

# ROTAMETERS

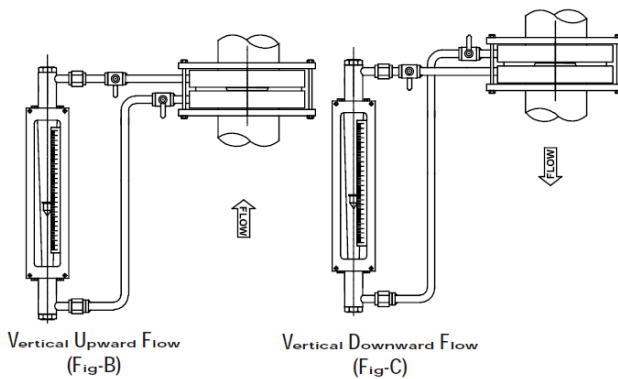


## STANDARD RANGES FOR WATER AT 20°C

| NB  | Maximum Flowrate (M3/HR.) | NB  | Maximum Flowrate (M3/HR.) |
|-----|---------------------------|-----|---------------------------|
| 25  | 5                         | 275 | 650                       |
| 40  | 10                        | 300 | 800                       |
| 50  | 20                        | 350 | 1000                      |
| 80  | 36                        | 400 | 1500                      |
| 100 | 80                        | 450 | 2000                      |
| 125 | 125                       | 500 | 2500                      |
| 150 | 150                       | 600 | 3000                      |
| 200 | 320                       | 700 | 4000                      |
| 225 | 450                       | 800 | 5000                      |
| 250 | 550                       |     | Other Sizes on request    |

## METER ASSEMBLY

|                        |         |
|------------------------|---------|
| Glass Tube Rotameter : | FSG-1   |
| Metal Tube Rotameter : | FSD-100 |

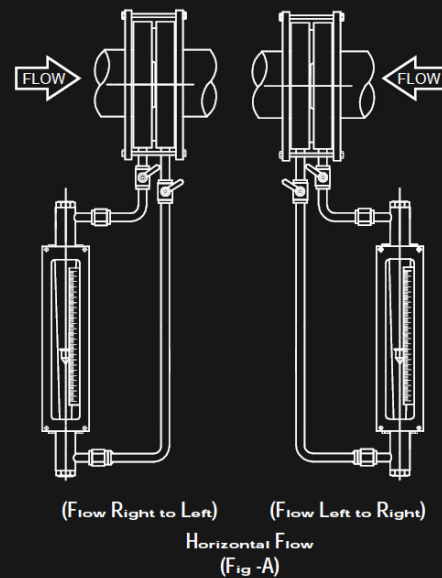


Bypass Rotameter Assembly Through Carrier Rings

## BYPASS ROTAMETER

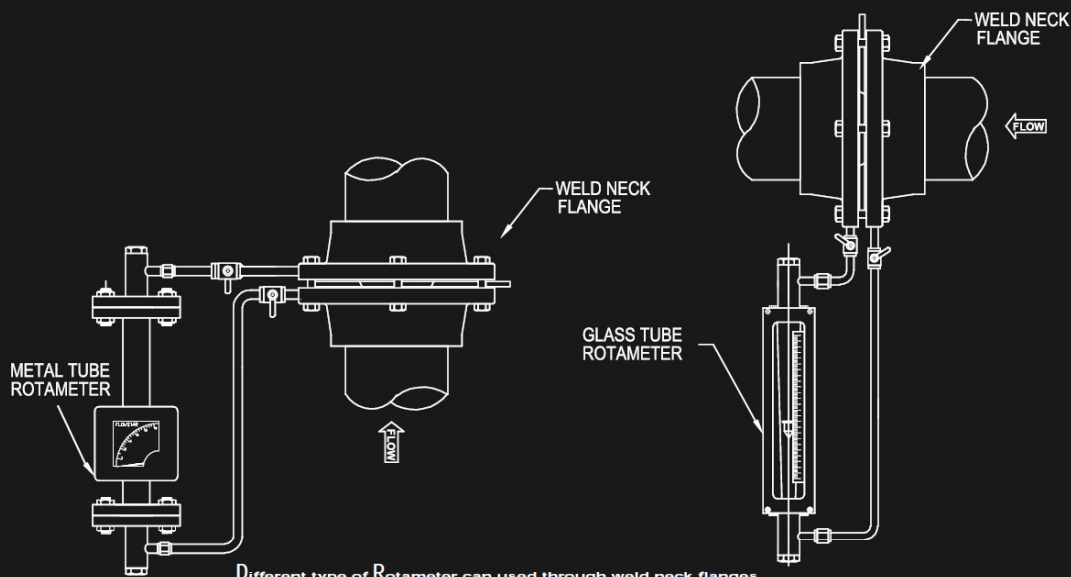
Flowstar Bypass Rotameter systems are designed for the accurate measurement of fluid rate of flow in pipelines 25 NB in diameter or larger design Standard ISO 5167 or BS/1042. They accomplished this by providing a bypass flow that is directly proportional to the main flow. Since Rotameter measure bypass flow, not static differential, flow ranges up to 10 to 1 are possible with these instruments. This provides a decided advantage over other types of flow measuring devices.

SYSTEM - A complete bypass Rotameter installation consists of the following : orifice flanges with orifice plate for insertion into the main pipeline; bypass piping with valves and fittings; a range orifice for insertion into the bypass pipeline; and what ever type Rotameter is considered best suited to a particular application



## INSTALLATION - BYPASS

Rotameters can be installed to measure horizontal flow (Fig. A) or vertical flow up (Fig. B) or down (Fig. C) for proper operation, a straight run of pipe is required on both sides of the orifice or, when space is limited, straightening vanes must be used as indicated in Table.



Different type of Rotameter can used through weld neck flanges

## SPECIFICATION

Type of tapping : Flange, D and D/2, corner  
 Accuracy :  $\pm 2\%$  of full flow  
 Rangeability : 7:1 or 5:1

## ACCESSORIES

Hi-low flow switch  
 4-20 mA transmitter

## STANDARD MATERIAL OF CONSTRUCTION

|                               |   |
|-------------------------------|---|
| Orifice Flange                | : SS 316 L, SS 316, SS 304, CS etc.                         |
| Orifice Plate                 | : SS 316, L, SS 316, SS 304, Hastelloy 'C', Monel, PVC etc. |
| Carrier Rings                 | : SS 316 L, SS 316, Mild steel, PP etc.                     |
| By Pass Line                  | : SS 316 L, SS 316, SS 304, Mild steel, PVC etc.            |
| Wetted Parts of the Rotameter | : SS 316 L, SS 316, SS 304, Mild steel, PP etc.             |

| MINIMUM UPSTRAIGHT LENGTHS REQUIRED           | Piping Layout | DIAMETER RATIO (B) |      |     |      |     |      |     |      |     |      |     |      |  |
|---|---------------|--------------------|------|-----|------|-----|------|-----|------|-----|------|-----|------|--|
|   |               | 0.2                | 0.25 | 0.3 | 0.35 | 0.4 | 0.45 | 0.5 | 0.55 | 0.6 | 0.65 | 0.7 | 0.75 |  |
| Fitting Before Straight Run                   |               |                    |      |     |      |     |      |     |      |     |      |     |      |  |
| Single 90° bend or tee                        |               | 10                 | 10   | 10  | 12   | 14  | 14   | 14  | 16   | 18  | 22   | 28  | 36   |  |
| Two or more 90° bends in the Same Planes      |               | 14                 | 14   | 16  | 16   | 18  | 18   | 20  | 22   | 26  | 32   | 36  | 42   |  |
| Two or more 90° bends in the Same Planes      |               | 34                 | 34   | 34  | 36   | 36  | 38   | 40  | 44   | 48  | 54   | 62  | 70   |  |
| Reducers or Expanders                         |               | 16                 | 16   | 16  | 16   | 16  | 18   | 20  | 20   | 22  | 24   | 26  | 28   |  |
| Globe Valve Fully open                        |               | 18                 | 18   | 18  | 18   | 20  | 20   | 22  | 24   | 26  | 28   | 32  | 36   |  |
| Gate Valve Fully open                         |               | 12                 | 12   | 12  | 12   | 12  | 12   | 12  | 14   | 16  | 16   | 20  | 24   |  |
| Minimum Down Stream Straight Lengths Required |               | 4                  | 4    | 5   | 5    | 6   | 6    | 6   | 6    | 7   | 7    | 7   | 8    |  |

Valve of the Straight Length are of 'D' B=D/D D= Orifice Diameter D= Internal Diameter of Pipe

PLEASE PROVIDE US GENERAL ORDERING INFORMATIONS FOR BY-PASS ROTAMETER.

- 1) Name of fluid
- 2) Operating density of fluid / specific gravity
- 3) Operating viscosity of fluid
- 4) Clarity of fluid transparent or opaque
- 5) Operating pressure
- 6) Operating temperature
- 7) Line size
- 8) Type of connection
- 9) Minimum & maximum flow rate
- 10) Preferred material of construction for wetted parts and non wetted parts
- 11) Actual I. D. of pipe or schedule of pipe or class of pipe
- 12) Direction of flow i.e. vertical (upward or downward) or horizontal (left to right or right to left)