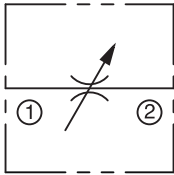


**S, SM Needle Valve, High Pressure**  
Male-to-Female / Female-to-Female

IN-LINE



MODEL 01



MODEL 02



MODEL 50



**DESCRIPTION**

**High Pressure Angle and Globe Needle Valves**

Pneu-Trol Angle and Globe Needle Valves are ideal for use in special and general purpose applications requiring excellent flow characteristics as well as positive shut-off service, such as chemical processing and machine tool service lines.

Valves are available in globe and angle mounted types for pressures up to 10,000 psi (690 bar). The stem has 16 threads per inch for fast shut-off. Globe and angle type valves can be furnished for panel mounting by the use of a panel-mounting kit. The (SM) needle affords excellent metering characteristics for industrial applications.

- For faster, less critical needle adjustments
- Easily adjustable under pressure
- Available with Fine Metering (SM) needle

**SPECIFICATIONS**

**Maximum Operating Pressure (Non-Shock Service)**

Carbon Steel: 10,000 psi (690 bar)

**Operating Temperature Range**

-30° to +250° F (-34° to +120° C)

**Threads**

NPTF, BSPT, BSPP

**Needle**

Standard 30° Included Angle

SM – Slotted Needle

**Materials**

Body/Packing Nut: Steel (Copper Brazed Bodies)

Stem: Stainless Steel 416

O-Ring: Buna-N

Back-Up Washer: Teflon

Packing Washer/Gland: Brass

Handle: Bright Nickel Plated Zinc Die Cast

**Panel Mounting Hole Sizes**

1/8" 25/32" (19.8)

1/4" 25/32" (19.8)

3/8" 31/32" (24.6)

1/2" 31/32" (24.6)

3/4" 1-5/32" (29.4)

**Panel Mounting Kits (Sold Separately)**

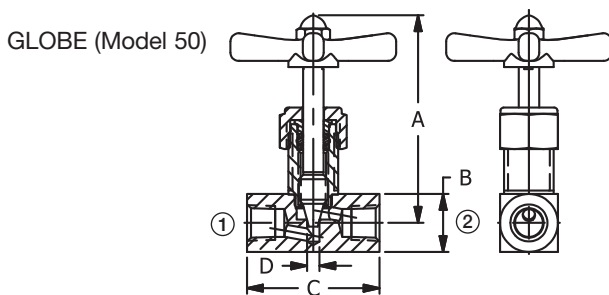
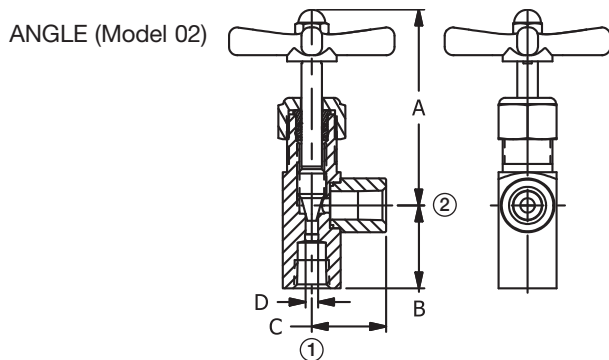
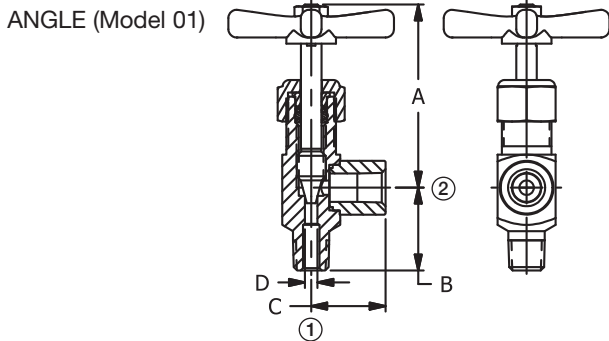
Available in Deluxe and Economy Kits in all sizes except 1" and 3/4".

Panel Mounting Nut: Bright Nickel Plated Brass

**FLOW RATING**

Size	Co-Efficient (Cv Factor) - Fully Open	
	Models 01 and 02 Angle Type	Model 50 Globe Type
1/8"	.67	.37
1/4"	.85	.47
3/8"	1.67	1.00
1/2"	1.89	1.10
3/4"	3.70	2.65
1"	-	4.65

## INSTALLATION DIMENSIONS



( ) Parentheses = Millimeters

Angle Pattern **Model 01** Male-to-Female

Pipe Size	A Open	B	C	D Orifice
1/8"	3-1/8 (79.4)	15/16 (23.8)	15/16 (23.8)	.188 (4.8)
1/4"	3-3/16 (81.0)	1-1/4 (31.8)	1-1/8 (28.6)	.188 (4.8)
3/8"	3-13/16 (96.9)	1-3/8 (34.9)	1-1/4 (31.8)	.281 (7.1)
1/2"	3-13/16 (96.9)	1-11/16 (42.9)	1-9/16 (39.7)	.281 (7.1)

Angle Pattern **Model 02** Female-to-Female

Pipe Size	A Open	B	C	D Orifice
1/4"	3-23/64 (85.3)	1-1/4 (31.8)	1-1/8 (28.6)	.188 (4.8)
3/8"	3-13/16 (96.9)	1-3/8 (34.9)	1-1/4 (31.8)	.281 (7.1)
1/2"	3-13/16 (96.9)	1-11/16 (42.9)	1-9/16 (39.7)	.281 (7.1)
3/4"	5 (127.0)	1-5/8 (41.3)	1-3/4 (44.5)	.438 (11.1)

Angle Pattern **Model 50** Female-to-Female

Pipe Size	A Open	B	C	D Orifice
1/8"	3-1/16 (77.8)	7/8 (22.2)	2 (50.8)	.188 (4.8)
1/4"	3-5/8 (92.1)	7/8 (22.2)	2 (50.8)	.188 (4.8)
3/8"	4-1/32 (102.4)	1 (25.4)	2-3/8 (60.3)	.281 (7.1)
1/2"	3-15/16 (100.0)	1-1/4 (31.8)	2-7/8 (75.0)	.281 (7.1)
3/4"	4-15/16 (125.5)	1-1/2 (38.1)	3-5/8 (92.1)	.438 (11.1)
1"	6-1/8 (155.6)	2 (50.8)	4 (101.6)	.563 (14.3)

## HOW TO ORDER

Size	Model 01 Male-to Female	Model 02 Female-to Female			Model 50 Female-to Female			
	NPTF Thread	NPTF Thread		ISO 7/1 – RS BSP Taper Thread	NPTF Thread		ISO 7/1 – RS BSP Taper Thread	ISO 7/1 – RS BSP Parallel Thread
		Standard	Fine Metering		Standard	Fine Metering		
1/8"	S101S1	–	–	–	–	SM150S1	–	–
1/4"	S201S1	S202S1	SM202S1	SB202S1	S250S1	SM250S1	SB250S1	SBP250S1
3/8"	S301S1	S302S1	–	SB302S1	S350S1	–	SB350S1	SBP350S1
1/2"	S401S1	S402S1	–	SB402S1	S450S1	–	SB450S1	SBP450S1
3/4"	–	S602S1	–	SB602S1	S650S1	–	SB650S1	SBP650S1
1"	–	–	–	–	S850S1	–	–	–