

Sho-Rate™ "50" Size 8 Flow Indicator Model 1358

- Ten-to-one rangeability
- Heavy-wall, precision bore borosilicate glass metering tube
- A wide range of scales on the metering tube
- Tube removable without disconnecting the instrument
- Interchangeable tubes and floats
- Piping connections rotatable through 360° at 90° intervals
- Easily panel mounted
- Single tube or multi-tube configurations available

DESCRIPTION

The Brooks® Sho-Rate "50" Series of low flow indicators provides a cost-effective means of flow indication where the accuracy requirements are not severe. Available options include an integral needle control valve as well as flow controllers piped to the inlet or outlet of the meter.

SPECIFICATIONS

Pressure Ratings:

200 psig (1,378 kPa) at temperatures up to 250°F (121°C). Fluid temperatures below 32°F (0°C) will cause frosting of the glass metering tube. Consult factory for applications below this temperature.

Pressure Equipment Directive (PED) 97/23/EC:

Flowmeters mentioned in this document are Sound Engineering Practice (SEP).

Scales:

Type (Standard): Fused on meter tube

Length: 75 mm, nominal

Graduations:

Standard: direct read on tube in gpm water or scfm air.

Optional: special direct read decal on tube. Consult factory for available ranges. Direct read on metal scale plate mounted beside tube.

Standard accuracy: ±10% of full scale from 100% to 10% of scale reading.

Repeatability: 0.5% full scale



*Model 1358-V
Sho-Rate "50" Meter
with optional Needle
Control Valve*

Rangeability: Ten to one

Connections:

Standard: Horizontal female 3/8" NPT threaded adaptors.
Optional: Horizontal female 3/8" NPT threaded adaptors with locknut for front of panel mounting.

Materials of Construction:

Metering Tubes:

Borosilicate glass

Float: 316 stainless steel

End Fittings:

Chrome plated brass or 316 stainless steel

Side Plates:

Standard: Black anodized aluminum

Optional: 316 stainless steel

Window:

Scratch resistant, UV stabilized polycarbonate

Back Cover: Milk white polycarbonate

Float Stops: Stainless steel

Brooks® Model 1358

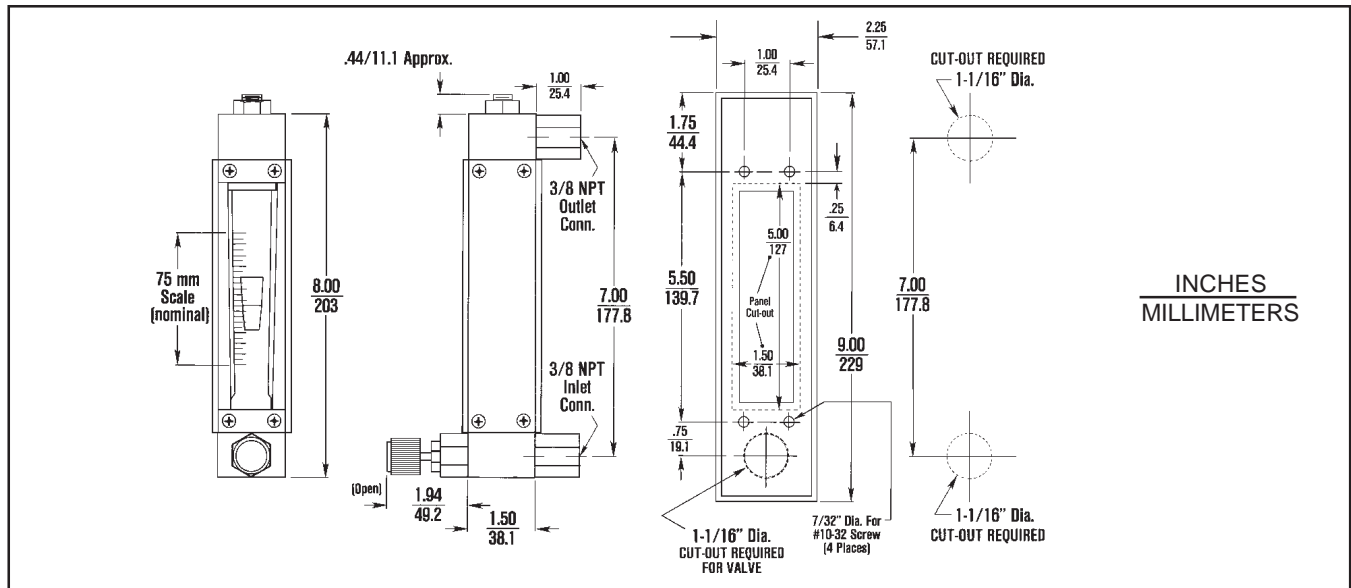


Figure 1 Dimensions

Tube Packing:

Standard: Neoprene™ (Brass meters), Viton-A® fluoroelastomers (316 stainless steel meters).
Optional: Teflon®, EPM

O-rings:

Standard: Buna-N (Brass meters), Viton-A fluoroelastomers
Optional (316 stainless steel meters): EPM, Kalrez®

Protective Tube Sleeve:

UV stabilized polycarbonate

Dimensions

See Figure 1

OPTIONAL EQUIPMENT

- Integrally mounted needle control valve on inlet or outlet
- Flush panel mounting bezel
- Front of panel mounting locknuts
- Externally piped flow controller and needle valve (see DS-VA-FC-eng)
- Multi-tube construction up to six tubes

ORDERING INFORMATION

- To order, please specify:
1. Model Number (see chart)
 2. Materials of Construction
 3. Scale Data
 4. Complete Metering Data: Type of fluid; maximum, minimum and normal flows; operating temperature; operating back pressure; specific gravity
 5. Options, if desired
 6. For ranges other than above, consult factory

Table 1 Capacities

| Water (gpm) | Maximum Flow Rate | | Float |
|-------------|---|---------------------------------------|---------|
| | Pressure Drop Without Valve Inches W.C. | Pressure Drop With Valve Inches W. C. | |
| 0.8 | 12.6 | 13.6 | 8-RV-8 |
| 1.5 | 22.2 | 27.0 | 8-RJ-10 |
| 2.5 | 61.0 | 85.2 | 8-RJ-23 |
| 3.5 | 88.7 | 121.0 | 8-RJ-30 |
| 5.0 | 172 | 238.0 | 8-RJ-39 |
| Air (scfm) | Pressure Drop W.C. Without Valve Inches | Pressure Drop W.C. With Valve Inches | Float |
| 3.4 | 14.34 | 15.5 | 8-RV-8 |
| 6.0 | 25.34 | 30.8 | 8-RJ-10 |
| 12.0 | 69.34 | 97.3 | 8-RJ-23 |
| 15.0 | 101.34 | 138.3 | 8-RJ-30 |

NOTE: All air flows are at 14.7 psia and 70°F.

Table 2 Size 8 Sho-Rate Model Number Code

| | | |
|---------------------|---|--|
| MODEL CODE 1358F | SIZE 8 SHO-RATE FLOW INDICATOR Sho-Rate "50," Size 8 | |
| | CODE | TUBE |
| | 1 | R-8M-75-1 (Cut-Off) |
| | 9 | No Tube |
| | CODE | FLOAT (316 STAINLESS STEEL) |
| | A | 8-RV-8 |
| | B | 8-RJ-10 |
| | C | 8-RJ-23 |
| | D | 8-RJ-30 |
| | E | 8-RJ-39 |
| | W | Special |
| | Y | No Float |
| | CODE | SCALE TYPE/SIDE PLATE ARRANGEMENT |
| | 1 | Scale on Tube (Plain Side Plates) |
| | 2 | Aluminum Detachable Scale Mounted to Right Side Plate |
| | 3 | Dual Aluminum Detachable Scales |
| | 4 | Stainless Steel Detachable Scale Mounted to Right Side Plate |
| | 5 | Dual Stainless Steel Detachable Scales |
| | CODE | SCALE INSCRIPTION |
| | A | No Inscription |
| | B | MM Scale |
| | C | 0-100 Linear |
| | D | SCFM Air @ 70°F psia, Standard 10% Accuracy |
| | E | GPM Liquid Specific Gravity 1.0, Viscosity 1.0 cP, Standard 10% Accuracy |
| | F | Special Inscription, Standard 10% Accuracy |
| | G | Special Calibration, 10% Full Scale Air |
| | H | Special Calibration, 10% Full Scale Water |
| | J | Special Calibration, 10% Full Scale Oil |
| | K | Special Calibration, 5% Full Scale Air |
| | L | Special Calibration, 5% Full Scale Water |
| | M | Special Calibration, 5% Full Scale Oil |
| | CODE | TUBE PACKING AND O-RING MATERIALS FOR METER/VALVE ¹ |
| | A | Neoprene Tube Packing, Buna O-ring |
| | B | Viton Tube Packing, Buna O-ring |
| | C | Viton Tube Packing, Viton O-ring |
| | D | Viton Tube Packing, EPM O-ring |
| | E | Viton Tube Packing, Kalrez O-ring |
| | F | Teflon Tube Packing, Buna O-ring |
| | G | Teflon Tube Packing, Viton O-ring |
| | H | Teflon Tube Packing, EPM O-ring |
| | J | Teflon Tube Packing, Kalrez O-ring |
| | K | EPM Tube Packing, EPM O-ring |
| | L | No Packing ² , Buna-O-ring |
| | M | No Packing ² , Viton O-ring |
| | N | No Packing ² , EPM O-ring |
| | P | No Packing ² , Kalrez O-ring |

Brooks® Model 1358

Table 2 Size 8 Sho-Rate Model Number Code (Continued)

1358 | 1 | C | 3 | D | C | 8 | B | C | D | Typical Model Number

| CODE | FITTING & ADAPTER MATERIAL ³ /PROCESS CONNECTION SIZE & TYPE |
|------|---|
| 1 | 3/8" NPT Connection, Brass Fitting & Adapter |
| 2 | 3/8" NPT Connection, 316 Stainless Steel Fitting & Adapter |
| 3 | Thd. 3/8" NPT with Locknut Connection, Brass Fitting & Adapter |
| 4 | Thd. 3/8" NPT with Locknut Connection, 316 Stainless Steel Fitting & Adapter |
| 5 | No Adapter ³ , Brass Fitting |
| 6 | No Adapter ³ , 316 Stainless Steel Fitting |
| 7 | 3/8" NPT Connection, Brass Fitting, 316 Stainless Steel Adapter |
| 8 | 3/8" NPT Connection, 316 Stainless Steel Fitting, Brass Adapter |
| 9 | Thd. 3/8" NPT with Locknut Connection, Brass Fitting, 316 Stainless Steel Adapter |
| A | Thd. 3/8" NPT with Locknut Connection, 316 Stainless Steel Fitting, Brass Adapter |

| CODE | VALVE CONFIGURATION |
|----------------|---|
| A | No Valve (Plain End Fitting on Inlet) |
| B | Standard Stainless Steel Needle Valve on Inlet |
| C | Standard Stainless Steel Needle Valve on Outlet |
| D | Standard Brass Needle Valve on Inlet |
| E | Standard Brass Needle Valve on Outlet |
| F ⁴ | Mounted to 8810 Flow Controller |
| G ⁴ | Mounted to 8910 Flow Controller |
| H ⁴ | Mounted to 8830 Flow Controller |
| J | Standard Valve Cavity with Stainless Steel Valve Plug |
| K | Standard Valve Cavity without Valve or Plug |

| CODE | CONNECTION ORIENTATION |
|------|-------------------------------------|
| 1 | Inlet Port Back, Outlet Port Back |
| 2 | Inlet Port Back, Outlet Port Front |
| 3 | Inlet Port Back, Outlet Port Right |
| 4 | Inlet Port Back, Outlet Port Left |
| 5 | Inlet Port Front, Outlet Port Back |
| 6 | Inlet Port Front, Outlet Port Front |
| 7 | Inlet Port Front, Outlet Port Right |
| 8 | Inlet Port Front, Outlet Port Left |
| 9 | Inlet Port Right, Outlet Port Back |
| A | Inlet Port Right, Outlet Port Front |
| B | Inlet Port Right, Outlet Port Right |
| C | Inlet Port Right, Outlet Port Left |
| D | Inlet Port Left, Outlet Port Back |
| E | Inlet Port Left, Outlet Port Front |
| F | Inlet Port Left, Outlet Port Right |
| G | Inlet Port Left, Outlet Port Left |

| CODE | ACCESSORIES (ONE OR TWO-DIGIT FIELD) |
|------|---|
| A | None |
| B | Plastic Bezel |
| C | Stainless Steel Side Plates |
| D | Degrease for Oxygen Service |
| E | Triangular Base Plate with Spirit Level |
| G | No Brooks Identification |

NOTES:

- ¹If valve is not required, select proper O-ring material for meter only.
- ²If tube is not required, select proper O-ring material coded L through P.
- ³If no adapter is required, select proper code for end fitting material only.
- ⁴Flow Controller must be a second-line item on customer's order.

TRADEMARKS

Brooks Brooks Instrument, LLC
 Kalrez DuPont Performance Elastomers
 Neoprene E. I. DuPont de Nemours & Co.
 Sho-Rate Brooks Instrument, LLC
 Teflon E. I. DuPont de Nemours & Co.
 Viton DuPont Performance Elastomers

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HELP DESK

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Due to Brooks Instrument's commitment to continuous improvement of our products, all specifications are subject to change without notice.

