

BROOKS®
INSTRUMENT

Beyond Measure







Variable Area Flowmeters

Built for Global Standards



CCOE | CE (EMC, RoHS, PED) | CRN | ECAS | IP66 / IP67 | KOSHA | NAMUR | NEMA 4X | SIL-2 on Alarms | TR-CU

Process-proven technology proudly manufactured in the USA

Sho-Rate™ Series Glass Tube Flowmeters	GT1600 Series Glass Tube Flowmeters	MT3750 Series Metal Tube Flowmeters	MT3809 Series Metal Tube Flowmeters
			
<p>The industry standard glass tube VA flowmeter for decades. Multiple material options available for a wide variety of applications.</p>	<p>Simple, rugged design for long-lasting performance with low and high-flow gas and liquid applications where process viewing is important.</p>	<p>Reliable, durable, low flow measurement for long-lasting performance in harsh environments.</p>	<p>Widest temperature, pressure, and flow ranges for measuring fluids in hazardous, remote areas.</p>
<ul style="list-style-type: none"> • Rugged, single piece frame construction • Easy-change design allows quick interchangeability of tube assemblies 	<ul style="list-style-type: none"> • Configurable to retrofit GT10XX, GT13XX and Full-View Series • Process connections can be rotated 360°, 180° viewing window, panel mount options • Optional integral inlet or outlet valve saves space, time & cost, eliminating potential leak points 	<ul style="list-style-type: none"> • Optional integral inlet or outlet valve saves space, time & cost, eliminating potential leak points • Optional alarms, transmitters and limit switch controllers provide added levels of measurement and control 	<ul style="list-style-type: none"> • Alarm functions meet SIL2 requirements • Multiple corrosion-resistant wetted materials and indicator housings available • 4–20 mA output with HART • Integrated FOUNDATION Fieldbus • Optional local operator interface with LCD screen
			

Custom Engineered Solutions

When your application requires specifications beyond our standard offerings, our custom engineered solutions program provides the flexibility to design a flowmeter for your unique process conditions.

- ▶ **Design Flexibility:** Configure flowmeter materials, connections, and ranges to match demanding process conditions.
- ▶ **Engineered Precision:** Eliminate unnecessary modifications or add-ons with a fit-for-purpose flowmeter.
- ▶ **Specialized Expertise:** Leverage our engineering team's experience to develop reliable, application-specific measurement solutions.

**Available for all products.*



Accessories & Replacement Parts



Alarms

Provides an added level of measurement and control where process conditions are critical



NRS™ Needle Control Valves

Designed for extremely low flow gas and liquid applications



Flow Controllers

Maintains a constant differential pressure to ensure constant flow



Mechanical Pressure Regulators

Compact, high-precision supply pressure regulators suitable for line or panel mounting



Tube and Float Assemblies

Quick replacements for glass tube meters reduce process downtime



Cartridge Valves

Easily replace integral valves for Sho-Rate and MT3750 meters

Engineering Documentation Support and Regulatory Requirements

Process-proven technology paired with years of dedicated expertise in supporting customer documentation and global regulatory needs.

- ▶ ITP (Inspection Test Plan)
- ▶ General Arrangement Drawings
- ▶ Sizing Calculation and Project Data Sheets
- ▶ Welding, NDE (Non-Destructive Exam), and Functional Test Procedures
- ▶ Support with many more certificates, technical, and quality documents

Glass & Metal Tube Flowmeters



*Standard Option Available			Sho-Rate™ 1250, 1350	GT1600	MT3750	MT3809		
Full Scale Flow Air Values based on reference conditions of 70°F 1 atm at STP	l/h	1,200,000					45,000	CFH
		73,000					2,500	
		22,000					810	
		3,400					120	
		46					1.62	
		16					0.57	
		6.7					0.24	
		3					0.11	
Full Scale Flow H ₂ O	l/h	100,000					27,000	GPH
		4,900					1,300	
		1,000					280	
		100					27	
		0.96					0.25	
		0.11					0.03	
		0.035					0.01	
Operating Pressure	Bar	430.9					6,250	Psi
		275.8					4,000	
		34.5					500	
		13.8					200	
		0					0	
Operating Temperature	°C	420					788	°F
		204					400	
		121					250	
		1					33	
		-50					-58	
		-198					-325	
Accuracy	10%							
	5%							
	3%							
	2%							
	1%							
	6 VDI/VDE FS							
	4 VDI/VDE FS							
	2.5 VDI/VDE FS							
Repeatability	1% FS							
	0.5% FS							
	0.25% FS							
Connection Types (Select Sizes)	Flange							
	Flange - Elbow							
	NPT (f)							
	NPT (m)							
	RC (f)							
	Integral Thread							
	VCR							
	Compression							
	Hose							

Rugged, Economical, Easy to Use



*Standard Option Available			Sho-Rate™ 1250, 1350	GT1600	MT3750	MT3809
Wetted Materials	Connection Materials / End Blocks	Stainless Steel	316	316/316L	316L	316/316L
		Brass				
		Aluminum				
		Monel® K500				
		Inconel 625				
		Titanium Gr. II				
		Hastelloy® C276				
	Tube	Borosilicate Glass				
		Stainless Steel			316L	316/316L
		Monel® K500				
		Inconel 625				
		Hastelloy® C276				
		Titanium Gr. II				
		Tefzel® Lined Stainless Steel				
	Float	Glass				
		Stainless Steel	316	316/316L	316L	316L
		Sapphire				
		Carboloy®				
		Tantalum				
		Titanium Gr. II				
		Monel® K500				
		Inconel 625				
		Hastelloy® C276				
		PVDF				
	Float Stops	Stainless Steel	316		316L	316L
		Teflon®				
		Monel® K500				
		Inconel 625				
		Hastelloy® C276				
		Titanium Gr. II				
		PVDF				
	Elastomers	Buna		O-Rings	O-Rings	
		Viton®				
		EPM/EPR/EDPM				
		Kalrez®				
		None				
		Neoprene				
		Teflon®			O-Rings	O-Rings
Electronics & Alarms	Inductive Sensor(s) / Switch(es)					
	Inductive Sensor(s) / Switch(es) with Relay Options					
	Reed Switch(es)					
	MAT Transmitter					
	HART Transmitter					
	Foundation Fieldbus					
Certificates & Approvals	International Agency Approvals					
	SIL2 for Alarm Options					
	Calibration Certificates					
	Material Certificates					
	Testing Certificates					
	Cleaning Certificates					
Valve Available						
Flow Controller Available						

Service and Support



Focused Expertise

As one of the pioneering manufacturers in variable area (VA) flowmeter technology, Brooks Instrument has created a diverse and proven portfolio of gas flowmeters, installed and in use across virtually every industry. Brooks Instrument has more than 70 years of global flow experience in over 80 countries, with successful applications ranging from nuclear and biotechnology to power and petrochemical.

Our global network of factory trained, certified flow specialists can help you select and configure devices that raise the performance and results of your processes to new levels.

Trust the expertise of the Brooks Instrument team and see why Brooks Instrument leads the world in variable area flowmeters.



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