

# Robertshaw

INDUSTRIAL PRODUCTS DIVISION

## Pressure Regulator or Pressure Relief Valve RP-1073D Series

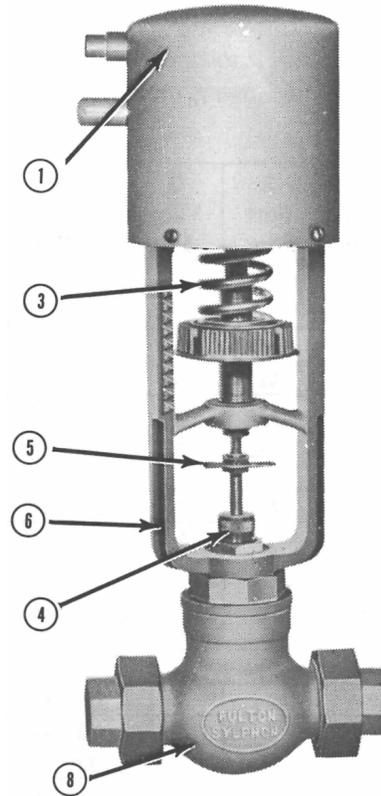
All Stainless Steel Upperworks for use  
in corrosive atmospheres

### Features

1. Large powerful stainless steel Robertshaw bellows for long life and corrosion resistance.
2. All parts exposed to the atmosphere are made of 18-8 stainless steel.
3. Over-pressure protection is standard feature.
4. Chevron "Lifetime" stem packing made of Teflon.
5. Quick-detach valve stem construction permits easy valve change.
6. Sturdy construction with stainless steel frame.

Regulator No.		RP-1073D1 Pressure Reg.	RP-1073D2 Pressure Relief Valve
Valve See Valve Spec. Sheet for further description.	Action	Direct Acting - closes on Rising pressure.	Reverse Acting-opens on rising pressure.
	Sizes	1/4" thru 4"	1/4" thru 4"
	Type*	1/4", 3/8", 1/2" single-seated type "A"; 3/4" thru 2" single-seated type "MA" 2 1/2" thru 4" double-seated type "FA".	Same as RP-1073-D1 except sizes 3/4" thru 4" have double-seated tye "FA".
	Ends*	1/2" thru 1 1/2", screwed bronze unions 2" thru 4", 125 lbs. ANSI flanges.	1/2" thru 1 1/2", screwed bronze unions 2" thru 4", 125 lbs. ANSI flanges.
	Trim	1/4" thru 4" stainless steel.	1/4" thru 1/2", stainless steel; 3/4" thru 1 1/2", bronze, 2" - 4", stainless steel
	Stem	Stainless Steel Quick-detach type	Stainless Steel Quick-detach type
	Stem Packing	Teflon chevrons, spring loaded	Rubber U-Cup
	Body	1/4" thru 1 1/2" Bronze 2" thru 4", Cast Iron	1/4" thru 1 1/2" Bronze 2" thru 4", Cast Iron
	Body Rating	1/4" thru 1 1/2", 250 psi 2" thru 4", 125 psi	1/4" thru 1 1/2", 250 psi 2" thru 4", 125 psi
Materials For Parts other than Listed above.	Frame	Stainless Steel	Stainless Steel
	Adj. Spring	Stainless Steel	Stainless Steel
	Other Parts	Stainless Steel	Stainless Steel
Location Size	Side of Head		Side of Head
		1/4" NPT	1/4" NPT

\* On 1/2" size with 1/4" and 3/8" reduced ports, the "A" type valve with threaded unions is cataloged.



Sizes 1/4" thru 4"

### HOW TO ORDER

#### Specify:

1. Quantity
2. Regulator number
3. Valve size, type, action, etc.
4. Medium through valve (steam, etc.)
5. Initial and reduced pressures (PSIG)
6. Special features desired.
7. Shipping and billing instructions.

# RP 1073 D Series

## Dimensions, Shipping Weights and Sensing Bulb Sizes

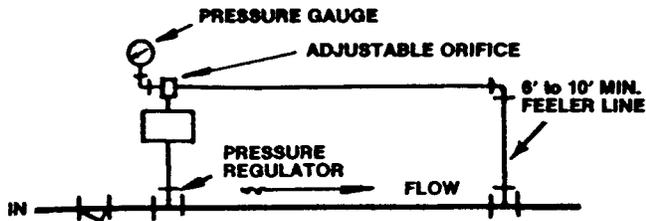
Valve Size, Inches	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2	2 1/2	3	4
Direct-Acting Valve Type	A	A	A	MA	MA	MA	MA	MA	FA	FA	FA
A	15-1/16	15-1/16	15-1/16	16-15/16	16-15/16	17-1/8	17-1/8	18-7/16	18-1/4	18-1/4	19-5/16
B	13-1/2	13-1/2	13-1/2	13-1/2	13-1/2	13-1/2	13-1/2	13-1/2	13-1/2	13-1/2	13-1/2
D	1-9/16	1-9/16	1-9/16	3-7/16	3-7/16	3-5/8	4-1/8	4-15/16	4-3/4	4-3/4	5-13/16
E	4-3/4	4-3/4	4-3/4	6-15/16	7-1/8	7-1/2	8-1/2	7	7-3/4	8 5/8	10-1/4
<b>Regulator No.</b>	<b>Shipping Weight Lbs.</b>										
RP-1073D	28	28	29	30	34	40	45	80	100	125	155

### RP-1073-D1 Operating Characteristics - Direct Acting Valve

1 Valve Size	2 Port Size	3 Valve Lift +1/32 -0	4 ΔP, PSIG	Control Pressure (P2, PSIG) when supply pressure (P1) is 0 PSIG						To determine control pressure (P2) when supply pressure (P1) is more than 0 PSIG, adjust 0 PSIG value as listed below.
				Low End of Range			High End of Range			
				Valve Fully Open	Nominal Set Point, Mid Stroke	Valve on Seat	Valve Fully Open	Nominal Set Point, Mid Stroke	Valve on Seat	
<b>Single Ported Valves Type A</b>										
1/2	1/4	1/8	2.8±0.4	3	4.4	5.8±0.4	37.2±0.4	38.6	40	Add 0.004xP1
1/2	3/8	5/32	3.5±0.5	3	4.8	6.5±0.5	36.5±0.5	38.2	40	Add 0.008xP1
1/2	1/2	3/16	4.2±0.6	3	5.1	7.2 ±0.6	35.8±0.6	37.9	40	Add 0.015xP1
<b>Single Ported Valves Type MA</b>										
3/4	3/4	1/4	5.6±0.8	3	5.8	8.6±0.8	34.4±0.8	37.2	40	Minus 0.006 x P1
1	1	5/16	7.0±1.0	3	6.5	10.0±1.0	33±1.0	36.5	40	Minus 0.006 x P1
1-1/4	1-1/4	3/8	8.4±1.2	3	7.2	11.4±1.2	31.6±1.2	35.8	40	Minus 0.006 x P1
1-1/2	1-1/2	7/16	9.6±1.4	3	7.9	12.8±1.4	30.2±1.4	35.1	40	Minus 0.006 x P1
2	2	9/16	12.6±1.8	3	9.3	15.6±1.8	27.4±1.8	33.7	40	Minus 0.006 x P1
<b>Double Ported Valves Type FA</b>										
2-1/2	2-1/2	3/8	8.4±1.2	3	7.2	11.4±1.2	31.6±1.2	35.8	40	Add 0.035 x P1
3	3	7/16	9.8±1.4	3	7.9	12.8 ±1.4	30.2±1.4	35.1	40	Add 0.042 x P1
4	4	9/16	12.6±1.8	3	9.3	15.6±1.8	27.4±1.8	33.7	40	Add 0.057 x P1

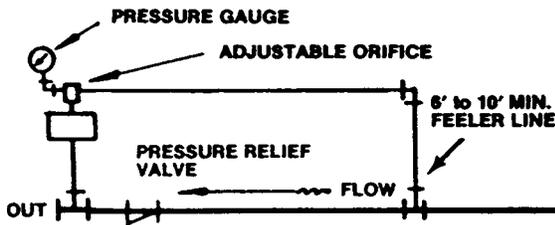
### RP-1073-D2 Operating Characteristics - Reverse Acting Valve

1 Valve Size	2 Port Size	3 Valve Lift +1/32 -0	4 ΔP, PSIG	Control Pressure (P2, PSIG) when supply pressure (P1) is 0 PSIG						To determine control pressure (P2) when supply pressure (P1) is more than 0 PSIG, adjust 0 PSIG value as listed below.
				Low End of Range			High End of Range			
				Valve Fully Open	Nominal Set Point, Open Mid Stroke	Valve on Seat	Valve Fully Open	Nominal Set Point, Mid Stroke	Valve on Seat	
<b>Single Ported Valves Type A</b>										
1/2	1/4	1/8	2.8±0.4	3	4.4	5.8±0.4	37.2±0.4	38.6	40	Minus 0.004 x P1
1/2	3/8	5/32	3.5±0.5	3	4.8	6.5±0.5	36.5±0.5	38.2	40	Minus 0.008 x P1
1/2	1/2	3/16	4.2±0.6	3	5.1	7.2±0.6	35.8±0.6	37.9	40	Minus 0.015 x P1
<b>Double Ported Valves Type FA</b>										
3/4	3/4	5/32	3.5±0.5	3	4.8	6.5±0.5	36.5±0.5	38.2	40	Minus 0.006 x P1
1	1	3/16	4.2±0.6	3	5.1	7.2±0.6	35.8±0.6	37.9	40	Minus 0.009 x P1
1-1/4	1-1/4	7/32	4.9±0.7	3	5.4	7.9±0.7	35.1±0.7	37.6	40	Minus 0.009 x P1
1-1/2	1-1/2	1/4	5.6±0.8	3	5.8	8.6±0.8	34.4±0.8	37.2	40	Minus 0.011 x P1
2	2	5/16	7.0±1.0	3	6.5	10.0±1.0	33.0±1.0	36.5	40	Minus 0.028 x P1
2-1/2	2-1/2	3/8	8.4±1.2	3	7.2	11.4±1.2	31.6±1.2	35.8	40	Minus 0.035 x P1
3	3	7/16	9.8±1.4	3	7.9	12.8±1.4	30.2±1.4	35.1	40	Minus 0.042 x P1
4	4	9/16	12.6±1.8	3	9.3	15.6±1.8	27.4±1.8	33.7	40	Minus 0.057 x P1



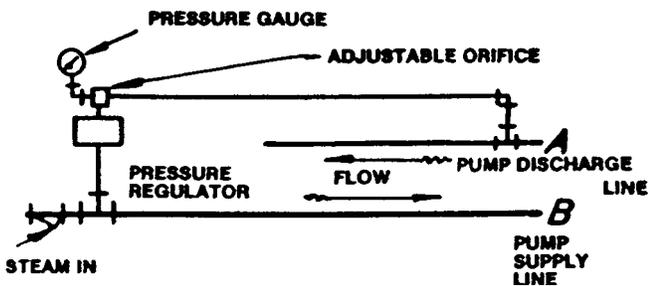
**PRESSURE REDUCTION**

**Figure 1-** Typical installation of a pressure regulator showing: feeler pipe connection, adjustable orifice and pressure side of supply line at a point 6 ft. to 10 ft. minimum from regulator valve.



**MODULATING PRESSURE RELIEF**

**Figure 2-** Shows an installation of a pressure relief valve. The feeler pipe is connected to the high pressure or upstream side of the supply line at a point 6 ft. or 10 ft. minimum from the regulator valve.

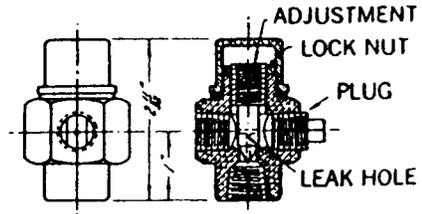


**PUMP GOVERNOR**

**Figure 3 -** Regulator can be used to protect a pump on a dual line system as a governor, single line system as a back pressure regulator; or recirculation loop as a downstream pressure relief back to pump intake. Illustrated is pressure regulator as a pump governor on a steam-driven pump. Feeler line is connected to pump discharge line "A" so that pumped medium pressure determines the amount of steam supplied to the pump through line "B".

**ADJUSTABLE ORIFICE NO. 94204-A1**

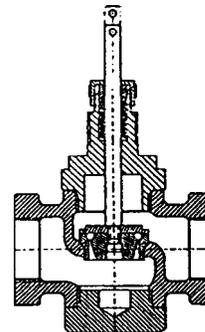
Damps out rapid pressure fluctuations in feeler pipe ... protects control bellows. Always recommended but supplied only on order at extra cost



All parts made of brass, 1/4" pipe connections. Pipe plug may be removed for installation of pressure gauge. No. 94204-A2 is available without leak hole.

**Stainless Steel Valve Substitution**

Style "CSS" Valve Assembly  
(Now Available)



Direct or Reverse Acting  
St. St. Body,  
St. St. Trim  
Sizes 1/2" - 1"  
Soft-Seated for tight shut off  
See product spec for more details.

## *Robertshaw*

### **U.S.A. and CANADA**

Robertshaw Industrial Products Division  
1602 Mustang Drive  
Maryville, TN 37801  
Phone: (865) 981-3100 Fax: (865) 981-3168  
<http://www.robertshawindustrial.com>

### **Exports**

Invensys Appliance Controls  
2809 Emerywood Parkway  
P.O. Box 26544  
Richmond, Virginia 23261-6544  
Phone: (804) 756-6500 Fax: (804) 756-6561