



## Adjustable Chemical Injector

**Models 7181-7184**

*Standard Discharge Line*

**Models 7192-7194**

*For Unloaders 7500S, 7500XS, 7600S, 7580, 7581*

**Models 7197-7199**

*For Unloaders 7570, 7572*

### FEATURES

- Durable stainless steel orifice and o-ring.
- Convenient adjustment collar for adjusting chemical draw.
- Lightweight, compact unit for optimum space utilization.
- Simple pump discharge line installation or mount directly to the unloader discharge port.

**SELECTION:** Select the Chemical Injector that mounts most conveniently to your system and meets the flow requirements of the system. For discharge line installation select the Injector models 7181, 7182, 7183 or 7184. For mounting directly to the 7500S, 7500XS, 7600S, 7580 and 7581 Unloaders, select Injector models 7192, 7193 or 7194 and for mounting directly to the 7570 and 7572 Unloaders, select the Injector models 7197, 7198 or 7199.

### SPECIFICATIONS

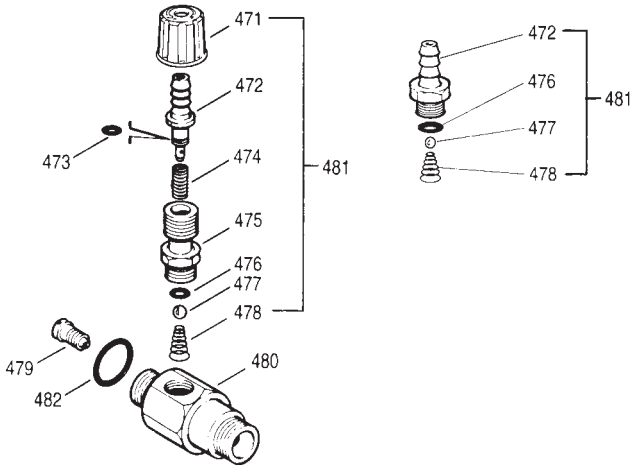
	U.S. Measure	Metric Measure
<b>MODEL 7181</b>		
Flow.....	2-3 GPM	(7.5-11 L/M)
Nozzle Orifice .....	1.5 mm	(1.5 mm)
<b>MODELS 7182, 7192, 7197</b>		
Flow.....	3-4 GPM	(11-15 L/M)
Nozzle Orifice .....	1.8 mm	(1.8 mm)
<b>MODELS 7183, 7193, 7198</b>		
Flow.....	4-5 GPM	(15-19 L/M)
Nozzle Orifice .....	2.1 mm	(2.1 mm)
<b>MODELS 7184, 7194, 7199</b>		
Flow.....	5-6 GPM	(19-23 L/M)
Nozzle Orifice .....	2.3 mm	(2.3 mm)
<b>COMMON SPECIFICATIONS</b>		
Max. Pressure.....	3145 PSI	(235 BAR)
Max. Temperature.....	180°F	(82°C)
Barb Hose .....	1.4"	(1.4")
Inlet Port (7181, 7182, 7183, 7184) .....	3/8" NPTM	(3/8" NPTM)
(7192, 7193, 7194) .....	M18 x 1.0	(M18 x 1.0)
(7197, 7198, 7199) .....	M20 x 1.5	(M20 x 1.5)
Discharge Port .....	3/8" NPTM	(3/8" NPTM)
Weight.....	6.3 oz.	(.18 kg)
Dimensions .....	.2" x 1" x 3"	(51 x 39 x 76 mm)

**INSTALLATION:** The Adjustable Chemical Injector should be mounted downstream from the system regulating device or directly onto the discharge port of one of the various unloaders.

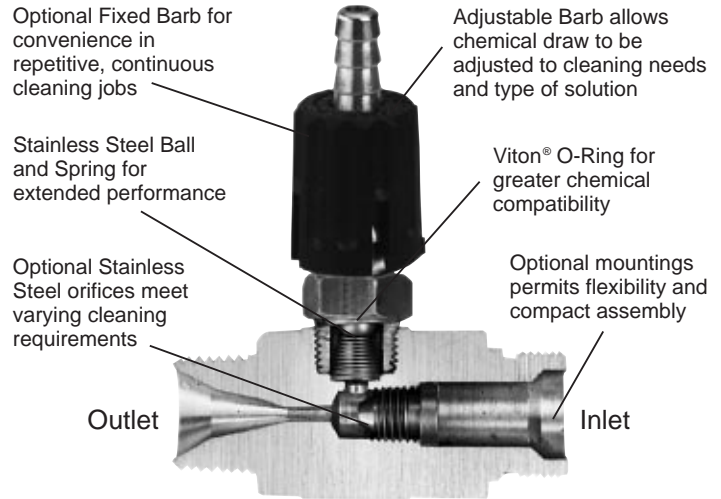
To install either of the **unloader mount injectors**, remove the male discharge fitting with check valve and spring from the unloader. **Reinstall the spring, then the check valve into the injector** and thread onto unloader. NOTE: **Discard both o-ring and unloader discharge fitting.**  
(continued on back)

*“Customer confidence is our greatest asset”*

## EXPLODED VIEW



## CUTAWAY



## PARTS LIST

ITEM	P/N	MATL	DESCRIPTION	MODEL USED	QTY
471	33949	BBNY	Cap, Adjustment	All	1
472	32941	BB	Hose Barb, Adjustable	All	1
473	33503	NBR	O-Ring, Hose Barb	All	1
474	33500	S	Spring	All	1
475	33946	BB	Retainer, Ball Seat	All	1
476	33504	FPM	O-Ring, Retainer	All	1
477	34620	SS	Ball	All	1
478	33501	SS	Spring, Tapered	All	1
479	32071	S	Injector Orifice (1.5 mm)	7181	1
	32072	S	Injector Orifice (1.8 mm)	7182	1
	32073	S	Injector Orifice (2.1 mm)	7183	1
	32074	S	Injector Orifice (2.3 mm)	7184	1
<b>Injector for Unloaders 7500S, 7500XS, 7600S, 7580, 7581</b>					
479	32372	S	Injector Orifice (1.8 mm)	7192	1
	32373	S	Injector Orifice (2.1 mm)	7193	1
	32374	S	Injector Orifice (2.3 mm)	7194	1
482	13969	NBR	O-Ring	7500S, 7500XS, 7600S	1
	33547	NBR	O-Ring	7580, 7581	1
<b>Injector for Unloaders 7570, 7572</b>					
479	32072	S	Injector Orifice (1.8 mm)	7197	1
	32073	S	Injector Orifice (2.1 mm)	7198	1
	32074	S	Injector Orifice (2.3 mm)	7199	1
480	—	BB	Body	All	1
481	33481	BB	Barb Assy, Adjustable	All	1
			(Incls: 471,472,473,474,475,476,477,478)		
	33480	BB	Barb Assy, Fixed	All	1
			(Incls: 472,476,477,478)		
482	13969	NBR	O-Ring, Body - 70	All	1

*Italics are optional items.*

Material Codes (Not Part of Part No.): BB=Brass FPM=Fluorocarbon (Viton®)  
NBR=Medium Nitrile (Buna-N) NY=Nylon S=304SS SS=316SS

**OPERATION:** The Chemical Injector is designed to **draw chemical only under low pressure.** It should be used with a double lance fitted with a low and high pressure nozzle, dual nozzle, adjustable nozzle or the vari-nozzle. **When chemical is desired, the system must be switched over to the low pressure nozzle to draw chemical.** The amount of chemical draw may be varied by turning the adjustment collar completely into the body to stop draw and approximately 1-1/2 turns counterclockwise for maximum chemical draw. During normal high pressure operation there will be a pressure drop across the injector. See performance chart.

### CAUTION:

Deduct the pressure drop shown in the performance chart from your desired system pressure to arrive at the maximum high pressure nozzle rating. This is essential to avoid over-pressurizing the pump.

Example:

$$\left[ \begin{array}{l} \text{System - 4 GPM, 2000 PSI} \\ \text{Injector - 7183} \\ \text{Pressure Drop - 375 PSI} \end{array} \right] = \left[ \begin{array}{l} \text{Low Pressure Nozzle - 250 PSI} \\ \text{Max. High Pressure Nozzle - 1625 PSI} \end{array} \right]$$

Flush system after chemical application to prevent clogging and to prolong life.

## PERFORMANCE CHART

Model	Desired Flow	Orifice Size (mm)	Low PSI Nozzle (max. injecting pressure less hose friction loss)	Max. Chemical Draw (oz/min)	Pressure Drop across nozzle (deduct from Hi-Pressure)
7181, 92, 97	2 GPM	1.5	240 psi	59	375
7181, 92, 97	2 GPM	1.8	225 psi	60	150
7181, 92, 97	3 GPM	1.8	275 psi	60	300
7181, 92, 97	4 GPM	1.8	450 psi	60	500
7183, 93, 98	3 GPM	2.1	225 psi	54	150
7183, 93, 98	4 GPM	2.1	375 psi	54	250
7183, 93, 98	5 GPM	2.1	600 psi	54	400
7184, 94, 99	3 GPM	2.3	150 psi	50	125
7184, 94, 99	4 GPM	2.3	225 psi	50	220
7184, 94, 99	5 GPM	2.3	300 psi	50	350
7184, 94, 99	6 GPM	2.3	340 psi	50	500

Optimum performance of chemical injector occurs with a 35 ft. high pressure hose and a minimum 3/8 I.D. The type of hose, extended lengths, reduced I.D. and fittings may create back pressure in excess of the low pressure nozzle rating and prevent the injector from drawing chemical. Deduct hose friction loss from the above PSI nozzle. See High Pressure Guide. Consult factory for assistance with other options.

## TROUBLESHOOTING

No Chemical Draw:	<ul style="list-style-type: none"> <li>• Low pressure nozzle sized for too high pressure.</li> <li>• Air leak in suction line.</li> <li>• Worn injector orifice.</li> </ul>
Leaking Around Adjusting Collar:	<ul style="list-style-type: none"> <li>• O-ring worn.</li> <li>• Foreign material in injector.</li> </ul>

## WARRANTY

### 90 Day Warranty

Refer to complete Cat Pump Warranty for further information.

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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