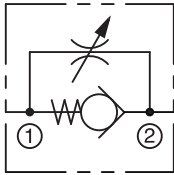


**EF Flow Control**  
Female-to-Female

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

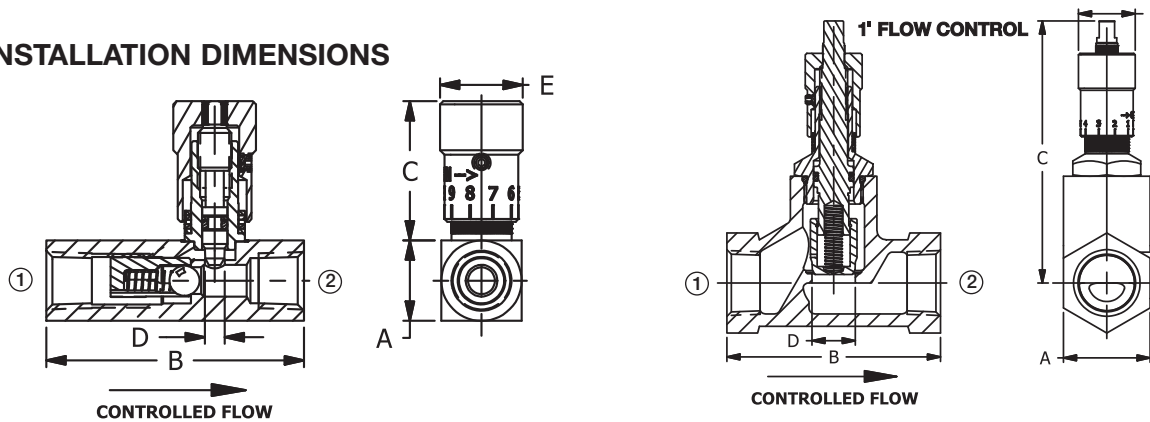
**FLOW RATING**

| 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 | -               | -                               | -      | -                                  | -       | -            |