ROXSPUR
MEASUREMENT & CONTROL

Unit 10 Campbell Court, Bramley,
Tadley, Hampshire.
RG26 5EG, England.
Tel: +44(0)1256 884901
Fax: +44(0)1256 882986
E-mail: sales@roxspurmc.co.uk
www.controlsdirect.com

PRODUCT DATA SHEET DS1111

GLASS TUBE VA FLOWMETER

SAFETY HOUSED GAPMETER TYPE GU

DESCRIPTION

Gapmeters type GU are glass tube Variable Area Flowmeters for direct display of liquid or gas flowrate. The GU housing provides a robust rigid frame, suitable for mounting directly into plant pipework, protecting the glass tube from pipework stress and random plant damage. The safety Perspex window gives good flow visibility, while protecting the operator. A safety blowout disc on the rear of the housing provides a relief vent for process fluids, in case of glass tube damage.

Glass tube VA flowmeters are simple and reliable in operation, and instantaneous in response – they offer flow visualisation to the operator, and the float rotation gives confirmation of correct meter performance. Standard tubes and floats offer low line pressure loss and a high resolution 100mm linear scale, fused into the glass tube. Fluid flow vertically upward through the tapered glass tube causes the float to rise to an equilibrium position. Flow rate is measured on the scale of the flow tube, along the top edge of the float.

The borosilicate glass tubes are individually scaled according to customers requirements, and individually flow calibrated.

FEATURES

- Robust construction
- Instant flow rate visual indication
- Suitable for installation in unsupported pipework
- Flow tube scaled for any gas or liquid
- Safety housed for operator protection
- Site interchangeable 150mm flowtubes

SPECIFICATION – GTF FLOW TUBE

Tube	Boroscilicate glass
Calibration	Custom scaled for gas or liquid and site conditions. Standard air and water flow tube ranges as opposite.
Scale Length	100mm
Scale markings	Fused ceramic ink
Accuracy	± 1.25% FSD standard (± 2.5% for 1CHD/1BHD models, ±3% for predicted scales)

ORDER CODE

G T F1 A H S–B

Tube Size (1, 2 or 3)

Tube Taper (A, B or C)

Float material
HS = Hollow stainless
HD = Hollow dural
SS = Solid stainless

Scale reference

SPECIFICATION – GU HOUSING

Connections	3/8" BSP female (Optionally 1/2" ANSI/15mm DIN flanged)
Housing	Polyester coated aluminium with polypropylene rear facing pressure relief vent.
Window	Solid perspex
Max Pressure	25 bar (non-shock)
Max Temperature	100°C (viton seals) 80°C (nitrile seals)

ORDER CODE

G U S 2 1 2

End connection blocks
S = stainless steel
B = plated brass
FS = flanged S/S

Tube fittings (Size 1, 2 or 3)

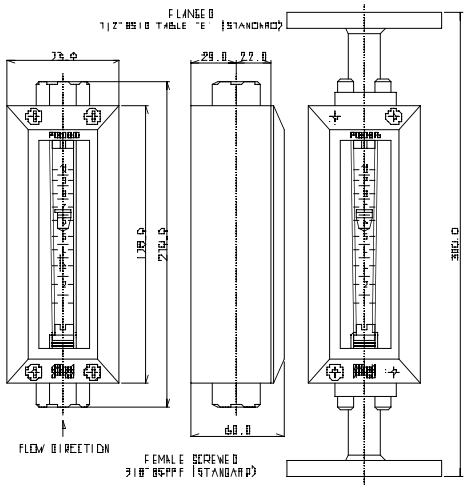
Seal material
1 = Nitrile O-rings
2 = Viton O-rings

Alarms
1 = not fitted
2 = Low alarm

FLOW RANGES

Model (for gases)	Air at ATP (1.013 bar + 20°C)	
	Scale B	Scale D
GTF 1 CHD	5-100 cm^3/min	-
GTF 1 BHD	50-250 cm^3/min	-
GTF 1 AHD	60-600 cm^3/min	2-40 L/hr
GTF 1 AHS	0.1-1.2 L/min	5-70 L/hr
GTF 2 CHD	0.2-2 L/min	10-120 L/hr
GTF 2 BHD	0.6-5 L/min	30-300 L/hr
GTF 2 BHS	1-10 L/min	-
GTF 2 AHD	1-12 L/min	50-700 L/hr
GTF 2 AHS	2-25 L/min	0.1-1.5 m^3/hr
GTF 3 AHD	6-50 L/min	0.3-3 m^3/hr
GTF 3 AHS	10-100 L/min	0.6-6 m^3/hr
Model (for liquids)	**Water at 20°C**	
	Scale C	**Scale E**
GTF 1 AHS	2-25 cm^3/min	-
GTF 1 ASS	10-80 cm^3/min	0.6-4.6 L/hr
GTF 2 BHS	20-280 cm^3/min	1-16 L/hr
GTF 2 AHS	50-800 cm^3/min	2-46 L/hr
GTF 2 ASS	0.2-1.5 L/min	10-90 L/hr
GTF 3 AHS	0.2-3.0 L/min	10-180 L/hr
GTF 3 ASS	0.4-4.4 L/min	20-270 L/hr

Note: The tabulation gives typical air and water flow ranges. Tubes are custom scaled for the required fluids and line pressure/temperature conditions. A wide range of standard tube scales are available.



ACCESSORIES

For fine flow control on a GU flowmeter installation, the FCV multi-turn needle valve is available in plated brass or stainless steel. FCV model flow ranges correspond to the three GTF tube sizes. Adaptors (type CVA) in brass or stainless steel allow the FCV to be connected directly to the GU flowmeter.
Infra-red sensors can be fitted to the GU frame to monitor the float position and provide latching high or low flow alarms.

For higher pressure operation or where metal tubes are required, the LMT Armoured Purgemeters should be considered.

Every effort has been made during the preparation of this document to ensure the accuracy of statements and specifications. However, we do not accept liability for damage, injury, loss or expense caused by errors or omissions made. We reserve the right to withdraw or amend products or documentation without notice.