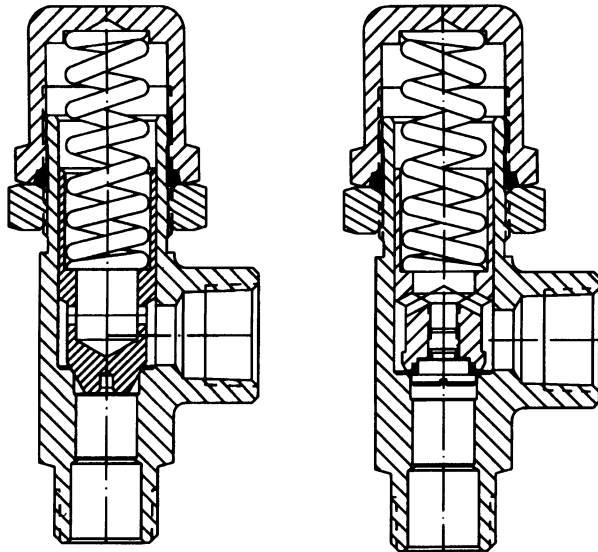


Catalog Series 620 - 649x

Specifications



Hard Seat

Soft Seat

Service Applications: Hydraulic and pneumatic.

Pressure Range:

Working: 4 to 3600 PSI in 13 ranges
Reset: Range 1
 80% of cracking pressure
 Ranges 2 to 13
 90% of cracking pressure

Temperature Range: -40° to 250° F.
 Higher on special order.

Sizes:

IST and FLD: 4, 6, 8, 10, 12.
NPT: 1/8, 1/4, 3/8, 1/2, 3/4.

Type Ports:

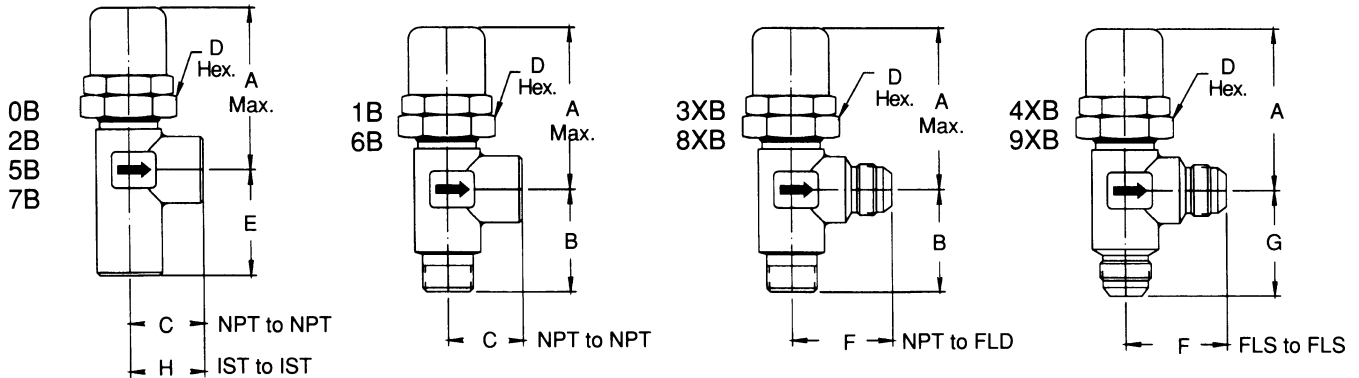
NPT Pipe Threads; IST Internal Straight Threads;
 FLD Flared Tube Connection SAE 37°.

Materials:

Body and Cap: Brass, aluminum alloy, stainless steel.
Finish: Aluminum alloy, anodized; stainless steel.
Poppet: (Hard seat type) stainless steel type 416; (soft seat type) stainless steel type 303.
Seat (soft): Ranges 1 to 3 inclusive, synthetic rubber Code 2; Ranges 4 to 13, PTFE.
Spring: Stainless steel.
Cap O-Ring: Synthetic rubber.

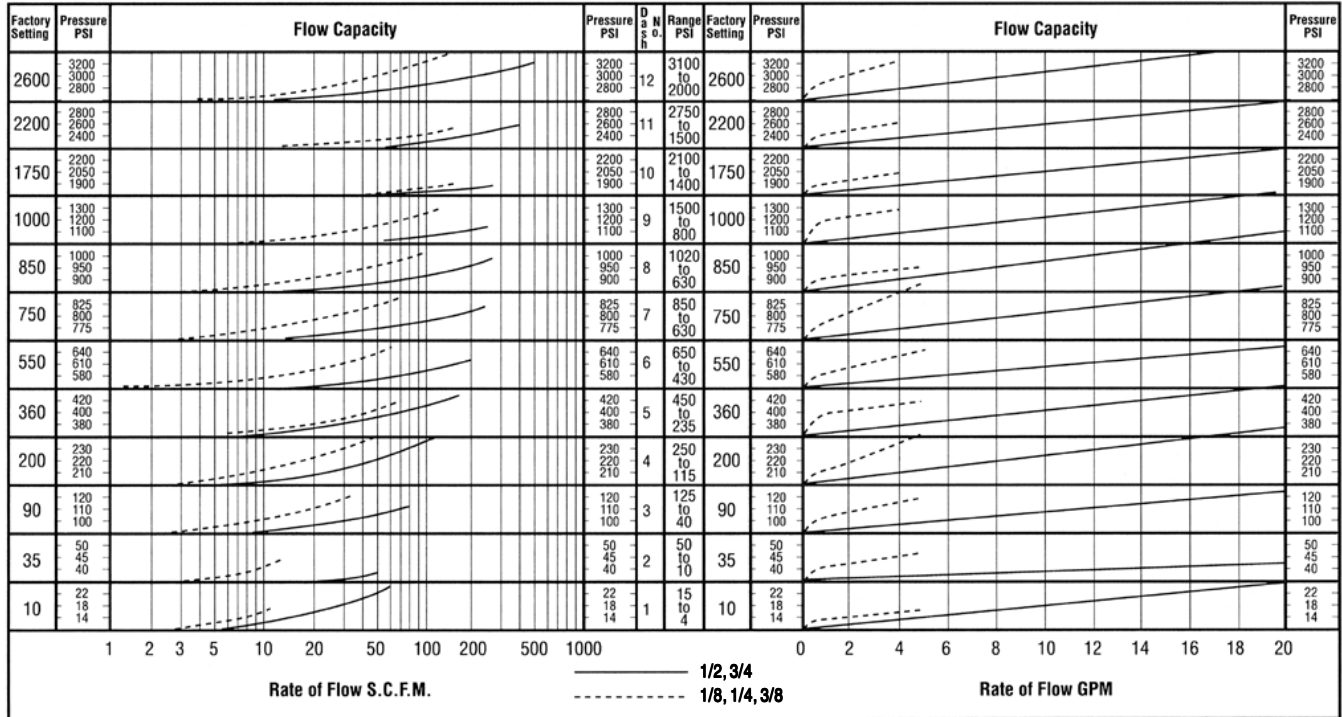
Features

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



Valve Size		All Dimensions are in Inches							Maximum Rated Flow G.P.M.	Weights (Approx.)			
Pipe	Tube	A	B	C	D	E	F	G		H	Aluminum Alloy	Brass	Stainless Steel
1/8	4	2 3/8	1 7/32	7/8	1 1/4	1 3/16	1 7/16	1 1/2	1 1/16	2	4 Oz.	10 Oz.	12 Oz.
1/4	6	2 3/8	1 3/8	1 1/16	1 1/4	1 9/32	1 7/16	1 1/2	1 1/16	4			
3/8	8	2 3/8	1 1/4	1 1/8	1 1/4	1 3/8	1 1/2	1 1/2	1 3/16	5			
1/2	10	3 23/32	2 1/8	1 1/2	1 3/4	2 5/32	2 1/16	2 3/16	1 1/2	10	14 Oz.	2 Lbs. 2 Oz.	2 Lbs. 4 Oz.
3/4	12	3 23/32	2 1/8	1 9/16	1 3/4	2 3/16	2 3/32	2 3/16	1 9/16	15			

Rate of Flow



Examples

Pneumatic:

Establish cracking pressure setting of 1/2" valve for flow of 70 SCFM at 400 PSI pressure:

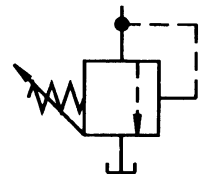
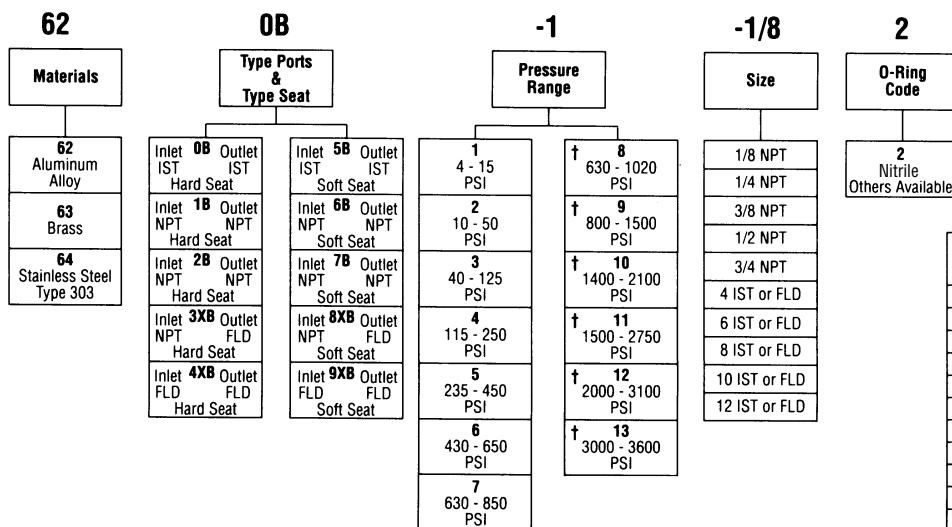
1. Project 70 SCFM on vertical scale.
2. Project 400 PSI scale horizontally intersecting 1.
3. Project line parallel to curves back to vertical line 1.
4. Read cracking pressure setting: 360 PSI.

Hydraulic:

Find amount of pressure increase above 360 PSI cracking pressure when flow through 3/4" valve is increased to 14 GPM:

1. From 360 on vertical pressure scale, follow 3/4" curve until it intersects with the vertical line representing 14 GPM.
2. Project intersecting point horizontally and read pressure, i.e., 420 PSI.
3. Accumulated Pressure: 420 minus 360 = 60 PSI.

Interpretation of Valve Number



ANSI Symbol

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