

# Brooks® Model GT 1306 O-ring Seal Flowmeter

## DESIGN FEATURES

- Heavy wall, precision bore, ribbed borosilicate glass tubes
- O-ring seals
- Vertical connections
- Simple assembly procedure
- Wide choice of float types and flow ranges
- CE certified

## DESCRIPTION

The GT 1306 flowmeters are low cost instruments intended for general metering installations where the operating pressure is within the limitations imposed by the use of borosilicate glass metering tubes. The instruments can be supplied with brass or 316 SS female threaded end fittings.

## SPECIFICATIONS

### Warning

Do not operate this instrument in excess of the specifications listed below. Failure to heed this warning can result in serious personal injury and/or damage to the equipment.

### Performance

Accuracy **GT 1306**  
classification Standard Class 2.5 acc VDE/VDI 3513  
Optional Class 1.6 acc VDE/VDI 3513  
Repeatability  $\pm 0.5\%$   
Scale length 127 mm

### Materials of construction

End fittings Brass or 316 SS, fitted in aluminium collar  
Metering Borosilicate glass tubes

### Warning

#### GLASS TUBE EXPLOSION HAZARD

Plastic protective sleeve must remain over glass tube. Fasten meter windows securely.  
Do not operate above pressure and temperature limits. Avoid pressure and flow surges.  
Do not service or repair while pressurized.  
Read and understand instruction manual.  
Failure to comply could result in serious personal injury or property damage.



Model GT 1306

Floats **#7-1306** Glass, 316 SS or Monel  
**#8/10-1306** 316 SS  
O-ring seals Viton, Buna or Kalrez  
Side plates Aluminum  
Scale type **• Standard:** Millimeter or percent of maximum flow etched on metering tube  
**• Optional:** Direct reading engraved on a detachable aluminium plate  
Ambient Temperature Limits: 1°C to 52°C

## Ratings

Meter size	Max. pressure at 90°C (bar)	Max. temperature °C	Pressure reduction above 90 °C bar/°C
	GT 1306		
7	24	120	0.093
8	20.7	120	0.093
10	6.9	120	0.056

Table 1: Flow ranges for GT 1306

SIZE	TUBE TYPE	FLOAT	MODEL CODE	WATER		V.I.C. <sup>2)</sup> cSt	AIR	
				l/h	ΔP (kPa)		m <sup>3</sup> <sub>n</sub> /h	ΔP (kPa)
7	R-7M-127-1F	Glass	A1	31	0.25	1	1.20	0.25
		316 SS	A3	73	0.75	1	2.30	0.75
		Monel	A6	74	0.75	1	2.40	0.75
8	R-8M-127-4F	8-RV-2	DA	110	0.50	1.2	3.3	0.50
		8-RV-3	DB	160	0.50	3	4.8	0.75
		8-RV-8	DC	225	1.25	4	6.9	1.50
		8-RS-8	DD	300	2.00	2	9.0	2.00
		8-RV-14	DE	310	2.00	7	9.1	2.50
		8-RS-14	DF	380	3.00	3	11.0	3.25
		8-RV-31*	DG	430	6.00	7	12.0	7.00
		8-RS-31*	DH	480	8.25	3	15.5	9.25
10	R-10M-127-3F	10-RV-15	GA	615	0.50	12	18.5	0.50
		10-RV-30	GB	845	1.00	13	25.5	1.00
		10-RV-64	GC	1385	2.25	20	42.0	2.50
		10-RS-64	GD	1725	3.00	5	52.5	3.25
		10-RV-138*	GE	1785	5.75	23	52.5	6.50
		10-RS-138*	GF	2205	7.25	5	66.0	8.25

\*\* These floats are not recommended for liquid service

\* These floats are not recommended for gas service unless downstream operating pressure exceeds 2 bar gauge

1 The capacities stated are based on 316 SS floats unless otherwise indicated

2 Viscosity Immunity Ceiling

## OPTIONAL EQUIPMENT

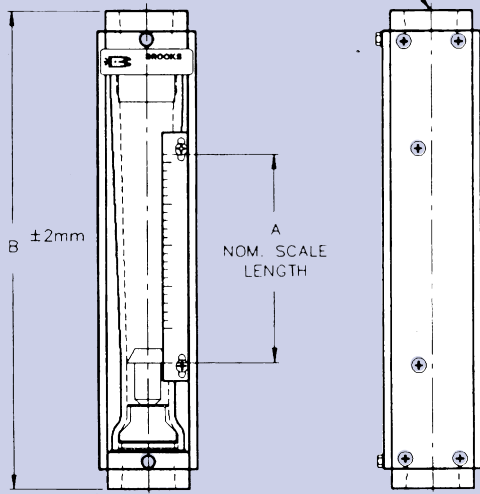
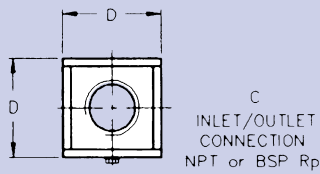
### Screwed-in needle valves

For flowrate control, needle valves in brass or 316 SS may be externally piped to the inlet or outlet side of the instrument. We strongly advise not to use solenoid-valves as these can cause pressure shocks and damage to glass tubes

### Screwed-in flow controllers

Brooks self-contained flow controllers are constant differential regulators with built-in flow control needle valves. The internal diaphragm-actuated control valve

is positioned by the incoming fluid pressure on one side of the diaphragm and outlet pressure + spring action on the other side. Variations in the supply and/or discharge pressure disturb the balance of forces on the diaphragm, causing the control valve to close or to open, thus maintaining a fixed differential across the manual flow regulating valve. The series 8800 controllers are designed for all liquid and gas flows with constant downstream pressure. Series 8900 controllers are designed for all liquids and gas flows with constant upstream pressure.

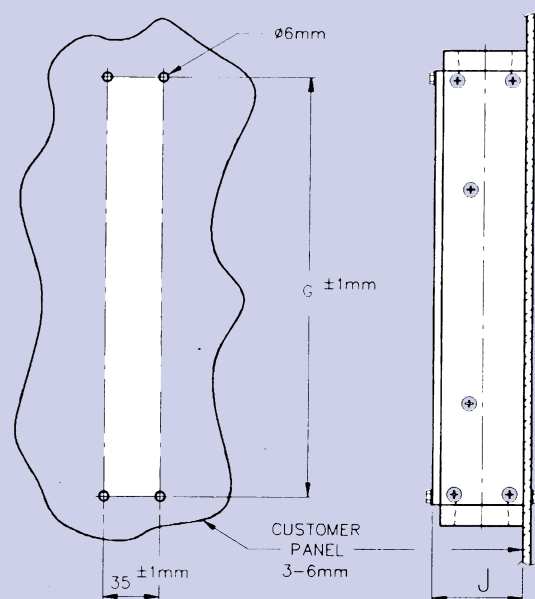
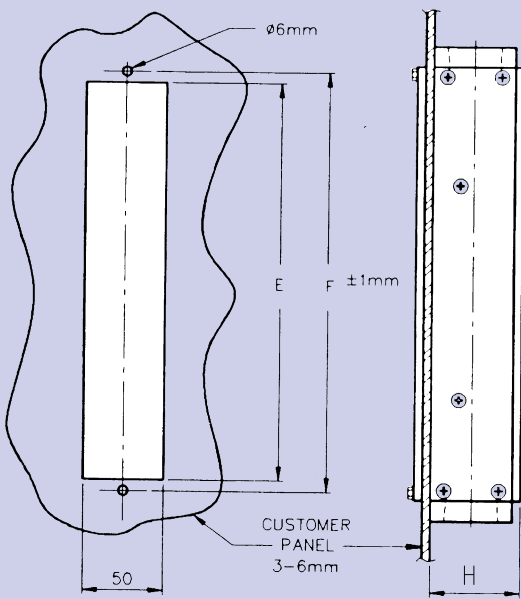


**MODEL GT 1306**

METER SIZE	A	B	C	D	E	F	G	H	J
SIZE 7	127	300	1/2"	60	250	264	261	55	55
SIZE 8	127	300	1/2"	60	250	264	261	55	55
SIZE 10	127	300	1"	65	250	264	261	58	59

PANEL CUT OUT FOR BACK PANEL MOUNTING

PANEL CUT OUT FOR FRONT PANEL MOUNTING



**WARNING**

Glass metering tubes are designed for operation up to the maximum operating pressures and temperatures as specified herein. Due to the inherent brittle characteristics of glass and conditions beyond our control, tube breakage could result below specified operating conditions. Possible glass tube breakage represents a potential hazard to operating personnel; therefore, operator protection should be supplied where operating pressures may exceed 3,4 bar. A customer supplied window constructed of 1/2-inch polycarbonate plastic may be used or the glass tube meter may be replaced with an all metal (amored) meter.

**How to order: please describe:**

- Model Number
- Quantity required
- Minimum, normal and maximum flow rate
- Process fluid, density and viscosity at operating conditions
- Minimum, normal and maximum operating temperature and pressure
- Scale inscription
- Accessories required, i.e. flow controller

## MODEL LISTING

BASE MODEL NO.	DESCRIPTION	
1306/B	O-ring seal flowmeter, scale length 127 mm	
	<b>CODE</b>	<b>TUBE TYPE</b>
	*	To be selected from the flow range table
	<b>CODE</b>	<b>FLOAT TYPE</b>
	*	To be selected from the flow range table
	<b>CODE</b>	<b>FITTING MATERIAL</b>
	1	Brass
	2	316 SS
	<b>CODE</b>	<b>O-RING MATERIAL</b>
	1	Viton
	2	Buna
	3	Kalrez
	<b>CODE</b>	<b>CONNECTION TYPE</b>
	1	NPT
	2	BSP
	<b>CODE</b>	<b>SCALE TYPE</b>
	C	mm Decal + cal. curve, Class 2.5
	D	mm Decal + cal. curve, Class 1.6
	G	% Decal + factor, Class 2.5
	H	% Scale + factor, Class 1.6
	L	DR scale, Class 2.5
	M	DR scale, Class 1.6
	<b>CODE</b>	<b>PANEL MOUNTING</b>
	1	Long screws for front panel mounting
	2	Long screws for back panel mounting
	<b>CODE</b>	<b>VALVE</b>
	A	1/2" Brass needle valve on inlet
	B	1/2" 316 SS needle valve on inlet
	C	1" Brass needle valve on inlet
	D	1" 316 SS needle valve on inlet
	E	1/2" Brass needle valve on outlet
	F	1/2" 316 SS needle valve on outlet
	G	1" Brass needle valve on outlet
	H	1" 316 SS needle valve on outlet
<b>1306/B</b>	<b>*</b>	<b>*</b>
	<b>1</b>	<b>1</b>
	<b>1</b>	<b>1</b>
	<b>1</b>	<b>A</b>
	<b>1</b>	<b>A</b>
		<b>Typical model number</b>

### BROOKS SERVICE AND SUPPORT

Brooks is committed to assuring all of our customers receive the ideal flow 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. The primary standard calibration equipment to calibrate our flow products is certified by our local Weights and Measures Authorities and traceable to the relevant International Standards.

Visit [www.BrooksInstrument.com](http://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, if necessary under in-situ conditions, and the results will be traceable to the relevant international quality standards.

### CUSTOMER SEMINARS AND TRAINING

- Brooks can provide customer seminars and dedicated training to engineers, end users and maintenance persons.

### HELP DESK

In case you need technical assistance:

Americas ☎ 1-888-554-FLOW  
 Europe ☎ +(31)-318-549-290 Within Netherlands ☎ 0318-549-290  
 Asia ☎ +011-81-3-5633-7100

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

#### Brooks Instrument

407 West Vine Street  
 P.O. Box 903  
 Hatfield, PA 19440-0903 USA  
 T (215) 362-3700  
 F (215) 362-3745

E-Mail [BrooksAm@BrooksInstrument.com](mailto:BrooksAm@BrooksInstrument.com)

[www.BrooksInstrument.com](http://www.BrooksInstrument.com)

#### Brooks Instrument

Neonstraat 3  
 6718 WX Ede, Netherlands  
 T 31-318-549-300  
 F 31-318-549-309  
 E-Mail [BrooksEu@BrooksInstrument.com](mailto:BrooksEu@BrooksInstrument.com)

#### Brooks Instrument

1-4-4 Kitasuna Koto-Ku  
 Tokyo, 136-0073 Japan  
 T 011-81-3-5633-7100  
 F 011-81-3-5633-7101  
 E-Mail [BrooksAs@BrooksInstrument.com](mailto:BrooksAs@BrooksInstrument.com)



**BROOKS**<sup>®</sup>  
 INSTRUMENT