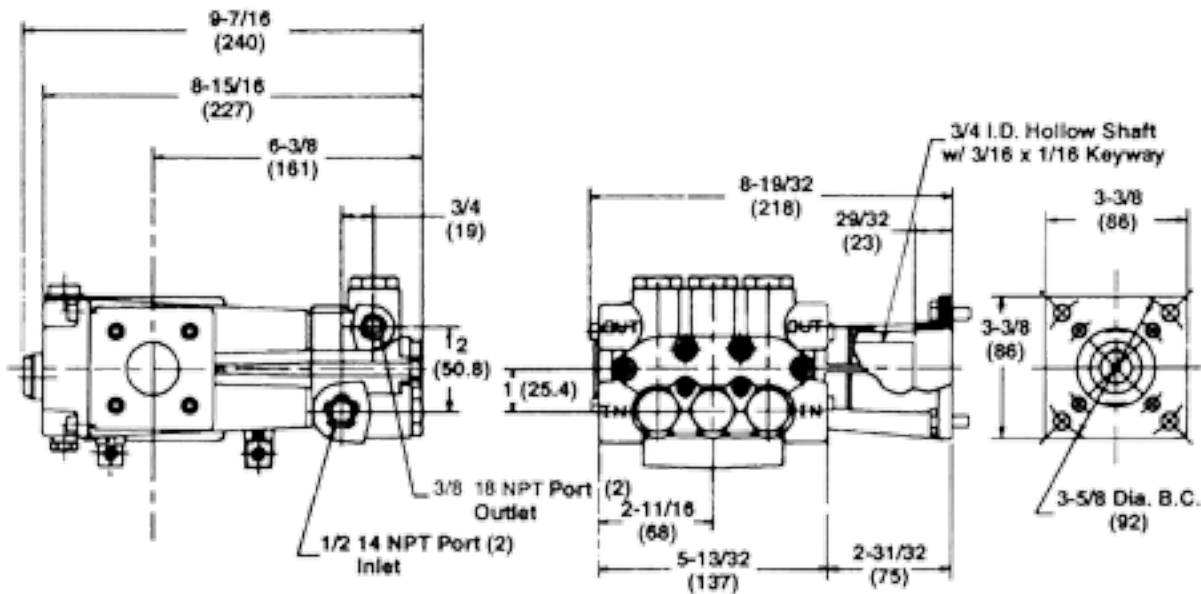
2351B-P	PSI	500		700		1000		1300		2000		3000	
	RPM	GPM	HP	GPM	HP	GPM	HP	GPM	HP	GPM	HP	GPM	HP
1000	2.4	0.9	2.3	1.7	2.3	2.1	2.3	2.4	2.3	3.1	2.3	2.3	4.3
1450	3.4	1.4	3.4	2.4	3.4	3.0	3.3	3.4	3.3	4.4	3.2	3.2	6.3
1600	3.8	1.6	3.7	2.7	3.7	3.3	3.7	3.7	3.6	4.8	3.6	3.6	7.0
1725	4.0	1.7	4.0	2.9	4.0	3.5	4.0	4.0	3.9	5.1	3.8	3.8	7.4

## Metric Units

2350B-P, 2359B-PY	BAR	34		48		69		90		138		207	
	RPM	L/m	Kw	L/m	Kw	L/m	Kw	L/m	Kw	L/m	Kw	L/m	Kw
1000	7.9	0.7	7.9	1.2	7.9	1.5	7.9	1.7	7.6	2.1	7.6	2.1	3.0
1450	11.4	1.0	11.4	1.7	11.4	2.1	11.0	2.4	11.0	3.1	11.0	3.1	4.2
1600	12.5	1.2	12.5	1.9	12.5	2.4	12.5	2.5	12.1	3.3	12.1	3.3	4.6
1725	13.6	1.2	13.6	2.0	13.2	2.5	13.2	2.8	13.2	3.6	12.9	3.6	5.1

2351B-P	BAR	34		48		69		90		138		207	
	RPM	L/m	Kw	L/m	Kw	L/m	Kw	L/m	Kw	L/m	Kw	L/m	Kw
1000	9.1	0.7	8.7	1.3	8.7	1.6	8.7	1.8	8.7	2.3	8.7	3.2	3.2
1450	12.9	1.0	12.9	1.8	12.9	2.2	12.5	2.5	12.5	3.3	12.1	3.3	4.7
1600	14.4	1.2	14.0	2.0	14.0	2.5	14.0	2.8	13.6	3.6	13.6	3.6	5.2
1725	15.1	1.3	15.1	2.2	15.1	2.6	15.1	3.0	14.8	3.8	14.4	3.8	5.5

Pumps 2331, 2354



## U.S. Units

2331B-CP	PSI	500		700		1000		1300		1500	
	RPM	GPM	HP	GPM	HP	GPM	HP	GPM	HP	GPM	HP
1800	1.9	1.0	1.9	1.2	1.8	1.5	1.8	1.8	1.8	1.8	2.1
2600	2.7	1.4	2.6	1.7	2.6	2.2	2.6	2.7	2.5	3.0	3.0
2875	2.9	1.5	2.9	1.9	2.8	2.4	2.8	2.8	2.8	3.2	3.2
3450	3.4	1.9	3.4	2.2	3.3	2.8	3.3	3.4	3.3	3.8	3.8

2354B-CP	PSI	500		1000		1500		2000	
	RPM	GPM	HP	GPM	HP	GPM	HP	GPM	HP
2800	2.4	1.3	2.3	2.0	2.3	2.7	2.2	3.4	3.4
3000	2.6	1.4	2.5	2.2	2.4	2.9	2.3	3.7	3.7
3200	2.7	1.6	2.6	2.4	2.6	3.2	2.5	3.9	3.9
3400	2.9	1.6	2.8	2.4	2.7	3.3	2.6	4.0	4.0

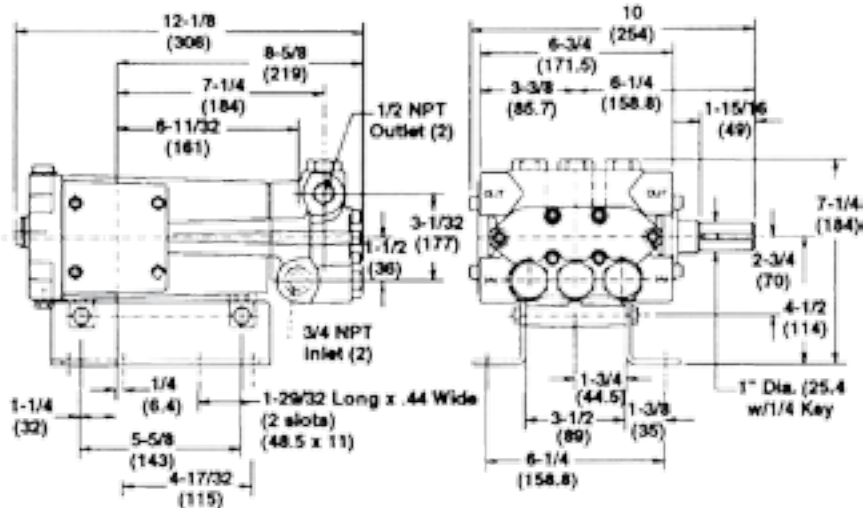
## Metric Units

2331B-CP	BAR	34		48		69		90		103	
	RPM	L/m	Kw	L/m	Kw	L/m	Kw	L/m	Kw	L/m	Kw
1800	7.2	0.7	7.2	0.9	6.8	1.1	6.8	1.3	6.8	1.6	1.6
2600	10.2	1.0	9.8	1.3	9.8	1.6	9.8	2.0	9.5	2.2	2.2
2875	11.0	1.1	11.0	1.4	10.6	1.8	10.6	2.1	10.6	2.4	2.4
3450	12.9	1.4	12.9	1.6	12.5	2.1	12.5	2.5	12.5	2.8	2.8

2354B-CP	BAR	34		69		90		103	
	RPM	L/m	Kw	L/m	Kw	L/m	Kw	L/m	Kw
2800	9.1	1.0	8.7	1.5	8.7	2.0	8.3	2.5	2.5
3000	9.8	1.0	9.5	1.6	9.1	2.2	8.7	2.8	2.8
3200	10.2	1.2	9.8	1.8	9.8	2.4	9.5	2.9	2.9
3400	11.0	1.2	10.6	1.8	10.2	2.5	9.8	3.0	3.0

# Technical Information

Pumps 2410, 2411, 2412, 2413, 2414, 2430, 2431, 2432, 2433, 2434



## U.S. Units

2410B-P	PSI	1000		1500		2000		2500	
	RPM	GPM	HP	GPM	HP	GPM	HP	GPM	HP
1000	2.7	1.9	2.7	2.7	2.6	3.4	2.6	4.1	
1150	3.1	2.1	3.1	3.0	3.0	3.8	3.0	4.6	
1450	3.9	2.6	3.9	3.7	3.8	4.8	3.7	5.8	
1725	4.6	3.1	4.5	4.4	4.4	5.7	4.4	6.9	

2411B-P	PSI	1000		1500		2000		2500	
	RPM	GPM	HP	GPM	HP	GPM	HP	GPM	HP
1000	3.2	2.4	3.2	3.3	3.1	4.2	3.1	5.1	
1150	3.7	2.5	3.7	3.6	3.6	4.6	3.6	5.6	
1450	4.6	3.1	4.6	4.4	4.5	5.7	4.5	7.0	
1725	5.3	3.7	5.3	5.2	5.2	6.7	5.1	8.1	

2412B-P	PSI	1000		1500		2000		2500	
	RPM	GPM	HP	GPM	HP	GPM	HP	GPM	HP
1000	3.6	2.7	3.5	3.6	3.5	4.6	3.5	5.6	
1150	4.1	2.9	4.1	4.1	4.0	5.2	4.0	6.4	
1450	5.1	3.7	5.1	5.1	5.0	6.6	5.0	8.0	
1725	5.9	4.2	5.9	5.9	5.8	7.7	5.7	9.4	

2413B-P	PSI	500		1000		1500		1800	
	RPM	GPM	HP	GPM	HP	GPM	HP	GPM	HP
1000	4.4	1.8	4.4	3.0	4.3	4.2	4.3	5.0	
1150	5.1	1.9	5.0	3.3	5.0	4.8	4.9	5.7	
1450	6.3	2.5	6.2	4.2	6.1	5.9	6.1	7.0	
1725	7.2	2.9	7.1	4.9	7.0	6.8	7.0	8.1	

2414B-P	PSI	500		1000		1500		1800	
	RPM	GPM	HP	GPM	HP	GPM	HP	GPM	HP
1000	5.0	1.9	4.9	3.3	4.9	4.7	4.9	5.5	
1150	5.7	2.0	5.6	3.7	5.6	5.3	5.6	6.3	
1450	7.0	2.5	6.9	4.6	6.9	6.6	6.8	7.8	
1725	7.9	3.0	7.8	5.3	7.7	7.6	7.7	8.8	

2430B-P	PSI	1000		2000		3000		3600	
	RPM	GPM	HP	GPM	HP	GPM	HP	GPM	HP
1000	2.7	1.9	2.6	3.4	2.5	4.8	2.5	5.6	
1150	3.1	2.1	3.0	3.8	2.9	5.4	2.8	6.4	
1450	3.9	2.6	3.8	4.8	3.6	6.8	3.6	8.0	
1725	4.6	3.1	4.4	5.7	4.3	8.1	4.2	9.5	

2431B-P	PSI	1000		2000		3000		3600	
	RPM	GPM	HP	GPM	HP	GPM	HP	GPM	HP
1000	3.2	2.4	3.1	4.2	3.1	5.9	3.0	6.8	
1150	3.7	2.5	3.6	4.6	3.5	6.6	3.5	7.7	
1450	4.6	3.1	4.5	5.7	4.4	8.2	4.3	9.8	
1725	5.3	3.7	5.2	6.7	5.0	9.5	5.0	11.2	

## Metric Units

2410B-P	BAR	69		103		138		172	
	RPM	L/m	Kw	L/m	Kw	L/m	Kw	L/m	Kw
1000	10.2	1.4	10.0	2.0	9.8	2.5	9.7	3.1	
1150	11.7	1.6	11.5	2.2	11.4	2.8	11.2	3.4	
1450	14.8	1.9	14.6	2.8	14.4	3.6	14.0	4.3	
1725	17.4	2.3	17.0	3.3	16.7	4.3	16.5	5.1	

2411B-P	BAR	69		103		138		172	
	RPM	L/m	Kw	L/m	Kw	L/m	Kw	L/m	Kw
1000	12.1	1.8	11.9	2.5	11.7	3.1	11.7	3.8	
1150	14.0	1.9	13.8	2.6	13.6	3.4	13.4	4.2	
1450	17.4	2.3	17.2	3.3	17.0	4.3	16.8	5.2	
1725	20.1	2.8	19.9	3.9	19.7	5.0	19.3	6.0	

2412B-P	BAR	69		103		138		172	
	RPM	L/m	Kw	L/m	Kw	L/m	Kw	L/m	Kw
1000	13.6	2.0	13.2	2.7	13.2	3.4	13.2	4.2	
1150	15.5	2.2	15.5	3.1	15.1	3.9	15.1	4.8	
1450	19.3	2.8	19.3	3.8	18.9	4.9	18.9	6.0	
1725	22.3	3.1	22.3	4.4	22.0	5.7	21.6	7.0	

2413B-P	BAR	34		69		103		124	
	RPM	L/m	Kw	L/m	Kw	L/m	Kw	L/m	Kw
1000	16.7	1.3	16.7	2.2	16.3	3.1	16.4	3.7	
1150	19.1	1.4	18.9	2.5	18.9	3.6	18.7	4.2	
1450	23.7	1.8	23.5	3.1	23.1	4.4	23.2	5.2	
1725	27.1	2.2	26.9	3.7	26.5	5.1	26.6	6.1	

2414B-P	BAR	34		69		103		124	
	RPM	L/m	Kw	L/m	Kw	L/m	Kw	L/m	Kw
1000	18.9	1.4	18.5	2.5	18.5	3.5	18.5	4.1	
1150	21.6	1.5	21.2	2.8	21.2	4.0	21.2	4.7	
1450	26.5	1.9	26.1	3.4	26.1	4.9	25.7	5.8	
1725	29.9	2.2	29.5	4.0	29.1	5.7	29.1	6.6	

2430B-P	BAR	69		138		207		248	
	RPM	L/m	Kw	L/m	Kw	L/m	Kw	L/m	Kw
1000	10.2	1.4	9.8	2.5	9.5	3.6	9.5	4.2	
1150	11.7	1.6	11.4	2.8	11.0	4.0	10.6	4.8	
1450	14.8	1.9	14.4	3.6	13.6	5.1	13.6	6.0	
1725	17.4	2.3	16.7	4.3	16.3	6.0	15.9	7.1	

2431B-P	BAR	69		138		207		248	
	RPM	L/m	Kw	L/m	Kw	L/m	Kw	L/m	Kw
1000	12.1	1.8	11.7	3.1	11.7	4.4	11.4	5.1	
1150	14.0	1.9	13.6	3.4	13.2	4.9	13.2	5.7	
1450	17.4	2.3	17.0	4.3	16.7	6.1	16.3	7.3	
1725	20.1	2.8	19.7	5.0	18.9	7.1	18.9	8.4	



# Technical Information

Pumps 2410, 2411, 2412, 2413, 2414, 2430, 2431, 2432, 2433, 2434

## U.S. Units

2432B-P	PSI	1000		1500		3000		3600	
	RPM	GPM	HP	GPM	HP	GPM	HP	GPM	HP
1000	3.6	2.6	3.5	4.7	3.4	6.9	3.4	7.8	
1150	4.1	2.9	4.0	5.3	4.0	7.5	3.9	8.8	
1450	5.2	3.6	5.0	6.6	4.9	9.4	4.8	11.0	
1725	6.0	4.2	5.8	7.6	5.7	10.9	5.6	12.8	

2433B-P	PSI	1000		1500		2000		2500	
	RPM	GPM	HP	GPM	HP	GPM	HP	GPM	HP
1000	4.4	3.0	4.3	4.2	4.3	5.5	4.3	6.7	
1150	5.0	3.3	5.0	4.8	4.9	6.2	4.9	7.6	
1450	6.2	4.2	6.1	5.9	6.1	7.7	6.0	9.4	
1725	7.1	4.9	7.0	6.8	7.0	8.9	6.9	10.8	

2434B-P	PSI	1000		1500		2000		2500	
	RPM	GPM	HP	GPM	HP	GPM	HP	GPM	HP
1000	4.9	3.4	4.9	4.8	4.8	6.2	4.8	7.6	
1150	5.6	3.8	5.6	5.4	5.5	7.1	5.5	8.5	
1450	7.0	4.5	6.9	6.5	6.8	8.6	6.8	10.5	
1725	7.9	5.3	7.8	7.7	7.8	10.0	7.7	12.1	

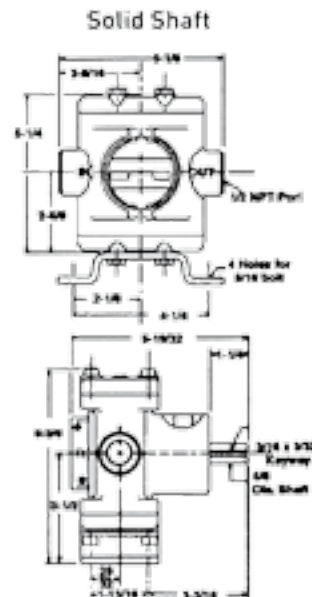
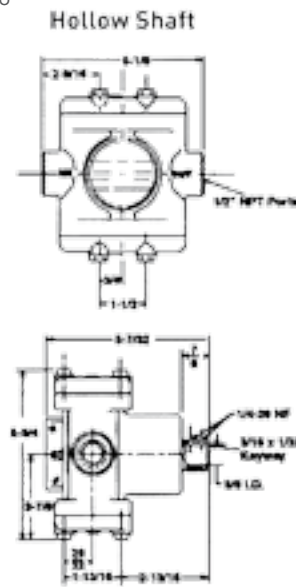
## Metric Units

2432B-P	BAR	69		138		207		248	
	RPM	L/m	Kw	L/m	Kw	L/m	Kw	L/m	Kw
1000	13.6	1.9	13.2	3.5	12.9	5.1	12.9	5.8	
1150	15.5	2.2	15.1	4.0	15.1	5.6	14.8	6.6	
1450	19.7	2.7	18.9	4.9	18.5	7.0	18.2	8.2	
1725	22.7	3.1	22.0	5.7	21.6	8.1	21.2	9.5	

2433B-P	BAR	69		103		138		172	
	RPM	L/m	Kw	L/m	Kw	L/m	Kw	L/m	Kw
1000	16.7	2.2	16.3	3.1	16.3	4.1	16.3	5.0	
1150	18.9	2.5	18.9	3.6	18.5	4.6	18.5	5.7	
1450	23.5	3.1	23.1	4.4	23.1	5.7	22.7	7.0	
1725	26.9	3.7	26.5	5.1	26.5	6.6	26.1	8.1	

2434B-P	BAR	69		103		138		172	
	RPM	L/m	Kw	L/m	Kw	L/m	Kw	L/m	Kw
1000	18.5	2.5	18.5	3.6	18.2	4.6	18.2	5.7	
1150	21.2	2.8	21.2	4.0	20.8	5.3	20.8	6.3	
1450	26.5	3.4	26.1	4.8	25.7	6.4	25.7	7.8	
1725	29.9	4.0	29.5	5.7	29.5	7.5	29.1	9.0	

Pumps 5315, 5320, 5325, 5330



## U.S. Units

5315	PSI	100	200	300	400	500				
	RPM	GPM	HP	GPM	HP	GPM	HP			
1725	1.5	0.2	1.5	0.3	1.5	0.4	1.5	0.4	1.4	0.6

5320	PSI	100	200	300	400	500				
	RPM	GPM	HP	GPM	HP	GPM	HP			
1725	2.2	0.3	2.2	0.4	2.1	0.6	2.1	0.7	2.1	0.8

5325	PSI	100	200	300	400	500				
	RPM	GPM	HP	GPM	HP	GPM	HP			
1725	2.5	0.4	2.5	0.5	2.5	0.7	2.5	0.8	2.4	1.0

5330	PSI	100	200	300	400	500				
	RPM	GPM	HP	GPM	HP	GPM	HP			
1725	3.0	0.5	3.0	0.7	3.0	0.9	3.0	1.1	2.9	1.2

## Metric Units

5315	BAR	7	14	21	27.5	34.5				
	RPM	L/m	Kw	L/m	Kw	L/m	Kw			
1725	5.8	0.1	5.7	0.2	5.6	0.3	5.5	0.3	5.5	0.4

5320	BAR	7	14	21	27.5	34.5				
	RPM	L/m	Kw	L/m	Kw	L/m	Kw			
1725	8.3	0.2	8.2	0.3	8.0	0.4	8.0	0.5	8.0	0.6

5325	BAR	7	14	21	27.5	34.5				
	RPM	L/m	Kw	L/m	Kw	L/m	Kw			
1725	9.6	0.3	9.5	0.4	9.5	0.5	9.4	0.6	9.2	0.7

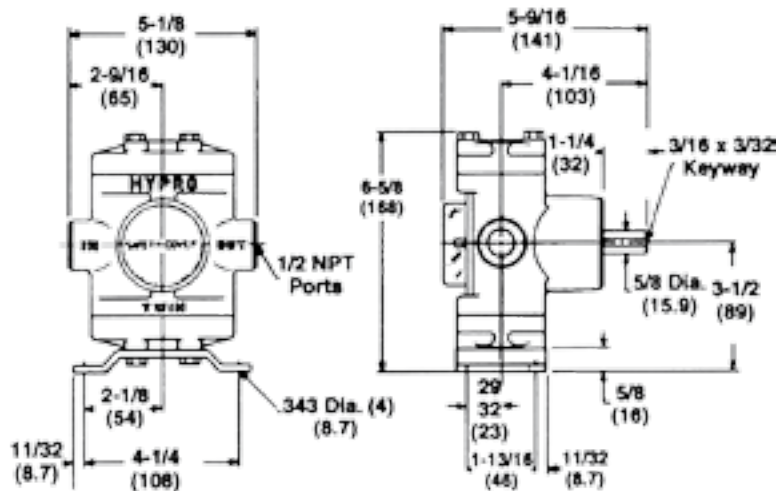
5330	BAR	7	14	21	27.5	34.5				
	RPM	L/m	Kw	L/m	Kw	L/m	Kw			
1725	11.4	0.4	11.4	0.6	11.3	0.7	11.2	0.8	11.1	0.9



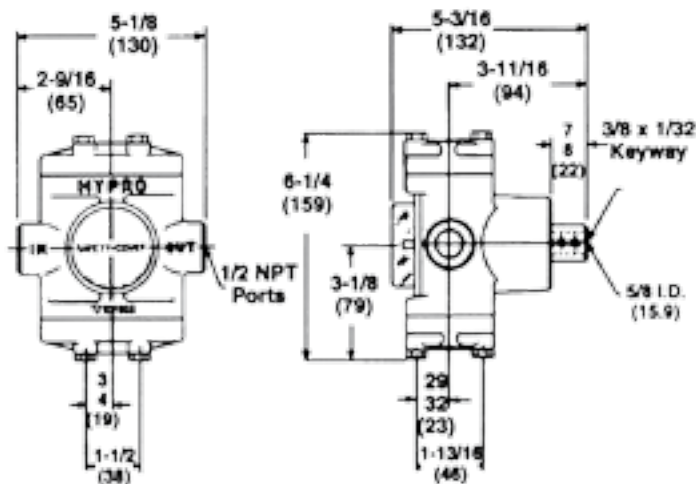
# Technical Information

Pumps 5321, 5322, 5324

## Solid Shaft



## Hollow Shaft



### U.S. Units

5321, 5322	PSI	100		300		500		700		1000	
	RPM	GPM	HP	GPM	HP	GPM	HP	GPM	HP	GPM	HP
	900	1.1	0.2	1.1	0.4	1.1	0.5	1.1	0.6	1.1	0.8
	1200	1.5	0.3	1.5	0.5	1.5	0.6	1.5	0.8	1.4	1.0
	1450	1.8	0.4	1.8	0.6	1.8	0.7	1.8	0.9	1.8	1.2
1725	2.2	0.4	2.1	0.7	2.1	0.8	2.1	1.1	2.1	1.4	

### Metric Units

5321, 5322	BAR	7		20		40		50		69	
	RPM	L/m	Kw	L/m	Kw	L/m	Kw	L/m	Kw	L/m	Kw
	900	4.2	0.2	4.2	0.3	4.2	0.4	4.2	0.5	4.1	0.6
	1200	5.8	0.2	5.6	0.4	5.5	0.5	5.5	0.6	5.4	0.7
	1450	6.9	0.3	6.8	0.4	6.7	0.6	6.7	0.7	6.6	0.9
1725	8.2	0.3	8.1	0.5	8.0	0.7	8.0	0.8	7.9	1.1	

5324	PSI	100		200		300		400		500		600		700		800	
	RPM	GPM	HP	GPM	HP	GPM	HP	GPM	HP	GPM	HP	GPM	HP	GPM	HP	GPM	
	600	1.0	0.1	0.9	0.2	0.9	0.3	1.0	0.3	0.9	0.4	0.9	0.5	0.9	0.5	0.9	0.6
	900	1.5	0.2	1.5	0.3	1.5	0.4	1.5	0.5	1.5	0.6	1.5	0.7	1.5	0.8	1.5	0.9
	1200	2.0	0.3	2.0	0.4	2.0	0.6	2.0	0.7	2.0	0.8	2.0	0.9	1.9	1.1	1.9	1.2
	1450	2.4	0.3	2.4	0.5	2.4	0.7	2.4	0.8	2.4	1.0	2.3	1.1	2.3	1.3	2.3	1.4
	1725	2.9	0.4	3.0	0.6	2.9	0.8	2.9	1.0	2.8	1.2	2.8	1.4	2.8	1.5	2.8	1.7

5324	BAR	7		21		34.5		48		55	
	RPM	L/m	Kw	L/m	Kw	L/m	Kw	L/m	Kw	L/m	Kw
	900	5.7	0.2	5.7	0.3	5.7	0.5	5.7	0.6	5.7	0.7
	1200	7.6	0.2	7.6	0.5	7.6	0.6	7.2	0.8	7.2	0.9
	1450	9.1	0.3	9.1	0.5	9.1	0.8	8.7	1.0	8.7	1.1
1725	11.0	0.3	11.0	0.6	10.6	0.9	10.6	1.2	10.6	1.3	

## Limited Warranty on Hypro PowerLine Plus 2000 Plunger Pumps

Hypro warrants to the original purchaser of its products (the "Purchaser") that oil crankcase plunger pumps will be free from defects in material and workmanship under normal use for the period of five (5) years, and accessories will be free from defects in material and workmanship under normal use for the period of ninety (90) days. In addition, Hypro warrants to the purchaser all forged brass pump manifolds will be free from defects in material and workmanship under normal use and from damage resulting from environmental conditions for the life of the pump.

"Normal use" does not include use in excess of recommended maximum speeds, pressures, vacuums and temperatures, or use requiring handling of fluids not compatible with component materials, as noted in Hypro product catalogs, technical literature, and instructions. This warranty does not cover freight damage, freezing damage, normal wear and tear, or damage caused by misapplication, fault, negligence, alterations, or repair that affects the performance or reliability of the product.

**THIS WARRANTY IS EXCLUSIVE. HYPRO MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

Hypro's obligation under this warranty is, at Hypro's option, to either repair or replace the product upon return of the entire product to the Hypro factory in accordance with the return procedures set forth below. **THIS IS THE EXCLUSIVE REMEDY FOR ANY BREACH OF WARRANTY.**

**IN NO EVENT SHALL HYPRO BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND, WHETHER FOR BREACH OF ANY WARRANTY, FOR NEGLIGENCE, ON THE BASIS OF STRICT LIABILITY, OR OTHERWISE.**

### Return Procedures

**All pumps or products must be flushed of any chemical (ref. OSHA section 1910.1200 (d) (e) (f) (g) (h)) and hazardous chemicals must be labeled/tagged before being shipped\* to Hypro for service or warranty consideration.** Hypro reserves the right to request a Material Safety Data Sheet from the Purchaser for any pump or product Hypro deems necessary. Hypro reserves the right to "disposition as scrap" pumps or products returned which contain unknown substances, or to charge for any and all costs incurred for chemical testing and proper disposal of components containing unknown substances. Hypro requests this in order to protect the environment and personnel from the hazards of handling unknown substances.

For technical or application assistance, call the **Hypro Technical/Application number: 800-445-8360**, or send an email to: **technical@hypropumps.com**. To obtain service or warranty assistance, call the **Hypro Service and Warranty number: 800-468-3428**; or send a fax to the **Hypro Service and Warranty FAX: 651-766-6618**. Be prepared to give Hypro full details of the problem, including the following information:

1. Model number and the date and from whom you purchased your pump.
2. A brief description of the pump problem, including the following:
  - Liquid pumped. State the pH and any non-soluble materials, and give the generic or trade name.
  - Temperature of the liquid and ambient environment
  - Suction lift or vacuum (measured at the pump).
  - Discharge pressure.
  - Size, type, and mesh of the suction strainer.
  - Drive type (gas engine/electric motor, direct/belt drive, tractor PTO) and rpm of pump.
  - Viscosity (of oil, or other than water weight liquid).
  - Elevation from the pump to the discharge point.
  - Size and material of suction and discharge line.
  - Type of spray gun, orifice size, unloader/relief valve.

Hypro may request additional information and may require a sketch to illustrate the problem. Contact the factory to receive a return material authorization before sending the product. All pumps returned for warranty work should be sent shipping charges prepaid to:

HYPRO/PENTAIR  
Attention: Service Department  
375 Fifth Avenue NW  
New Brighton, MN 55112

\*Carriers, including U.S.P.S., airlines, UPS, ground freight, etc., require specific identification of any hazardous materials being shipped. Failure to do so may result in a substantial fine and/or prison term. Check with your shipping company for specific instructions.



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