# Schneider Gelectric

Sales Manual Section 160 Product Specification RP-1073D

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

All Stainless Steel Upper works for use in corrosive atmospheres



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.

### Features

- 1. Large powerful stainless steel 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.

<b>Regulator</b> N	lo.	<b>RP-1073D1</b>	<b>RP-1073D2</b>			
0		Pressure Reg.	<b>Pressure Relief</b>			
		0	Valve			
Valve	Action	Direct Acting - closes on	Reverse Acting-opens on			
See Valve Spec.		Rising pressure.	rising pressure.			
Sheet for further	Sizes	1/4" thru 4"	1/4" thru 4"			
description.	Type*	1/4", 3/8", 1/2"single-seated	Same as RP-1073-D1			
		type "A"; 3/4" thru 2"	except sizes 3/4" thru 4"			
		single-seated type "MA"	have double-seated tye			
		2 1/2" thru 4"	"FA".			
		double-seated type "FA".				
	Ends*	1/2" thru 1 1/2", screwed	1/2" thru 1 1/2", screwed			
		bronze unions 2" thru 4",	bronze unions 2" thru 4",			
		125 lbs. ANSI flanges.	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	Stainless Steel			
		Quick-detach type	Quick-detach type			
	Stem Packing	Teflon chevrons, spring	Rubber U-Cup			
	_	loaded	_			
	Body	1/4" thru 1 1/2" Bronze	1/4" thru 1 1/2" Bronze			
		2" thru 4", Cast Iron	2" thru 4", Cast Iron			
	Body Rating	1/4" thru 1 1/2", 250 psi	1/4" thru 1 1/2", 250 psi			
		2" thru 4", 125 psi	2" thru 4", 125 psi			
Materials For	Frame	Stainless Steel	Stainless Steel			
Parts other than	Adj. Spring	Stainless Steel	Stainless Steel			
Listed above.						
	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.

### **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	А	А	А	MA	MA	MA	MA	MA	FA	FA	FA
Туре											
А	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
В	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
Regulator No.	Shipping Weight Lbs.										
RP-1073D	28	28	29	30	34	40	45	80	100	125	155

### **RP-1073-DI** Operating Characteristics - Direct Acting Valve

1	2	3	4	Contro	ol Pressure (P2	2, PSIG) wh	To determine control			
Valve	Port	Valve	ΔΡ,	Low End of Range			High End of Range			pressure (P2) when supply
Size	Size	Lift	PSIG	Valve	Nominal	Valve on	Valve	Nominal Valve		pressure (P1) is more than 0
		+1/32		Fully	Set Point,	Seat	<b>Fully Open</b>	Set Point,	on	PSIG, adjust 0 PSIG value
		-0		Open	Mid Stroke			Mid Stroke	Seat	as listed below.
Single Ported Valves Type A										
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	$7.2 \pm 0.6$	35.8±0.6	37.9	40	Add 0.015xP1
Single Ported Valves Type MA										
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	$10.0{\pm}1.0$	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	$11.4{\pm}1.2$	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	$12.8 \pm 1.4$	30.2±1.4	35.1	40	Minus 0.006 x P1
2	2	9/16	12.6±1.8	3	9.3	$15.6 \pm 1.8$	27.4±1.8	33.7	40	Minus 0.006 x P1
Double Ported Valves Type FA										
2-1/2	2-1/2	3/8	8.4±1.2	3	7.2	$11.4{\pm}1.2$	31.6±1.2	35.8	40	Add 0.035 x P1
3	3	7/16	9.8±1.4	3	7.9	$12.8 \pm 1.4$	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	2	3	4	Control Pressure (P2, PSIG) when supply pressure (P1) is 0 PSIG					To determine control	
Valve	Port	Valve	ΔP,	Low End of	Range	ange High End of Range			pressure (P2) when supply	
Size	Size	Lift	PSIG	Valve Nominal	Valve on	Valve	Nominal	Valve	pressure (P1) is more than 0	
		+1/32		Fully Set Point,	Seat	<b>Fully Open</b>	Set Point,	on	PSIG, adjust 0 PSIG value	
		-0		Open Mid Stroke			Mid Stroke	Seat	as listed below.	
Single Ported Valves Type A										
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	
Double Ported Valves Type FA										
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	

#### **ADJUSTABLE ORIFICE NO. 94204-A1**



### 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.

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)



#### 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".



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.



1602 Mustang Dr Maryville, TN 37801 Ph (865) 981-3100 FX (865) 981-3168

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