



# FLUXUS® F706 and G706 4-Beam Clamp-on Liquid and Gas Flowmeter

Unrivalled Precision, Reliability and Repeatability

## Hydrocarbon Products Handling

Pipeline Monitoring & Balancing

Check Metering

Leak Detection

Product Detection



**FLEXIM**  
*when measuring matters*



# FLUXUS® F706 and G706 4-Beams for Precision

## Leading clamp-on ultrasonic flow measurement

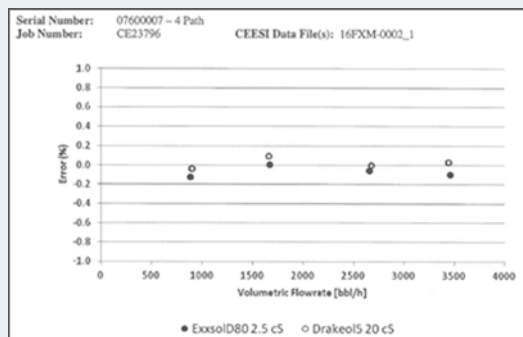
Temperature compensated transducers, unique digital signal processing with superior noise suppression, combined with a highly rugged design, result in an unrivalled degree of reliability, durability and accuracy - ensuring perfect operation of the system under the harshest field conditions and making it even suitable for buried or flooded installations (IP68 rated).

## Unrivalled Accuracy, Repeatability and Reliability

The F/G706 combines high precision with the advantages of non-invasive ultrasonic flow measurement. With its 4 beams, in reflect mode providing 8 paths through the fluid, the meter averages the result of up to 4 planes. This arrangement averages-out cross-flow and achieves the optimum non-invasive compensation. On longer straight runs, the 4-Beam meter achieves outstanding accuracy performance due to the individually averaged path effects and can thus be used for redundancy measurements of custody transfer meters or leak detection.

## Custody Transfer Accuracy

The F/G706 is capable of accuracy in the Custody Transfer class. Clamp-on meters installed will contain some uncertainty due to pipe uncertainties. These can be minimized with careful installation and UT pipe wall measurements. While installed "out of box" custody transfer accuracy is not possible, in many pipeline services like check-metering, leak detection, barge loading, tank unloading/loading it can be possible to calibrate the meter in-situ to achieve Custody class accuracy.



Calibration result at Colorado Experiment Engineering Station Inc. (CEESI) Calibration Facility

F/G706 calibrated on two hydrocarbon liquids







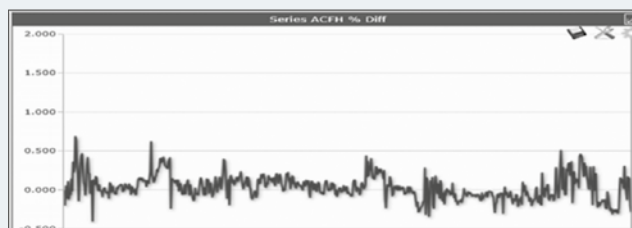
# The Solution for Challenging Midstream Applications

## Flow Measurement in Leak Detection Systems

Leak Detection applications depend on flowmeters with highest flow measurement accuracy, wide turndown and especially good repeatability and reliability. This must also be achievable under changing ambient conditions and with stationary or transient flow conditions. On the basis of its 4-Beam ultrasonic technology, the F/G706 is capable of providing such solutions for both liquid hydrocarbon products as well as natural gas applications. Being completely drift-free and detecting even the smallest flow rates, it is the ideal meter for leak detection purposes.

## Check Metering

Check metering points provide metering redundancy, providing an increase in reliability and accountability. The F/G706 non-invasive flow meter can be placed next to a custody transfer meter for continuous validation. Moreover with the F/G706 in place, downtime can be avoided in case the custody transfer meter is temporarily taken out for recalibration.



F/G706 compared to a Custody Meter with CEESmaRT System

## Pipeline Monitoring and Liquid Detection

Pipelines have to be monitored closely - especially within tank terminals where various hydrocarbon products can successively pass within the same line. Placing custody transfer meters at such measurement points can be very costly. FLEXIM's F/G706 meter provides the same levels of metering capability but more cost effectively. Furthermore, the F/G706 can be placed on any pipe, independent of its dimensions, material and inner pressure.

FLEXIM also provides a solution for non-invasive media detection. By measuring the sonic velocity of the flow medium, the meter clearly identifies the individual hydrocarbon product and can be used to help trigger valves and vents to reduce costly transmixing of media.



## Laboratory Accuracy under Field Conditions

High accuracy and proven laboratory performance under reference conditions is one task. Accuracy under field conditions is quite another thing:

- FLEXIM's transducers automatically compensate for ambient temperature changes – according to ANSI/ASME MFC-5.1-2011. This ensures no false measurement readings during temperature swings (day / night)
- FLEXIM's transducers are carefully paired according to their individual properties. This process lays the foundation for superior accuracies over a wide temperature and application range. It also ensures a negligible zero offset and facilitates the measurement of very low flow rates. There is no need for zeroing, or programmed "automatic zero" workarounds.
- FLEXIM's transducers are all individually factory calibrated, with storage of the calibration data on a "Sensprom" chip. The calibrated transmitter automatically reads the individual calibration data, avoiding potential errors and making transducer exchanges easy.

For FLEXIM, accuracy is a topic we take seriously. FLEXIM's specified installed-accuracy claims can seem conservative but we firmly believe that clients expect us to over-perform rather than disappoint. Ask us, if you want to learn more about the total measurement uncertainty for your specific application.

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**www.flexim.com  
or call us at:  
1-888-852-PIPE**

### Technical facts

#### Measurement uncertainty (volumetric flow rate):

FLUXUS® F706 (liquids)	± 1% of reading ±0.02 ft/s
FLUXUS® G706 (gases)	± 1 to 2% of reading ±0.02 ft/s

#### Transmitter:

Explosion protection:	
FLUXUS® F/G706	ATEX/IECEX Zone 1, FM Class I - Div 2
Power supply:	
FLUXUS® F/G706	100 ... 230 V AC, 24 V DC, 12 V DC
Outputs:	
FLUXUS® F/G706	4 - 20 mA active / passive, 4 - 20 mA HART active / passive, pulse, frequency, binary
Inputs:	
FLUXUS® F/G706	Pt100 / Pt1000, 4 - 20 mA active / passive, binary
Digital communication:	
FLUXUS® F/G706	Modbus RTU, Foundation Fieldbus

#### Available transducers:

Explosion protection:	
FLUXUS® F/G706	ATEX/IECEX Zone 1, FM Class I - Div 2
Pipe size range (inner diameter):	
FLUXUS® F706	0.24 inch to 255.9 inch
FLUXUS® G706	0.28 inch to 63 inch
Temperature range (pipe wall):	
FLUXUS® F706	-40 °F to +392 °F / WI: -328 °F to +1112 °F
FLUXUS® G706	-40 °F to +392 °F

For more detailed Information please download the Technical Specifications here: [www.flexim.com](http://www.flexim.com).

