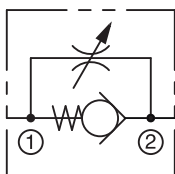




## EF Flow Control Female-to-Female

IN-LINE



### DESCRIPTION

Deltrol's unique line of Easy Read Flow Control 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 control valves provide flow control in one direction, free flow in opposite direction. 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)

#### Cracking Pressure (Except 1")

1 to 2.5 psi (.07 to .17 bar)

#### Cracking Pressure (1")

3 to 5 psi (.21 to .34 bar)

#### Operating Temperature Range

1/8"-3/4" -30° to +200° F (-34° to +93° C)  
1" -15° to +400° F (-26° to +204° C)

#### Threads

NPTF, BSPT, BSPP, SAE

#### 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  
Ball: Stainless Steel 440  
Spring: Stainless Steel 302  
Ball Guide: Delrin®  
Knob: Aluminum  
Set Screw: Steel  
Color Rings: Anodized Aluminum

#### Materials (1")

Body: Leaded Tin Bronze, Ductile Iron  
Housing: Brass, Steel  
Needle: Stainless Steel 440  
(Brass and Steel Valves)  
O-Rings: Viton  
Back-Up Washer: Teflon  
Poppet: Stainless Steel 303  
Spring: Stainless Steel 302  
Retainer Ring: Steel  
Knob: Aluminum  
Set Screw: Steel  
Color Rings: Anodized Aluminum

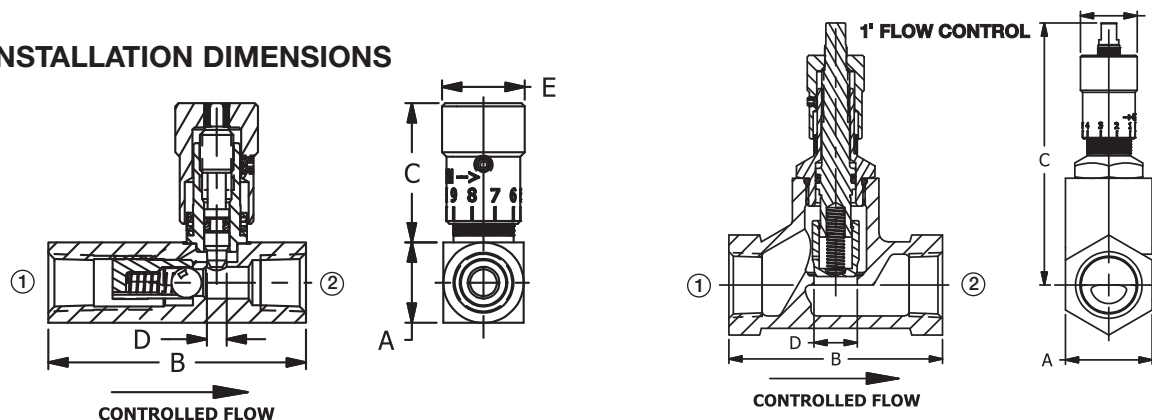
### FLOW RATING

Size	Max Recommended Flow gpm (lpm)	Co-Efficient (Cv Factor) Fully Open
1/8"	3.0 (11.4)	.28
1/4"	6.0 (22.7)	.53
3/8"	10.0 (37.9)	.76
1/2"	12.0 (45.4)	.93
3/4"	20.0 (75.7)	1.43
1"	55.0 (208.2)	8.00

### FLOW CURVES

See Page 5.01.1

## INSTALLATION DIMENSIONS



Pipe Size	A Square	A SAE Square	A HEX	B	B SAE	B ISO	C Open	C Closed	D Orifice	E Diameter
1/8"	5/8 (15.9)	—	—	1-15/16 (49.2)	—	1-15/16 (49.2)	1-9/32 (32.5)	1-1/16 (27.0)	.125 (3.7)	23/32 (18.3)
1/4"	3/4 (19.1)	3/4 (19.1)	—	2-13/32 (61.1)	2-9/16 (65.1)	2-1/2 (63.5)	1-13/32 (35.7)	1-7/32 (31.0)	.187 (9.7)	25/32 (19.8)
3/8"	1 (25.4)	1-1/8 (28.6)	—	2-7/8 (73.1)	3-1/4 (82.6)	2-31/32 (75.4)	1-5/8 (41.3)	1-3/8 (39.9)	.250 (6.4)	57/64 (22.6)
1/2"	1-1/8 (28.6)	1-1/4 (31.8)	—	3-7/16 (87.4)	3-9/16 (90.5)	3-7/16 (87.4)	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)	1-1/2 (38.1)	—	3-3/4 (95.3)	4-1/8 (104.8)	3-3/4 (95.3)	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)	—	—	5-1/16 (128.6)	4-11/16 (119.1)	.875 (22.2)	1-5/32 (29.4)

( ) Parentheses = Millimeters

## HOW TO ORDER



Code	Thread
Omit	NPTF
<b>B</b>	BSPT
<b>BP</b>	BSPP
<b>M</b>	SAE

Code	Material
<b>B</b>	Brass (1" - Leaded Tin Bronze)
<b>S</b>	Carbon Steel (1" - Ductile Iron)
<b>SS</b>	Stainless Steel

Code	SAE Size
Omit	NPTF, BSPT, BSPP
<b>6</b>	9/16-18 UNF
<b>8</b>	3/4-16 UNF
<b>10</b>	7/8-14 UNF
<b>12</b>	1-1/16-12 UN

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

## 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.

## AVAILABLE MODEL CODES

Size	NPTF Thread			ISO 7/1 - RS — BSP Taper Thread		ISO 7/1 - RP — BSP Parallel Thread		SAE Thread
	Brass	Steel	Stainless Steel	Brass	Steel	Brass	Steel	Carbon Steel
1/8"	EF10B	EF10S	EF10SS	EFB10B	EFB10S	EFBP10B	EFBP10S	—
1/4"	EF20B	EF20S	EF20SS	EFB20B	EFB20S	EFBP20B	EFBP20S	EFM620S
3/8"	EF25B	EF25S	EF25SS	EFB25B	EFB25S	EFBP25B	EFBP25S	EFM825S
1/2"	EF30B	EF30S	EF30SS	EFB30B	EFB30S	EFBP30B	EFBP30S	EFM1030S
3/4"	EF35B	EF35S	—	EFB35B	EFB35S	—	EFBP35S	EFM1235S
1"	EF40B	EF40S	—	—	—	—	—	—