

Fully integrated meters drive best performance

GE Sensing & Inspection Technologies' ultrasonic flow meters are high-accuracy precision instruments with each component of the meter—from electronics to transducers to flow spool—having an important role to play in the meter's overall performance. GE highly recommends that customers buy the complete meter from us to ensure that specified performance metrics are met. Purchasing the meter body along with the electronics and transducers has many advantages.

Greatest accuracy

Optimizing the accuracy of your meter begins with knowing the critical parameters and programming the meter correctly. When we provide you an integrated solution, we tie the critical parameters of all subassemblies (electronics, transducers, cables, and meter body) together into seamlessly. For example, path length is very important to getting the accuracy right

for an uncalibrated meter. Path dimensions depend on a lot of factors, such as pipe ID, nozzle length, transducer length and buffer length. A 1 degree error in determining path angle or a 3 mm to 4 mm error in determining path dimensions can cause a greater than 2% error in measurement accuracy. We mitigate these errors by using precision measurement tools like our CMM to record more than 50 points off of the transducers, flow cell and buffers. We determine actual path, pipe size and angle rather than using theoreticals.

We carry that same philosophy when programming sound speed and calibrating Tw into the meter. Our static tests are able to zero out any other errors that might exist in the system. These parameters all come with your pre-programmed meter and we maintain a record of your site file so that if there is an issue, the meter can be defaulted to factory settings. We consistently strive to provide the best accuracy meters to our customers.



High-accuracy CMM measurement

Parameter	Value	Unit
ID#1 CH1 VOLV	0.00	Ft/s
ID#1 CH1 VOLUP	0	KACF/PSH
ID#1 CH1 +TOTL	51291	ACF
ID#1 CH1 -TOTL	270	ACF
ID#1 CH1 TMR	26248.17	
ID#1 CH1 MDOT	0	LB/SEC
ID#1 CH1 +PRSG	12591	LB
ID#1 CH1 -PRSG	50	LB
ID#1 CH1 SS up	64.2	
ID#1 CH1 SS do	64.3	
ID#1 CH1 SNGSF	1137.921	Ft/s
ID#1 CH1 Top	1904.840	usec
ID#1 CH1 Tabur	1904.866	usec
ID#1 CH1 DELTA	-0.018	usec
ID#1 CH1 REYNE	0	

Tolerance verification of flow parameters



Highest performance

GE flow meters are known for their rangeability. A GF868, for example, has a turndown ratio of more than 3940:1 when engineered correctly. To get the maximum range from our meters, the path angle, the transducer recess, and the location of the path itself all have to meet our highest tolerance specifications. A GE engineered meter body will always meet our design specifications.

Long term mechanical integrity

Every GE flow meter is manufactured via a thorough quality control process that has an ISO9001 certification. There are more than a 100 points of quality checked on every meter spool to deliver the highest mechanical integrity. All inspection reports and factory settings for every completely assembled meter are stored in our database for future reference. We assemble the meter and do a complete performance check, including speed of sound measurement, so that when the meter reaches the field, it is engineered to perform for a very long time.

GE warranty and support

All our fully integrated flow meters come with the GE guarantee. GE stands behind its products and our customers will get the full GE support, regardless of where the meter was purchased and where it is currently installed. GE's global team will support its products from offshore platforms in West Africa to pipelines in Alaska.



Field commissioning and service

Leverage our experience

Your meter body may look like just another piece of pipe, but there is a lot of engineering and skill that makes it a measurement instrument. It all begins with our vendors. GE Sensing & Inspection Technologies follows an extensive vendor qualification process as part of our ISO9000 system that reviews not only the vendor's welding and fabrication capabilities, but educates the supplier on those elements of meter body that are critical to accurate flow measurement. Our engineers work as partners with our suppliers to give you the highest quality for your standard or custom application.

We strongly encourage our customers to purchase the entire meter from GE. For the highest standard of reliability, accuracy, performance, and support, you can rely on GE engineers to build meters with pride and integrity.



Electronics programming for customer-specific meter



imagination at work

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