

Flow Solutions for EPC Companies

Variable Area Flow Meters



BROOKS[®]
INSTRUMENT

Beyond Measure

Flow Solutions for EPC Companies

Process-proven technology. Dedicated EPC expertise.

When Engineering, Procurement and Construction (EPC) contractors with projects in oil, gas, chemical and other industries need high-performance flow meter technology and in-depth technical expertise, Brooks Instrument is their trusted source for reliable, accurate solutions. Brooks 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 performance and value speaks for itself: Our EPC partners come back to us project after project, year after year.

Metal Tube Variable Area Flow Meters

In EPC projects, on-time delivery and cost efficiency are critical—and by choosing Brooks, you choose one source and point of contact for a complete range of reliable, accurate variable area flow meters proven in thousands of applications. Our broad line of flow meters, including the MT3750 and MT3809 Series, incorporates key features engineered for tough oil and gas applications:

- Various process connection types (depending on base model):
 - Threaded - RcP, RCT, NPT
 - Flanged - ANSI, DIN, JIS, API
- Option for high alloys (Inconel 625, Hastelloy C, Titanium)
- Special options for high and low temperature applications
- Special MT3809 design for use in high pressure applications up to 1379 bar/20,000 psig

Glass Tube Variable Area Flow Meters

For industrial processes with low pressures or temperatures in laboratories for example, flow can also be measured accurately with the robust GT1600 glass tube variable area flow meters from Brooks Instrument. With a broad range of flow rates available, GT1600 glass tube flow meters are suitable for a variety of liquids and gases.

And with glass tube flow meters you have the ability to easily see the float and flow scales on the glass tube.



MT3809 Series
Metal Tube
VA Flow Meters



MT3750 Series
Metal Tube VA
Flow Meters

Widest temperature, pressure and flow ranges for measuring fluids in hazardous, remote areas.

Reliable, durable, low flow measurement for long-lasting performance in harsh environments.



Key Features

- Repeatable flow measurement even at low process temperatures down to -198°C (-325°F) and high process temperatures up to 420°C (788°F)
- Designed for high process pressures 1379 bar / 20,000 psig
- Optional local operator interface with LCD screen
- Alarm functions meet SIL 2 requirements
- Multiple corrosion-resistant wetted materials and indicator housings available
- Meets ASME B31.3 standard
- Analog & Digital I/Os: 4-20 mA, HART[®] 7, FOUNDATION Fieldbus[™]
- For use in low flow applications with high-pressure or hazardous fluids
- Compact design
- 4–20 mA output
- Good upgrade from glass tube flow meters
- Optional alarms, transmitters and limit switch controllers provide added levels of measurement and control

Performance

- Fluid Types — clean liquids, gases and steam
- Flow Range —
 - o Air: Up to 750 scfm / 1200 m³n/hr
 - o Water: Up to 440 gpm / 100,000 l/h
- Accuracy — ±1, ±2%, ±3%, ±5% FS
 - o Class 1.6, 2.5, 4.0 VDI
- Max Pressure —
 - o Standard 6000 psig (413.7 bar)
 - o Optional 20,000 psig (1379 bar)
- Temperature Range —
 - 198–420°C (-325 – 788°F)
- Fluid Types — clean liquids, gases and steam
- Flow Range —
 - o Air: Up to 110 scfh / 3.1 m³n/hr
 - o Water: Up to 26 gpm / 100 l/h
- Accuracy — ±3, ±5% FS
 - o Class 2.5, 4.0 VDI
- Max Pressure —
 - o Standard 1500 psig (100 bar)
 - o Optional 4000 psig (276 bar)
- Temperature Range —
 - 50–204°C (-58 – 400°F)

Variable Area Flow Meters



GT1600 Series Glass Tube Flow Meters

Simple, rugged design for long-lasting performance with low and high-flow gas and liquid applications where viewing the process is important.

Key Features

- Configurable to retro-fit GT1000, GT130x and Full-View models
- Premium materials of construction ensure safety, indoor and outdoor durability
- Process connections can be rotated 360°, 180° viewing window, panel or wall mount option
- Transparent scale for easy readability; polycarbonate safety shield for absolute safety
- Monitor critical flow conditions with optional alarm (purchase at time of order or add it in the field)
- Optional integral inlet or outlet valve saves space, time & cost, eliminating potential leak points

Performance

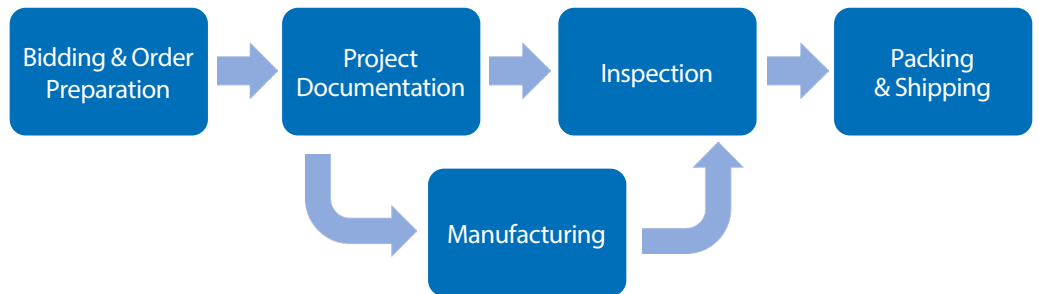
- Fluid Types — clean liquids and gases
- Flow Range —
 - o Air: Up to 150 scfm/270 m³n/h
 - o Water: Up to 21 gpm/4,800 l/h
- Accuracy — ±2, ±5, ±10% FS Class 2.5 acc VDI/VDE, (Optional ±1% FS, Class 1.6 acc VDI/VDE)
- Max Pressure — 500 psig (34.5 bar)
- Temperature Range — 1–121°C (33–250°F)

Our Project Approach

During our decades of experience in working with EPCs and related industries, Brooks Instrument has developed an efficient, unique project approach. This project approach consists of a number of consecutive project stages with a clearly defined output to ensure we deliver high quality products and technical documentation within your time frame.

During the first stage, our dedicated project team is fully engaged in bid preparation and technical bid evaluation to minimize time and risks for our customers.

Next, when creating Project Documentation, our dedicated project team has all the tools needed for ultimate flexibility in complying with changing project requirements while still focusing on timely delivery of required documentation.



Project Documentation & Certificates

Brooks Instrument supplies more than great instrumentation—we fully support you with extensive, project-specific documentation and services. This includes the following documents and certificates:

Technical Documents

- Certificate of Origin
- Certified Dimensional Drawings
- General Arrangement Drawings
- Instrument Data Sheets
- Manufacturing Data Books
- Name Plate / Tag Plate Sketches
- Sizing Calculation Sheets
- (Electronic) Spare Parts List

Quality Documents

- Factory Acceptance Test Report
- Inspection and Test Plan
- Manufacturing Procedures
- Welding Sketches (incl. WPS/PQR)

Certificates

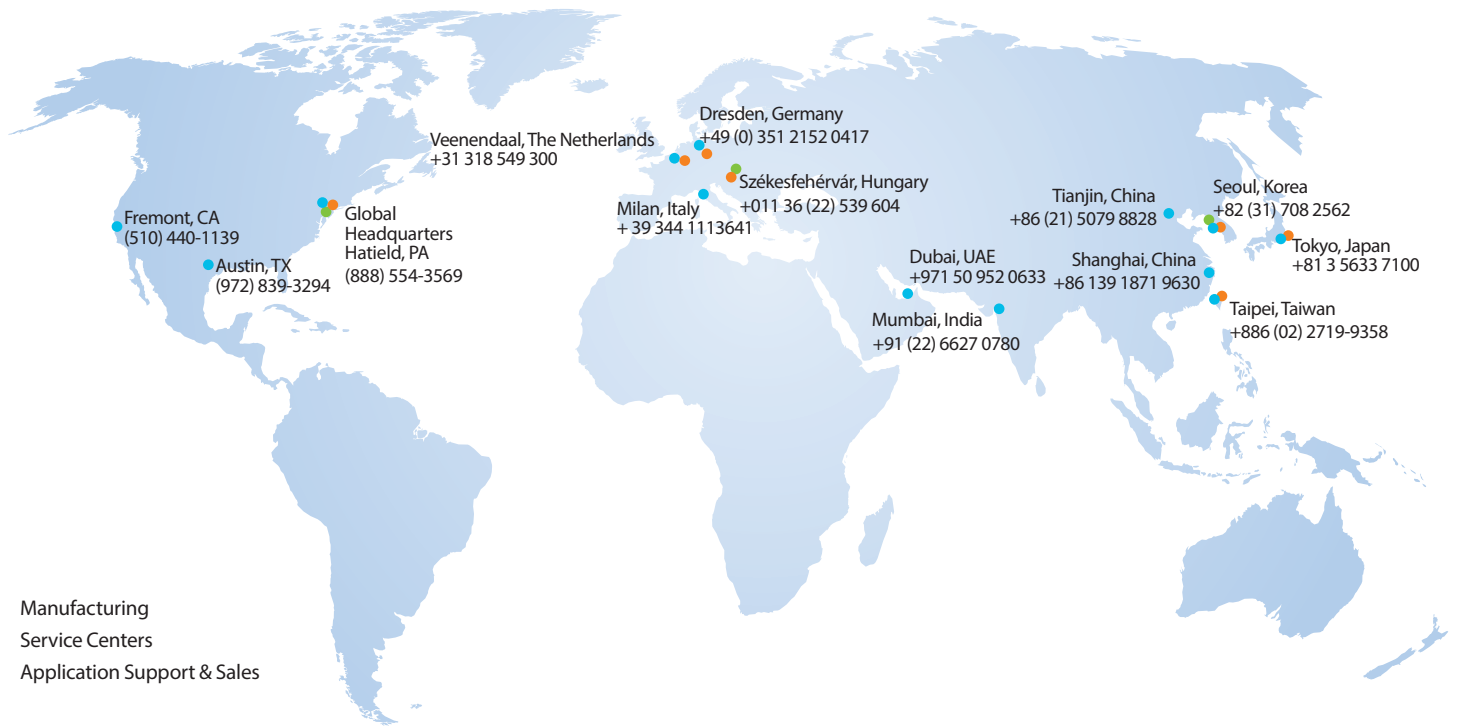
- International Calibration Certificate
- Liquid Dye Penetrant (LDP) Test
- Material Certificate EN10204 Type 2.2 or 3.1
- NACE Certificate (MR 0103 and MR 0175)
- Operator Qualification Certificates
- Paint Thickness Test
- Passivation ASTM A380
- Positive Material Identification (PMI)
- Welders Performance Certificate
- X-ray Examination

International Approvals

You can be confident using our flow meters for the widest range of applications and environments. We have earned key industry approvals that meet most international standards and codes, such as:



Service & Support



Visit www.BrooksInstrument.com
for more information on Service.

Global Service & Support

Brooks Instrument products are recognized as the most stable and reliable in the world. To keep your products operating at the highest level of accuracy and extend their life, your best choice is to trust Brooks Instrument Factory Certified Service repair and recalibration offerings.



Our Factory Certified Service is the only industry resource that ensures that your Brooks flow, pressure, vapor and vacuum products are serviced utilizing the same metrology standards, work instructions, equipment and custom software as our manufacturing processes—by expert technicians trained exclusively on servicing Brooks products.

Our global service center network offers fast turnaround on repair and recalibration requests. Complete details are available at BrooksInstrument.com/en/service-support.

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