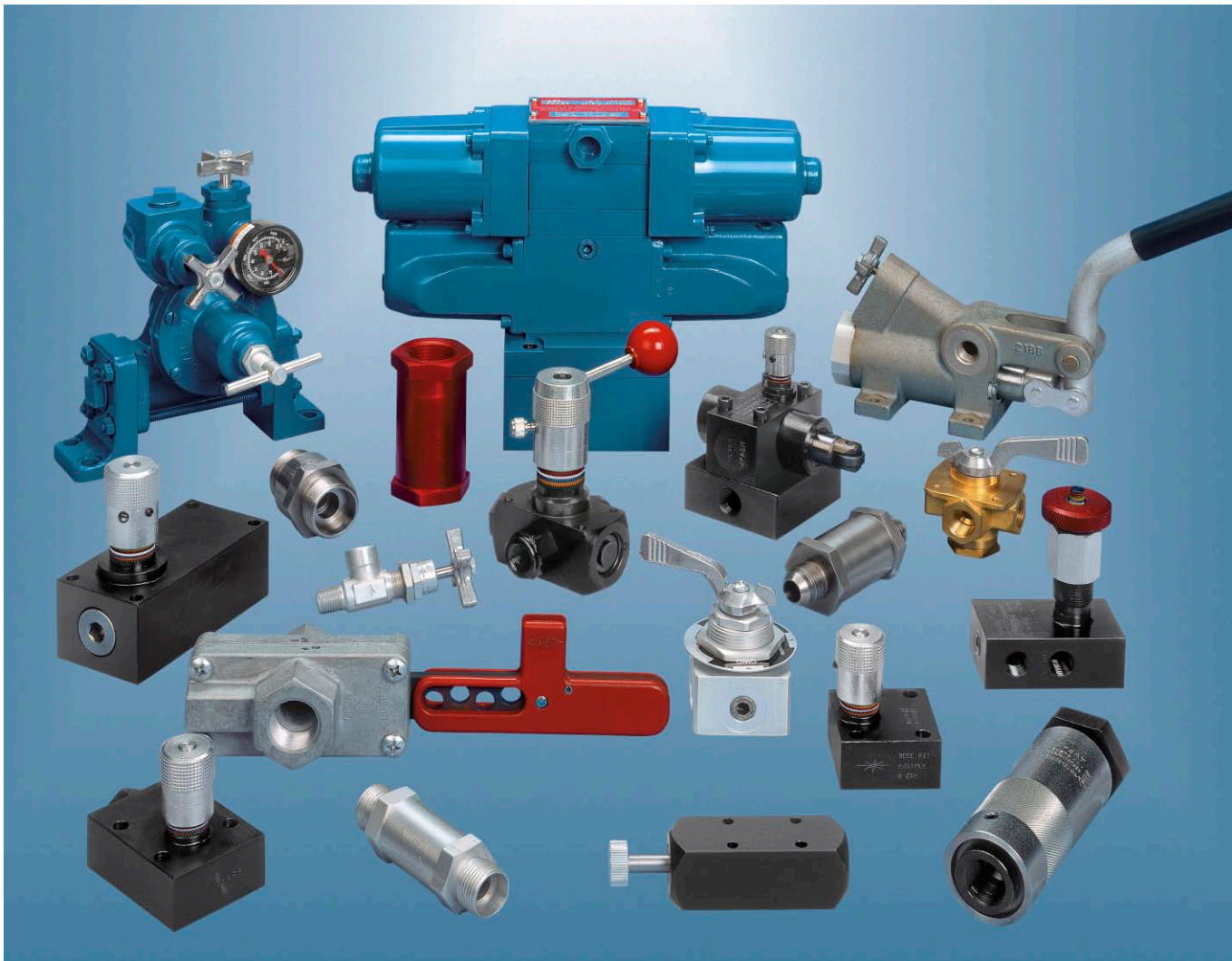




Republic/Manatrol

Hydraulic and Pneumatic Control Valves

Catalog HY14-3000/US



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Pressure Control Valves

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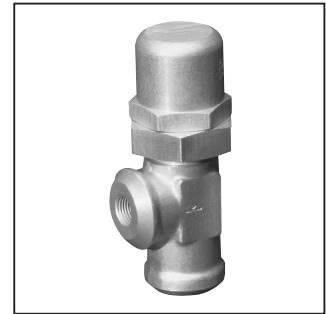
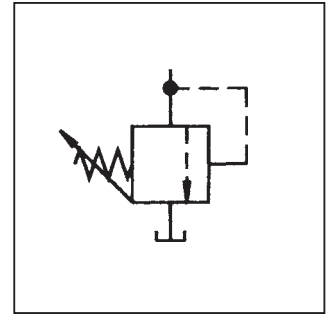
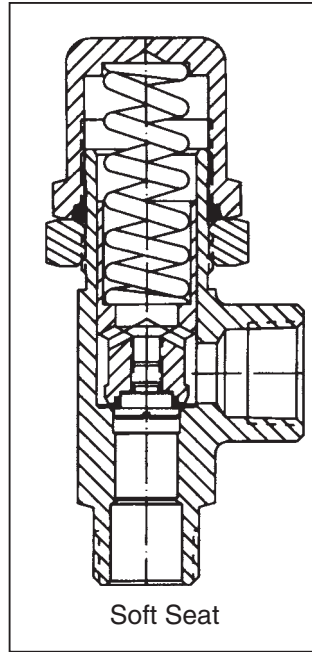
E

General Description

Series 620 - 649 in-line pressure control valves open the system to tank when the system pressure reaches the pressure setting of the control valve. The pressure setting is externally adjustable so that it can be tuned accordingly within its range. However, the valve can be factory set to a specified pressure setting.

Specifications

Service App.	Hydraulic and Pneumatic
Maximum Operating Pressure	Working: 0.3 to 248.4 Bar (4 to 3600 PSI) in 13 ranges Reset: Range 1: 80% of cracking press. Ranges 2 - 13: 90% of cracking pressure
Sizes	NPT 1/4", 1/2", 3/4" IST SAE 6, SAE 10, SAE 12 FLD SAE 6, SAE 10, SAE 12
Ports	NPT Pipe threads IST Internal straight threads FLD Flared Tube Connection SAE 37°
Material	Body, Cap Brass, aluminum alloy, stainless steel Finish Aluminum alloy, anodized; stainless steel Poppet 416 Stainless Steel (Hard seat) 303 Stainless Steel (Soft seat) Seat (soft) Ranges 1 -3: Synthetic rubber - Code 2 Ranges 4 - 13: PTFE Spring Stainless steel Cap O-ring Synthetic rubber
Operating Temperature	-40°C to +121°C (-40°F to +250°F) Higher on special order

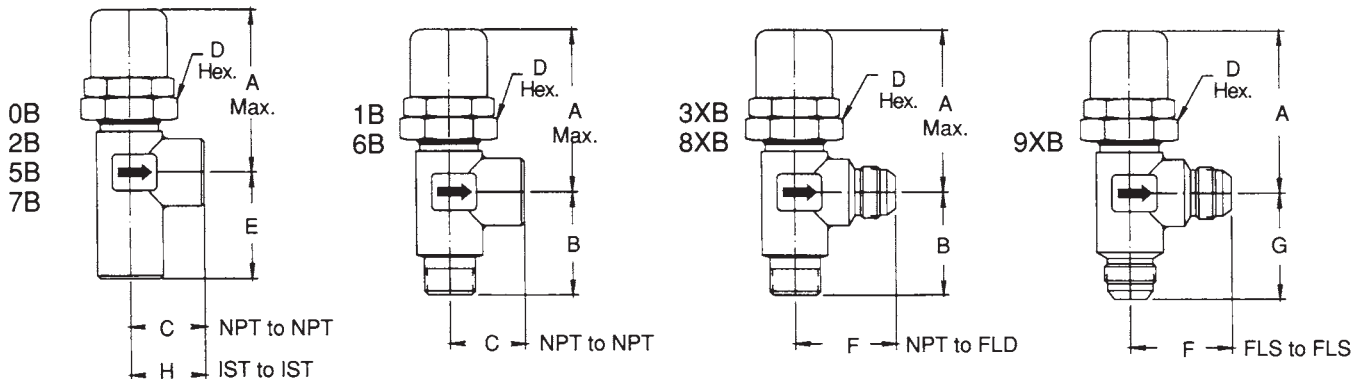


Hard Seat
 available only in
 Brass and Stainless Steel

Features

- Externally adjustable.
- Available for hydraulic or pneumatic service.
- Quick response for venting applications.

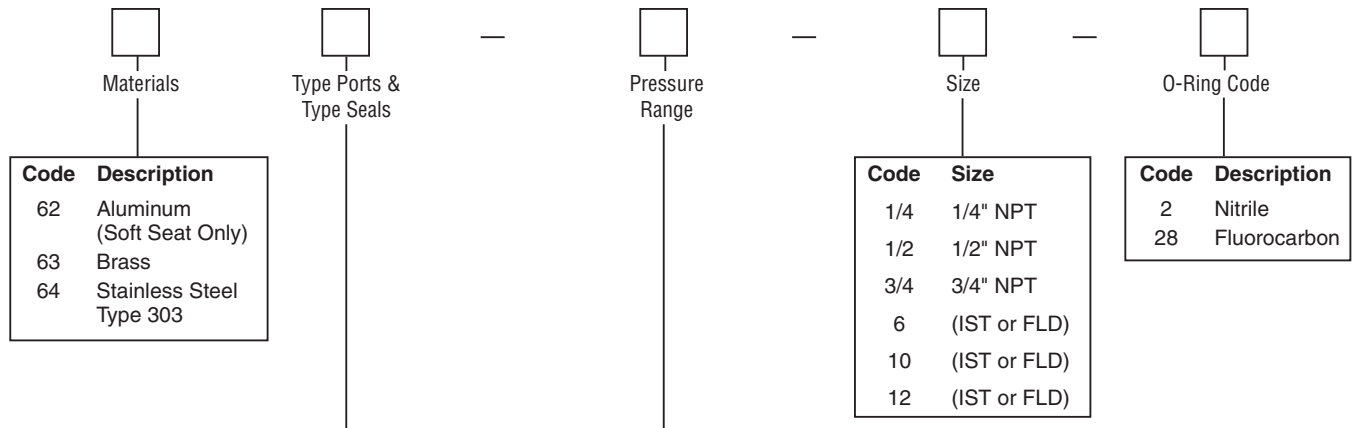
Dimensions — Inch equivalents for millimeter dimensions are shown in (**)



Valve Size		Dimensions								Maximum Rated Flow LPM (GPM)	Weights (Approx.)		
Pipe	Tube	A	B	C	D	E	F	G	H		Allum. Alloy	Brass	Stainless Steel
1/4	6	60.3 (2.38)	34.9 (1.38)	27.0 (1.06)	31.8 (1.25)	32.5 (1.28)	36.5 (1.44)	38.1 (1.50)	27.0 (1.06)	15.1 (4.0)	4 oz.	10 oz.	12 oz.
1/2	10	94.5 (3.72)	54.0 (2.13)	38.1 (1.50)	44.5 (1.75)	54.8 (2.16)	52.4 (2.06)	55.6 (2.19)	38.1 (1.50)	37.9 (10.0)	14 oz.	2 lbs. 2 oz.	2 lbs. 4 oz.
3/4	12	94.5 (3.72)	54.0 (2.13)	39.7 (1.56)	44.5 (1.75)	55.6 (2.19)	53.2 (2.09)	55.6 (2.19)	39.7 (1.56)	56.8 (15.0)	14 oz.	2 lbs. 2 oz.	2 lbs. 4 oz.

3000-E1.p65, dd





Code	Inlet	Outlet	Code	Inlet	Outlet
Hard Seat			Soft Seat		
0B	IST	IST	5B	IST	IST
1B	NPT	NPT	6B	NPT	NPT
2B	NPT	NPT	7B	NPT	NPT
3XB	NPT	FLD	8XB	NPT	FLD
			629XB	FLD	FLD
			only		

Hard Seat available in Brass and Stainless Steel only.

Code	Description
1	0.3 - 1.0 Bar (4-15 PSI)
2	0.7 - 3.5 Bar (10-50 PSI)
3	2.8 - 8.6 Bar (40-125 PSI)
4	7.9 - 17.3 Bar (115-250 PSI)
5	16.2 - 31.1 Bar (235-450 PSI)
6	29.7 - 44.9 Bar (430-650 PSI)
7	43.5 - 58.7 Bar (630-850 PSI)
8*	43.5 - 70.4 Bar (630-1020 PSI)
9*	55.2 - 103.5 Bar (800-1500 PSI)
10*	96.6 - 144.9 Bar (1400-2100 PSI)
11*	103.5 - 189.8 Bar (1500-2750 PSI)
12*	138.0 - 213.9 Bar (2000-3100 PSI)
13*	207.0 - 248.4 Bar (3000-3600 PSI)

* Hard Seat only.

PTFE seats for Ranges 4, 5, 6 and 7 only.

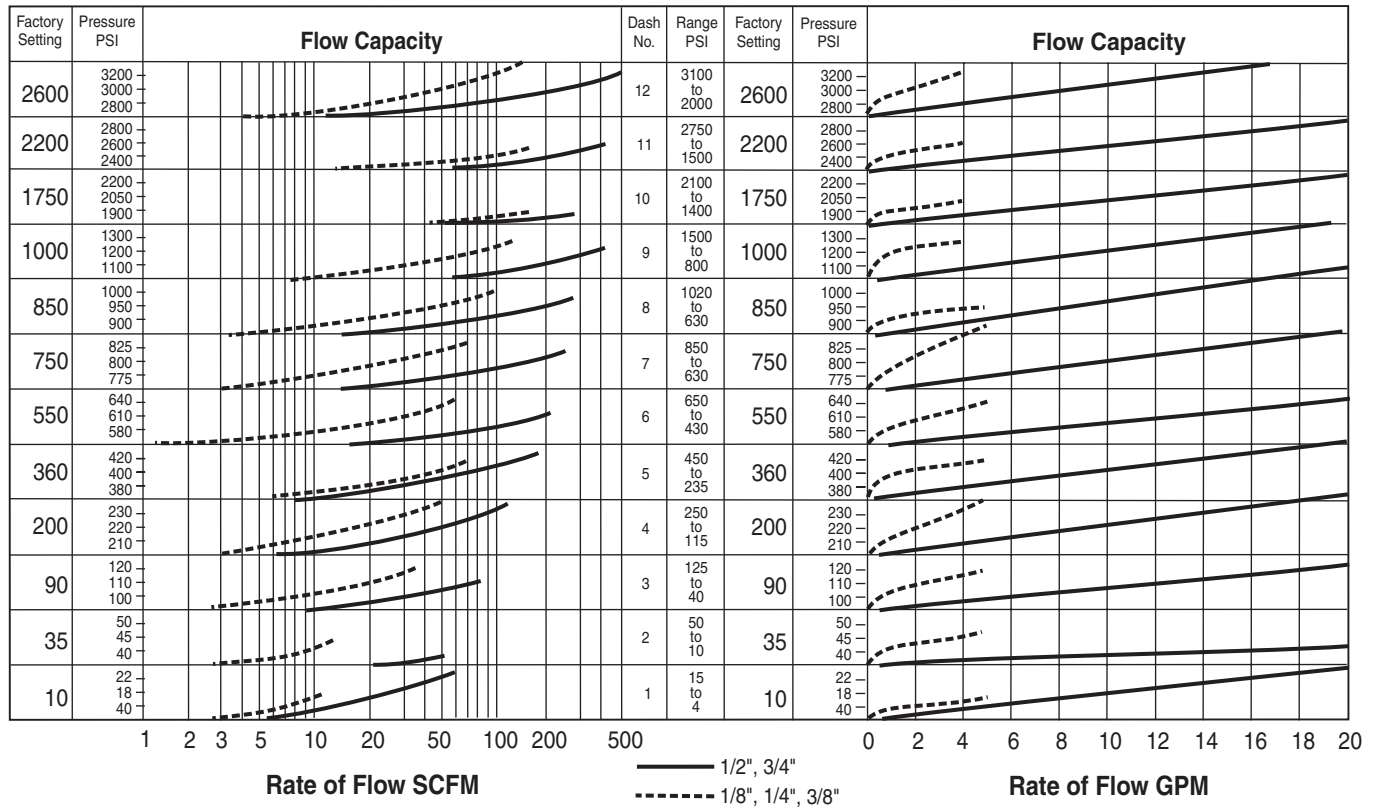
Pressure Range

Range Bar (PSI)	Pre-Set Cracking Pressure	Soft Seat Material (when used)	Range Dash Number
0.3 - 1.0 Bar (4-15 PSI)	0.7 Bar (10 PSI)	Synthetic Rubber	-1
0.7 - 3.5 Bar (10-50 PSI)	2.4 Bar (35 PSI)	Synthetic Rubber	-2
2.8 - 3.5 Bar (40-125 PSI)	6.2 Bar (90 PSI)	Synthetic Rubber	-3
7.9 - 17.3 Bar (115-250 PSI)	13.8 Bar (200 PSI)	PTFE	-4
16.2 - 31.1 Bar (235-450 PSI)	24.8 Bar (360 PSI)	PTFE	-5
29.7 - 44.9 Bar (430-650 PSI)	38.0 Bar (550 PSI)	PTFE	-6
43.5 - 58.7 Bar (630-850 PSI)	51.8 Bar (750 PSI)	PTFE	-7
43.5 - 70.4 Bar (630-1020 PSI)	58.7 Bar (850 PSI)	PTFE	-8
55.2 - 103.5 Bar (800-1500 PSI)	69.0 Bar (1000 PSI)	PTFE	-9
96.6 - 144.9 Bar (1400-2100 PSI)	120.8 Bar (1750 PSI)	PTFE	-10
103.5 - 189.8 Bar (1500-2750 PSI)	151.8 Bar (2200 PSI)	PTFE	-11
138.0 - 213.9 Bar (2000-3100 PSI)	179.4 Bar (2600 PSI)	PTFE	-12
207.0 - 248.4 Bar (3000-3600 PSI)	220.8 Bar (3200 PSI)	PTFE	-13

Definitions:

Cracking pressure – Liquid: 15 tp 20 DPM
 Air: steady stream of bubbles
 Reseat leakage – Less than 1 DPM or 1 BPM





Examples

Pneumatic:

- Establish cracking pressure setting of 1/2" valve for flow of 70 SCFM at 27.6 Bar (400 PSI) pressure:
1. Project 70 SCFM on vertical scale.
 2. Project 27.6 Bar (400 PSI) scale horizontally intersecting 1.
 3. Project line parallel to curves back to vertical line 1.
 4. Read cracking pressure setting: 24.8 Bar (360 PSI).

Hydraulic:

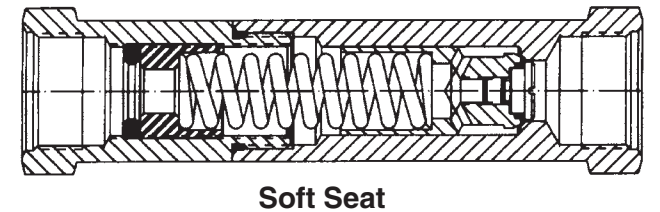
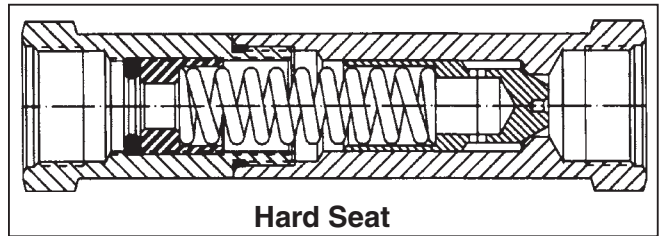
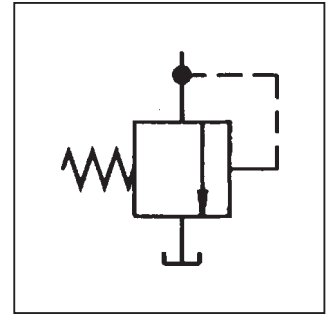
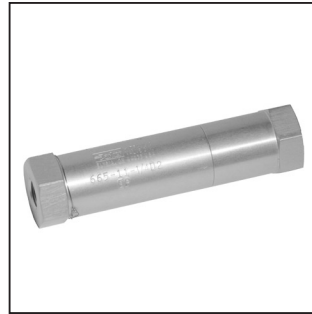
- Find amount of pressure increase above 24.8 Bar (360 PSI) cracking pressure when flow through 3/4" valve is increased to 54 LPM (14 GPM):
1. From 360 on vertical pressure scale, follow 3/4" curve until it intersects with the vertical line representing 54 LPM (14 GPM).
 2. Project intersecting point horizontally and read pressure, i.e., 29 Bar (420 PSI).
 3. Accumulated Pressure:
 420 minus 360 = 4.1 Bar (60 PSI).

General Description

Series 665 relief valves are adjustable, in-line direct-acting relief valves. The valve opens when the system pressure exceeds the pressure at which the valve is set.

Specifications

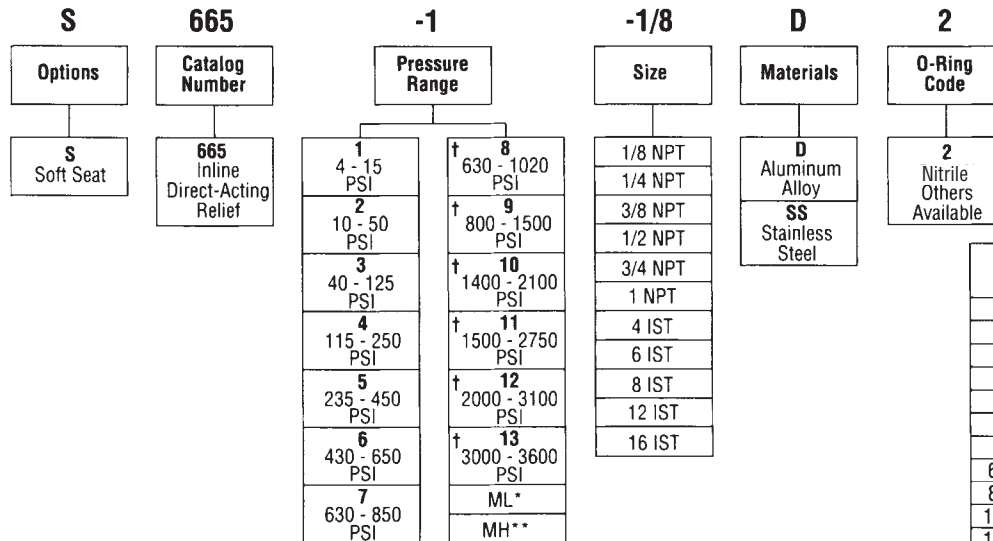
Service App.	Hard seat: Hydraulic Soft seat: Hydraulic and air
Maximum Operating Pressure	Working: 0.3 to 248.4 Bar (4 to 3600 PSI) in 13 ranges Reseat: Range 1: 80% of cracking press. Ranges 2 - 13: 90% of cracking pressure Proof: 310.5 Bar (4500 PSI)
Sizes	NPT 1/4", 1/2", 3/4", 1"
Ports	NPT Pipe threads IST Internal straight threads
Material	Body, Cap Aluminum alloy, anodized Stainless steel Poppet, 416 Stainless Steel (Hard seat) Adj. Screw 303 Stainless Steel (Soft seat) Locknut 303 Stainless steel Spring Stainless steel AMS5688 and 17-7PH O-ring Synthetic rubber Seat (soft) Ranges 1 -3: Synthetic rubber Ranges 4 - 13: PTFE
Operating Temperature	-40°C to +121°C (-40°F to +250°F) Higher on special order



Features

- Internal adjustment ideal for tamper-proof applications.
- Available for hydraulic or pneumatic service.
- In-line design saves space in power unit application.

Ordering Information



Pressure Range

Range PSI	Pre-Set Cracking Pressure	Soft Seat Material (when used)	Range Dash Number
4-15	10	Synthetic Rubber	-1
10-50	35		-2
40-125	90		-3
115-250	200	PTFE	-4
235-450	360		-5
430-650	550		-6
630-850	750		-7
630-1020	850		-8
800-1500	1000		-9
1400-2100	1750		-10
1500-2750	2200		-11
2000-3100	2600		-12
3000 - 3600	3200		-13

† **NOTE:** Ranges 8 and above – Hard Seat only
Teflon seats for Ranges 4, 5, 6 and 7 only

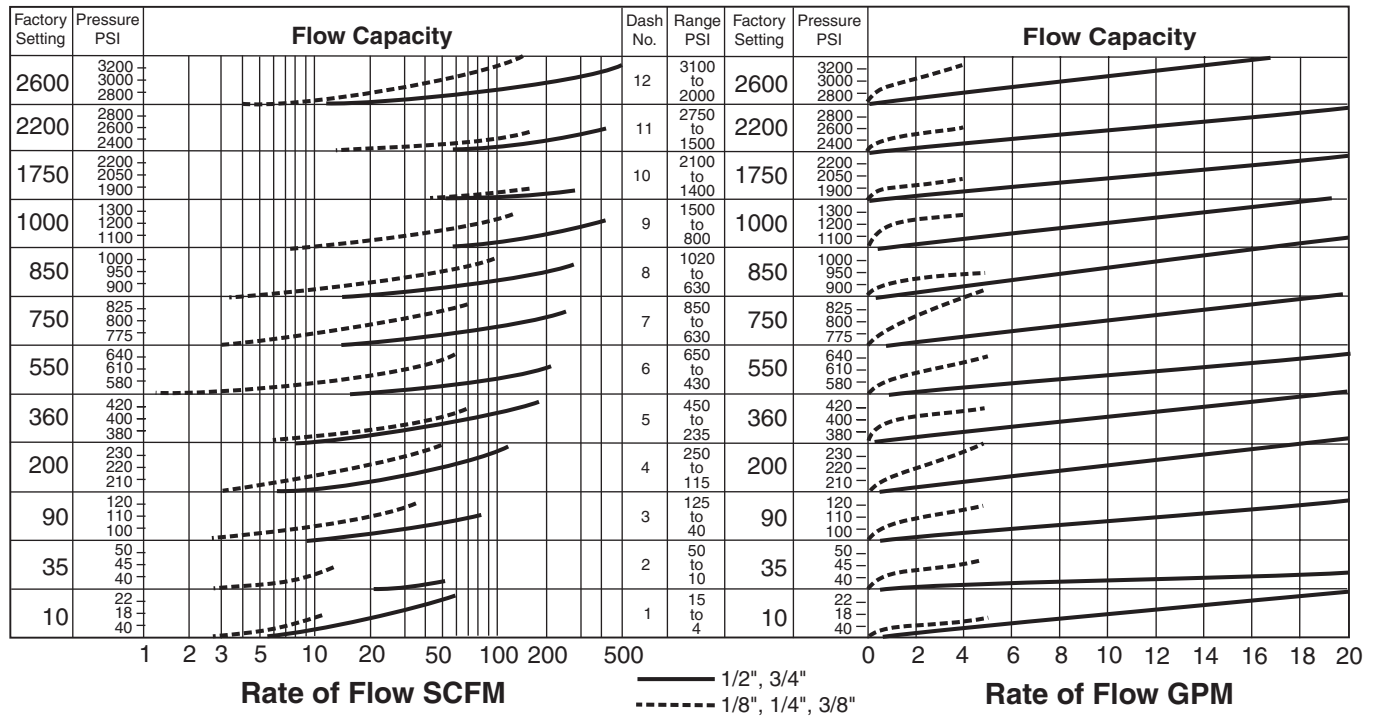
Definitions:

Cracking pressure – Liquid: 15 to 20 DPM

Air: steady stream of bubbles

Reseat leakage – Less than 1 DPM or 1 BPM

Performance Curves



Examples

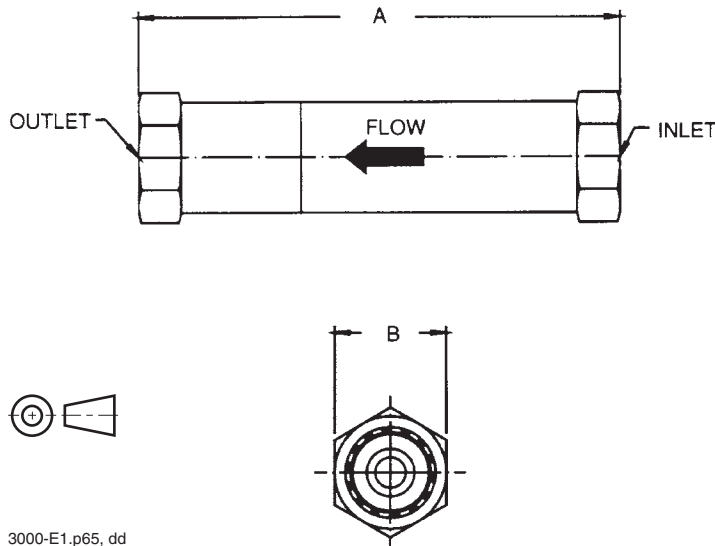
Pneumatic:

- Establish cracking pressure setting of 1/2" valve for flow of 70 SCFM at 27.6 Bar (400 PSI) pressure:
1. Project 70 SCFM on vertical scale.
 2. Project 27.6 Bar (400 PSI) scale horizontally intersection 1.
 3. Project line parallel to curves back to vertical line 1.
 4. Read cracking pressure setting: 24.8 Bar (360 PSI).

Hydraulic:

- Find amount of pressure increase above 24.8 Bar (360 PSI) cracking pressure when flow through 3/4" valve is increased to 54 LPM (14 GPM):
1. From 360 on vertical pressure scale, follow 3/4" curve until it intersects with the vertical line representing 54 LPM (14 GPM).
 2. Project intersecting point horizontally and read pressure, i.e., 29 Bar (420 PSI).
 3. Accumulated Pressure: 420 minus 360 = 4.1 Bar (60 PSI).

Dimensions – Shown in inches



Valve Size NPT	A	B	Maximum Rated Flow G.P.M.	Weights (Approx.)	
				Aluminum Alloy	Stainless Steel
1/4	5	1 3/16	4	0.6 Lbs.	1.3 Lbs.
1/2	5	1 3/16	10		
3/4	7	1 5/8	15	1.7 Lbs.	3.2 Lbs.
1	7	1 5/8	15		

3000-E1.p65, dd

General Description

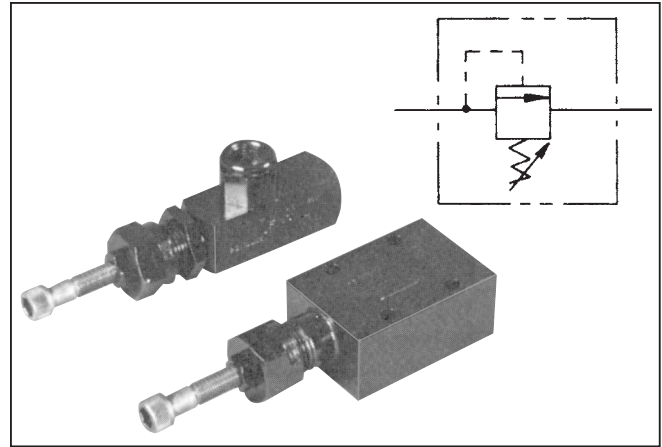
Series RA and RAS direct operated relief valves are often used for pop-off protection against overpressure on systems where normal overpressures are relieved by other relief valves such as Series RP and RM types.

Features

- Available in two sizes: 3/8" and 3/4".
- In-line or subplate mounted, in any position.
- Panel mounting nut provided with each Series RA valve.

Specifications

Pressure Adjustment Ranges	Min. - 17 Bar (Minimum - 250 PSI) 17 - 35 Bar (250 - 500 PSI) 35 - 70 Bar (500 - 1000 PSI) 70 - 140 Bar (100 - 2000 PSI)
Maximum Operating Pressure	210 Bar (3000 PSI)



Flow Data

Valve Model	Port Size, In.	Flow, Max. GPM (L/M)	Mounting
RA600S	3/8-NPTF	8 (30)	Inline
RA(S)600S	3/8-NPTF subplate port	8 (30)	Subplate
RA1200S	3/4-NPTF	20 (76)	Inline

Ordering Information

Example: "RA600S3" means Model RA Direct-operated, Pressure-control relief valve, inline model, 3/8," steel, 500-1000 PSI pressure range.

Bolt Kits

Model	Bolt Kit No.	Bolts	Torque
RAS 600S	BK04	1/4-20 x 1-3/4 SAE grade 8 or better	13 Ft. Lb.

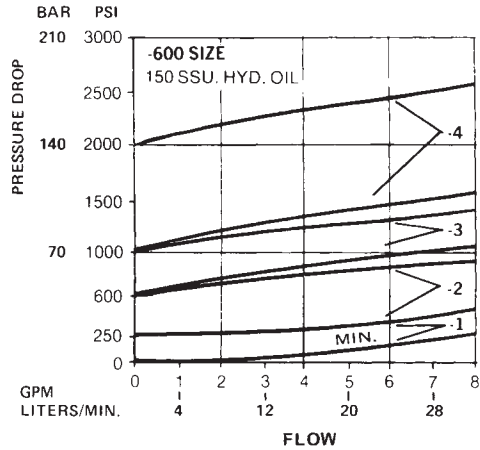
RA			S		
RELIEF VALVE	MOUNTING	SIZE	MATERIAL	PRESSURE RANGE	SEALS
Omit S	Inline (NPTF) Subplate	600 1200*	S Steel	1 2 3 4	Omit Nitrile Fluorocarbon
		3/8" 3/4"		Min. to 250 PSI 250 to 500 PSI 500 to 1000 PSI 1000 to 2000 PSI	

*Inline only

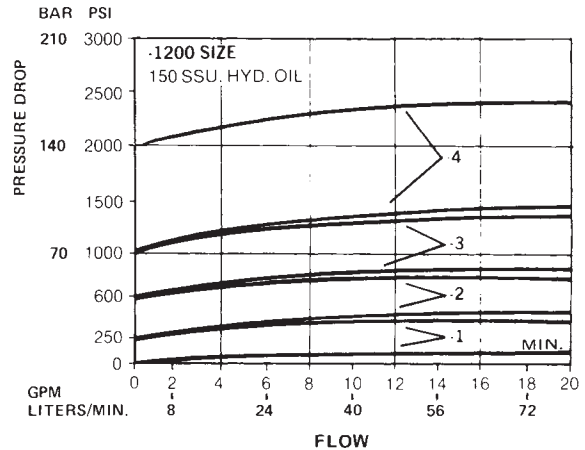


Performance Curves

All relief valves are subject to override. For a given valve setting and flow, any change in flow will cause a change in relief pressure. See curves (relief pressure vs: flow).



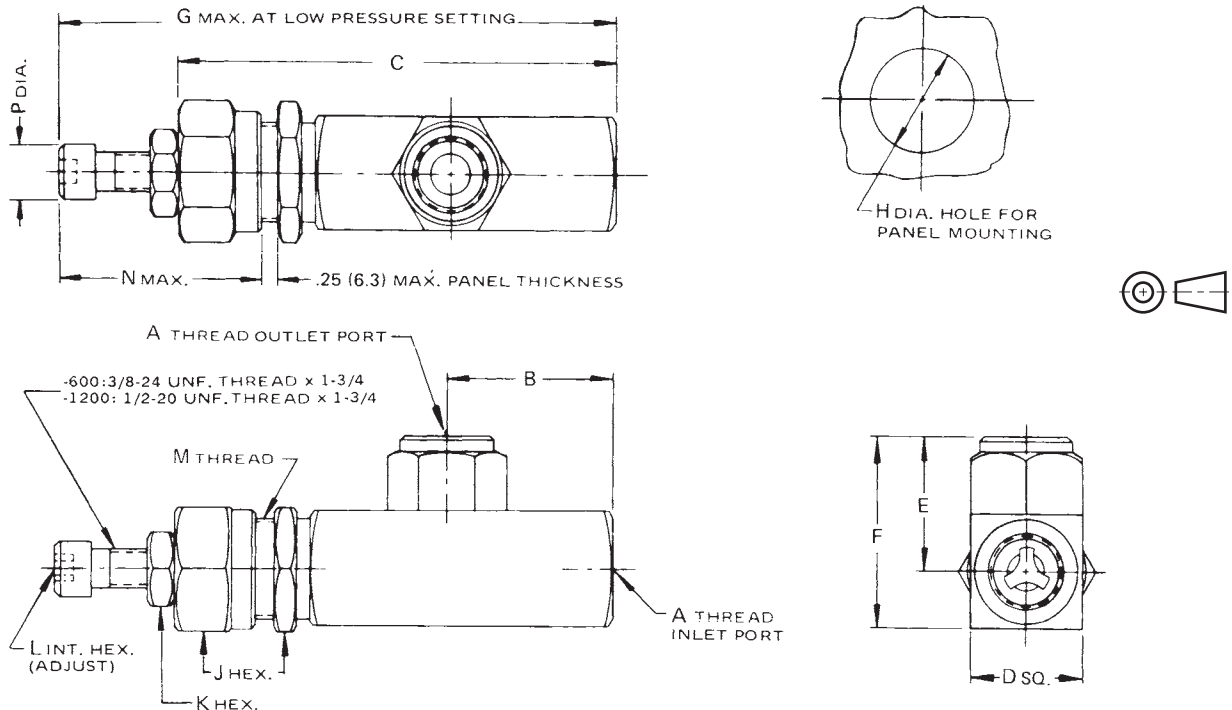
**_OVERRIDE CURVES
 MODELS RA600S and RA(S)600S**



**_OVERRIDE CURVES
 MODEL RA1200S**

Dimensions

Millimeter equivalents for inch dimensions are shown in (**)



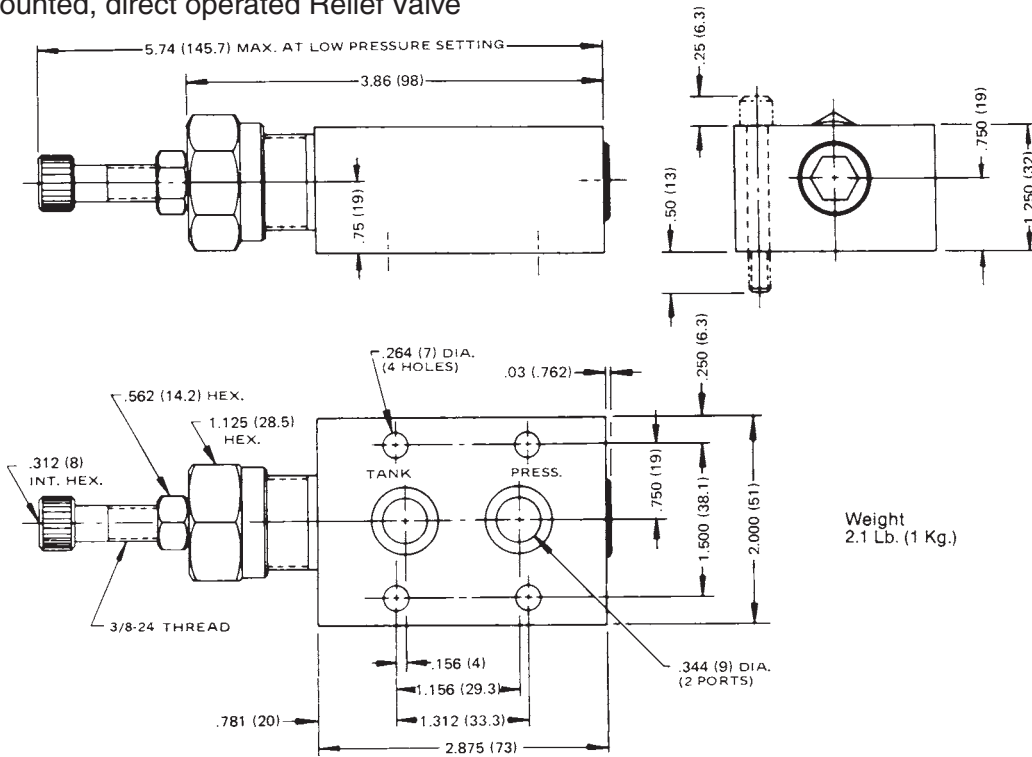
VALVE MODEL	A THREAD NPFT	B	C	D	E	F	G	H	J	K	L	M THREAD	N	WEIGHT Lb. (Kg.)	
RA600S	3/8-18	1.67 (42.4)	4.25 (108)	1.00 (25.4)	1.25 (32)	1.75 (44.4)	5.62 (142.7)	.906 (23)	1.125 (28.5)	.562 (14.2)	.312 (8)	7/8-14 UNF THREAD	2.12 (53.8)	.56 (14.2)	1.2 (0.5)
RA1200S	3/4-14	2.22 (56.3)	5.91 (150.1)	1.50 (38.1)	1.75 (44.4)	2.50 (63.5)	7.25 (184.1)	1.344 (34.1)	1.625 (41.2)	.75 (19)	.375 (9.5)	1-5/16-12 UNF THREAD	2.44 (61.9)	.75 (19)	3.2 (1.5)

3000-E1.p65, dd

Millimeter equivalents for inch dimensions are shown in (**)

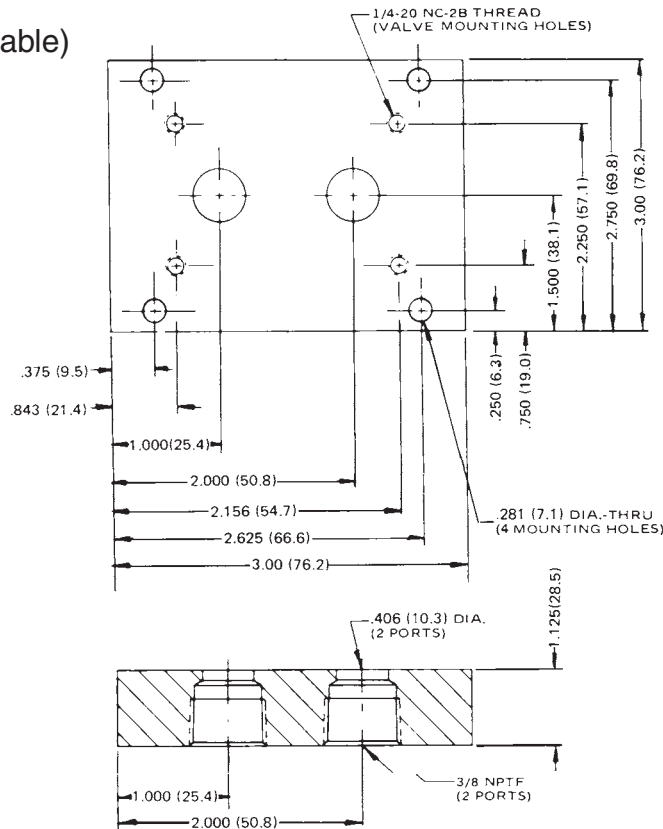
RAS600S

Subplate mounted, direct operated Relief Valve



Subplate Dimensions

Reference Data Only
 (Subplates are not available)



3000-E1.p65, dd

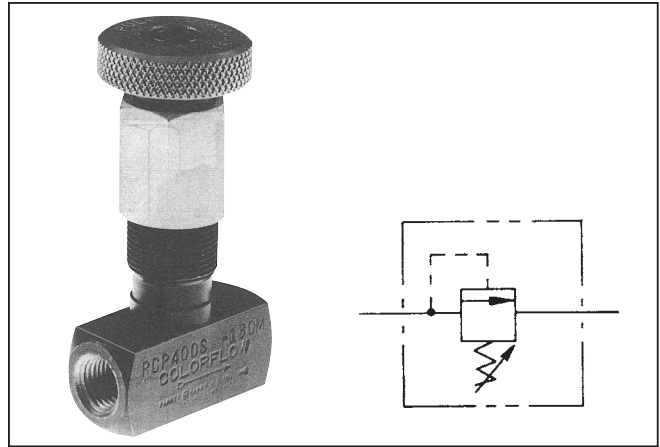


General Description

Series RCP in-line pressure control valves are chiefly used as remote control valves. They limit system pressure by opening to tank when pressure reaches the selected relief pressure.

When used as remote control valves, Series RCP valves are piped to the vent port of a pilot operated relief valve, such as Series RP and RM valves.

Pressure relief settings are made with a self-locking knob that is pulled and turned to the proper setting. Pushing the knob in locks it positively at this setting.



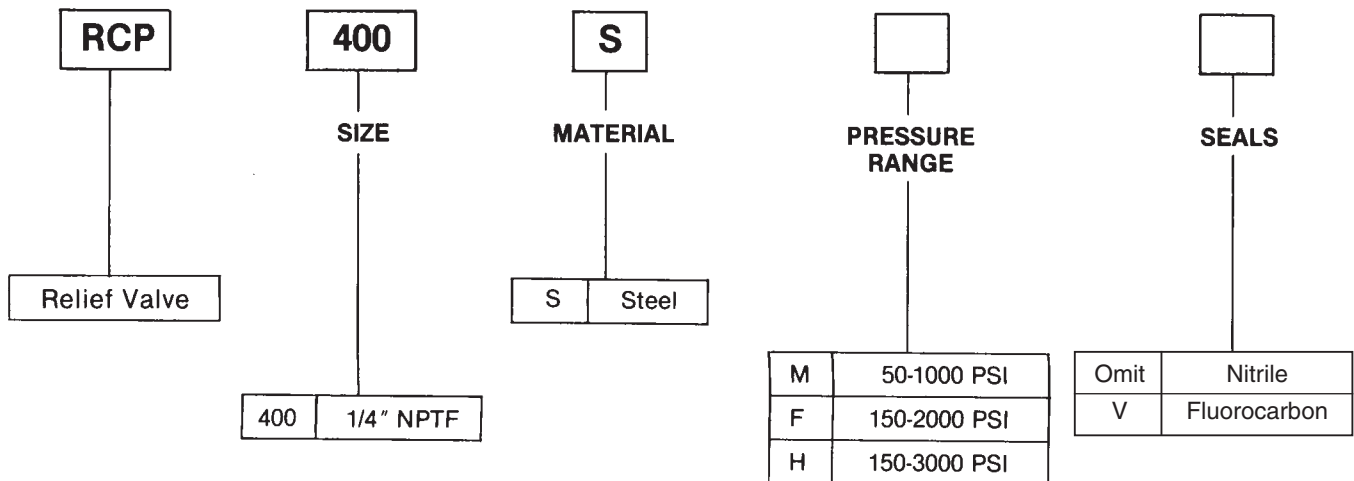
Specifications

Pressure Adjustment Ranges	3 - 70 Bar (50 - 100 PSI) 10 - 140 Bar (150 - 2000 PSI) 10 - 210 Bar (150 - 3000 PSI)
Maximum Operating Pressure	210 Bar (3000 PSI)
Flow	4 LPM (1 GPM) Maximum 492 cc./min.(30 Cu. In./min.) Minimum
Pressure Setting	3.4 Bar (50 PSI) Minimum, at maximum flow Changes in flow, viscosity or temperature will affect minimum pressure
Size	1/4"
Port	NPTF
Mounting	Any position, panel mounting kit available

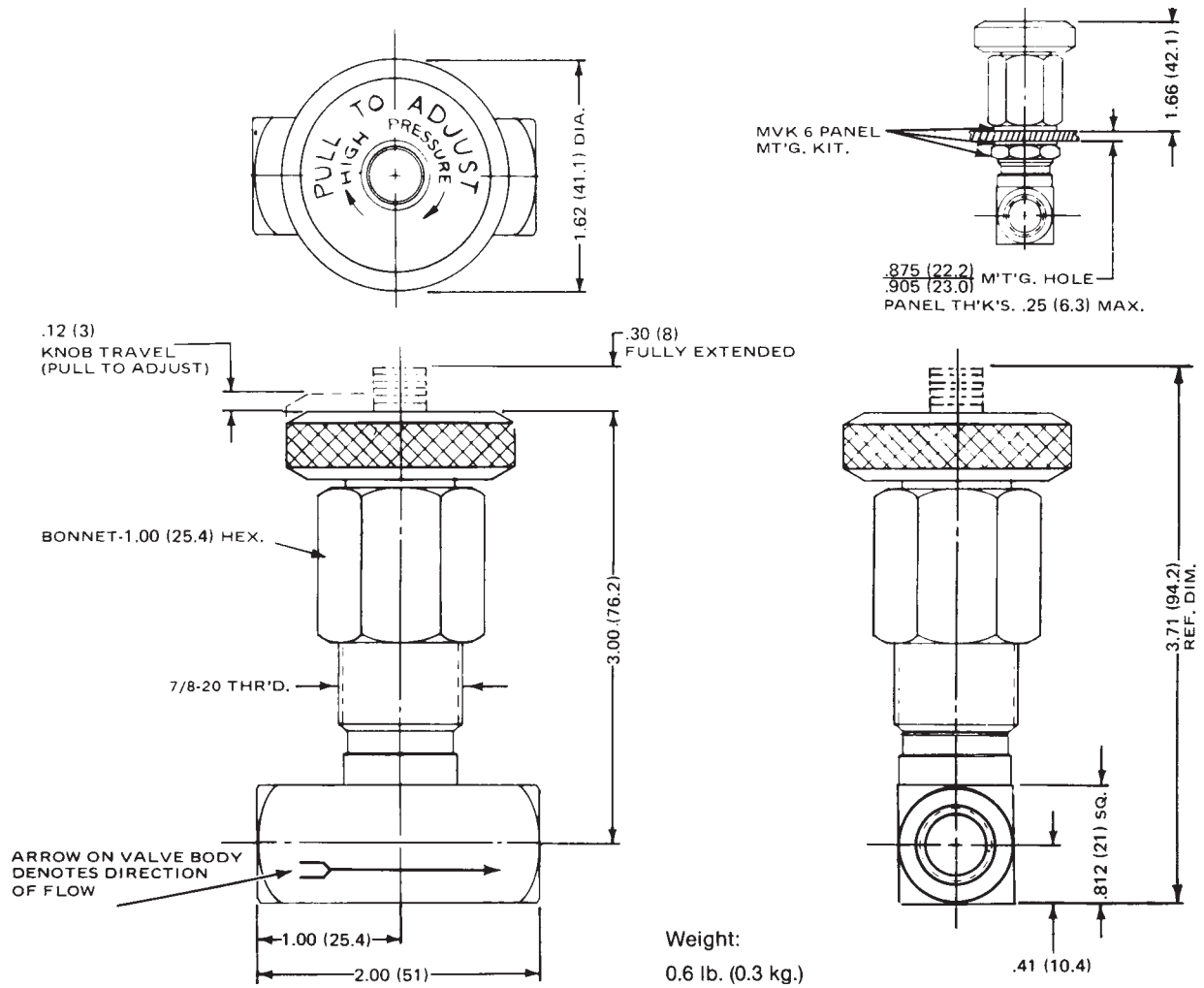
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Ordering Information

Example: "RCP400SF" means Series RCP, 1/4", steel, 150—2000 PSI pressure adjustment range, standard nitrile seal.



Millimeter equivalents for inch dimensions are shown in (**)

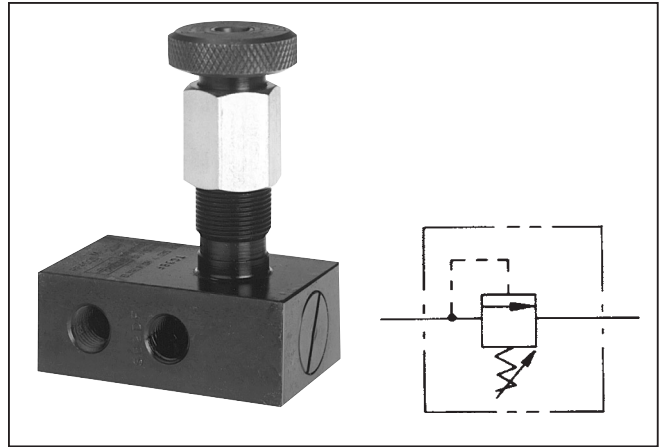


General Description

Series RP pressure control valves open the system to tank when the system pressure reaches the pressure setting of the control valve (see pressure adjustment ranges, below).

By adding a remote pilot valve to the vent port of a main pilot relief valve, pressure can be controlled by remote control. With this arrangement, the main relief valve setting should be 10 Bar (150 PSI) higher than the remote pilot setting.

For venting flow at minimum pressure, the vent port of the main relief valve can be connected directly to the tank.



Specifications

Pressure Adjustment Ranges	3 - 70 Bar (50 - 100 PSI) 10 - 140 Bar (150 - 2000 PSI) 10 - 210 Bar (150 - 3000 PSI)
Maximum Operating Pressure	210 Bar (3000 PSI)
Override	Any relief valve is subject to override, or a change in relief pressure when a change in flow occurs. For override characteristics, see chart on next page.

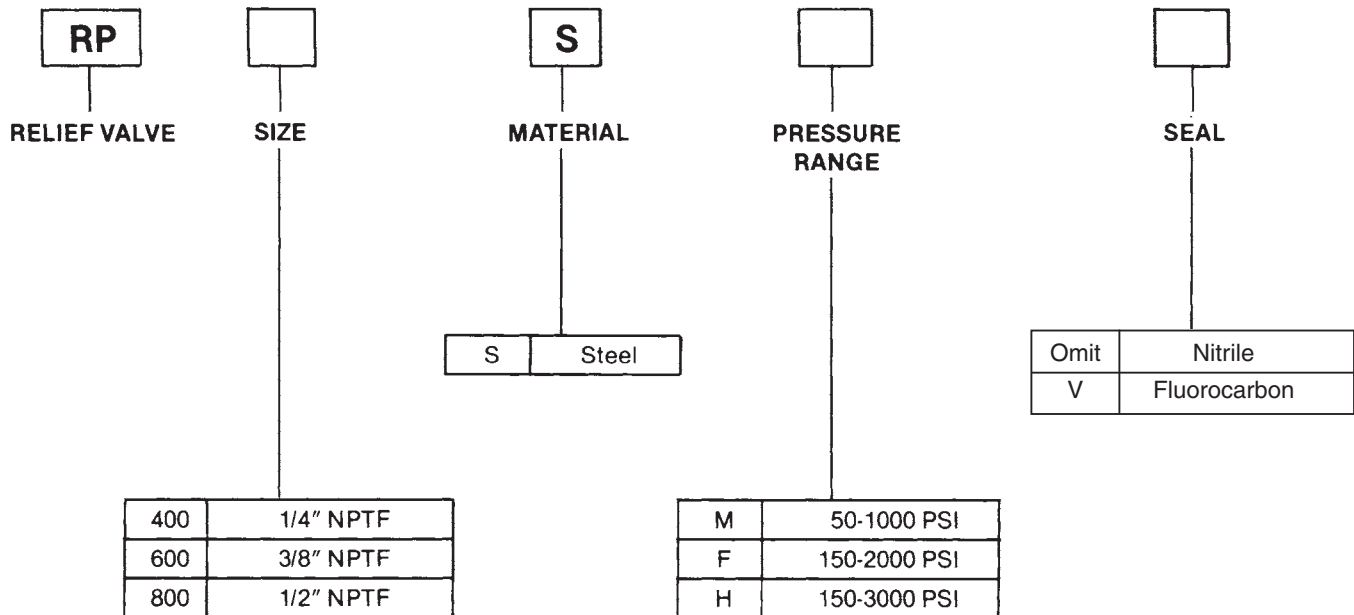
Flow Data

Valve Model	Port Size	Flow, max. GPM (L/M)	Vent Pressure PSI (Bar)
RP400	1/4 NPTF	6 (25)	60 (4)
RP600	3/8 NPTF	10 (40)	80 (5)
RP800	1/2 NPTF	15 (60)	50 (3)

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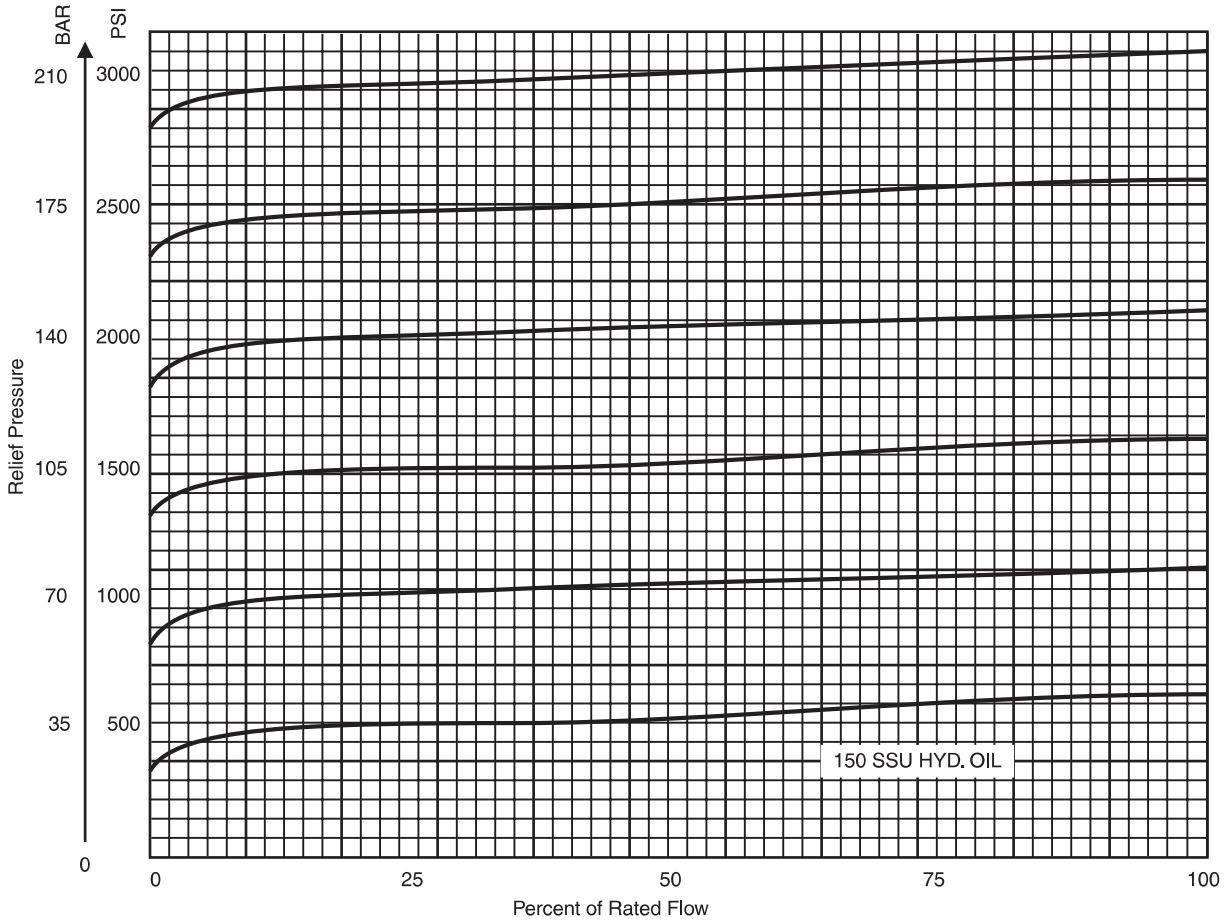
Ordering Information

Example: "RP400SFV" means Series RP relief valve, 1/4" size, steel, 150-2000 PSI pressure range, optional Fluorocarbon seal.



Override Specifications

All relief valves are subject to override. For a given valve setting and flow, any changes in flow will cause a change in relief pressure. For example, a valve set at 140 Bar (2000 PSI) at 25% flow will read 145 Bar (2100 PSI) at 100% flow.

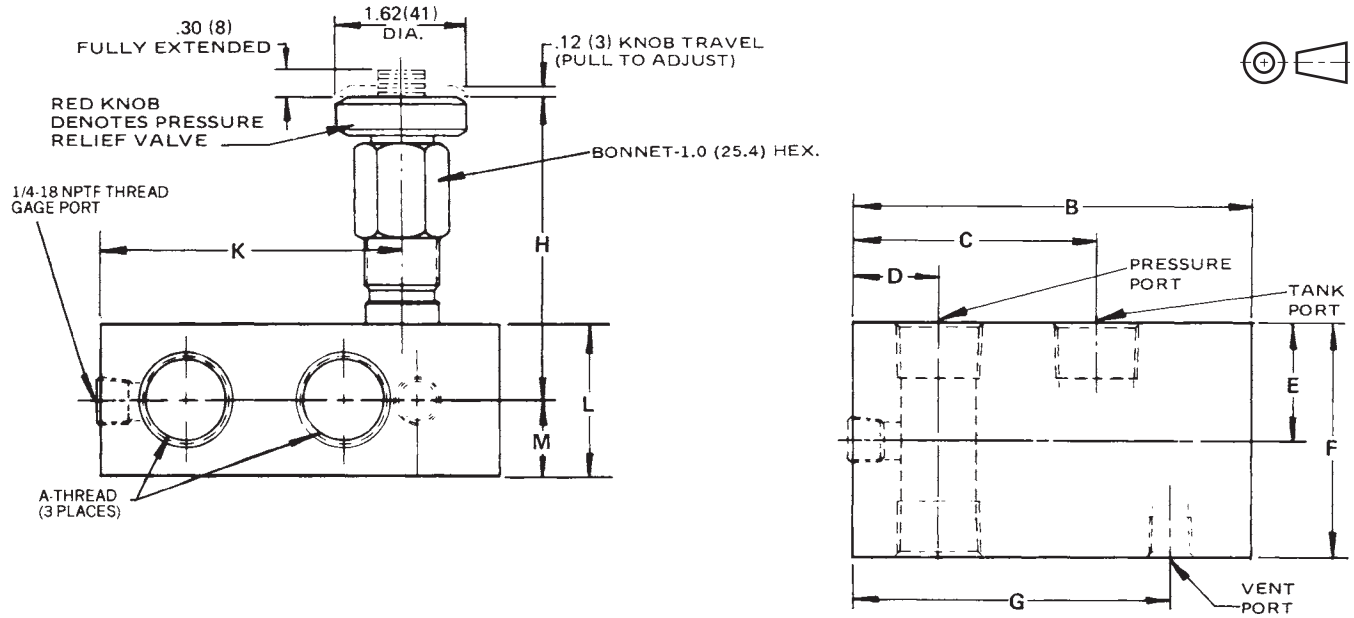


Relief Pressure vs. Flow



Millimeter equivalents for inch dimensions are shown in (**)

**In-line mounted, pilot operated
Pressure Relief Valves**



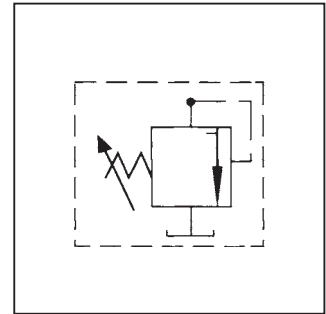
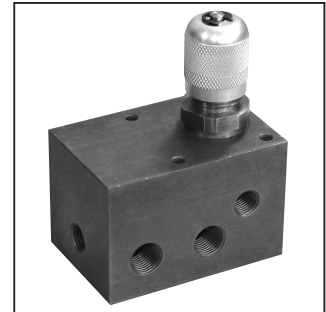
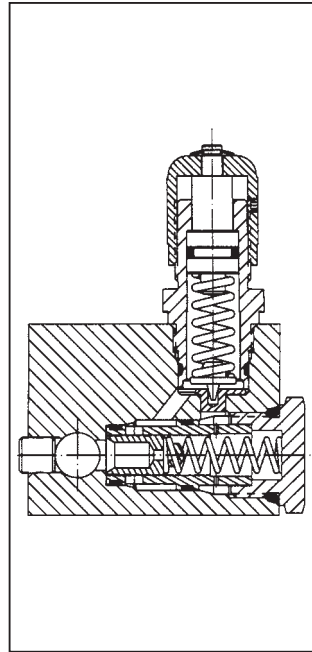
Valve Size	A-Thread	B	C	D	E	F	G	H	J	K	L	M	Weight Lb. (Kg)
RP400S	1/4-18 NPTF	3.00 (76.2)	1.60 (41)	.67 (17)	.88 (22.3)	1.75 (44.4)	2.25 (57.1)	3.16 (80.2)	4.02 (102.1)	2.04 (52)	1.12 (28.4)	.56 (14.2)	1.9 (0.8)
RP600S	3/8-18 NPTF	3.53 (90)	2.00 (51)	.75 (19)	1.00 (25.4)	2.00 (51)	2.77 (70.3)	3.22 (82)	4.14 (105.1)	2.62 (66.5)	1.25 (32)	.62 (16)	2.6 (1.2)
RP800S	1/2-14 NPTF	4.10 (104.1)	2.40 (61)	.91 (23.1)	1.12 (28.4)	2.25 (57.1)	3.17 (81)	3.34 (85)	4.39 (115)	3.03 (77)	1.50 (38.1)	.75 (19)	3.7 (1.7)

General Description

Series R6701 relief valves are pilot operated relief valves. When system pressure reaches the selected adjustable setting on this valve, the valve opens the system to tank.

Features

- Accurate, quick response due to pressure balanced spool design.
- Available in 1/4" through 3/4" sizes.
- Can be equipped with Tel-lok cap for tamper-proof design (1/4" - 3/4" sizes only).
- High volume pilot operated relief 340.7 LPM (90 GPM)
 1 1/4" and 1 1/2" poppet design available.



Specifications

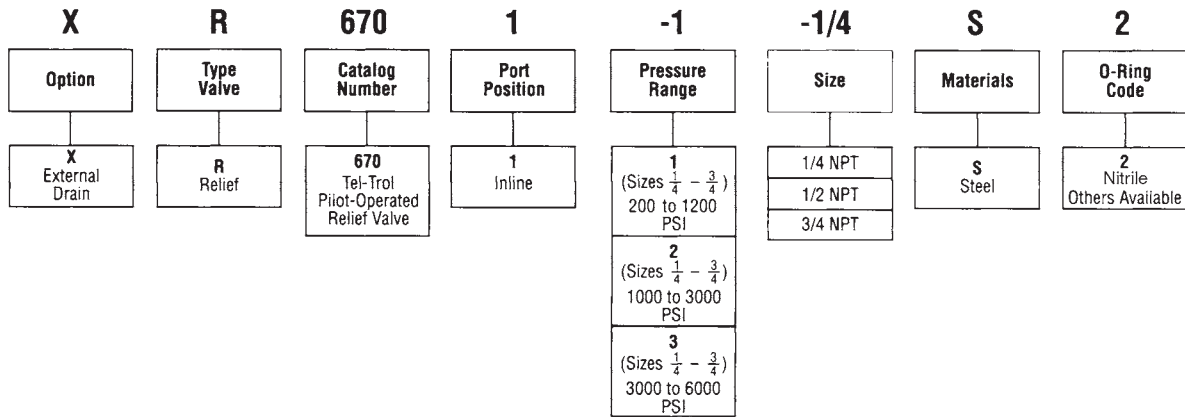
Service Applications	Hydraulic Oil
Pressure Adjustment Ranges	Range 1: Sizes 1/4" - 3/4" 13.8 - 82.8 Bar (200 - 1200 PSI) Sizes 1 1/4" - 1 1/2" 17.3 - 82.8 Bar (200 - 1200 PSI) Range 2: Sizes 1/4" - 3/4" 69 - 207 Bar (1000 - 3000 PSI) Sizes 1 1/4" - 1 1/2" 69 - 207 Bar (1000 - 3000 PSI) Range 3: Sizes 1/4" - 3/4" 207 - 414 Bar (3000 - 6000 PSI) Sizes 1 1/4" - 1 1/2" 207 - 414 Bar (3000 - 6000 PSI)
Sizes	NPT 1/4", 1/2", 3/4"
Ports	NPT Pipe threads
Mounting	In-line or panel
Material	Body, Cap, Piston Sleeve, Pilot Cap Barstock steel Pilot Knob Aluminum Piston, Adjustable Stem, Pilot Piston, Pilot Seat 400 Stainless Steel O-rings Synthetic rubber Back-up Rings PTFE Body Finish Paint
Operating Temperature	-40°C to +121°C (-40°F to +250°F)

Flow Data

Valve Size	Cv Factor Inlet to Inlet	Flow Rate GPM Max.	Vent Pressure at Max. Flow	Weight
1/4	1.5	6	65 PSI	4 Lbs. 12 Oz.
1/2	9.0	15	30 PSI	7 Lbs.
3/4	12.5	25	50 PSI	9 Lbs. 10 Oz.

E

Ordering Information

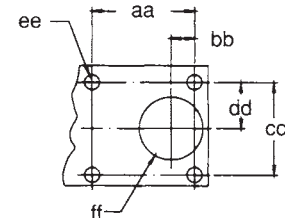
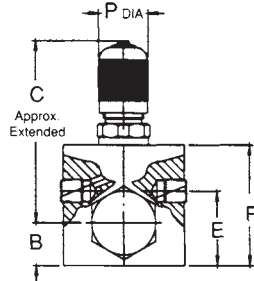


Dimensions — Shown in inches

E



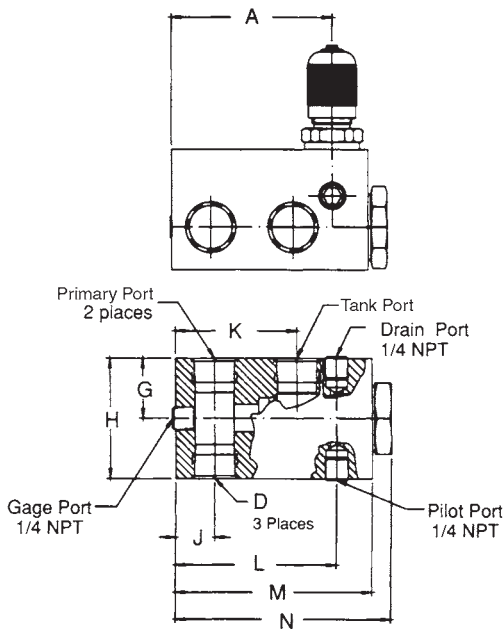
R6701 Sizes 1/4 - 3/4



Panel Machining for Panel Mounted Valves

Panel Mounting Dimensions

Valve Size	aa	bb	cc	dd	ee	ff	Mounting Threads
$\frac{1}{4}$	1.750	0.531	1.750	0.875	0.281	1.4375	$\frac{1}{4}$ - 20NC-2
$\frac{1}{2}$							
$\frac{3}{4}$	2.312	0.531	2.125	1.062	0.343	1.4375	$\frac{5}{16}$ - 18NC-2



Valve Size	A	B	C	Port Type D	E	F	G	H	J	K	L	M	N	P
$\frac{1}{4}$	2.313	.750	4.000	$\frac{1}{4}$ NPT	1.313	2.375	1.187	2.375	.625	1.563	2.313	3.125	3.437	1.125
$\frac{1}{2}$	3.188	.968	4.156	$\frac{1}{2}$ NPT	1.688	2.750	1.125	2.250	.750	2.250	3.188	4.000	4.437	1.125
$\frac{3}{4}$	3.688	.968	4.156	$\frac{3}{4}$ NPT	1.688	2.750	1.375	2.750	.891	2.781	3.688	4.500	4.937	1.125

General Description

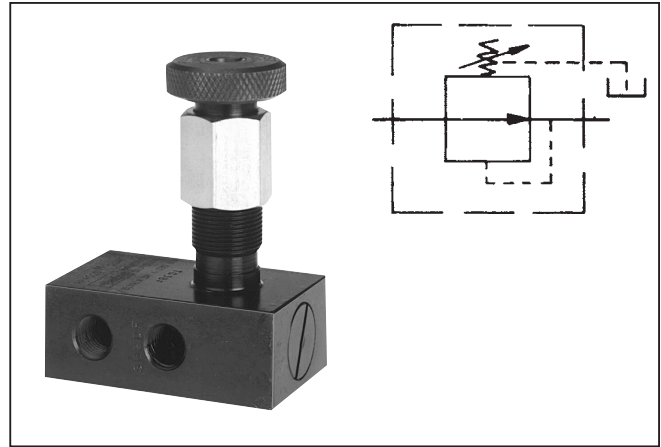
Series PR*S pressure reducing valves maintain an independently controlled constant outlet pressure on one leg of the hydraulic system, regardless of pressure at the valve inlet or on the main relief valve. Inlet pressure on a Series PR valve must be higher than the pressure setting on the valve.

Made from alloy steel bar stock, Series PR valves are compact and require minimum space. They can be installed in any position. They are used on installations that do not require service of equal reliability.

The one-hand adjusting knob is self-locking at desired pressure. Pull the knob and turn to adjust; release knob to lock positively.

Drain lines of Series PR valves should be connected directly to tank below fluid level. Pressure in any drain line is in addition to the valve pressure chosen.

For certain unusual installations, the drain line can be pressurized or restricted to improve valve pressure reducing performance. For example, if full pressure is applied to the drain, the Series PR valve will open, preventing pressure reduction. Pressurizing or restricting the drain will avoid this. However, be careful in using Series PR valves in other than normal applications; consult your Parker representative or the Factory.



Specifications

Pressure Adjustment Ranges	3.5 - 70 Bar (50 - 1000 PSI) 10.5 - 140 Bar (500 - 2000 PSI) 10.5 - 210 Bar (150 - 3000 PSI)
Maximum Operating Pressure	210 Bar (3000 PSI)
Pressure Setting	3.5 Bar (50 PSI) minimum, at rated flow Note: Changes in flow, viscosity or temperature will affect valve minimum pressure.

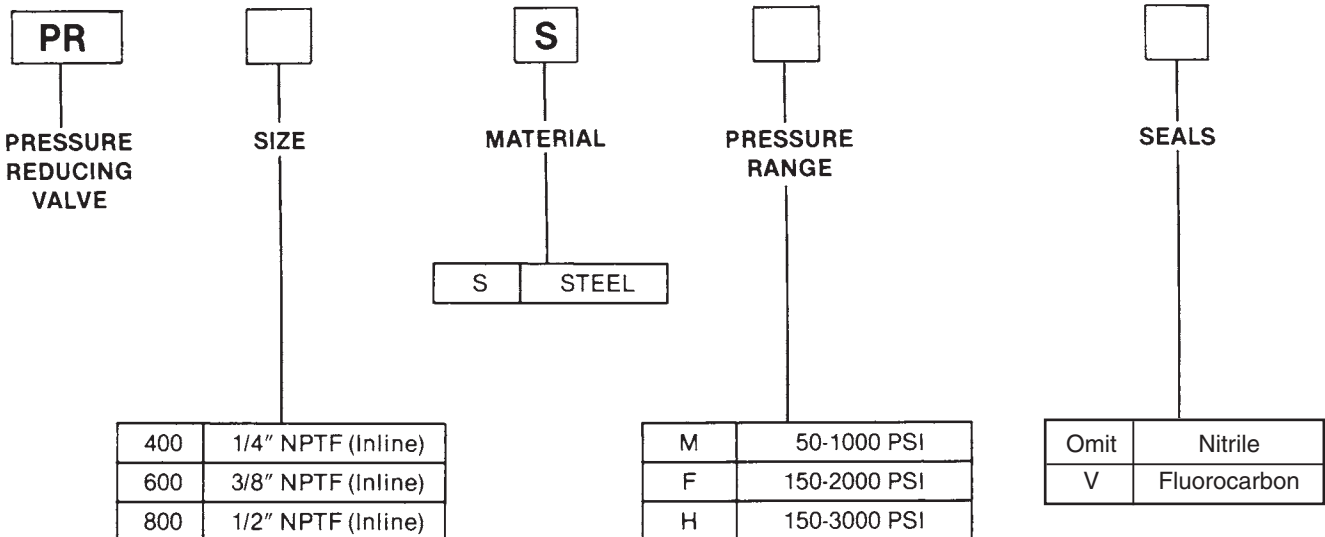


Ordering Information

Example: "PR400SVF" means Series PR relief valve, 1/4" size, steel, 150-2000 PSI pressure range, optional Fluorocarbon seal.

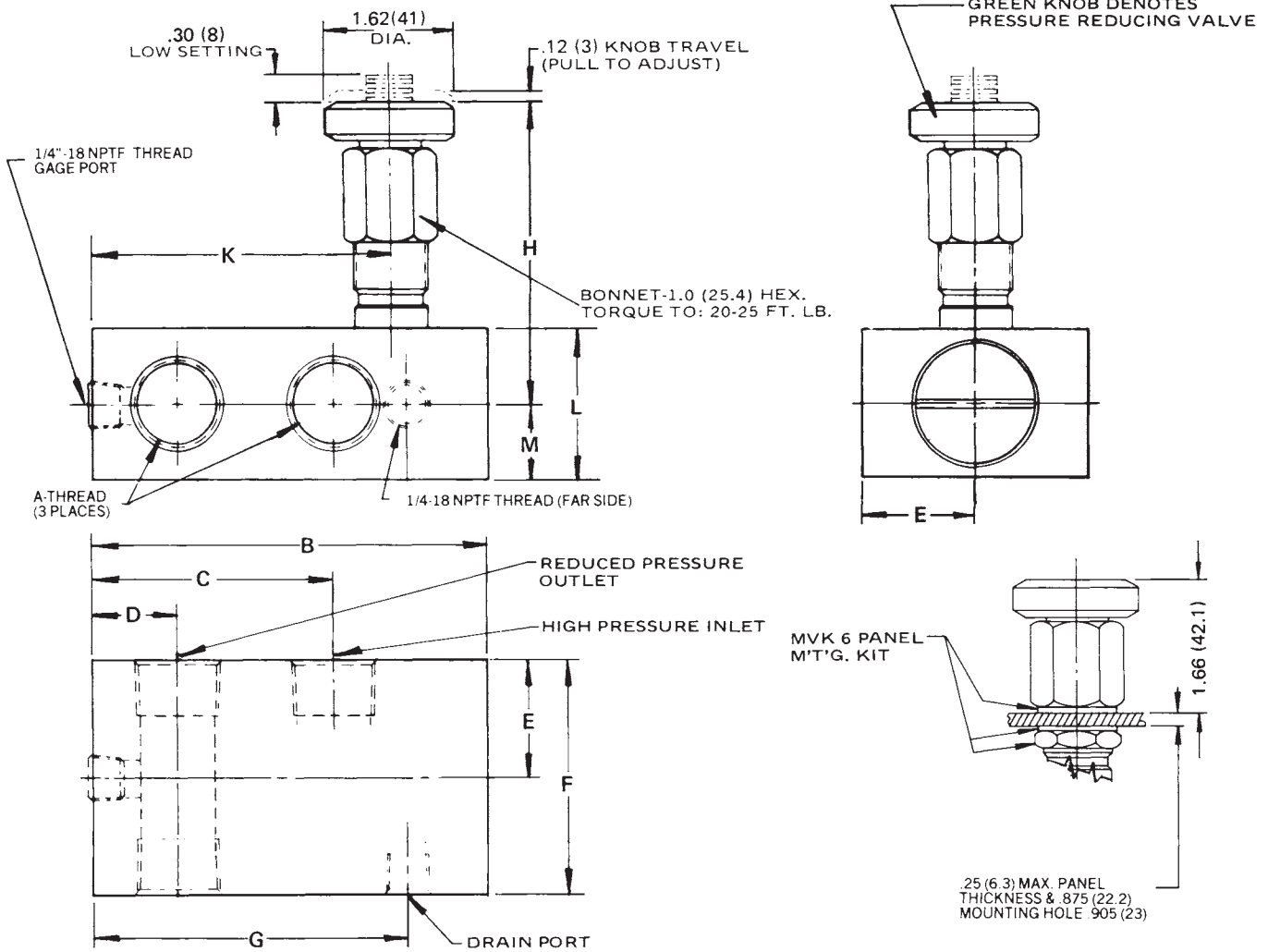
Flow Data

Valve Model	Port Size	Flow (Max)
PR400S	1/4 NPTF	6 GPM (25 L/M)
PR600S	3/8 NPTF	10 GPM (40 L/M)
PR800S	1/2 NPTF	15 GPM (60 L/M)



Millimeter equivalents for inch dimensions are shown in (**)

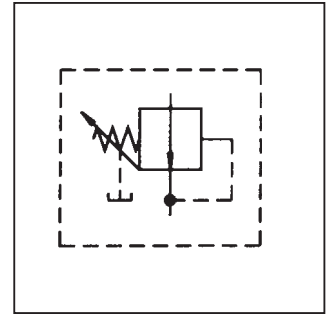
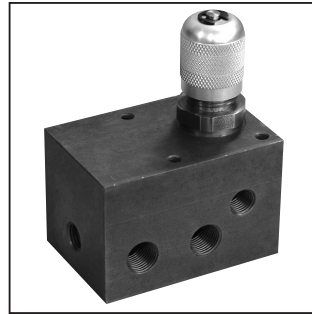
In-line mounted, pilot operated
Pressure Reducing Valves



Valve Model	A-Thread	B	C	D	E	F	G	H	K	L	M	Weight Lb. (Kg.)
PR400S	1/4-18 NPTF	3.00 (76.2)	1.60 (41)	.67 (17)	.88 (22.3)	1.75 (44.4)	2.25 (57.1)	3.16 (80.2)	2.04 (52)	1.12 (28.4)	.56 (14.2)	1.9 (0.9)
PR600S	3/8-18 NPTF	3.53 (90)	2.00 (51)	.75 (19)	1.00 (25.4)	2.00 (51)	2.77 (70.3)	3.22 (82)	2.62 (66.5)	1.25 (32)	.62 (16)	2.6 (1.2)
PR800S	1/2-14 NPTF	4.10 (104.1)	2.40 (61)	.91 (23.1)	1.12 (28.4)	2.25 (57.1)	3.17 (81)	3.34 (85)	3.03 (77)	1.50 (38.1)	.75 (19)	3.7 (1.7)

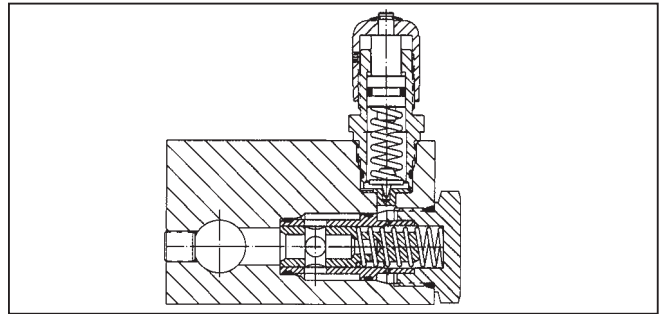
General Description

Series PR6701 pressure reducing pressure control valves maintain an independently controlled constant outlet pressure on one leg of the hydraulic system, regardless of pressure at the valve inlet or on the main relief valve. Inlet pressure on the valve must be higher than the pressure setting on the valve.



Features

- Recommended where limited reduced hydraulic pressure is required without using additional low pressure pump.
- Designed for up to 414 Bar (6000 PSI) primary pressure.
- Maintains regulated pressure within $\pm 5\%$ under flow conditions.



Specifications

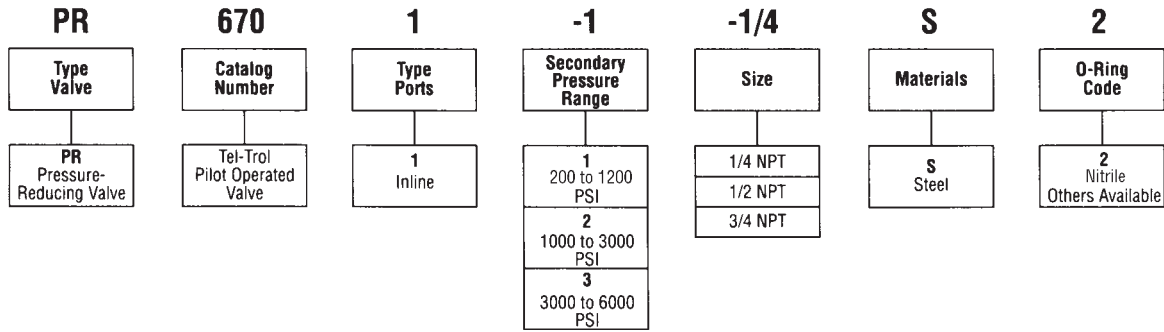
Service App.	Hydraulic Oil	Sizes	NPT 1/4", 1/2", 3/4"
Pressure Adjustment Range	Range 1: Maximum Primary Pressure 138 Bar (2000 PSI) Regulated Secondary Pressure 13.8 - 82.8 Bar (200 - 1200 PSI)	Ports	NPT Pipe threads
	Range 2: Maximum Primary Pressure 207 Bar (3000 PSI) Regulated Secondary Pressure 69 - 207 Bar (1000 - 3000 PSI)	Mounting	In-line or panel
	Range 3: Maximum Primary Pressure 414 Bar (6000 PSI) Regulated Secondary Pressure 207 - 414 Bar (3000 - 6000 PSI)	Material	Body, Cap, Piston Sleeve, Pilot Cap Steel
Maximum Operating Pressure	Proof: Ranges 1 & 2 310.5 Bar (4500 PSI) Range 3 621 Bar (9000 PSI)		Pilot Knob Aluminum
	Burst: Ranges 1 & 2 517.5 Bar (7500 PSI) Range 3 1035 Bar (15,000 PSI)	Piston, Adjustable Stem, Pilot Piston, Pilot Seat 400 Stainless Steel	O-rings Synthetic rubber
		Back-up Rings PTFE	Body Finish Paint
		Operating Temperature	-40°C to +121°C (-40°F to +250°F)



Flow Data

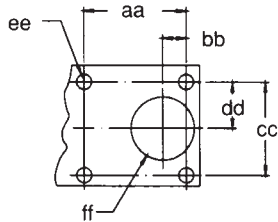
Valve Size	Cy Factor Inlet to Inlet	Flow, Max. LPM (GPM)	Max. Pilot Flow to Tank	Weight kg (lbs.)
1/4	1.1	22.7 (6)	0.7 LPM (.18 GPM)	2.2 (4.75)
1/2	3.5	56.8 (15)	0.8 LPM (.21 GPM)	3.2 (7.0)
3/4	4.5	94.6 (25)	0.8 LPM (.22 GPM)	4.4 (9.6)

Ordering Information



Dimensions — Shown in inches

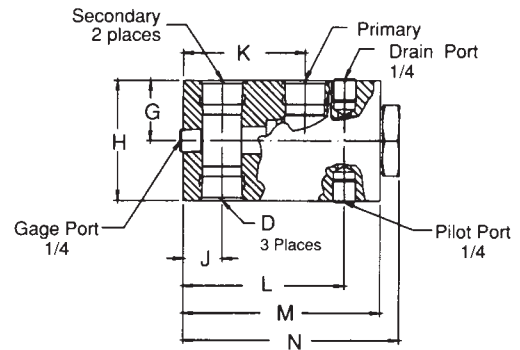
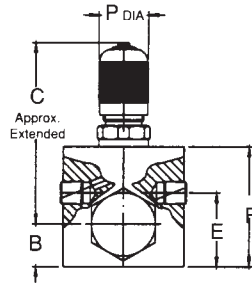
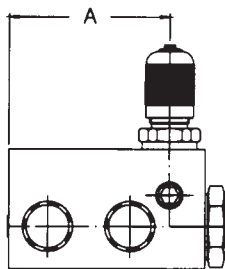
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Panel Machining for Panel Mounted Valves

Panel Mounting Dimensions

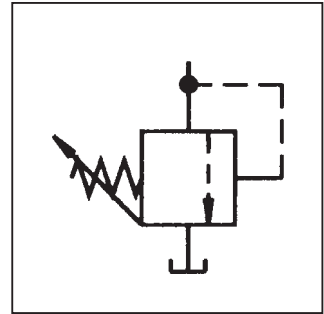
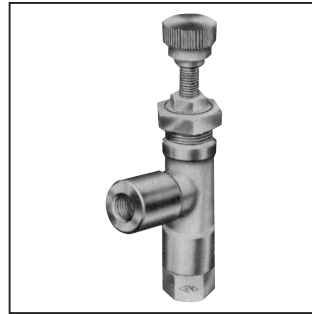
Valve Size	aa	bb	cc	dd	ee	ff	Mounting Threads
1/4	1.750	0.531	1.750	0.875	0.281	1.4375	1/4 - 20NC-2
1/2							
3/4	2.312	0.531	2.125	1.062	0.343	1.4375	5/16 - 18NC-2



Valve Size	A	B	C	Port Type D	E	F	G	H	J	K	L	M	N	P
1/4	2.313	.750	4.000	1/4 NPT	1.313	2.375	1.187	2.375	.625	1.563	2.313	3.125	3.437	1.125
1/2	3.188	.968	4.156	1/2 NPT	1.688	2.750	1.125	2.250	.750	2.250	3.188	4.000	4.437	1.125
3/4	3.688	.968	4.156	3/4 NPT	1.688	2.750	1.375	2.750	.891	2.781	3.688	4.500	4.937	1.125

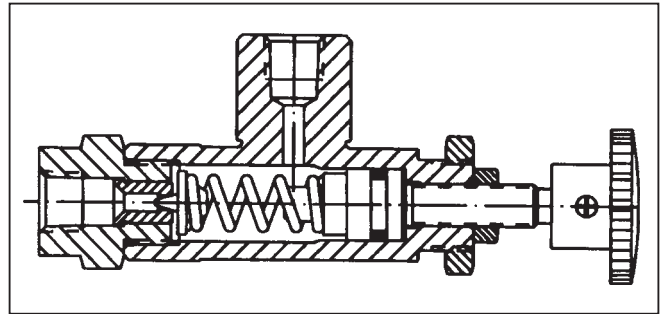
General Description

Series P6701 valves serve as a remote pilot for a pilot operated parent valve. Adjustable in three pressure ranges: 6.9 to 82.8 Bar (100 to 1200 PSI), 69 to 207 Bar (1000 to 3000 PSI) and 207 to 345 Bar (3000 to 6000 PSI).



Features

- Remote pilot for R6701, R6703, S6701, S6703, PR6701 and PR6703.
- Ideal for adjustable vent valve.

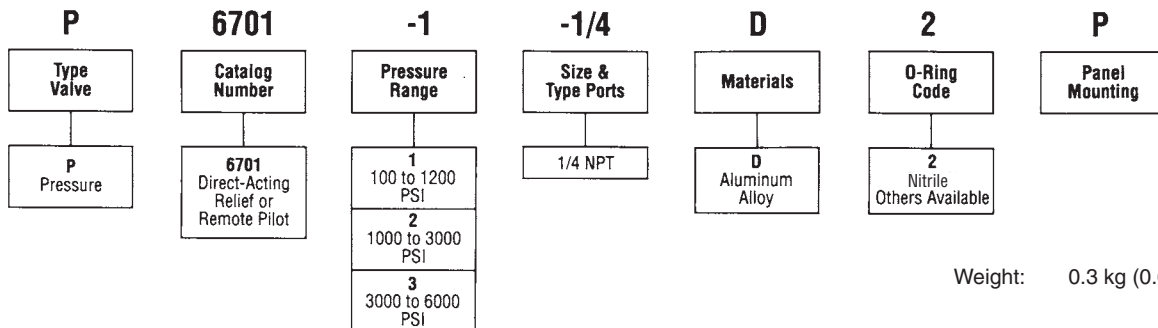


Specifications

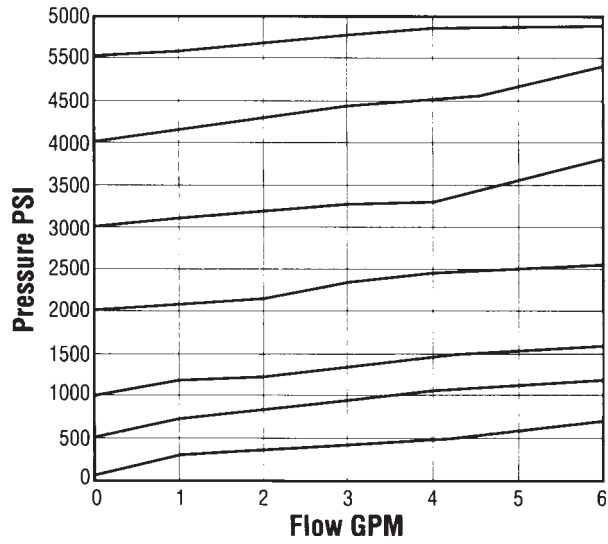
Service App.	Hydraulic Oil	Internal Leakage	Less than 1 DPM at 90% of cracking pressure
Pressure Adjustment Range	Range 1: 6.9 - 82.8 Bar (100 - 1200 PSI) Range 2: 69 - 207 Bar (1000 - 3000 PSI) Range 3: 207 - 414 Bar (3000 - 6000 PSI)	Mounting	Panel hole 27/32" diameter
Maximum Operating Pressure	Proof: 517.5 Bar (7500 PSI) Burst: 828 Bar (12,000 PSI)	Material	Body Forged aluminum alloy Trim Steel and Stainless steel O-rings Synthetic rubber
Sizes	NPT 1/4"	Operating Temperature	-40°C to +121°C (-40°F to +250°F)
Orifice Dia.	1/8"		
Ports	NPT Pipe threads		



Ordering Information



Performance Curves



Dimensions — Shown in inches

