

Beyond Measure

# Sho-Rate<sup>TM</sup> Series Model 1358

Glass Tube Variable Area Flowmeters (Rotameter)

The Sho-Rate™ Series of low flow indicators provide a cost-effective means of flow indication where the accuracy requirements are not severe. Model 1358 is ideal for flow rates from 0.8 to 5.0 gpm of water. Available options include an integral needle control valve and optional configuration to connect a flow controller to the inlet or outlet of the meter.



Benefits		
Meets a wide range of customer specifications		
Resistant to thermal shock and corrosive gases and fluids		
Easy in-situ maintenance. Prevents loss of float during tube removal		
Ability to drop in to customer process		
Meets a wider range of customer requirements		

## **Product Specifications**

#### Performance

Scales

Measuring Range	See Capacity Table					
Standard Accuracy	±10% of F.S.					
Repeatability	0.5% F.S.					
Rangeability	10 - 1					
Pressure/Temperature	200 psig at 33°F to 250°F (1°C to 121°C) Fluid temperatures below 32°F (0°C) will cause frosting of the glass metering tube. Consult factory for applications below this temperature. 100 psig at 33°F to 250°F (1°C to 121°C)(CRN Certification)					
Pressure Equipment Directive (PED) 97/23/EC	Flowmeters mentioned in this document are Sound Engineering Practice (SEP)					
Materials of Construction						
Metering Tube	Borosilicate Glass					
Tube Packing	Standard: NeopreneTM (Brass meters); Viton-A® fluoroelastomers (316 Stainless Steel meters); Optional: EPM					
O-rings	Standard: Buna-N (Brass meters); Viton-A® fluoroelastomers (316 Stainless Steel meters); Optional: EPM					
Float	316 Stainless Steel					
Float Stops	Stainless Steel					
Side Plates	Standard: Black Anodized Aluminum					
Window	Scratch resistant, UV stabilized polycarbonate					
Back Cover	Milk white polycarbonate					
End Fittings	Chrome Plated Brass or 316 Stainless Steel					
Connections	Standard: Horizontal female 3/8" NPT threaded adaptors; Optional: Refer to Model Code					
	Type (standard): Fused on meter tube					

Length: 75mm, 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.

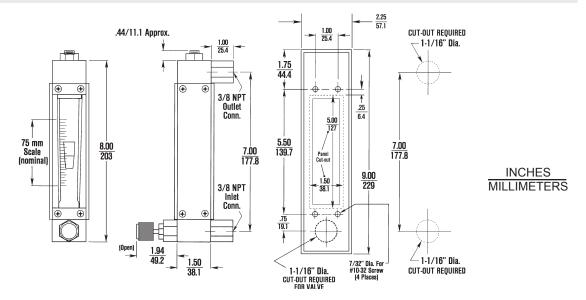
Direct read on metal scale plate mounted beside tube

Capacities			Pressure Drop without Valve Inches W.C.	Pressure Drop with Valve Inches W.C.	Float
		0.8	12.6	13.6	8-RV-8
	Water	1.5	22.2	27.0	8-RJ-10
		2.5	61.0	85.2	8-RJ-23
Maximum	(gpm)	3.5	88.7	121.0	8-RJ-30
Flow Rate		5.0	172	238.0	8-RJ-39
riow Rate		3.4	14.34	15.5	8-RV-8
	Air	6.0	25.34	30.8	8-RJ-10
	(scfm)	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. Reference conditions 70°F @ latm.

### **Product Dimensions**

### Model 1358



### Model Code

**Code Description Code Option Option Description** 

Code Description	Code Option	Option Description
I-V. Base Model Code	1358F	Sho-Rate "50", Size 8
VI. Tube	1	R-8M-75-1
	2	R-8M-75-1 CRN option
	9	No Tube
VII EL . (24/ C) : L C . D	1	
VII. Float (316 Stainless Steel)	Α	8-RV-8
	В	8-RJ-10
	C	8-RJ-23
	D	8-RJ-30
	E	8-RJ-39
	Y	No Float
VIII. Scale Type / Side Plate Arrangement	1	Scale on tube
	2	Aluminum Detachable Scale Mounted to Right Side Plate
IX. Scale Inscription	А	No Inscription
	В	MM Scale
	D	SCFM Air @ 70 F and 14.7 PSIA, Standard 10 % Accuracy
	Е	GPM Liquid Specific Gravity 1.0, Viscosity 1.0 cP, Standard 10% Accuracy
	F	Special Inscription, Standard 10% Accuracy
X. Tube Packing & O-ring Materials for	А	Neoprene Tube Packing, Buna O-ring
Meter/Valve <sup>1</sup>	С	Viton Tube Packing, Viton O-ring
	К	EPM Tube Packing, EPM O-ring
	L	No Packing <sup>2</sup> , Buna O-ring
	М	No Packing <sup>2</sup> , VitonO-ring
	N	No Packing <sup>2</sup> , EPM O-ring
XI. Fitting & Adapter Material <sup>3</sup> / Process	1*	3/8" NPT Connection, Brass Fitting & Adapter
Connection Size & Type	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
XII. Valve Configuration	А	No Valve (Plain End Fitting on Inlet)
	В	Standard Stainless Steel Needle Valve on Inlet
	С	Standard Stainless Steel Needle Valve on Outlet
	D*	Standard Brass Needle Valve on Inlet
	E*	Standard Brass Needle Valve on Outlet
	F <sup>4</sup>	To mount 8810 Flow Controller
	G <sup>4</sup>	To mount 8910 Flow Controller
	H <sup>4</sup> *	To mount 8830 Flow Controller
XIII. Connection Orientation	1	Inlet Port Back, Outlet Port Back
	3	Inlet Port Back, Outlet Port Right <sup>5</sup>
	9	-
	7	Inlet Port Right, Outlet Port Back <sup>6</sup>
XIV. Accessories (One or Two Digital Field)	А	None
	G	No Brooks Indentification

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.

#### Sample Model Code

sample woder code										
	I-V	VI	VII	VIII	IX	Χ	XI	XII	XIII	XIV
	1358F	1	C.	2	D	C.	2	В	1	Α

<sup>&</sup>lt;sup>3</sup>If no adapter is required, select proper code for end fitting material only.

<sup>&</sup>lt;sup>4</sup>Flow Controller must be a second-line item on customer's order.

<sup>\*</sup> Not available with CRN Certification

<sup>&</sup>lt;sup>5</sup>For 8912 Controller Only

<sup>&</sup>lt;sup>6</sup>For 8812/8830 Controller Only

### Service and Support

Brooks is committed to assuring all of our customers receive the optimal solution for their application, along with outstanding service and support to back it up. We operate first class repair facilities located around the world to provide rapid response and support. Each location utilizes primary standard calibration equipment to ensure accuracy and reliability for repairs and recalibration and is certified by our local Weights and Measures Authorities and traceable to the relevant International Standards.

Visit www.BrooksInstrument.com to locate the service location nearest to you.

### START-UP SERVICE AND IN-SITU CALIBRATION

Brooks Instrument can provide start-up service prior to operation when required. For some process applications, where ISO-9001 Quality Certification is important, it is mandatory to verify and/or (re)calibrate the products periodically. In many cases this service can be provided under in-situ conditions, and the results will be traceable to the relevant international quality standards.

#### SEMINARS AND TRAINING

Brooks Instrument can provide customer seminars and dedicated training to engineers, end users, and maintenance persons. Please contact your nearest sales representative for more details. Due to Brooks Instrument's commitment to continuous improvement of our products, all specifications are subject to change without notice.



**TRADEMARKS** 

Data-Sheet-1358-EN/2024-12

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