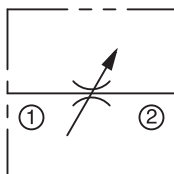


IN-LINE



**DESCRIPTION**

Deltrol's unique line of Easy Read needle valves incorporate a metal setting knob and stem for added durability and positive operation. Color coding on stem allows you to precisely set flow requirements by simply turning the knob to the appropriate marking.

Flow adjustment can be made under pressure. Setting knob can be locked in any desired position with convenient set screw.

These tough valves are ideal for general industrial and mobile applications including plastic injection molding machines, packaging equipment, machine tools, car washes, hospital beds, and many types of automotive equipment.

- **Metal setting knob and stem**
- **Color coding and numerical readout allow positive setting for precise flow control and repeatability**
- **Can be accurately adjusted within a small fraction of a turn (one full turn per color)**
- **Set Screw in knob to maintain flow setting**

**SPECIFICATIONS**

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

Brass: 2,000 psi (138 bar)  
Carbon Steel: 5,000 psi (345 bar)  
Stainless Steel: 5,000 psi (345 bar)  
Ductile Iron: 5,000 psi (345 bar)

**Minimum Burst Pressure**

Brass: 8,000 psi (552 bar)  
Carbon Steel: 20,000 psi (1,379 bar)  
Stainless Steel: 20,000 psi (1,379 bar)  
Ductile Iron: 20,000 psi (1,379 bar)

**Operating Temperature Range**

-15° to +400° F (-26° to +204° C)

**Threads**

NPTF, BSPT, BSPP

**Materials (except 1")**

Body: Brass, Steel, Stainless Steel 303  
Needle: Brass (Brass Valves)  
Stainless Steel 416 (Steel and Stainless Steel Valves)  
O-Ring: Viton  
Back-Up Washer: Teflon  
Knob: Aluminum  
Set Screw: Steel  
Color Rings: Anodized Aluminum

**Materials (1")**

Body: Leaded Tin Bronze, Ductile Iron  
Housing: Brass, Steel  
Needle: Stainless Steel 416 (Brass and Steel Valves)  
O-Rings: Viton  
Back-Up Washer: Teflon  
Knob: Aluminum  
Set Screw: Steel  
Color Rings: Anodized Aluminum

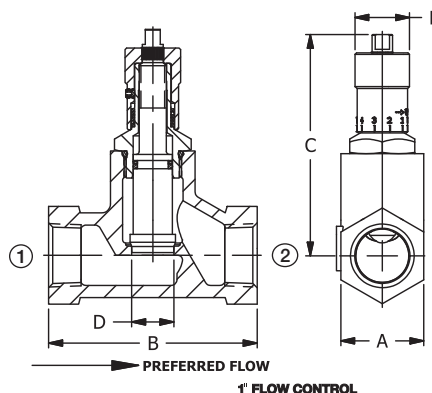
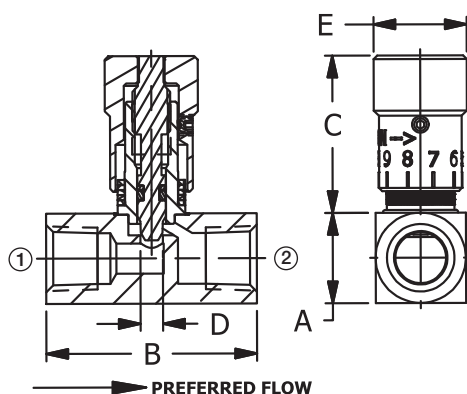
**FLOW RATING**

Size	Max Recommended Flow gpm (L/min)	Co-Efficient (Cv Factor) Fully Open
1/8"	4.5 (17.0)	.25
1/4"	10.0 (37.9)	.51
3/8"	18.0 (68.1)	.92
1/2"	28.0 (106.0)	1.20
3/4"	40.0 (151.4)	1.84
1"	100.0 (378.5)	9.60

**FLOW CURVES**

See Page 5.01.1

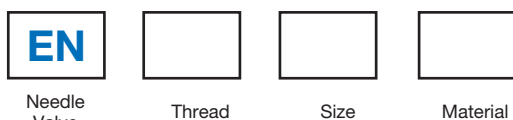
## INSTALLATION DIMENSIONS



Pipe Size	A HEX	A Square	B	C Open	C Closed	D Orifice	E Diameter
1/8"	—	5/8 (15.9)	1-7/16 (36.6)	1-9/32 (32.5)	1-1/16 (27.0)	.125 (3.2)	23/32 (18.3)
1/4"	—	3/4 (19.1)	1-3/4 (44.5)	1-13/32 (35.7)	1-7/32 (31.0)	.187 (4.7)	25/32 (19.8)
3/8"	—	1 (25.4)	2-1/16 (52.4)	1-5/8 (41.3)	1-3/8 (34.9)	.250 (6.4)	57/64 (22.6)
1/2"	—	1-1/8 (28.6)	2-1/2 (63.5)	1-31/32 (50.0)	1-5/8 (41.3)	.312 (7.9)	1-1/64 (25.8)
3/4"	—	1-3/8 (34.9)	2-3/4 (69.9)	2-3/16 (55.6)	1-13/16 (46.1)	.375 (9.5)	1-5/32 (29.4)
1"	1-3/4 (44.5)	—	4-1/2 (114.3)	5-1/6 (128.6)	4-11/16 (119.1)	.875 (22.2)	1-5/32 (29.4)

( ) Parentheses = Millimeters

## HOW TO ORDER



Code	Thread	Code	Material
Omit	NPTF	B	Brass (1" - Leaded Tin Bronze)
B	BSPT	S	Carbon Steel (1" - Ductile Iron)
BP	BSPP	SS	Stainless Steel

## HOW TO ADJUST

From the closed position, open the valve by turning the metal knob counter-clockwise until the desired flow volume is obtained.

The colored band on the stem and the numerical readout indicate to what extent the valve is opened or closed. Each color on the color band represents one full turn.

Find the scribe mark on the upper surface of the valve body. The number on the knob in proximity to the scribe mark will indicate 10ths of a turn the valve is opened.

Record the information for future reference.

Code	Size
10	1/8"
20	1/4"
25	3/8"
30	1/2"
35	3/4"
40	1"

## AVAILABLE MODEL CODES

Size	NPTF Thread			ISO 7/1 - RS — BSP Taper Thread		ISO 7/1 - RS — BSP Parallel Thread	
	Brass	Steel	Stainless Steel	Brass	Steel	Brass	Steel
1/8"	EN10B	EN10S	—	ENB10B	ENB10S	—	ENBP10S
1/4"	EN20B	EN20S	EN20SS	ENB20B	ENB20S	ENBP20B	ENBP20S
3/8"	EN25B	EN25S	—	ENB25B	ENB25S	ENBP25B	ENBP25S
1/2"	EN30B	EN30S	—	ENB30B	ENB30S	—	ENBP30S
3/4"	EN35B	EN35S	—	ENB35B	ENB35S	—	ENBP35S
1"	EN40B	EN40S	—	—	—	—	—