



*The Pumps with Nine Lives*

# ACCESSORY CATALOG



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## Conversion Chart

Multiply	By	To Obtain
Flow (M <sup>3</sup> /hr)	4.4	GPM
Flow (GPM)	3.785	Liters (L/M)
Flow (Barrel/day US)	0.0292	GPM
Flow (Barrel/day Euro)	0.0219	GPM
Horsepower (hp)	1.34	kW
Pressure (PSI)	0.06894	BAR
Weight (oz)	0.02834	Kilogram (kg)
Weight (lbs)	0.45359	Kilogram (kg)
Dimensions (in)	25.4	Dimensions (mm)
Dimensions (ft)	304.8	Dimensions (mm)
Temperature (°F)	$(\text{tf} - 32) \div 1.8$	Temperature (°C)

### Material Codes used in this catalog:

BB=Brass  
 EPDM=Ethylene Propylene Diene Monamer  
 FPM=Fluorocarbon  
 NBR=Medium Nitrile (Buna-N)  
 PTFE=Pure Polytetrafluoroethylene  
 RTP=Reinforced Composite  
 S=304 Stainless Steel  
 SS=316 Stainless Steel  
 STG=Special Blend PTFE White  
 ZP=Zinc Plated

# Pressure Regulators

## 7001 • 7002 • 7003



### Pressure Regulators

The internal high velocity design assures consistent pressure for multiple pump or shut-off gun installations while the lightweight flow-thru design provides easy installation. Multiple parallel regulators can be installed to handle larger volumes in flow. Any pressure adjustments are easily calibrated with top adjusting nut. Stainless steel wear parts and FPM elastomer construction with no external moving parts or springs. Add .100 to model number for optional 316 stainless steel.

### Flow-Thru-Mount

Specifications	7001	7002	7003
Flow Range [GPM] .....	0.5-5.0	0.5-5.0	0.5-5.0
Pressure Range [PSI] .....	100-1000	500-2000	1500-3000
Max. Temperature [F] .....	180°	180°	180°
Inlet Port [NPTF] .....	3/8	3/8	3/8
Discharge Port [NPTF] .....	3/8	3/8	3/8
By-Pass Port [NPTF] .....	1/2	1/2	1/2
Weight [lbs.] .....	2.25	2.25	2.25
Dimensions [in.] .....	6.25 x 1.5	6.25 x 1.5	6.25 x 1.5

## 7011 • 7012 • 7013 • 7014



### Pressure Regulators

The internal high velocity design assures consistent pressure for multiple pump or shut-off gun installations while the lightweight flow-thru design provides easy installation. Multiple parallel regulators can be installed to handle larger volumes in flow. Any pressure adjustments are easily calibrated with top adjusting nut. Stainless steel wear parts and FPM elastomer construction with no external moving parts or springs. Add .100 to model number for optional 316 stainless steel.

### Flow-Thru-Mount

Specifications	7011	7012	7013	7014
Flow Range [GPM] .....	1.0-10.0	1.0-10.0	1.0-10.0	1.0-10.0
Pressure Range [PSI] ....	100-1000	500-2000	1500-3000	2000-4000
Max. Temperature [F] ....	180°	180°	180°	180°
Inlet Port [NPTF] .....	1/2	1/2	1/2	1/2
Discharge Port [NPTF] ...	1/2	1/2	1/2	1/2
By-Pass Port [NPTF] .....	3/4	3/4	3/4	3/4
Weight [lbs.] .....	3.75	3.75	3.75	3.75
Dimensions [in.] .....	7.5 x 1.88	7.5 x 1.88	7.5 x 1.88	7.5 x 1.88

## 7021 • 7022 • 7023



### Pressure Regulators

The internal high velocity design assures consistent pressure for multiple pump or shut-off gun installations while the lightweight flow-thru design provides easy installation. Multiple parallel regulators can be installed to handle larger volumes in flow. Any pressure adjustments are easily calibrated with top adjusting nut. Stainless steel wear parts and FPM elastomer construction with no external moving parts or springs. Add .100 to model number for optional 316 stainless steel.

### Flow-Thru-Mount

Specifications	7021	7022	7023
Flow Range [GPM] .....	2.5-25.0	2.5-25.0	2.5-25.0
Pressure Range [PSI] .....	100-1000	500-2000	1500-3000
Max. Temperature [F] .....	180°	180°	180°
Inlet Port [NPTF] .....	3/4	3/4	3/4
Discharge Port [NPTF] .....	3/4	3/4	3/4
By-Pass Port [NPTF] .....	1	1	1
Weight [lbs.] .....	5.0	5.0	5.0
Dimensions [in.] .....	8.5 x 2.25	8.5 x 2.25	8.5 x 2.25

## 7028 • 7031 • 7032 • 7033



### Pressure Regulators

The internal high velocity design assures consistent pressure for multiple pump or shut-off gun installations while the lightweight flow-thru design provides easy installation. Multiple parallel regulators can be installed to handle larger volumes in flow. Any pressure adjustments are easily calibrated with top adjusting nut. Stainless steel wear parts and FPM elastomer construction with no external moving parts or springs. Add .100 to model number for optional 316 stainless steel.

### Flow-Thru-Mount

Specifications	7028	7031	7032	7033
Flow Range [GPM] .....	3.5-35	3.5-35	3.5-35	3.5-35
Pressure Range [PSI] ....	250-800	700-1000	1000-2000	1500-3000
Max. Temperature [F] ....	180°	180°	180°	180°
Inlet Port [NPTF] .....	3/4	3/4	3/4	3/4
Discharge Port [NPTF] ...	3/4	3/4	3/4	3/4
By-Pass Port [NPTF] .....	1	1	1	1
Weight [lbs.] .....	5.5	5.5	5.5	5.5
Dimensions [in.] .....	8.5 x 2.25	8.5 x 2.25	8.5 x 2.25	8.5 x 2.25



# Pressure Regulators

## 7061 • 7063 • 7073



### Pressure Regulators

Offers pump protection against pressure fluctuations and system changes. Maintains full system pressure while running in by-pass. Minimum pressure fluctuations with the alternate use of multiple guns or nozzles. The top adjustment knob and locking nut secures system pressure. Stainless steel and FPM internal parts provide temperature and liquid compatibility. No external moving parts.

## Stainless Steel Flow-Thru-Mount

Specifications	7061	7063	7073
Flow Range [GPM] .....	10-70	10-70	10-70
Pressure Range [PSI] .....	400-1000	600-1800	1200-2000
Max. Temperature [F] .....	180°	180°	180°
Inlet Port [NPTF] .....	1	1	1
By-Pass Port [NPTF] .....	1-1/4	1-1/4	1-1/4
Weight [lbs.] .....	6.2	6.2	6.2
Dimensions [in.] .....	9.1 x 3.43 x 2.38	9.1 x 3.43 x 2.38	9.1 x 3.43 x 2.38

## 7065 • 7068



### Pressure Regulators

Offers pump protection against pressure fluctuations and system changes. Maintains full system pressure while running in by-pass. Minimum pressure fluctuations with the alternate use of multiple guns or nozzles. The top adjustment knob and locking nut secures system pressure. Stainless steel and FPM internal parts provide temperature and liquid compatibility. No external moving parts.

## Stainless Steel Flow-Thru-Mount

Specifications	7065	7068
Flow Range [GPM] .....	10-35	10-35
Pressure Range [PSI] .....	400-1200	1200-2000
Max. Temperature [F] .....	180°	180°
Inlet Port [NPTF] .....	3/4	3/4
By-Pass Port [NPTF] .....	1	1
Weight [lbs.] .....	4.19	4.57
Dimensions [in.] .....	8.12 x 2.75 x 2.75	8.12 x 2.75 x 2.75

## 7066



### Pressure Regulator

Offers pump protection against pressure fluctuations and system changes. Maintains full system pressure while running in by-pass. Minimum pressure fluctuations with the alternate use of multiple guns or nozzles. The top adjustment knob and locking nut secures system pressure. Stainless steel and FPM internal parts provide temperature and liquid compatibility. No external moving parts.

## Stainless Steel Tee-Mount

Specifications	7066
Flow Range [GPM] .....	1-12
Pressure Range [PSI] .....	3000-5000
Max. Temperature [F] .....	180°
Inlet Port [NPTF] .....	1/2
By-Pass Port [NPTF] .....	3/4
Weight [lbs.] .....	3.8
Dimensions [in.] .....	6.7 x 2.5

## 7070 • 7076 • 7077



### Pressure Regulators

Offers pump protection against pressure fluctuations and system changes. Maintains full system pressure while running in by-pass. Minimum pressure fluctuations with the alternate use of multiple guns or nozzles. The top adjustment handle and locking nut secures system pressure. Stainless steel and FPM internal parts provide temperature and liquid compatibility. No external moving parts.

## Stainless Steel Tee-Mount

Specifications	7070	7076	7077
Flow Range [GPM] .....	1-12*	1-12*	0.5-5
Pressure Range [PSI] .....	600-1000	800-1500	50-500
Max. Temperature [F] .....	180°	180°	180°
Inlet Port [NPTF] .....	1/4	1/4	1/4
By-Pass Port [NPTF] .....	3/8	3/8	3/8
Weight [lbs.] .....	1.2	1.2	1.2
Dimensions [in.] .....	6.2 x 2.5	6.2 x 2.5	6.2 x 2.5

\*As flow increases, low pressure setting increases [ @ 4.0 GPM, 100 PSI minimum, @ 12.0 GPM, 600 PSI minimum].

# Pressure Regulators

## 7080 • 7082



### Pressure Regulators

Provides system pressure setting and protection for single or multiple gun, nozzle and pump systems. Immediately returns to system pressure when gun opens. Serves also as a secondary relief valve. Features color coded springs for easy valve identification and change from one pressure rating to another. Compact size and easy installation.

### Tee-Mount

Specifications	7080	7082
Flow Range [GPM].....	2.5-7.8	2.5-7.8
Pressure Range [PSI] .....	150-1450	850-3575
Max. Temperature [F] .....	160°	160°
Inlet Port [NPTF] .....	3/8	3/8
Discharge Port [NPTF].....	3/8	3/8
By-Pass Port [NPTF].....	3/8	3/8
Weight [lbs.] .....	1.0	1.0
Dimensions [in.] .....	3.1 x 2.0 x 6.4	3.1 x 2.0 x 6.4

## 7085



### Pressure Regulator

Provides system pressure setting and protection for single or multiple gun, nozzle and pump systems. Immediately returns to system pressure when gun opens. Serves also as a secondary relief valve.

### Tee-Mount

Specifications	7085
Flow Range [GPM].....	1.0-3.5
Pressure Range [PSI] .....	205-2300
Max. Temperature [F] .....	195
Inlet Port [BSPM] .....	1/4
By-Pass Port [BSPF].....	1/8
Hose Barb [in.] .....	1/2
Weight [lbs.] .....	.30
Dimensions [in.] .....	3.0 x 1.5 x 1.0

## 7095 • 7096 • 7097



### Pressure Regulators

Offers pump protection against pressure fluctuations and system changes. Maintains full system pressure while running in by-pass. Minimum pressure fluctuations with the alternate use of multiple guns or nozzles. The top adjustment knob and locking nut secures system pressure. Stainless steel and FPM internal parts provide temperature and liquid compatibility. No external moving parts.

### Stainless Steel Flow-Thru-Mount

Specifications	7095	7096	7097
Flow Range [GPM] .....	10-75	10-75	10-75
Pressure Range [PSI] .....	400-1000	1000-2000	100-400
Max. Temperature [F] .....	180°	180°	180°
Inlet Port [NPTF].....	1	1	1
By-Pass Port [NPTF] .....	1-1/4	1-1/4	1-1/4
Weight [lbs.] .....	6.2	6.2	6.2
Dimensions [in.] .....	9.1 x 3.43 x 2.38	9.1 x 3.43 x 2.38	9.1 x 3.43 x 2.38

# Pressure Regulating Unloaders

## 7500S • 7501



### Pressure Regulating Unloaders

This ultra compact unloader maintains set system pressure yet unloads to near zero in by-pass. Pressure sensitive feature gives immediate pressure when gun opens, permits low pressure by-pass and reduces horsepower. Optional chemical injector threads directly into unloader.

Use model 7500XS with barb for by-pass hose for 2SFx pumps.

Add .0110 to model number for FPM version.

## Single Gun - Pressure Sensitive

Specifications	BB 7500S	SS 7501
Flow Range [GPM].....	0.5-6.0	0.5-6.0
Pressure Range [PSI].....	100-2000	100-2000
Max. Temperature [F].....	160°	180°
Inlet Port [NPTM].....	3/8	3/8
Discharge Port [NPTM].....	3/8	3/8
By-Pass Port [NPTF].....	3/8	3/8
Weight [oz.].....	14	13.6
Dimensions [in.].....	3.03 x .94 x 4.23	3.03 x .94 x 4.23

## 7531 • 7533 • 7536



### Pressure Regulating Unloaders

Maintains full system pressure while running in by-pass with minimum load on pump. Offers pump protection against pressure fluctuations and system changes. Minimum pressure fluctuations with alternating use of multiple guns. Color coded spring for easy identification and simple change from one model to another. Multiple ports for convenient mounting. Optional FPM O-Ring kit.

Add .100 to model number for Relief Valve version.  
Add .0110 to model number for FPM version.

## S.S. Multiple Gun - Pressure Sensitive

Specifications	7531	7533	7536
Flow Range [GPM].....	1-21	1-21	1-21
Pressure Range [PSI].....	400-2200	800-4000	3000-5700
Max. Temperature [F].....	180°	180°	180°
Inlet Port [NPTF].....	1/2	1/2	1/2
Discharge Port [NPTF].....	1/2	1/2	1/2
By-Pass Port [NPTF].....	1/2	1/2	1/2
Weight [lbs.].....	2.9	2.9	3.9
Dimensions [in.].....	8.75 x 3.75 x 1.75	8.75 x 3.75 x 1.75	8.75 x 3.75 x 1.75

## 7534 • 7535



### Pressure Regulating Unloaders

Maintains full system pressure while running in by-pass without full load on pump. Offers pump protection against pressure fluctuations and system changes. Minimum pressure fluctuations with alternating use of multiple guns. Color coded spring for easy identification and simple change from one model to another. Multiple ports for convenient mounting. Optional FPM O-Ring kit.

Add .100 to model number for Relief Valve version.  
Add .0110 to model number for FPM version.

## Brass Multiple Gun - Pressure Sensitive

Specifications	7534	7535
Flow Range [GPM].....	1-21	1-21
Pressure Range [PSI].....	400-2200	800-4000
Max. Temperature [F].....	180°	180°
Inlet Port [NPTF].....	1/2	1/2
Discharge Port [NPTF].....	1/2	1/2
By-Pass Port [NPTF].....	1/2	1/2
Weight [lbs.].....	2.9	2.9
Dimensions [in.].....	8.75 x 3.75 x 1.75	8.75 x 3.75 x 1.75

## 7580 • 7581



### Pressure Regulating Unloaders

Provides system pressure setting and protection for single gun (non-weep) and single pump installation. Compact size with optional ports for easy installation. Handle permits easy adjustments of pressure. Pressure sensitive feature permits wide range of flows and immediate pressure when gun opens. Springs are color coded for easy valve identification and simple change from one pressure rating to another.

## Single Gun - Pressure Sensitive

Specifications	7580	7581
Flow Range [GPM].....	0.5-6.5	0.5-6.5
Pressure Range [PSI].....	400-1000	800-2300
Max. Temperature [F].....	160°	160°
Inlet Port [NPTM].....	3/8	3/8
Discharge Port [NPTM].....	3/8	3/8
By-Pass Port [NPTF].....	3/8	3/8
Weight [oz.].....	14	14
Dimensions [in.].....	3.0 x 1.0 x 4.25	3.0 x 1.0 x 4.25

# Pressure Regulating Unloaders

## 7590



### Pressure Regulating Unloader

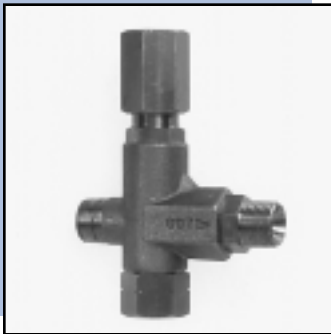
Maintains system pressure yet unloads to near zero when gun shuts off. Easy external pressure adjustment with locking nut to prevent over pressure. Lightweight flow through design for compact installation.

Add .100 to model number for Relief Valve version.

### High Flow - Multiple Gun - Pressure Sensitive

Specifications	7590
Flow Range [GPM].....	10-52
Pressure Range [PSI] .....	400-2175
Max. Temperature [F] .....	195°
Inlet Port [NPTF] [Flush Back] .....	1
Discharge Port [NPTF] [Extended Front] .....	1
By-Pass Port [NPTF] [Flush Bottom] .....	1
Weight [lbs.] .....	7.69
Dimensions [in.] .....	8.5x5.15x1.77

## 7600S



### Pressure Regulating Unloader

This ultra compact unloader maintains set system pressure yet unloads to near zero in by-pass. Pressure sensitive feature gives immediate pressure when gun opens, permits low pressure by-pass and reduces horsepower. Optional chemical injector threads directly into unloader.

### Single Gun - Pressure Sensitive

Specifications	7600S
Flow Range [GPM].....	2.0-5.0
Pressure Range [PSI] .....	700-3500
Max. Temperature [F] .....	160°
Inlet Port [NPTM] .....	3/8
Discharge Port [NPTM].....	3/8
By-Pass Port [NPTF].....	3/8
Weight [oz.] .....	21.4
Dimensions [in.] .....	3.25x1.0 x4.81

## 7620



### Pressure Regulating Unloader

This ultra-compact unloader provides system pressure setting and protection for single gun (non-weep) and single pump installation and unloads to low pressure in by-pass mode.

Standard on 2SFx25GZ and 2SFx30GZ pumps.

### Single Gun - Pressure Sensitive

Specifications	7620
Flow Range [GPM].....	0.5-7.8
Pressure Range [PSI] .....	100-3145
Max. Temperature [F] .....	194°
Inlet Port [BSPM] .....	3/8
Discharge Port [BSPF].....	3/8
By-Pass Port [BSPF].....	3/8
Auxiliary Port [BSPF] .....	1/4
Weight [lbs.] .....	1.3
Dimensions [in.] .....	3.2x1.5x4.7

## 7630



### Pressure Regulating Unloader

This ultra-compact unloader provides system pressure setting and protection for single gun (non-weep) and single pump installation and unloads to low pressure in by-pass mode.

Add .100 to model number for Relief Valve version.

### Single Gun - Pressure Sensitive

Specifications	7630
Flow Range [GPM].....	2.0-10.5
Pressure Range [PSI] .....	400-5100
Max. Temperature [F] .....	195°
Inlet Port [NPTM] .....	3/8
Discharge Port [BSPF].....	3/8
By-Pass Port [NPTF].....	1/2
Auxiliary Port [NPTF] .....	1/4
Weight [oz.] .....	28.7
Dimensions [in.] .....	5.3x3.3x1.7



# Pressure Regulating Unloaders

## 7670 • 7672 • 7690



### Pressure Regulating Unloader

Provides system pressure setting and protection for single gun (non-weep) and pump installation. Compact size with optional ports for easy installation. Ergonomic handle permits easy adjustments of pressure. Pressure sensitive feature permits wide range of flows and immediate pressure when gun opens. Springs are color coded for easy valve identification and simple change from one pressure rating to another.

Add .100 to model number for Relief Valve version.  
Add .0110 to model number for FPM version.

## Single Gun - Pressure Sensitive

Specifications	7670	7672	7690
Flow Range [GPM] .....	2.5-8.0	2.5-8.0	2.5-8.0
Pressure Range [PSI] .....	150-1450	850-3200	1000-4050
Max. Temperature [F] .....	195°	195°	195°
Inlet Port [NPTF] .....	3/8	3/8	3/8
Discharge Port [NPTF] .....	3/8	3/8	3/8
By-Pass Port [NPTF] .....	3/8	3/8	3/8
Weight [lbs.] .....	1.66	1.72	1.75
Dimensions [in.] .....	7.0x3.12x2.0	7.0x3.12x2.0	7.0x3.12x2.0

## 7700 • 7730



### Pressure Regulating Unloader

This ultra-compact unloader with a built-in by-pass channel maintains set system pressure yet unloads to low pressure in by-pass. Special flow-thru screws permit compact, direct port mounting.

## Modular Direct Mount

Specifications	SP 7700	3CP 7730
Flow Range [GPM] .....	5-4.5	5-4.5
Pressure Range [PSI] .....	100-3000	100-3000
Max. Temperature [F] .....	140°	140°
Inlet Port [NPTF] .....	3/8	3/8
Discharge Port [NPTF] .....	3/8	3/8
By-Pass Port .....	Built-in Channel	Built-in Channel
Weight [oz.] .....	20.8	20.8
Dimensions [in.] .....	3.2x1.5x4.7	3.2x1.5x4.7

## 7800 • 7850



### Pressure Regulating Unloader

This ultra-compact unloader with a built-in by-pass channel maintains set system pressure yet unloads to low pressure in by-pass. Special flow-thru screws permit compact, direct port mounting.

## Modular Direct Mount

Specifications	66DX 7800	5CP 7850
Flow Range [GPM] .....	3.0-5.0	3.0-5.0
Pressure Range [PSI] .....	700-4000	700-4000
Max. Temperature [F] .....	140°	140°
Inlet Port [NPTF] .....	1/2	1/2
Discharge Port [NPTF] .....	3/8	3/8
By-Pass Port .....	Built-in Channel	Built-in Channel
Weight [oz.] .....	35.2	35.2
Dimensions [in.] .....	4.65 x 1.70 x 6.75	4.65 x 1.70 x 6.75

## 9900



### Pressure Regulating Unloader

Maintains system pressure yet unloads to near zero when gun shuts off. Easy external pressure adjustment with locking nut to prevent over pressure. Flow through design for compact installation.

Add .100 to model number for Relief Valve version.

## Large Capacity Unloader

Specifications	9900
Flow Range [GPM] .....	50-120
Pressure Range [PSI] .....	100-2900
Max. Temperature [F] .....	195°
Inlet Port [NPTF] .....	1-1/4
Discharge Port [NPTF] .....	1-1/4
By-Pass Port [NPTF] .....	1-1/2
Weight [lbs.] .....	13.40
Dimensions [in.] .....	12.51 x 6.66 x 2.5

# Pressure Relief Valves

## 7036



### Relief Valve

Provides system pressure setting and acts as a secondary relief when set approximately 200 PSI above primary valve. Protects pump from overpressure. 316 stainless steel construction for strength and corrosion resistance.

## S.S. Flow-Thru, High Pressure

### Specifications

Flow Range [GPM] .....	1-21
Pressure Range [PSI] .....	800-4000
Maximum Temperature [F] .....	195°
Inlet Port [NPTF] .....	1/2
Discharge Port [NPTF] .....	1/2
By-Pass Port [NPTF] .....	1/2
Weight [lbs.] .....	2.67
Dimensions [in.] .....	7.38x3.92x1.85

**7036**

## 7190



### Relief Valve

Provides system pressure setting and acts as a secondary relief when set approximately 200 PSI above primary valve. Protects pump from overpressure.

## Flow-Thru, High Pressure

### Specifications

Maximum Flow [GPM] .....	2-6.5
Pressure Range [PSI] .....	400-5000
Maximum Temperature [F] .....	194°
Inlet Port [BSPF] .....	3/8
Discharge Port [BSPF] .....	3/8
By-Pass Port [BSPF] .....	3/8
Weight [oz.] .....	16.7
Dimensions [in.] .....	5.1 x 2.1 x 1.1

**7190**

## 7196



### Relief Valve

Provides system pressure setting and acts as a secondary relief when set approximately 200 PSI above primary valve. Protects pump from overpressure. Conveniently tees into discharge line.

## Tee-Mount, High Pressure

### Specifications

Flow Range [GPM] .....	1-21
Pressure Range [PSI] .....	100-7250
Maximum Temperature [F] .....	195°
Inlet Port [BSPF] .....	1/2
By-Pass Port [BSPF] .....	3/8
Weight [lbs.] .....	3.12
Dimensions [in.] .....	8.74 x 1.96 x 1.54

**7196**

## 30960 thru 33962



### Pop-Off Valves

A Pop-Off Valve provides system back-up protection to assure complete pressure relief for maximum pump and system protection. This lightweight, compact valve quickly mounts directly into the discharge line. Features a special, hardened stainless steel seat and "Acetal" needle valve to eliminate weeping.

## 1/4" or 3/8" Brass

### Specifications

	30960	30961	33961	33960	33962
Maximum Flow [GPM] .....	6.0	6.0	6.0	6.0	6.0
Pressure Range [PSI] .....	300-1500	1000-3000	1000-4000	300-1500	1000-4000
Maximum Temperature [F] .....	180°	180°	180°	180°	180°
Inlet Port [NPTM] .....	1/4	1/4	1/4	3/8	3/8
Barb [in.] .....	3/4	3/4	3/4	3/4	3/4
Weight [oz.] .....	2.96	2.96	2.96	2.96	2.96
Dimensions [in.] .....	0.75 x 2.375	0.75 x 2.375	0.75 x 2.375	0.75 x 2.375	0.75 x 2.375

# Pressure Relief Valves

## 890700 thru 890718



### Relief Valves

Provides system pressure setting and acts as a secondary relief when set approximately 200 PSI above primary valve. Designed for high pressure and high flow. Stainless steel wear parts and FPM elastomers

## S.S. High Pressure, High Flow

Specifications	890700	890702	890704	890706
Flow Range [GPM].....	30-180	25-210	45-320	15-260
Pressure Range [PSI] .....	1000-3000	500-2000	500-2000	250-1000
Maximum Temperature [F].....	300**	300**	300**	300**
Inlet/Discharge Port [NPTF] .....	2	2	2	2
By-Pass Port [NPTM] .....	2	2	2	2
Weight [lbs.].....	20.4	20.4	28.0	28.0
Dimensions [in.].....	9.4 x 6.1 x 5.5	9.4 x 6.1 x 5.5	6.9 x 5.5 x 17.5	6.9 x 5.5 x 17.5

Specifications	890708	890709	890718
Flow Range [GPM].....		8-13	20-60
Pressure Range [PSI] .....		2500-10,000	1500-4000
Maximum Temperature [F].....		300**	300**
Inlet/Discharge Port [NPTF] .....		2	2
By-Pass Port [NPTM] .....		2	2
Weight [lbs.] .....		20.4	20.4
Dimensions [in.].....		9.4 x 6.1 x 5.5	9.4 x 6.1 x 5.5

\*Check individual pump specifications. Do not exceed pump maximums.

## 890703 thru 890715



### Pop-Off Valves

A Pop-Off Valve provides system back-up protection to assure complete pressure relief for maximum pump and system protection. Designed for high pressure and high flow. Stainless steel wear parts and FPM elastomers.

## S.S. High Pressure, High Flow

Specifications	890703	890710	890711
Flow Range [GPM].....	30-135	25-100	5-50
Pressure Range [PSI] .....	400-1500	300-1500	1000-6000
Maximum Temperature [F]* .....	300**	300**	300**
Inlet Port [NPTM] .....	2	1	1
Discharge Port [NPTF].....	2	1	1
Weight [lbs.].....	20.5	6.2	6.2
Dimensions [in.].....	11.0 x 4.7 x 2.4	8.7 x 3.4 x 2.4	8.7 x 3.4 x 2.4

Specifications	890713	890715
Flow Range [GPM].....		20-210
Pressure Range [PSI] .....		500-4000
Maximum Temperature [F]* .....		300**
Inlet Port [NPTM] .....		2
Discharge Port [NPTF].....		2
Weight [lbs.].....		20.5
Dimensions [in.].....		11.0 x 4.7 x 2.4

\*Check individual pump specifications. Do not exceed pump maximums.

# Pulsation Dampeners

## 6010



### Prrrrr-O-Lator (Pulsation Dampener)

Reinforced NBR bladder for durability. Nitrogen precharge eliminates moisture and bladder deterioration. Sealed valve for positive pressure lock. Convenient bottom port for easy mounting directly onto discharge manifold.

Adjustable precharge capability with optimum precharge at 50 to 60% of working (system) pressure.

## Steel - Rechargeable

### Specifications

Maximum Flow [GPM]	40*
Standard Working Pressure [PSI]	3000*
Precharge [PSI]	450
Max. Temperature [F]	180***
Volume [cu. in.]	45
Safety Factor	4/1
Bladder Construction	NBR
Port Size [NPTM]	1
Weight [lbs.]	7.28
Diameter [in.]	4.44
Length [in.]	7.79

\*Authorized intermittent duty system performance (rated 25 GPM, 3000 PSI).

\*\*Maximum 2500 PSI at 180°F. Do not exceed maximum pump rating. Add .800 to model number for special precharge or no precharge.

### 6010

## 6011



### Prrrrr-O-Lator (Pulsation Dampener)

Reinforced bladder for durability. Nitrogen precharge eliminates moisture and bladder deterioration. Sealed valve for positive pressure lock. Convenient bottom port for easy mounting directly onto discharge manifold.

Adjustable precharge capability with optimum precharge at 50 to 60% of working (system) pressure.

## Steel - Rechargeable

### Specifications

Maximum Flow [GPM]	25*
Standard Working Pressure [PSI]*	7200*
Precharge [PSI]	2000
Max. Temperature [F]*	180***
Volume [cu. in.]	15
Safety Factor	4/1
Bladder Construction	NBR
Port Size [NPTF]	1/2
Weight [lbs.]	6.4
Diameter [in.]	4.5
Length [in.]	5.59

\*Authorized intermittent duty system performance (rated 10 GPM, 7200 PSI).

\*\*Maximum 6000 PSI at 180°F. Do not exceed maximum pump rating. Add .800 to model number for special precharge or no precharge.

### 6011

## 6012



### Prrrrr-O-Lator (Pulsation Dampener)

Reinforced NBR bladder for durability. Nitrogen precharge eliminates moisture and bladder deterioration. Sealed valve for positive pressure lock. Convenient bottom port for easy mounting directly onto discharge manifold.

Adjustable precharge capability with optimum precharge at 50 to 60% of working (system) pressure.

## Steel - Rechargeable

### Specifications

Maximum Flow [GPM]	70
Standard Working Pressure [PSI]	1500*
Precharge [PSI]	450
Max. Temperature [F]	180*
Volume [cu. in.]	120
Safety Factor	4/1
Bladder Construction	NBR
Port Size [NPTM]	1-1/4
Weight [lbs.]	12.0
Diameter [in.]	6.7
Length [in.]	8.5

\*\*Authorized intermittent duty system performance (rated 40 GPM, 1500 PSI).

\*Do not exceed maximum pump rating. Add .800 to model number for special precharge or no precharge.

### 6012

## 6013 • 6014 • 6015



### Prrrrr-O-Lators (Pulsation Dampener)

Reinforced NBR or FPM bladder for durability. Nitrogen precharge eliminates moisture and bladder deterioration. Sealed valve for positive pressure lock. 316 stainless steel housing for special compatibility. Convenient bottom port for easy mounting directly onto discharge manifold.

Adjustable precharge capability with optimum precharge at 50 to 60% of working (system) pressure.

## Stainless Steel - Rechargeable

### Specifications

	6013	6014	6015
Maximum Flow [GPM]	40*	25*	70*
Standard Working Pressure [PSI]	2000	2400	1500
Precharge [PSI]	450	450	450
Temperature Range [F]	+5°-210**	+32°-176**	+32°-76**
Volume [cu. in.]	45	20	120
Safety Factor	4/1	4/1	4/1
Bladder Construction	FPM	NBR	NBR
Port Size [NPTM]	1	3/4	1-1/4
Weight [lbs.]	6.28	2.9	9.3
Diameter [in.]	4.44	3.66	6.30
Length [in.]	7.79	5.91	9.0

\*Authorized intermittent duty system performance (rated 25 GPM / 2000 PSI, 25 GPM / 2400 PSI, 40 GPM / 1500 PSI).

\*\*Do not exceed maximum pump rating. Add .800 to model number for special precharge or no precharge.

# Pulsation Dampeners

## 6026 • 6028



### Prrrrr-O-Lators (Pulsation Dampener)

Reinforced NBR bladder for durability. Nitrogen precharge eliminates moisture and bladder deterioration. Broader bladder design provides greater pulsation reduction for smoother performance and longer system component life. Sealed style operates over full range of system pressures without precharge adjustment.

## Steel - Sealed - Precharged

Specifications	6026	6028
Maximum Flow [GPM].....	15	15
Pressure Range [PSI].....	300-600	600-1000
Sealed Precharge [PSI].....	250	450
Temperature Range [F]*.....	+5° to 180°	+5° to 180°
Volume [cu. in.].....	10	10
Safety Factor.....	4/1	4/1
Body Construction.....	Poly-steel	Poly-steel
Bladder Construction.....	NBR	NBR
Port Size [NPTM].....	1/2	1/2
Weight [lbs.].....	1.81	1.81
Diameter [in.].....	2.93	2.93
Length [in.].....	4.67	4.67

\*Do not exceed maximum pump rating.

## 6029 • 6030 • 6031



### Prrrrr-O-Lators (Pulsation Dampener)

Reinforced NBR or FPM bladder for durability. Nitrogen precharge eliminates moisture and bladder deterioration. Broader bladder design provides greater pulsation reduction for smoother performance and longer system component life. Optional stainless steel and FPM construction for critical applications.

Adjustable precharge capability with optimum precharge at 50 to 60% of working (system) pressure.

## Stainless Steel - Rechargeable

Specifications	6029	6030	6031
Maximum Flow [GPM].....	15	15	15
Pressure Range [PSI].....	100-3000	100-3000	100-2400
Precharge [PSI].....	450	450	450
Temperature Range [F].....	+5° to 180**	+5° to 180**	+5° to 180**
Volume [cu. in.].....	10	10	10
Safety Factor.....	4/1	4/1	4/1
Body Construction.....	316 S.S. Lower	316 S.S. Lower	All 316 S.S.
Bladder Construction.....	NBR	FPM	NBR
Port Size [NPTM].....	1/2	1/2	1/2
Weight [lbs.].....	2.18	2.18	2.18
Diameter [in.].....	2.93	2.93	2.93
Length [in.].....	5.51	5.51	5.51

\*Do not exceed maximum pump rating.

Add .800 to model number for special precharge or no precharge.

## 701501 thru 701543



### Prrrrr-O-Lators (Pulsation Dampener)

Durable 316 stainless steel bodies. Nitrogen precharge eliminates moisture and bladder deterioration. Replaceable bladder offers greater flexibility and service.

Optional bladder construction:

**FPM** - 701541, 701542, 701543

**EPDM** - 701521, 701522, 701523

Adjustable precharge capability with optimum precharge at 70% of working (system) pressure.

## Stainless Steel Rebuildable and Rechargeable

Specifications	701501	701502	701503	701506
Maximum Flow [GPM].....	15	25	75	15
Pressure Range [PSI].....	100-4300	100-3800	100-3000	100-8500
Precharge [PSI].....	per specification- 160°	per specification- 160°	per specification- 160°	per specification- 160°
Max. Temperature [F].....	160°	160°	160°	160°
Volume [cu. in.].....	6	15	30	6
Safety Factor.....	4/1	4/1	4/1	4/1
Body Construction.....	316 S.S.	316 S.S.	316 S.S.	316 S.S.
Port Size [NPTF].....	1/2	1/2	1	1/2
Weight [lbs.].....	5.34	8.34	12.56	11.7
Diameter [in.].....	2.6	3.0	3.7	3.0
Length [in.].....	6.57	7.79	9.69	6.61

\*Add .800 to model number for specified precharge.

## 701550 • 701555 • 701557



### R-Series Prrrrr-O-Lators (Pulsation Dampener)

Durable 316 stainless steel bodies. Reinforced NBR bladder for durability. Nitrogen precharge eliminates moisture and bladder deterioration. Replaceable bladder offers greater flexibility and service. Optional FPM, EPDM bladders.

Adjustable precharge to 70% of working (system) pressure.

## Stainless Steel Rebuildable and Rechargeable

Specifications	701550	701555	701557
Maximum Flow [GPM].....	100	100	260
Pressure Range [PSI].....	100-3365	100-6350	100-1275
Precharge [PSI].....	per specification-	per specification-	per specification-
Max. Temperature [F].....	160°	160°	160°
Volume [cu. in.].....	122	60	214
Safety Factor.....	4/1	4/1	4/1
Body Construction.....	316 S.S.	316 S.S.	316 S.S.
Bladder Construction.....	NBR	NBR	NBR
Port Size [NPTF].....	1-1/2	1	1-1/2
Weight [lbs.].....	50.7	48.5	41.9
Diameter [in.].....	6.2	5.8	5.5
Length [in.].....	16.54	10.79	16.93

\*Add .800 to model number for specified precharge.



## 31096



### Shut-Off Gun

Flow-through design makes handling easier. Trim, horizontal design allows for easy trigger operation and comfort while cleaning. Heat resistant nylon body for internal parts protection and operator comfort. Internal stainless steel ball and seat assembly extends service life. Special safety lock prevents unintentional operation. Notched seat rotates to weep for optional freeze protection.

## Industrial - Horizontal

### Specifications

	31096
Maximum Flow [GPM].....	10
Maximum Pressure [PSI].....	4000
Maximum Temperature [F].....	300**
Inlet Port [NPTF].....	3/8
Discharge Port [NPTF].....	1/4
Weight [oz.].....	22
Dimensions [in.].....	7.75x4.0x1.13

\*Check individual pump specifications. Do not exceed pump maximums.

## 31260 • 31265



### Shut-Off Guns

New internal body design permits easy trigger pull. Stainless steel valve and seat assure thousands of continuous cycles. Automatic "lock-off" safety mechanism responds if trigger is released unintentionally.

Optional 24" or 36" SS lance (31219, 31220) with insulator and nozzle protector connects directly to gun.

## High Pressure - Shutoff

### Specifications

	31260	31265
Maximum Flow [GPM].....	8	13
Maximum Pressure [PSI].....	5100	3650
Maximum Temperature [F].....	320**	320**
Inlet Port [NPTF].....	3/8	3/8
Discharge Port [NPTF].....	1/4	1/4
Weight [oz.].....	23.3	23.3
Dimensions [in.].....	7.50x7.25x1.25	7.50x7.25x1.25

\*Check individual pump specifications. Do not exceed pump maximums.

## 31675



### Dump Gun

Directs flow to dump lance when gun is shut off, eliminating pressure spikes to the pump. Also acts as a "weep" gun to prevent freezing. Features a heavy-duty, durable, stainless steel lance and internal wear parts for long service life. Easy service and ultra lightweight.

## S.S. Dump Gun - High Pressure

### Specifications

	31675
Maximum Flow [GPM].....	15
Maximum Pressure [PSI].....	15,000
Maximum Temperature [F].....	200**
Inlet Port [NPTM].....	1/2
Discharge Port [NPTF].....	1/4
Weight [lbs.].....	14.12
Dimensions w/Adjustable Shoulder Stock [in.].....	68x12x1.25

\*Check individual pump specifications. Do not exceed pump maximums.

## 32300 • 32301



### Dump Gun

A dump gun eliminates the need for regulator or unloader valves, keeping system costs down. It directs flow to outer lance when gun is shut off and eliminates pressure spikes to the pump. Also acts as a "weep" gun to prevent freezing. Features heavy-duty, durable, stainless steel barrels and internal wear parts for long service life.

## Dump Gun

### Specifications

	32300	32301
Maximum Flow [GPM].....	10	10
Maximum Pressure [PSI].....	3000	3000
Maximum Temperature [F].....	140°	140°
Inlet Port [NPTF].....	3/8	3/8
Discharge Port [NPTF].....	1/8	1/8
Weight [lbs.].....	2.69	6.81
Dimensions [Lance Only] [in.].....	15	39
Dimensions [Gun and Lance] [in.].....	25	49

# Guns

## 33425



### Shut-Off Gun

Balanced front load design reduces operator fatigue. Lightweight high impact nylon body for durability. Secure grip and quick release safety lock for operator comfort and safety. Insulated lance extensions offer cleaning flexibility. Conveniently connects to 33200 and 33221 lances and a variety of accessories. Standard on 2X1000, 3X1000 TUFF CATS.

## Front Load Shut-off

### Specifications

Maximum Flow [GPM] .....	8.0
Maximum Pressure [PSI] .....	2900
Maximum Temperature [F] .....	210*
Inlet Port [BSPF] .....	3/8
Discharge Port [NPTF] .....	1/4
Weight [oz.] .....	9.6
Dimensions [in.] .....	7.5 x 6.0 x 1.2

\*Check individual pump specifications. Do not exceed pump maximums.

## 33600



### Shut-Off Gun

Special 303 stainless steel model for additional compatibility. Durable nylon body with heat resistant trigger provides longer life and less breakage. Unique valve design with internal balanced pressure permits extended operation without operator fatigue. Quality construction stainless steel tapered seat and valve assures thousands of continuous cycles.

## 303SS Pressure Compensating

### Specifications

Maximum Flow [GPM] .....	10.5
Maximum Pressure [PSI] .....	5800
Maximum Temperature [F] .....	320*
Inlet Port [NPTF] .....	3/8
Discharge Port [NPTF] .....	1/4
Weight [oz.] .....	19.6
Dimensions [in.] .....	8.25 x 5.38 x 1.25

\*Check individual pump specifications. Do not exceed pump maximums.

## 35150 • 35151



### Shut-Off Guns

Durable impact resistant housing and trigger means longer life, less breakage. Contour design and smooth trigger action reduces operators fatigue. Quality construction stainless steel ball and seat assures thousands of continuous cycles. Special safety lock prevents unintentional operation.

## Standard and Weep

### Specifications

	Standard 35150	Weep 35151
Maximum Flow [GPM] .....	8.0	8.0
Maximum Pressure [PSI] .....	4500	4500
Maximum Temperature [F] .....	320*	320*
Inlet Ports [NPTF] .....	3/8	3/8
Discharge Ports [NPTF] .....	1/4	1/4
Weight [oz.] .....	23.4	23.4
Dimensions [in.] .....	7.2 x 7.2 x 1.26	7.2 x 7.2 x 1.26

\*Check individual pump specifications. Do not exceed pump maximums.

## 36126



### Shut-Off Gun

Special 303 stainless steel model for additional compatibility. Durable high strength, heat resistant body and trigger means longer life, less breakage. Contour design and smooth trigger action reduces operators fatigue. Special safety lock prevents unintentional operation. Quality construction stainless steel ball and seat assures thousands of continuous cycles.

## Stainless Steel - Shutoff

### Specifications

Maximum Flow [GPM] .....	10.0
Maximum Pressure [PSI] .....	4000
Maximum Temperature [F] .....	300*
Inlet Ports [NPTF] .....	3/8
Discharge Ports [NPTF] .....	1/4
Weight [oz.] .....	23.4
Dimensions [in.] .....	8.25 x 5.98 x 1.25

\*Check individual pump specifications. Do not exceed pump maximums.

# Guns

## 36140 • 36141



### Shut-Off Guns

Choice of standard or freeze protection "weep" version. Durable nylon body with new heat resistant trigger means longer life, less breakage. Contour design and smooth trigger action reduces operators fatigue. Special safety lock prevents unintentional operation. Quality construction stainless steel ball and seat assures thousands of continuous cycles.

## Standard and Weep - Shutoff

Specifications	Standard 36140	Weep 36141
Maximum Flow [GPM] .....	10.5	10.5
Maximum Pressure [PSI] .....	4500	4500
Maximum Temperature [F] .....	320**	320**
Inlet Ports [NPTF] .....	3/8	3/8
Discharge Ports [NPTF] .....	1/4	1/4
Weight [oz.] .....	27.5	27.5
Dimensions [in.] .....	8.26x5.39x1.15	8.26x5.39x1.15

\*Check individual pump specifications. Do not exceed pump maximums.

## 39411 • 39412 • 39413



### Shut-Off Guns

Unique valve design permits a gradual pull on the trigger for gradual build up of pressure. Contour design with fully adjustable front grip provides comfort and safety. Automatic "lock-off" safety mechanism responds if trigger is released unintentionally. Stainless steel internal parts and forged inlet housing for durability.

## High Pressure w/Lance Extensions

Specifications	39411	39412	39413
Maximum Flow [GPM] .....	21	21	21
Maximum Pressure [PSI] .....	7250	7250	7250
Maximum Temperature [F] .....	210**	210**	210**
Inlet Port [BSPF] .....	1/2	1/2	1/2
Discharge Port [BSPF] .....	1/2	1/2	1/2
Weight [oz.] .....	30.5	52.2	75.0
Lance Length [in.] .....	16	32	49
Dimensions [in.] .....	8.62 x 24.25	8.62 x 40.0	8.62 x 57.72

\*Check individual pump specifications. Do not exceed pump maximums.

# Lances

## 31219 • 31220



### Lances

Durable blue nylon insulator and nozzle protector for comfort, safety and nozzle protection. Suitable for hot or cold cleaning at high pressure. Conveniently fits to 31260, 31265 and 33600 guns.

## Stainless Steel Single

### Specifications

	31219	31220
Maximum Flow [GPM] .....	8.0	8.0
Maximum Pressure [PSI] .....	5100	5100
Maximum Temperature [F] .....	350**	350**
Inlet Port [NPTM] .....	1/4	1/4
Discharge Port [NPTF] .....	1/4	1/4
Weight [oz.] .....	31.6	33.8
Dimensions [in.] .....	32	42

\*Check individual pump specifications. Do not exceed pump maximums.

## 31017 • 32031 thru 32036



### Lances

Nylon insulator for operator comfort and safety. Suitable for hot or cold water cleaning. Two-piece nozzle protector reduces nozzle clogging and damage.

## Zinc Plated Single

### Specifications

	31017	32031	32032	32033	32034	32035
		<b>32036*</b>				
Maximum Flow [GPM] .....	10.5	10.5	10.5	10.5	10.5	10.5
Maximum Pressure [PSI] .....	3650	3650	3650	3650	3650	3650
Maximum Temperature [F] .....	320***	320***	320***	320***	320***	320***
Inlet Port [BSPM] .....	1/4	1/4	1/4	1/4	1/4	1/4
Discharge Port [Nozzle] [NPTF] .....	1/4	1/4	1/4	1/4	1/4	1/4
Weight [oz.] .....	21.8	24.2	35.4	41.0	43.8	49.1
Overall Length [in.] .....	27	36	48	60	67	79

\*NPTM inlet port.

\*\*Check individual pump specifications. Do not exceed pump maximums.

## 32042 • 32701 thru 32706 34733



### Lances

Nylon insulator for operator comfort and safety. Suitable for hot or cold water cleaning. Two-piece nozzle protector reduces nozzle clogging and damage.

## Stainless Steel Single

### Specifications

	32701	32702	32703	32704	32705	32706
		<b>32042*</b>		<b>34733*</b>		
Maximum Flow [GPM] .....	10.5	10.5	10.5	10.5	10.5	10.5
Maximum Pressure [PSI] .....	3650	3650	3650	3650	3650	3650
Maximum Temperature [F] .....	320***	320***	320***	320***	320***	320***
Inlet Port [BSPM] .....	1/4	1/4	1/4	1/4	1/4	1/4
Discharge Port [Nozzle] [NPTF] .....	1/4	1/4	1/4	1/4	1/4	1/4
Weight [oz.] .....	19.4	21.8	31.6	37.3	39.4	43.8
Overall Length [in.] .....	27	36	48	60	67	79

\*NPTM inlet port.

\*\*Check individual pump specifications. Do not exceed pump maximums.

# Lances

## 32264 • 32268 • 36267 36269



### Lances

Lightweight molded lance for sure grip and optimum control. New molded insulator eliminates assembly and adjustment. Optional lengths for flexibility and specialized cleaning.

## Zinc Plated Molded - Single

Specifications	32264	36267	32268	36269
Maximum Flow [GPM] .....	10.5	10.5	10.5	10.5
Maximum Pressure [PSI] .....	3650	3650	3650	3650
Maximum Temperature [F] .....	320**	320**	320**	320**
Inlet Port [BSPM] .....	1/4	1/4	1/4	1/4
Discharge Thread [BSPM] .....	1/4	1/4	1/4	1/4
Weight [oz.] .....	14.9	21.0	29.8	36.0
Overall Length [in.] .....	24	36	48	60

\*Check individual pump specifications. Do not exceed pump maximums.

## 33200 • 33201



### Lances

Ventilated square nylon insulator for operator comfort and safety. Front insulated adjustment handle for low to high pressure nozzle selection. Optional length for use with adjustable chemical injector.

## Dual Lance

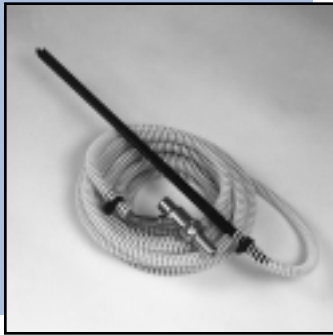
Specifications	S.S. 33200	Z.P. 33201
Maximum Flow [GPM] .....	10.5	10.5
Maximum Pressure [PSI] .....	3650	3650
Maximum Temperature [F] .....	320**	320**
Inlet Port [NPTM] .....	1/4	1/4
Discharge Port [Dual Nozzle] [NPTF] .....	1/4	1/4
Weight [oz.] .....	42.3	38.1
Overall Length [in.] .....	43	35

\*Check individual pump specifications. Do not exceed pump maximums.



# Sandblasters • Pipe Cleaners

## 30417 thru 30422



### Wet Sandblasters

Ultra-lightweight, compact design for easy dust-free blasting. Stainless steel spray nozzle for long life. Durable tungsten carbide lined mixing nozzle and body for maximum service. Standard sand induction hose assembly permits visual inspection of sand draw.

Select optional gun 35150, 36140 or 31260.

## Tungsten Carbide Light-Duty

Specifications	30417	30418	30419
Maximum Flow [GPM].....	3.8	5.1	6.0
Maximum Pressure [PSI].....	3500	3500	3500
Maximum Temperature [F].....	195°	195°	195°
Nozzle Orifice [in.].....	0.047	0.055	0.059
Sand Flow [lbs/min].....	6.0-9.0	6.5-10.0	7.0-11.0
Inlet Port [NPTF].....	1/4	1/4	1/4
Hose & Tube Probe Size [NPT].....	1/4	1/4	1/4
Sand Inlet Hose ID [NPT].....	1/2	1/2	1/2
Weight - Housing [lbs.].....	1.75	1.75	1.75
- Housing, Probe, Hose [lbs.].....	3.15	3.15	3.15
Length - Housing with Barb [in.].....	5.12	5.12	5.12
- Probe [in.].....	19.13	19.13	19.13

Specifications	30420	30421	30422
Maximum Flow [GPM].....	6.5	7.6	9.1
Maximum Pressure [PSI].....	3500	3500	3500
Maximum Temperature [F].....	195°	195°	195°
Nozzle Orifice [in.].....	0.063	0.070	0.078
Sand Flow [lbs/min].....	7.5-13.0	8.5-13.0	8.5-13.0
Inlet Port [NPTF].....	1/4	1/4	1/4
Hose & Tube Probe Size [NPT].....	1/4	1/4	1/4
Sand Inlet Hose ID [NPT].....	1/2	1/2	1/2
Weight - Housing [lbs.].....	1.75	1.75	1.75
- Housing, Probe, Hose [lbs.].....	3.15	3.15	3.15
Length - Housing with Barb [in.].....	5.12	5.12	5.12
- Probe [in.].....	19.13	19.13	19.13

## 30667 • 30677



### Wet Sandblasters

Lightweight aluminum housing for ease in handling. High efficiency venturi design for wide range of operating pressures and flows. Tungsten carbide mixing nozzle for maximum service life. Quality construction for ultimate performance. Draws up to 1000 pounds of sand per hour and features a sand induction hose for restriction free sand flow.

## Tungsten Carbide Industrial

Specifications	30667	30677
	Use w/35150 Gun	Use w/39411 Gun
Maximum Flow [GPM].....	6.1	8.0
Maximum Pressure [PSI].....	3000	5500
Maximum Temperature [F].....	160°	160°
Weight [lbs.].....	4.75	7.87
Wand Length [in.].....	30	(part of 39411Gun)
Overall Length [in.].....	41	31.5

## 34643 • 34644



### Jetter Hose with Tri-Jet Nozzle

Extremely flexible 30' or 50', 1/8" hose with wear resistant smooth finish. Tight 1/2" bend radius for maximum flexibility. One-third the weight of wire braid hose. Powerful Tri-Jet Nozzle blasts dirt free and propels hose through pipes.

## Jetter Pipe Cleaner

Specifications	34643	34644
Maximum Flow [GPM].....	3.0	3.0
Maximum Pressure [PSI].....	2000	2000
Maximum Temperature [F].....	180°	180°
Inlet Fitting [Quick Coupler].....	1/4	1/4
Nozzle Fitting [NPTM].....	1/8	1/8
Hose Rating [PSI].....	2500	2500
Weight [oz.].....	16.0	28.5
Hose Length [ft.].....	30	50

# Gauges

## 6086 • 6088 • 6089



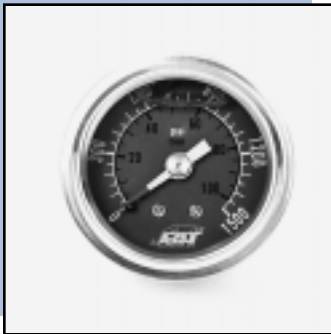
### Pressure Gauges

Glycerine filled for consistent, accurate reading and shock and pulsation protection. Built-in snubber reduces pressure fluctuations. Install on pump discharge manifold for accurate monitoring of pump performance and to enhance system safety.

## Brass - Bottom Mount

Specifications	6086	6088	6089
Pressure Range [PSI].....	0-1500	0-3000	0-6000
Temperature Range [F].....	68-160°	68-160°	68-160°
Fitting [NPTM] [Bottom].....	1/4	1/4	1/4
Weight [oz.].....	6.9	6.9	6.9
Dimensions Diameter [in.].....	2.64	2.64	2.64
Depth [in.].....	1.12	1.12	1.12
Full Height [in.].....	3.5	3.5	3.5

## 6094



### Pressure Gauge

Glycerine filled for consistent, accurate reading and shock and pulsation protection. Built-in snubber reduces pressure fluctuations. Install on pump discharge manifold for accurate monitoring of pump performance and to enhance system safety.

## Poly-Case - Flat Mount

Specifications	6094
Pressure Range [PSI].....	0-1500
Temperature [F].....	220°
Fitting [NPTM] [Back].....	1/8
Weight [oz.].....	2.5
Dimensions Diameter [in.].....	1.87
Depth [in.].....	1.87

## 6096



### Pressure Gauge

Glycerine filled for consistent, accurate reading and shock and pulsation protection. Built-in snubber reduces pressure fluctuations. Install on pump discharge manifold for accurate monitoring of pump performance and to enhance system safety.

## 304 S.S. Case - Flat Mount

Specifications	6096
Pressure Range [PSI].....	0-3000
Temperature [F].....	220°
Fitting [NPTM] [Back].....	1/8
Weight [oz.].....	3.4
Dimensions Diameter [in.].....	1.73
Depth [in.].....	1.79

## 6085 • 6087 • 6097 • 6098



### Pressure Gauges

Install on pump discharge manifold for accurate monitoring of pump performance and to enhance system safety. Safety blow-out disk for automatic pump protection at pressure limits [model 6098 only]. Glycerine filled for consistent, accurate reading and shock and pulsation protection. Built-in snubber reduces pressure fluctuations.

## All 316 S.S. Internal, 304 S.S. Case - Bottom Mount

Specifications	6085	6087	6097	6098
Pressure Range [PSI].....	1-1500	0-6000	0-3000	0-15,000
Temperature Range [F].....	68-160°	68-160°	68-160°	68-160°
Fitting [NPTM] [Bottom].....	1/4	1/4	1/4	1/2
Weight [oz.].....	6.88	6.88	6.88	29.52
Dimensions Diameter [in.].....	2.64	2.64	2.64	4.13
Depth [in.].....	1.12	1.12	1.12	1.83
Full Height [in.].....	3.5	3.5	3.5	5.25

# Lubricants

## 6100 • 6105 • 6107 • 6109



### Crankcase Oil

A special premium grade, multi-viscosity petroleum based hydraulic lubricant for high pressure hydraulic systems. Non-detergent for greater wear and protection at high RPM and high pressure. Anti-wear, high pressure and oxidizer inhibitor additives for maximum crankcase protection and wear. Runs significantly cooler than typical lubricants, enhancing the longevity of components.

## Special Blend Crankcase Oil

Specifications	6100	6105	6107	6109
Grade.....	Special Hydraulic	Special Hydraulic	Special Hydraulic	Special Hydraulic
ISO .....	68	68	68	68
Capacity.....	Case [12] 21 oz.	Twin-Pack [2] 2.5 gal.	Bottle 21 oz.	Drum 30 gal.
Weight .....	17.0 lbs.	41.0 lbs.	21.0 oz.	243 lbs.
Dimensions [in.].....	10 x 10 x 6.75	15 x 15 x 9.5	6 x 3 x 2	18 x 29

## 6115 • 6116



### R-Series Crankcase Oil

A special premium grade, multi-viscosity lubricant for CAT PUMPS R-Series pumps. Non-detergent for greater wear and protection at high pressure and continuous-duty operation. Anti-wear, high pressure, and oxidizer inhibitor additives for maximum crankcase protection and wear. Runs significantly cooler than typical lubricants, enhancing the longevity of components.

## Special Blend Crankcase Oil

Specifications	6115	6116
Grade.....	Special Blend	Special Blend
ISO .....	100	100
Capacity.....	Pail 5 gal.	Drum 16 gal.
Weight .....	42.75 lbs.	126 lbs.
Dimensions [in.].....	13.25 x 13.25 x 16	14.75 x 27

# Lubricants

## 6104



### Liquid Gasket

Extends pump life. A special flexible sealant applied to all o-ring and seal crevices and mating surfaces at each servicing. Fills gaps up to .010" extending service life in harsh liquid applications. Resistant to shock, heat, fuels, oils, coolants, fluorocarbons and salt water. Recommended in all reverse osmosis, leachate and harsh liquid applications.

## Flexible Sealant

### Specifications

Type.....	Polymer Gel	<b>6104</b>
Temperature Range [F] .....	-60° to 600°	
Capacity (Tube) [oz.] .....	1	
Weight [oz.].....	.15	
Dimensions [in.].....	2.5 x .75	

## 6106



### Antiseize

A non-hardening lubricant provided in all BD direct mount packages, gearbox, gearbox pumps and direct drive bolt kits. Recommended for driveshaft and keyway application to help minimize excessive bonding.

## Lubricant

### Specifications

Type.....	Nickel/Graphite	<b>6106</b>
Mil Spec.....	A-907E	
Temperature [F].....	440°	
Capacity (Tube) [ml] .....	2	
Weight [oz.].....	.011	
Dimensions [in.].....	.69 x 2.45	

## 6110 • 6111



### Gearbox Lube

Reduces friction and wear and lowers operating temperature, thus lowering maintenance costs. Provides excellent oxidation and thermal stability to prolong liquid life. Features demulsibility and filterability, allowing water and contaminants to be easily removed. Anti-wear, anti-rust and anti-corrosion protection extends gearbox life. Used in 8051-8078 gearboxes.

## Gearbox Lubricant

### Specifications

Grade.....	80-90W	<b>6110</b>	<b>6111</b>
ISO.....	220		220
Temperature Range [F] .....	-10-200°		-10-200°
Capacity.....	Bottle		Case
	16 oz.		[12] 16 oz.
Weight [oz.] [lbs.].....	16		12.45
Dimensions [in.].....	3.75 x 3.25 x 2.25		10 x 8.5 x 8.25

## 6119



### Food Grade Anti-seize

Prevents galling, seizing, friction and wear on threaded joints and other metal-to-metal surfaces. Recommended for all stainless steel pumps to lubricate and prevent galling.

## Food Grade Lubricant

### Specifications

Type.....	White Paste	<b>6119</b>
Temperature Range [F] .....	-20-750°	
Capacity (Tube) [oz.] .....	1	
Weight [oz.].....	.10	
Dimensions [in.].....	1.5 x 5.1	

# Filters

## 7104 thru 7108



### Inline Inlet Filters

Durable nylon body and 304SS mesh screen for corrosion resistance and reinforced stainless steel ports for added pipe connection support. Inline strainers are easily cleaned without removing the strainer or inlet plumbing. Inside out flow direction so sediment collects inside the screen. Optional mesh sizes and clear body construction available.

## Nylon Body

Specifications	7104	7105	7106	7107	7108
Max. Suction Flow [GPM]	6.0	15.0	20.0	35.0	60.0
Max. Pressurized Flow [GPM]	10.0	20.0	25.0	50.0	75.0
Inlet Pressure Range [PSI]	100-150	100-150	100-150	100-150	100-150
Max. Temperature [F] ...	160°	160°	160°	160°	160°
Inlet/Discharge Ports [NPTF]	1/2	3/4	1.0	1-1/4	1-1/2
Mesh Size .....	80	80	80	80	80
Weight [oz.].....	6.0	7.0	16.0	18.0	19.0

Dimensions [in.] ..... 3.6x2.95x5.35 3.6x2.95x5.35 5.0x4.1x6.35 5.0x4.1x7.0 5.13x4.1x8.13

Use Part No. 7104.4, 7105.5, 7106.6, 7107.7, 7108.8 for clear body versions.

## 7109



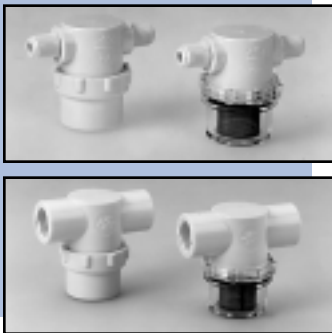
### Y-Inline Inlet Filter

Durable fiberglass reinforced polypropylene body and 304 stainless steel mesh screens for corrosion resistance. Convenient inline installation and bottom flushing port for easy periodic cleaning.

## Polypropylene Body

Specifications	7109
Maximum Suction Flow [GPM] .....	100
Maximum Pressurized Flow [GPM] .....	150
Maximum Inlet Pressure @ 70°F [PSI].....	150
Maximum Inlet Pressure @ 125°F [PSI].....	100
Maximum Temperature [F] .....	125°
Inlet / Discharge Ports [NPTF].....	2
Bottom Drain Port [in.] .....	1-1/4
Mesh Size .....	80
Weight [oz.].....	36.0
Dimensions [in.].....	8.56 x 4.62 x 7.89

## 7203 • 7204



### Inline Inlet Filters

Durable nylon body and 304SS mesh screen for corrosion resistance. Inline strainers are easily cleaned without removing the strainer or inlet plumbing. Inside out flow direction so sediment collects inside the screen. Optional mesh sizes and clear body construction available.

## Micro Nylon Body

Specifications	7203	7204
Maximum Flow [GPM] .....	10.0	10.0
Inlet Pressure [PSI] @ 70°F.....	10-50	10-150
@ 125°F.....	10-100	10-100
Maximum Temperature [F] .....	125°	125°
Inlet / Discharge Ports [NPTM].....	1/2	—
Inlet / Discharge Ports [NPTF].....	—	1/2
Mesh Size .....	80	80
Weight [oz.].....	3.0	3.0
Dimensions [in.].....	3.0x1.75x2.67	3.0x1.75x2.67

Use Part No. 7203.3 and 7204.4 for clear body versions.



# Filters

## 32738 • 32748



### Inline Inlet Filters

Features a RTP body with brass threads for durability. A low profile makes efficient use of limited space and the removable lower half is easy to clean without removing the inlet plumbing or the inlet filter. Inside out flow direction causes sediment to collect inside the screen. Convenient top auxiliary port for gauge or by-pass return line.

## RTP Ultra-Compact

### Specifications

	32738	32748
Maximum Flow [GPM].....	8.0	8.0
Maximum Inlet Pressure [PSI] .....	145	145
Maximum Temperature [F] .....	104°	104°
Inlet Port [NPTF] .....	1/2	1/2
Discharge Port [NPTM/F].....	1/2	1/2
Auxiliary Port [NPTF] .....	1/4	1/4
Mesh Size .....	50	50
Weight [oz.].....	6.0	6.0
Dimensions [in.] .....	3.66 x 3.03 x 2.2	3.66 x 3.03 x 2.2

## 32631



### Chemical Filter

Brass weighted chemical filter attaches to any 1/4" chemical hose. Filters out abrasives found in chemicals and cleaning agents prior to application.

## Nylon

### Specifications

	32631
Maximum Flow [oz / min] .....	60
Maximum Temperature [F].....	100°
Barb Size [in.].....	1/4
Mesh Size .....	100
Weight [oz.].....	0.77
Dimensions [in.] .....	5.0 x 1.25

## 32673



### Chemical Filter

Brass weighted chemical filter attaches to any 1/4" chemical hose. Filters out abrasives found in chemicals and cleaning agents prior to application. Check valve prevents backward flow of chemical/water into chemical supply.

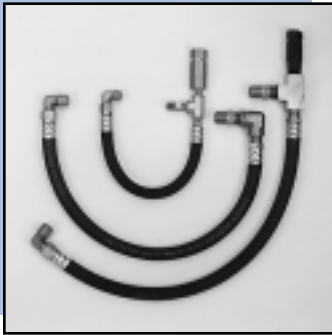
## Nylon With Check Valve

### Specifications

	32673
Maximum Flow [oz / min] .....	60
Maximum Temperature [F].....	100°
Barb Size [in.].....	1/4
Mesh Size .....	100
Weight [oz.].....	0.77
Dimensions [in.] .....	5.0 x 1.25

# Hoses

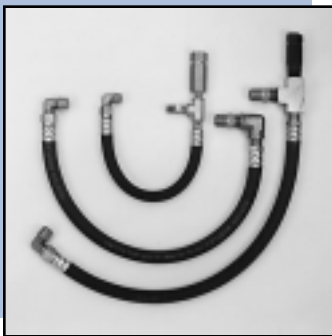
## 7090 • 7091 • 7093



### By-Pass Hose with Thermo Valve

Designed for easy, compact installation. Reduces pulsation in the by-pass line and helps prolong the life of the pump seals and liquid end. Absorbs pressure spikes caused by the regulating device while in by-pass. Optional assembly with brass or RTP "Thermo Valve" for added protection.

## 7094 • 7098



### By-Pass Hose with Thermo Valve

Designed for easy, compact installation. Reduces pulsation in the by-pass line and helps prolong the life of the pump seals and liquid end. Absorbs pressure spikes caused by the regulating device while in by-pass. Optional assembly with RTP "Thermo Valve" for added protection.

## 34325 thru 34358



### High Pressure Hoses

This heat, cleaning chemical, and wear resistant hose offers greater life and safety at high pressure. A tighter bend radius than standard R hoses creates a smaller packaged unit.

## 34357 • 34561



### High Pressure Hoses

This heat, cleaning chemical, and wear resistant hose offers greater life and safety at high pressure. A tighter bend radius than standard R hoses creates a smaller packaged unit.

## Brass Fittings

Specifications	2SF 7090	4SF 7091	5-7PFR 7093
Maximum Flow [GPM] .....	3.5	5.0	8.0
Maximum Pressure [PSI] .....	300	200	200
Maximum Temperature [F] .....	160°	160°	160°
Hose Connection [NPTM] .....	1/4	3/8	1/2
Hose Connection - Swivel .....	3/8" SAEF 45°	1/2" SAEF 45°	1/2" SAEF 45°
Elbow Fittings - Manifold [NPTM/F] .....	1/4 x 1/4	3/8 x 3/8	1/2 x 1/2
Elbow Fittings - Unloader .....	3/8"NPTM x 3/8" Pushlok	3/8"NPTM x 1/2" SAEM 45°	1/2"NPTM x 1/2" SAEM 45°
Weight [oz.] .....	6.89	12.57	16.78
Length [in.] .....	15	24	24

Use Part No. 7090.40, 7091.41 or 7093.42 for By-Pass Hose with Brass Thermo Valve.

Use Part No. 7090.35, 7091.36 or 7093.37 for By-Pass Hose with RTP Thermo Valve.

## Stainless Steel Fittings

Specifications	2SF 7094	3CP 7098
Maximum Flow [GPM] .....	3.5	8.0
Maximum Pressure [PSI] .....	300	300
Maximum Temperature [F] .....	160°	160°
Hose Connection [NPTM] .....	3/8	1/2
Hose Connection - Swivel .....	N/A	N/A
Elbow Fittings - Manifold [NPTM/F] .....	3/8 x 3/8	1/2 x 1/2
Hose Barb - Unloader .....	3/8"NPTM x 3/8" Pushlok	1/2"NPTM x 1/2" Pushlok
Weight [oz.] .....	13.09	23.58
Length [in.] .....	24	37

Use Part No. 7094.36 or 7097.37 for By-Pass Hose with RTP Thermo Valve.

## Reinforced Wire Braid

Specifications	34325	34350	34354	34355	34356	34358
Maximum Flow [GPM] .....	10	10	50	10	25	70
Maximum Pressure [PSI] .....	4000	3000	3000	3000	3000	3000
Maximum Temperature [F] .....	250**	250**	250**	250**	250**	250**
Bend Radius [in.] .....	2.5	2.0	4.75	2.0	3.5	6.0
Safety Factor .....	4 to 1	4 to 1	4 to 1	4 to 1	4 to 1	4 to 1
Hose Connections [NPTM] .....	3/8	3/8	3/4	3/8	1/2	1
Swivel Connections [NPTM] .....	3/8	3/8	3/4	3/8	1/2	1
Connection Type .....	B	B	B	B	B	A
Weight [lbs.] .....	14.2	6.1	35.5	9.8	14.5	55.0
Length [ft.] .....	50	30	50	50	50	50

\*Check individual pump specifications. Do not exceed pump maximums.

## Four Steel Spiral

Specifications	34357	34561
Maximum Flow [GPM] .....	25	25
Maximum Pressure [PSI] .....	10,000	5,000
Maximum Temperature [F] .....	100°	100°
Bend Radius [in.] .....	6.0	6.0
Safety Factor .....	3.2 to 1	3.2 to 1
Hose Connections [NPTM] .....	1/2	1/2
Swivel Connections [NPTM] .....	—	—
Connection Type .....	F	F
Weight [lbs.] .....	43.9	43.9
Length [ft.] .....	50	50

# Fittings

## 990620 thru 991669



### Fittings

Wide variety of low and high pressure fittings to match the system accessories to the pump inlet and discharge. Steel, brass or 316SS with various pressure ratings to match the system requirements.



## High Pressure Fittings

### Specifications

	Low Pressure	High Pressure
Maximum Pressure [PSI] .....	150	10,000
Maximum Temperature [F] .....	160°	160°
Fitting [NPTM/F] .....	1/4 to 1-1/2	1/4 to 1-1/4
Fitting Types .....	Nipple	Nipple
.....	Elbow	Elbow
.....	Tee	Tee
.....	Cross	Cross
.....	Reducer Bushing	Reducer Bushing

## 990801 thru 990860



### Industrial Hoses

Wide variety of inlet and discharge hoses to match the pump inlet and discharge fitting to assure proper flow through the system. Quality flexible structure to prevent collapsing and yet absorb pulsations. Steel or 316SS fittings.

## Flexible Inlet and Discharge

### Specifications

	Low Pressure	High Pressure
Maximum Pressure [PSI] .....	80-200	3000/6000/10,000
Maximum Temperature [F] .....	180°-212°	250°/250°/100°
Fitting [NPTM] .....	1/2 to 2-1/2	3/8 to 1-1/4
Weight Range [lbs.] .....	2-10	1-10
Hose Length [ft.] .....	6	3

# Captive Acceleration Tubes

## 711500 • 714500 • 717500



### Captive Acceleration Tubes

A C.A.T. absorbs energy from a positive head to increase liquid acceleration which stabilizes inlet pressure. Minimizes potential damage from pressure surges or hydraulic spikes. Eliminates wear producing shocks to the system components, especially when high temperature, booster pump feed, long inlet lines or quick coupling valves exist.

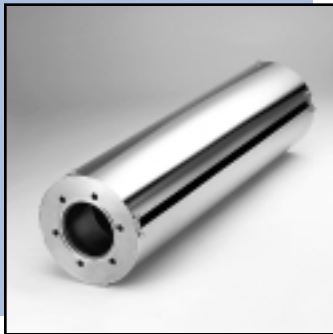
Multiple fitting selection to match pump inlet dimensions.

## Stainless Steel Inlet Pressure Stabilizer

Specifications	711500	714500	717500
Flow Range [GPM] .....	up to 15	up to 45	up to 75
Inlet Pressure Range [PSI] .....	2-50	2-50	2-50
Temperature [F] .....	208°	208°	208°
Active Tube Fitting [in.] .....	1-1/2	2-1/2	3
Active Tube Length [in.] .....	7.48	12.87	16.55
Weight (Base Model) [lbs.] .....	1.3	4.0	4.8

**Note: Adapters required for installation.**

## 719500



### R-Series Captive Acceleration Tube

A C.A.T. absorbs energy from a positive head to increase liquid acceleration which stabilizes inlet pressure. Minimizes potential damage from pressure surges or hydraulic spikes. Eliminates wear producing shocks to the system components, especially when high temperature, booster pump feed, long inlet lines or quick coupling valves exist.

## Stainless Steel Inlet Pressure Stabilizer

Specifications	719500
Flow Range [GPM] .....	up to 320
Inlet Pressure Range [PSI] .....	2-250
Temperature [F] .....	170°
Active Tube Fitting [in.] .....	6
Active Tube Length [in.] .....	42
Weight (Base Model) [lbs.] .....	104.36

**Note: Adapters required for C.A.T. installation.**

## 701818 thru 701833 711502 thru 717512



### C.A.T. Adapters

C.A.T. requires either two straight adapter assemblies or a combination of straight and bent adapters as needed per application.

C.A.T. 711500, 714500 and 717500 includes o-rings and snap rings.

C.A.T. 719500 includes o-ring, studs, lockwashers and washers.

To Fit 711500	Fitting Size	Weight (lbs.)
711502 .....	1/2" NPT	.46
711503 .....	3/4" NPT	.46
711504 .....	1" NPT	.46
711505 .....	1-1/4" NPT	.75
711506 .....	1-1/2" NPT	.93
711511 .....	1-1/2" BSP	.97
701818 .....	Bent 1-1/2"	.97

To Fit 714500	Fitting Size	Weight (lbs.)
714504 .....	1" NPT	.92
714505 .....	1-1/4" NPT	1.10
714506 .....	1-1/2" NPT	.99
714508 .....	2" NPT	1.37
714511 .....	2" BSP	1.32
701828 .....	Bent 2-1/2"	2.14

To Fit 717500	Fitting Size	Weight (lbs.)
717508 .....	2" NPT	1.50
717510 .....	2-1/2" NPT	2.29
717511 .....	2-1/2" BSP	2.49
701833 .....	Bent 3"	2.83

To Fit 719500	Fitting Size	Weight (lbs.)
719529 .....	6" - 150R	67.0

## 719529



# Nozzles

## 7265 • 7270



### Rotating Nozzles

Converts 0° blasting power to a 25° spinning action to agitate dirt loose. Covers a wide path with intense cleaning results. Quickly mounts to any 1/4" high pressure lance. See data sheet for flow/pressure selection.

## Turbo Nozzle

Specifications	7265	7270
Flow Range [GPM].....	1.0-5.7	1.0-10.0
Maximum Pressure [PSI] .....	3000	5000
Maximum Temperature [F].....	194°	194°
Inlet Port [BSPF] .....	1/4	1/4
Weight [oz.].....	11.8	25.5
Dimensions [in.] .....	3.7 x 1.5	4.5 x 2.0

## 7314 • 7315 • 7316 7324 • 7325 • 7326



### Power-Chem Nozzles

Unique chemical-siphoning system for introducing chemicals into the high pressure spray at high pressure. Stainless steel construction provides high strength and chemical resistance. Propels a concentrated spray pattern up to 25-35 feet with significant impact.

## Brass and Stainless

Specifications	7314, 7315, 7316 BB 7324, 7325, 7326 S
Flow Range [GPM] .....	2.0-6.7
Maximum Pressure [PSI] .....	5000
Maximum Temperature [F] .....	210°
Maximum Chemical Draw [GPM] .....	1/2
Maximum Horizontal Spray Distance [ft.] .....	35
Inlet Ports (QD Nipple) [NPTF] .....	1/4
Chemical Tube Length [ft.] .....	30
Weight [lbs.].....	1.54
Dimensions (Body Only) [in.] .....	2.5 x .75
(w/QD) [in.].....	3.75 x .75

## 7930 thru 7980



### Vari-Nozzles

An easy push forward on the Vari-Nozzle permits low pressure flow for chemical application; pull back for return to high pressure rinse. Smooth, easy, right or left rotation adjusts the spray angle for 0° to 60° for cleaning flexibility. Features a molded, insulated grip for comfortable operation and adjustment.

Standard on Hi-Temp TUFF CAT units.

## Adjustable Nozzles

Specifications	7930	7935	7940	7945	7950
Maximum Flow [GPM] .....	2.85	3.32	3.8	4.3	4.7
Maximum Pressure [PSI] .....	3500	3500	3500	3500	3500
Maximum Temperature [F] .....	195°	195°	195°	195°	195°
Nozzle Orifice [mm] .....	3.0	3.5	4.0	4.5	5.0
Inlet [BSPF].....	1/4	1/4	1/4	1/4	1/4
Weight [oz.].....	5.1	5.1	5.1	5.1	5.1
Dimensions [in.].....	4.50 x 1.79	4.50 x 1.79	4.50 x 1.79	4.50 x 1.79	4.50 x 1.79

Specifications	7955	7960	7970	7980
Maximum Flow [GPM] .....	5.2	5.6	6.6	7.5
Maximum Pressure [PSI] .....	3500	3500	3500	3500
Maximum Temperature [F] .....	195°	195°	195°	195°
Nozzle Orifice [mm] .....	5.5	6.0	7.0	8.0
Inlet [BSPF] .....	1/4	1/4	1/4	1/4
Weight [oz.].....	5.1	5.1	5.1	5.1
Dimensions [in.].....	4.50 x 1.79	4.50 x 1.79	4.50 x 1.79	4.50 x 1.79



# Nozzles

## 32149



### Change Over Nozzle

An ultra compact and lightweight nozzle holder for flexibility. Simple right to left turn rotates ball to switch the flow from high to low pressure nozzle. Stainless steel ball for long life. Convenient low pressure nozzle selection permits chemical injection.

## Change Over - Fixed

### Specifications

Specifications	32149
Maximum Flow [GPM] .....	7.0
Maximum Pressure [PSI] .....	2845
Maximum Temperature [F] .....	195°
Inlet Port [BSPF] .....	1/4
Nozzle Port [NPTF] .....	1/4
Weight [oz.] .....	5.7
Dimensions [in.] .....	1.88 x 1.5

## 32151



### Adjustable Nozzle Holder

Gradually adjusts from outer low pressure, circular fan spray to center, high pressure spray. Will accept any standard 1/4" NPTM high pressure nozzle. Convenient, sure-grip nylon adjustment collar permits convenient adjustment from high to low pressure. Low pressure selection permits chemical injection.

## Dual - Adjustable

### Specifications

Specifications	32151
Maximum Flow [GPM] .....	7.0
Maximum Pressure [PSI] .....	3650
Maximum Temperature [F] .....	320°
Inlet Port [BSPF] .....	1/4
Nozzle Port [NPTF] .....	1/4
Weight [oz.] .....	4.3
Dimensions [in.] .....	1.88 x 1.5

## 7616



### Car Wash Rotating Nozzle

High impact, rotating straight stream with 20° angle for intense cleaning action. Heavy duty, long wearing ceramic nozzle and seat. Quickly mounts in any position in stationary spray arches. See data sheet for flow/pressure selection.

## High Impact Rotating

### Specifications

Specifications	7616
Flow Range [GPM] .....	0.7-6.1
Maximum Pressure [PSI] .....	500-2300
Maximum Temperature [F] .....	212°
Inlet Port [NPTF] .....	1/4
Weight [oz.] .....	14.46
Dimensions [in.] .....	1.38 x 3.67

## 7625 • 7632



### Pressure Wash Rotating Nozzle

High impact, rotating straight stream with 20° angle for intense cleaning action. Heavy duty, long wearing ceramic nozzle and seat. Can be started and used in any position. See data sheet for flow/pressure selection.

## High Pressure Rotating

### Specifications

Specifications	7625	7632
Flow Range [GPM] .....	1.6-7.7	2.4-9.0
Maximum Pressure [PSI] .....	1200-3650	2600-5100
Maximum Temperature [F] .....	212°	212°
Inlet Port [BSPF] .....	1/4	1/4
Weight [oz.] .....	14.46	14.46
Dimensions [in.] .....	1.61 x 3.82	1.61 x 3.82

# Chemical Injectors

## 6300 • 6305



### Pulse Pump Injectors

Mounts directly onto various piston pump discharge manifolds, drawing chemical with each stroke of the pump. Chemical resistant 316 stainless steel upper body with chrome plated brass lower body. STG/NBR laminated diaphragm offers resilience and chemical compatibility. A patented single port purge valve purges air from head and case simultaneously. Chemical application at system pressures up to 1000 PSI.

## Piston Pump Hi-Pressure Injector

### Specifications

	6300	6305
Maximum Flow.....	1 qt/min*	1 gal/min*
Maximum Pressure [PSI].....	1000	1000
Inlet Ports [NPTM].....	1/4	3/8
Discharge Ports [NPTM].....	1/4	3/8
Manifold Mounting Port [NPTM].....	1/2	3/4
Weight [lbs.].....	2.7	6.0
Dimensions [in.].....	4.3x2.6x5.9	7.0x6.3x6.0

\*Flow will vary according to flow and pressure of the drive pump. For optimum performance inlet pressure to the pump should be zero or negative but not to exceed pump specifications.

Use 6300 with Pulse Pump Manifold models 6400, 6410 and 6425.

Use 6305 with Pulse Pump Manifold models 6410 and 6425.

## 7182 • 7183 • 7184



### Chemical Injectors

Features a convenient adjustment collar for adjusting chemical draw. Lightweight and compact for optimum space utilization. Simple pump discharge line installation or can be mounted directly to the unloader discharge port. Durable stainless steel orifice and o-ring.

## Brass Adjustable - Discharge Line

### Specifications

	7182	7183	7184
Flow Range [GPM].....	3.0-4.0	4.0-5.0	5.0-6.0
Max. Pressure [PSI].....	3500	3500	3500
Max. Temperature [F].....	195°	195°	195°
Nozzle Orifice [mm].....	1.8	2.1	2.3
Barb Hose [in.].....	1/4	1/4	1/4
Inlet Port [NPTM].....	3/8	3/8	3/8
Discharge Port [NPTM].....	3/8	3/8	3/8
Weight [oz.].....	6.3	6.3	6.3
Dimensions [in.].....	2.0x1.0x3.0	2.0x1.0x3.0	2.0x1.0x3.0

## 7192 • 7193 • 7194



### Chemical Injectors

Features a convenient adjustment collar for adjusting chemical draw. Lightweight and compact for optimum space utilization. Mounts directly to the unloader discharge port. Durable stainless steel orifice and o-ring construction.

## Brass Adjustable - Unloader Mount

### Specifications

	7192	7193*	7194**
Flow Range [GPM].....	3.0-4.0	4.0-5.0	5.0-6.0
Max. Pressure [PSI].....	3500	3500	3500
Max. Temperature [F].....	195°	195°	195°
Nozzle Orifice [mm].....	1.8	2.1	2.3
Barb Hose [in.].....	1/4	1/4	1/4
Inlet Port [mm].....	M18x1.0	M18x1.0	M18x1.0
Discharge Port [NPTM].....	3/8	3/8	3/8
Weight [oz.].....	6.3	6.3	6.3
Dimensions [in.].....	2.0 x 1.0 x 3.0	2.0 x 1.0 x 3.0	2.0 x 1.0 x 3.0

\*7193 standard selection for all 2SF and 2SFX Pumps.

\*\*7194 standard selection for all 4SF Pumps.

Use with Unloader models 7500S, 7500XS, 7580, 7581 and 7600S.

## 7222 • 7223 • 7224



### Chemical Injectors

Features a convenient adjustment collar for adjusting chemical draw. Lightweight and compact for optimum space utilization. Mounts directly to the unloader discharge port. Durable stainless steel orifice and o-ring.

## Brass Adjustable - Unloader Mount

### Specifications

	7222	7223	7224
Flow Range [GPM].....	3.0-4.0	4.0-5.0	5.0-6.0
Maximum Pressure [PSI].....	3500	3500	3500
Maximum Temperature [F].....	195°	195°	195°
Nozzle Orifice [mm].....	1.8	2.1	2.3
Barb Hose [in.].....	1/4	1/4	1/4
Inlet Port [mm].....	M22x1.5	M22x1.5	M22x1.5
Discharge Port [NPTM].....	3/8	3/8	3/8
Weight [oz.].....	6.3	6.3	6.3
Dimensions [in.].....	2.0 x 1.0 x 3.0	2.0 x 1.0 x 3.0	2.0 x 1.0 x 3.0

Use with Unloader models 7620, 7670, 7672 and 7690.

# Chemical Injectors

## 7231 • 7232 • 7233 • 7234



### Chemical Injectors

A lightweight, compact, direct unloader mount unit for optimum space utilization. Longer lasting stainless steel orifice.

## Brass Fixed - Unloader Mount

Specifications	2DX 7231	2DX, 3DX 7232	2SFX 7233	2SFX 7234
Flow Range [GPM].....	2.0-3.0	3.0-4.0	3.0-4.0	4.0-5.0
Max. Pressure [PSI] .....	3145	3145	3000	3000
Max. Temperature [F] ....	180°	180°	160°	160°
Nozzle Orifice Size [mm]	1.8	2.1	2.1	2.3
Barb Size, External [in.]	1/4	1/4	1/4	1/4
Inlet Port [mm].....	M18x1.0	M18x1.0	M22x1.5	M22x1.5
Discharge Port [NPTM]..	3/8	3/8	3/8	3/8
Weight [oz.] .....	5.3	5.3	6.3	6.3
Dimensions [in.] .....	2.0x1.0x1.75	2.0x1.0x1.75	2.25x1.0x2.63	2.25x1.0x2.63

## 7332 • 7342



### Chemical Injectors

A lightweight, compact, direct unloader mount unit for optimum space utilization. Longer lasting stainless steel orifice.

## Brass Fixed - Unloader Mount

Specifications	3SP 7332	66DX 7342
Flow Range [GPM] .....	3.0-4.0	3.0-5.0
Max. Pressure [PSI].....	3145	4000
Max. Temperature [F] .....	180°	180°
Nozzle Orifice [mm] .....	2.1	2.1
Barb Hose [in.].....	1/4	1/4
Inlet Port [mm] .....	M18x1.0	M20x1.0
Discharge Port [NPTM].....	3/8	3/8
Weight [oz.].....	4.0	4.0
Dimensions [in.] .....	1.81 x .86 x 2.05	1.81 x .86 x 2.07

## 7722 • 7723 • 7724



### Chemical Injectors

Features a convenient adjustment collar for adjusting chemical draw. Lightweight and compact for optimum space utilization. Pump discharge line installation. Durable stainless steel body and orifice.

## Stainless Steel Adjustable - In-Line

Specifications	7722	7723	7724
Flow Range [GPM] .....	3.0-4.0	4.0-5.0	5.0-6.0
Max. Pressure [PSI].....	3500	3500	3500
Max. Temperature [F] .....	195°	195°	195°
Nozzle Orifice [mm] .....	1.8	2.1	2.3
Barb Hose [in.].....	1/4	1/4	1/4
Inlet Port [NPTM] .....	3/8	3/8	3/8
Discharge Port [NPTM].....	3/8	3/8	3/8
Weight [oz.].....	6.3	6.3	6.3
Dimensions [in.] .....	2.0x1.0x3.0	2.0x1.0x3.0	2.0x1.0x3.0

# Brushes • Foamer

## 32155 • 32156 • 34456



### Rotating Brush

The Rotating Brush is designed to provide a LOW PRESSURE agitation for hard to remove dirt on sensitive services such as glass, tile and plastic. Its smooth gear action requires only minimal flow to activate. Durable stainless steel cam and gear shifts.

## Low Pressure

Specifications	32155	32156	34456
	White	Black	Black
Flow Range [GPM] .....	3.0-5.5	3.0-5.5	1.5-3.0
Pressure Range [PSI] .....	125-285	125-285	125-285
Maximum Temperature [F] .....	140°	140°	140°
Inlet Port [NPTM] .....	1/4	1/4	1/4
Weight [oz.] .....	27	27	27
Dimensions [in.] .....	9.5 x 6.0 x 3.25	9.5 x 6.0 x 3.25	9.5 x 6.0 x 3.25

## 34595



### Foamer

High pressure water creates a venturi action drawing liquid cleansing agents from the bottle and converts them to a surface adhering emulsified foam that enhances cleaning results. Standard with 1/4" nipple or optional 34595.521 with 20" lance (33221) for easy attachment to any 1/4" gun.

## Applicator

Specifications	34595
Flow Range [GPM] .....	1.4-7.0
Pressure Range [PSI] .....	700-4000
Maximum Temperature [F] .....	175°
Inlet Port [Metric Thread] .....	M22x1.5
Inlet Port [NPT] [with Nipple] .....	1/4
Nozzle Size .....	8.0
Weight [oz.] .....	10.0
Weight [with Lance] [oz.] .....	18.0
Dimensions [in.] .....	11.0 x 2.5 x 9.0
Dimensions [with Lance] [in.] .....	31.0 x 2.5 x 9.0

## 32017 • 39196 • 39234



### Foamer

High pressure water creates a venturi action drawing liquid cleansing agents from the bottle and converts them to a surface adhering emulsified foam that enhances cleaning results. Durable stainless steel orifice and FPM o-rings for chemical compatibility. Optional bottle sizes for specialized needs.

## Applicator

Specifications	32017	39196	39234
Maximum Flow [GPM] .....	6.5	6.5	6.5
Maximum Pressure [PSI] .....	2900	2900	2900
Maximum Temperature [F] .....	140°	140°	140°
Weight [oz.] .....	13	20	17
Dimensions [in.] .....	11.81 x 2.75	11.81 x 11.38	11.81 x 9.5

# Quick Start • Thermo Valves

## 7115 • 7116 • 7117



### Micro Thermo Valves

Protects pump from premature failure of the seal, packings and cups by eliminating heat build-up in closed loop by-pass systems. Easily mounts in the by-pass line and provides high temperature protection without interruption in flow. Choice of three port sizes to allow convenient and easy installation in the by-pass loop. Compatible with systems using either unloader or regulator valves.

## Ultra Compact

Specifications	7115	7116	7117
Maximum Inlet Pressure [PSI] .....	145	145	145
Maximum Temperature [F] .....	145°	145°	145°
Inlet Fitting [BSPM] .....	1/4	3/8	1/2
Barb Size [in.] .....	1/4	1/4	1/4
Weight [oz.] .....	1.22	1.81	1.87
Dimensions [in.] .....	1.42 x .94 x 1.31	1.42 x .94 x 1.31	1.42 x .94 x 1.31

## 7126



### Quick Start Valve

Relieves pump discharge line pressure during start-up phase requiring less engine or motor start-up power. By-pass barb routes bleed liquid either to the pump inlet or to drain.

## Start-up Pressure Reducer

Specifications	7126
Maximum Flow [GPM] .....	8
Maximum Pressure [PSI] .....	4050
Opening Pressure [PSI] .....	105
Maximum Temperature [F] .....	176°
Inlet Port [NPTM] .....	3/8
Barb Size [in.] .....	1/4
Weight [oz.] .....	5.0
Dimensions [in.] .....	2.1 x .87 x 2.1
Dimensions with Adapter [in.] .....	2.85 x .87 x 2.1

## 7128 • 7129 • 7130



### Thermo Valves

Unique "RTP" composite offers high strength, heat resistance and chemical compatibility. Protects pump from premature failure of seals, packings and cups by eliminating heat build-up in closed loop by-pass systems. Automatically seats during unloader/regulator pressure spikes to prevent liquid bleed. Compatible with systems using either unloader or regulator valves. Multiple Thermo Valves may be necessary for larger flows or higher temperature pumped liquids.

## RTP 165°F

Specifications	7128	7129	7130
Maximum Inlet Pressure [PSI] .....	125	125	125
Inlet Port [NPTM] .....	1/4	3/8	1/2
Bleed Port [NPTF] .....	1/8	1/8	1/8
Weight [oz.] .....	1.97	1.97	1.97
Dimensions [in.] .....	.87 x 3.0	.87 x 3.0	.87 x 3.0

The Thermo Valve must be installed with a pressurized pump inlet.

## 7135 • 7136 • 7137



### Thermo Valves

Unique "RTP" composite offers high strength, heat resistance and chemical compatibility. Protects pump from premature failure of seals, packings and cups by eliminating heat build-up in closed loop by-pass systems. Automatically seats during unloader/regulator pressure spikes to prevent liquid bleed. Compatible with systems using either unloader or regulator valves. Multiple Thermo Valves may be necessary for larger flows or higher temperature pumped liquids.

## RTP 145°F

Specifications	7135	7136	7137
Maximum Inlet Pressure [PSI] .....	125	125	125
Inlet Port [NPTM] .....	1/4	3/8	1/2
Bleed Port [NPTF] .....	1/8	1/8	1/8
Weight [oz.] .....	1.97	1.97	1.97
Dimensions [in.] .....	.87 x 3.0	.87 x 3.0	.87 x 3.0

The Thermo Valve must be installed with a pressurized pump inlet.

# Quick Start • Thermo Valves

## 7138 • 7146



### Thermo Valves

Unique "RTP" composite or brass offers high strength, heat resistance and chemical compatibility. Protects pump from premature failure of seals, packings and cups by eliminating heat build-up in closed loop by-pass systems. Automatically seats during unloader/regulator pressure spikes to prevent liquid bleed. Compatible with systems using either unloader or regulator valves. Multiple Thermo Valves may be necessary for larger flows or higher temperature pumped liquids.

## RTP or Brass 130°F

### Specifications

	RTP 7138	BB 7146
Maximum Inlet Pressure [PSI] .....	125	125
Inlet Port [NPTM] .....	1/4	1/4
Bleed Port [NPTF].....	1/8	1/8
Weight [oz.].....	1.97	5.6
Dimensions [in.] .....	.87 x 3.0	.87 x 3.0

The Thermo Valve must be installed with a pressurized pump inlet.

## 7140 • 7141 • 7142



### Thermo Valves

Protects pump from premature failure of the seals, packings and cups by eliminating heat build-up in closed loop by-pass systems. Easily mounts in the by-pass line and provides high temperature protection without interruption in flow. Compatible with systems using either unloader or regulator valves. Multiple Thermo Valves may be necessary for larger flows or higher temperature pumped liquids.

## Brass 145°F

### Specifications

	7140	7141	7142
Maximum Inlet Pressure [PSI] .....	125	125	125
Inlet Port [NPTM] .....	1/4	3/8	1/2
Bleed Port [NPTF].....	1/8	1/8	1/8
Weight [oz.].....	6.2	6.2	6.2
Dimensions [in.] .....	.88 x 3.0	.88 x 3.0	.88 x 3.0

The Thermo Valve must be installed with a pressurized pump inlet.

## 7143 • 7144 • 7145



### Thermo Valves

Protects pump from premature failure of the seals, packings and cups by eliminating heat build-up in closed loop by-pass systems. Easily mounts in the by-pass line and provides high temperature protection without interruption in flow. Compatible with systems using either unloader or regulator valves. Multiple Thermo Valves may be necessary for larger flows or higher temperature pumped liquids.

## Brass 165°F

### Specifications

	7143	7144	7145
Maximum Inlet Pressure [PSI] .....	125	125	125
Inlet Port [NPTM] .....	1/4	3/8	1/2
Bleed Port [NPTF].....	1/8	1/8	1/8
Weight [oz.].....	6.2	6.2	6.2
Dimensions [in.] .....	.88 x 3.0	.88 x 3.0	.88 x 3.0

The Thermo Valve must be installed with a pressurized pump inlet.

## 7170 • 7171 • 7172



### Thermo Valves

Protects pump from premature failure of the seals, packings and cups by eliminating heat build-up in closed loop by-pass systems. Easily mounts in the by-pass line and provides high temperature protection without interruption in flow. Compatible with systems using either unloader or regulator valves. Multiple Thermo Valves may be necessary for larger flows or higher temperature pumped liquids.

## Brass 180°F

### Specifications

	7170	7171	7172
Maximum Inlet Pressure [PSI] .....	125	125	125
Inlet Port [NPTM] .....	1/4	3/8	1/2
Bleed Port [NPTF].....	1/8	1/8	1/8
Weight [oz.].....	6.2	6.2	6.2
Dimensions [in.] .....	.88 x 3.0	.88 x 3.0	.88 x 3.0

The Thermo Valve must be installed with a pressurized pump inlet.



# Quick Start • Thermo Valves

## 7175 • 7176 • 7177

### Brass 190°F



#### Thermo Valves

Protects pump from premature failure of the seals, packings and cups by eliminating heat build-up in closed loop by-pass systems. Easily mounts in the by-pass line and provides high temperature protection without interruption in flow. Compatible with systems using either unloader or regulator valves. Multiple Thermo Valves may be necessary for larger flows or higher temperature pumped liquids.

#### Specifications

	7175	7176	7177
Maximum Inlet Pressure [PSI] .....	125	125	125
Inlet Port [NPTM] .....	1/4	3/8	1/2
Bleed Port [NPTF].....	1/8	1/8	1/8
Weight [oz.].....	6.2	6.2	6.2
Dimensions [in.] .....	.88 x 3.0	.88 x 3.0	.88 x 3.0

**The Thermo Valve must be installed with a pressurized pump inlet.**

# Control Valves

## 8100



### Throttle Controller

Lowers engine RPM when pump is in by-pass resulting in reduced engine wear and fuel consumption. Prolongs pump life by reducing potential liquid heat build-up while pump is in by-pass. Instant on/off response eliminates pressure delays when pump resumes operation.

## 4000 PSI Gas Throttle Controller

### Specifications

Maximum System Pressure [PSI] .....	4000
Actuation Pressure [PSI] .....	250
Maximum Temperature [F].....	160°
Inlet Port [NPTM] .....	3/8
Cable Length [in.].....	48
Weight [oz.].....	22.0
Dimensions [in.] .....	5.25 x 1.75

## 31013



### Float Valve

A low maintenance, economical pump protector. Maintains reservoir liquid level to protect pump from starvation and assure constant flow to pump inlet. Compact, easy installation features adjustable float reaction time.

## Adjustable

### Specifications

Maximum Flow [GPM] .....	7.1
Maximum Inlet Pressure [PSI].....	145
Maximum Temperature [F] .....	140°
Inlet Port [BSPM].....	3/8
Weight [oz.].....	8.6
Dimensions [in.].....	10.5 x 5.0 x 2.75

## 32010



### Float Valve

A low maintenance, economical pump protector. Maintains reservoir liquid level to protect pump from starvation and assure constant flow to pump inlet. Compact, easy installation features a preset float.

## Preset

### Specifications

Maximum Flow [GPM] .....	8.0
Maximum Inlet Pressure [PSI].....	145
Maximum Temperature [F] .....	140°
Inlet Port [BSPM].....	3/4
Weight [oz.].....	2.8
Dimensions [in.].....	6.5 x 2.5 x 3.0

# Control Valves

## 34870 • 34871

### Auto Shut-off Assembly

To prevent overheating of the pump, this assembly combines dual pressure switches and a mechanical relay to automatically shut off the system's pressure when the gun trigger is released. See components below.

## 31615 • 31625 • 31640



### Pressure Switch

This pressure activated control device shuts off burner or other low amp system components. Its non-adjustable, preset pressure setting is ideal for consistent system protection. Three-wire construction allows either normally open or normally closed operation. A stainless steel contact pin extends service life. See data sheet for additional models.

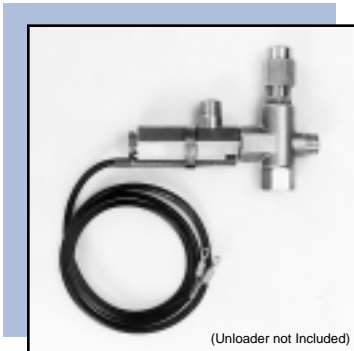
## 34542 • 34543



### Relay Switch

This relay switch combined with the dual pressure switch will automatically shut off the system's pressure when the gun trigger is released or there is no flow to the inlet of the unit.

## 33776



### Flow Valve

Protects pump from overheating while pumping liquids up to 190°F by shutting system down during intermittent non-use. Also reduces energy cost by shutting down motor or burner during intermittent non-use.

## Auto System Shut-off

### Specifications

	34870	34871
Maximum Horsepower [HP].....	2	3
Volts.....	115	220
Activation Switches [Model].....	31615	31615
.....	31625	31625
Mechanical Relay [Model].....	34542	34543
Weight [lbs.].....	3.37	3.37

### Pressure Switch

#### Specifications

	31615	31625	31640
Maximum System Pressure [PSI].....	3650	3650	3650
Switch Engaging Pressure [PSI].....	215	360	580
Voltage [Volts].....	12-250	12-250	12-250
Maximum Amperage [Amps].....	6	6	6
Color Code.....	Blue	Red	Black
Maximum Temperature [F].....	194°	194°	194°
Inlet Port [NPTM].....	1/4	1/4	1/4
Weight [oz.].....	6.4	6.4	6.4
Dimensions [in.].....	3.0x3.0x1.0	3.0x3.0x1.0	3.0x3.0x1.0

### Relay Switch

#### Specifications

	34542	34543
Input Control Voltage [VAC].....	90-280	90-280
Output Contact Terminal Voltage [VAC].....	24-330	24-330
Output One Cycle Surge (non repetitive) [Amps].....	625	625
One Second Surge [Amps].....	130	130
Constant Amperage [Amps].....	30	30
Operating Temperature Range [F].....	- 40 to 212°	- 40 to 212°
Maximum Horsepower for Relay.....	120 V = 2 HP	220 V = 5 HP
Wire to Relay and Motor.....	14 GA, 120V, 15 Amp, 1.5 HP	12 GA, 120V, 17.5 Amp, 2.0 HP
.....	14 GA, 220V, 15 Amp, 4.0 HP	12 GA, 220V, 20 Amp, 4.0 HP
Weight [oz.].....	.202	.202
Dimensions [in.].....	2.25 x 1.75 x 1.0	2.25 x 1.75 x 1.0

### Flow Switch

#### Specifications

	33776
Maximum System Pressure [PSI].....	3500
Minimum Activating Pressure [PSI].....	30
Maximum System Flow [GPM].....	7
Minimum Activating Flow [GPM].....	1/3
Maximum Voltage [VAC].....	250
Maximum Amperage [Amps].....	1
Maximum Temperature [F].....	190°
Inlet Port [BSPM].....	3/8
Discharge Port [BSPM].....	3/8
Weight [lbs.].....	.86
Dimensions [in.].....	3.75 x 2.0 x 1.5

# Inlet Pressure Regulators

## 7069 • 7071 • 7074



### Inlet Pressure Regulators

A regulator that prevents over pressure or pressure spikes at the pump inlet. Features convenient, compact inline installation and its preset, tamper-proof design protects the pump from neglect or improper system conditions.

## Low Flow - Preset

Specifications	7069	7071	7074
Flow Range [GPM].....	3-10	3-10	3-10
Inlet Pressure Range [to Regulator] [PSI]*	40-200	40-200	40-200
Inlet Pressure Range [to Pump] [PSI]* .....	30-45	30-45	40-60
Maximum Temperature [F].....	190°	190°	190°
Inlet Port.....	3/4" FGH	3/4" FGH	3/4" FGH
Discharge Port.....	3/4" MGH	1/2" NPTF	1/2" NPTF
Weight [oz.].....	14	14	14
Dimensions [in.].....	1.5x3.19	1.5x3.27 with adapter	1.5x3.27 with adapter

\*See Data Sheet Inlet Pressure chart.

## 7075



### Inlet Pressure Regulator

Convenient inline style, mounts either horizontally or vertically. Heavy-duty cast iron upper body with adjustable bronze lower body. Adjust inlet pressure to the pump from 300 PSI down to 20-75 PSI.

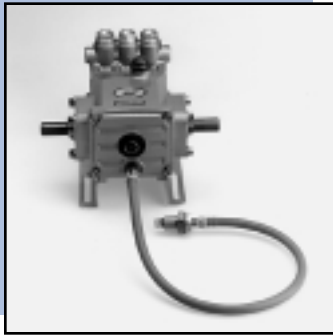
## High Flow - Adjustable

Specifications	7075
Flow Range [GPM].....	15-70
Inlet Pressure Range [to Regulator] [PSI]* .....	40-300
Inlet Pressure Range [to Pump] [PSI] * .....	20-100
Maximum Temperature [F].....	160°
Inlet Port [NPTF] .....	1-1/4
Discharge Port [NPTF].....	1-1/4
Cleanout Port [in.] .....	1-1/4
Weight [lbs.] .....	8.85
Dimensions [in.] .....	8.75 x 5.0 x 4.75

\*See Data Sheet Inlet Pressure chart.

# Drain Kit • Flushing Assembly

**31346 • 34314 • 34334 • 990394**



## Oil Drain Kit

Replaces oil drain plug and mounts directly to pump. Hose allows easy access to drain oil from crankcase without disturbing plumbing or enclosure.

## Oil Drain Kit Assemblies

31346.....	60-68PFR Power Units
34314.....	35-60FR Pumps
34334.....	All Pumps Models Except 2SF and 4SF
990394.....	2SF, 2SFX and 2SF"SS" Pump Models

**990663**



## Flushing Assembly

Motorized reservoir for delivery of liquid to the special flushing ports on the "K" block-style pump models and "C" cast models.

Flushing liquid provides adequate lubrication and cooling for the Lo-Pressure Seals in special high temperature and high vapor liquids.

## "K" and "C" Models

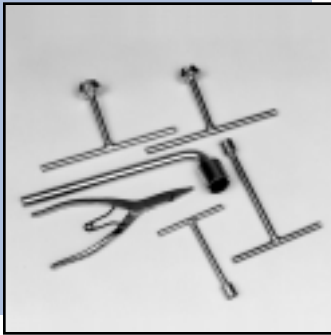
### Specifications

	<b>990663</b>
Tank Capacity [gal.].....	5
Maximum Flow [GPM].....	1
Maximum Pressure [PSI].....	3
Power Supply [Volts/Amps].....	115/1.1
Port Size [NPT].....	*

\*Flushing Assembly includes Adapter Fittings to fit 1/8, 1/4 and 1/2" NPT manifold ports.

# Service Tools

## 25053 thru 45103



### Service Tools

L-Wrench and T-Wrench for convenience in removing rear cover. Reverse pliers for quick valve assembly removal. Seal case removal tool to simplify seal replacement. Oil gauge tool for replacement of bubble oil gauge.



### Seal Case Tool

Convenient and compact 1/2" drive, socket tool, seal case remover.

## "T" and "L" Wrenches

### Specifications

#### T-Wrenches

Model .....	25053	25082	25083	25324	44044
Size .....	M14	M10	M17	M13	M11

#### L-Wrenches

Model .....	44045	44046
Size .....	M27	M24

#### Allen Wrenches

Model .....	33046	33047	33048	34030	34113
Size .....	M8	M10	M12	5/32"	7/64"

#### Reverse Pliers

Model .....	30696
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#### Oil Gauge Removal Tool - Wrench

Model .....	44050
Size .....	M28

#### Seal Case Removal Tools - T-Wrenches

Model .....	43257	43523	45103
Frame .....	7PFR	15PFR	5PFR

#### Seal Case Removal Tools - 1/2" Drive

Model .....	33004	33005	33006
Frame .....	5PFR	7PFR	15PFR

## 30940 • 34570



### Filling and Gauging Assembly

Large "T" valve opens to allow precharge reading. Gas regulator valve opens to allow increase in precharge (to 50% of system pressure for 6000 series) (70% for 70000 series). Small "T" valve bleeds off pressure in the gauging assembly before removing from accumulator.

30940 includes Pressure Gauge 6099.  
34570 includes Pressure Gauge 6084.



### Specifications

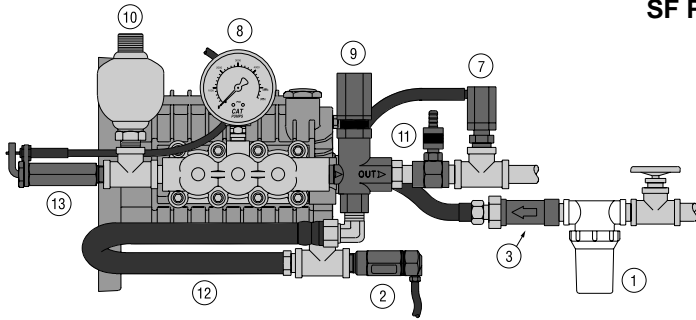
	30940	34570
Maximum Pressure [PSI] .....	3500	3000
Gauge to Accumulator Connection [NPT] .....	1/8	1/4
Hose Length [in.] .....	96	72
Weight [lbs.] .....	3.43	2.93

30940 used with Prrrrr-O-Lators 6010-6015, 6029-6031.  
34570 used with Prrrrr-O-Lators 701501-701543.

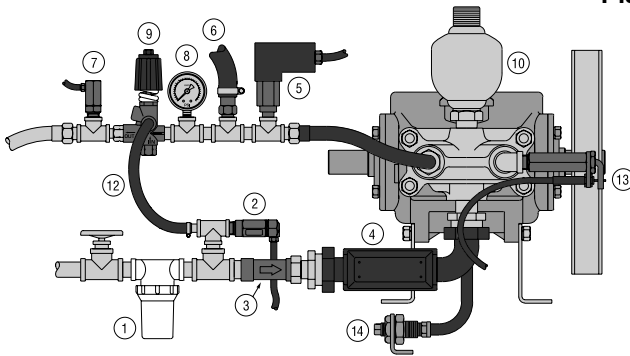


# Typical Installation

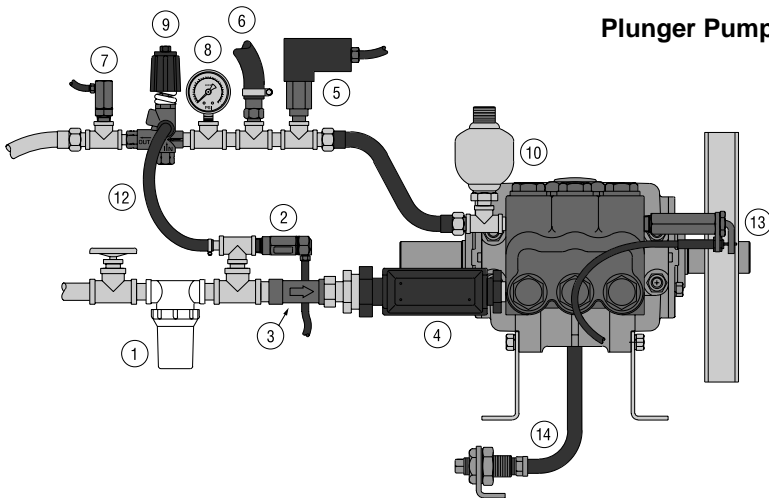
## SF Pump



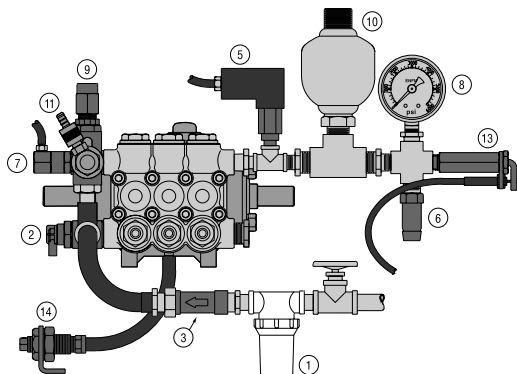
## Piston Pump



## Plunger Pump



## CP Plunger Pump



- 1 Inlet Filter
- 2 Thermo Valve
- 3 Inlet Pressure Range Regulator
- 4 C.A.T. (Captive Acceleration Tube)
- 5 Pressure Switch
- 6 Pop-Off Valve
- 7 Quick Start Valve
- 8 Pressure Gauge
- 9 Pressure Regulator/Unloader
- 10 Pulsation Dampener\*
- 11 Chemical Injector
- 12 By-Pass Hose
- 13 Throttle Controller
- 14 Oil Drain Kit

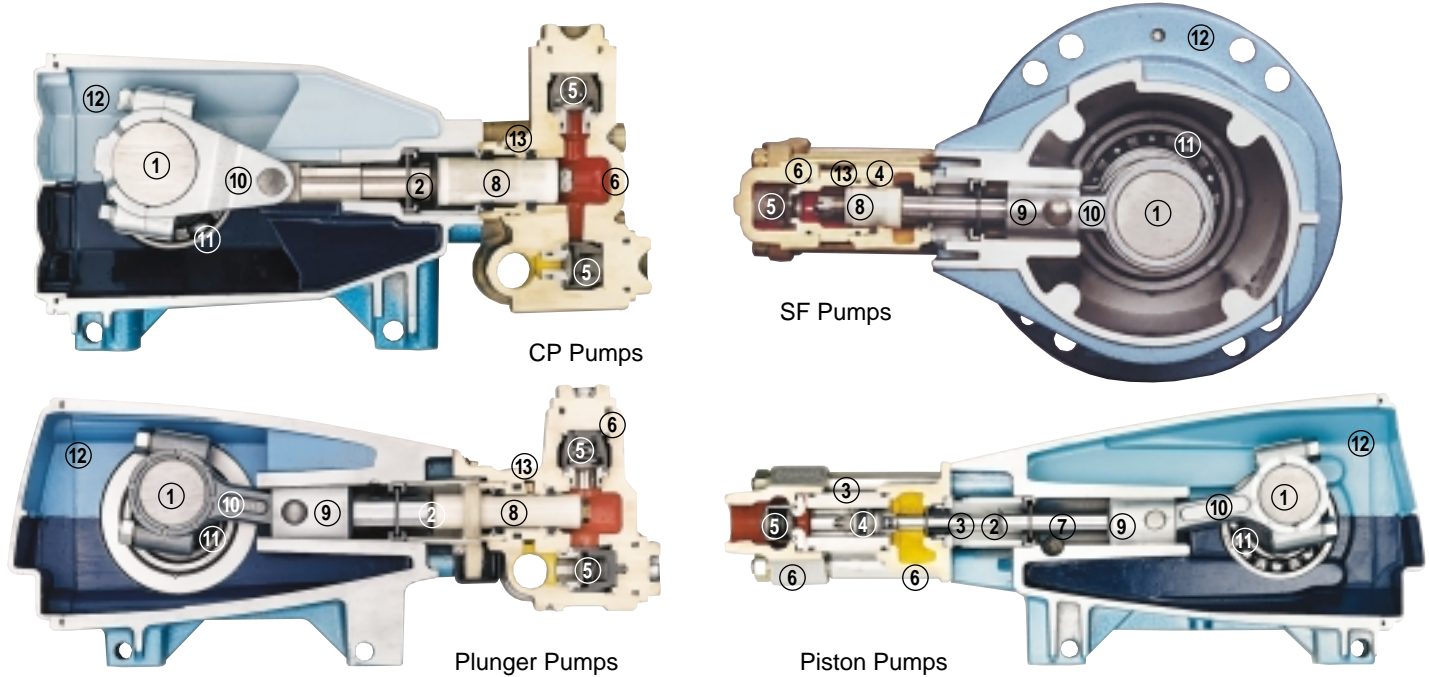
These illustrations show the basic elements for a typical installation of a high pressure piston or plunger pump. **Not all components shown are required for all applications or systems.** Each component presents potential problems that too often are ascribed to a perfectly functioning pump, such as: a clogged strainer, a partially closed shut-off valve, a faulty gauge, or a malfunctioning regulator/unloader.

Proper system installation, routine lubrication and monitoring of components are your basic guarantees of optimum pump performance. CAT PUMPS does not assume any liability or responsibility for the design or operation of a customer's high pressure system.

\*Preferred mounting of Pulsation Dampener (Prrrrr-O-Lator) is directly on the discharge manifold of the pump. The preferred mounting of the by-pass hose (when returning to the inlet) is before the Pressure Reducing Valve. If this is not possible, then mount the Prrrrr-O-Lator after the Pressure Unloading Valve to prevent pressure spikes to the pump inlet.

# Proven Design and Quality Components Assure Long-Term Performance

CAT PUMPS are constructed of the highest quality materials manufactured under close tolerance control and fully tested before leaving the factory. ISO 9001 certified. Select models offer flushed inlet manifolds for high temperature, high vapor and environmentally unfriendly liquids. Select models built to API674 specifications. No other pump offers such consistently high standards.



- ① Chrome-moly crankshaft provides unmatched strength and surface hardness for long life.
- ② The stainless steel slinger provides back-up protection for the piston rod seal, keeping pumped liquids out of the crankcase.
- ③ The cylinder and sleeve wear surfaces are hard chrome-plated stainless steel for longer service life.
- ④ 100% wet cup/seal design adds to service life by allowing pumped liquids to cool and lubricate the elastomers on both sides.
- ⑤ Stainless steel valves, seats, and springs provide corrosion-resistance, positive seating, and long life.
- ⑥ High strength forged brass manifolds are also available in 316 stainless steel, nickel aluminum bronze or Duplex SS for special corrosion resistance.
- ⑦ The patented stepped piston rod with hard chrome-plated sleeve provides a durable wear surface and easy wet end servicing.
- ⑧ Special concentric, high-density, polished, solid ceramic plungers provide a true wear surface and extended seal life.
- ⑨ The high strength stainless steel plunger rods have a 360° supported crosshead providing uncompromising plunger rod alignment.
- ⑩ Matched oversized connecting rods are made of high strength material with exceptional bearing quality.
- ⑪ Oversized ball bearings or tapered roller bearings provide extended bearing life.
- ⑫ Die cast aluminum crankcase means high strength, lightweight, and excellent tolerance control.
- ⑬ Specially formulated, CAT PUMP exclusive Hi-Pressure Seal offers unmatched performance and seal life.

## Worldwide Availability of Pumps and Parts

When you need a part for your CAT PUMP, you can count on our extensive worldwide network of sales and service representatives. Each location is equipped with pumps, complementary accessories and parts. Each location is trained to assist you in the selection, installation and maintenance of your CAT PUMPS. We're there when you need us; down the block...around the clock. No matter where you are, you're in CAT PUMP country.

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Colorado	Indiana	Michigan	New Jersey	Pennsylvania	Virginia	
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Chile	India	Mexico	Republic of	Venezuela
Columbia	Indonesia	The	South Africa	
Denmark	Ireland	Netherlands	Singapore	
Finland	Israel	New Zealand	Spain	

Products described hereon are covered by one or more of the following U.S. patents 3558244, 3652188, 3809508, 3920356, 3930756 and 5035580

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