



## Non-Intrusive Ultrasonic Clamp-on Flow Measurement of Liquids and Gases

# FLUXUS® F/G80X For Operation in Hazardous Areas

Chemical Industries

Petrochemical Industries

Downstream - Refining

Midstream -  
Hydrocarbon Transport

E&P - Offshore / Onshore



**FLEXIM Sets Standards**  
*when measuring matters*

# FLUXUS® F/G80X

## Specifically Designed for Demanding Environments

### From Oil & Gas Exploration and Production to Petrochemical and Chemical Processing

From wellhead to refinery, the flows of crude oil, natural gas and refined products need to be measured every step of the way. Harsh environments with corrosive atmospheres offshore or hot and dirty applications during crude oil refining require tough solutions.

Also during chemical processing, liquid media such as acids, caustics as well as highly viscous organic substances or highly pressurised gas lines place enormous material and mechanical stress upon wetted flow measurement technologies.

#### FLEXIM offers the better alternative:

- Being non-intrusive, the measurement system never gets into contact with the media inside the pipe and therefore does not suffer any wear and tear.
- Ultrasonic transducers are simply clamped onto the outside of the pipe - plant shut-downs for installation are a thing of the past.
- The measurement system can never be the cause for a potential pipe leak, cannot be prone to clogging and is virtually maintenance-free.
- It is suitable for all pipe sizes from 10 mm ( $\frac{3}{8}$  inch) diameter upwards, with no limitation on pipe material, wall thickness and media temperature.
- FLEXIM's ultrasonic flowmeters offer exceptional reliability and accuracy even at high and low flows due to their matched, calibrated and temperature compensated transducer pairs as well as sophisticated internal signal processing.
- With measurement from outside of the pipe wall, the system offers a long lifetime as well as high energy efficiency as pressure losses inside the pipe can be avoided.

FLEXIM's permanently installed and portable flowmeters for explosive and hazardous areas have already been proven worldwide in many demanding applications with major operators.

#### Chemical Industry

- Hazardous Organic and Inorganic Media
- Acids and Caustics
- Process Gases
- Polymerisation Processes
- Infrastructural Processes

#### Hydrocarbon Products Handling

- Hydrocarbon Products Flow Measurement
- Pipeline Integrity Monitoring
- Allocation Terminals
- LNG Terminals
- Underground Gas Storage
- Gas Distribution and Compressor Stations

#### Crude Oil Refining and Gas Processing

- Distillation Columns
- Cracker and Coker Units
- Petrochemical Processes
- Gas Processing

#### Oil & Gas Exploration On- & Offshore

- FWKO and Separator Outlets
- Coalescers
- Scrubbers and Reboilers
- Produced Water Management
- Chemical Injection



## Advantages

- Bi-directional flow measurement of liquids and gases in ATEX / IECEx Zone 1 and FM Class I, Div. 1 areas
- Very cost effective:
  - No pipe works
  - No process shut-downs
  - Virtually maintenance-free
- Matched, paired and wet calibrated flow transducers (traceable certification to national standards)
- Excellent zero point stability and drift-free
- Wide turndown ratio
- Independent of pipe size, material, operating pressure, medium and temperature
- High tolerance to entrained solids and gases
- Free of wear, tear and abrasion
- Not prone to clogging or corrosion
- No pressure loss or source of potential leaks and fugitive emissions

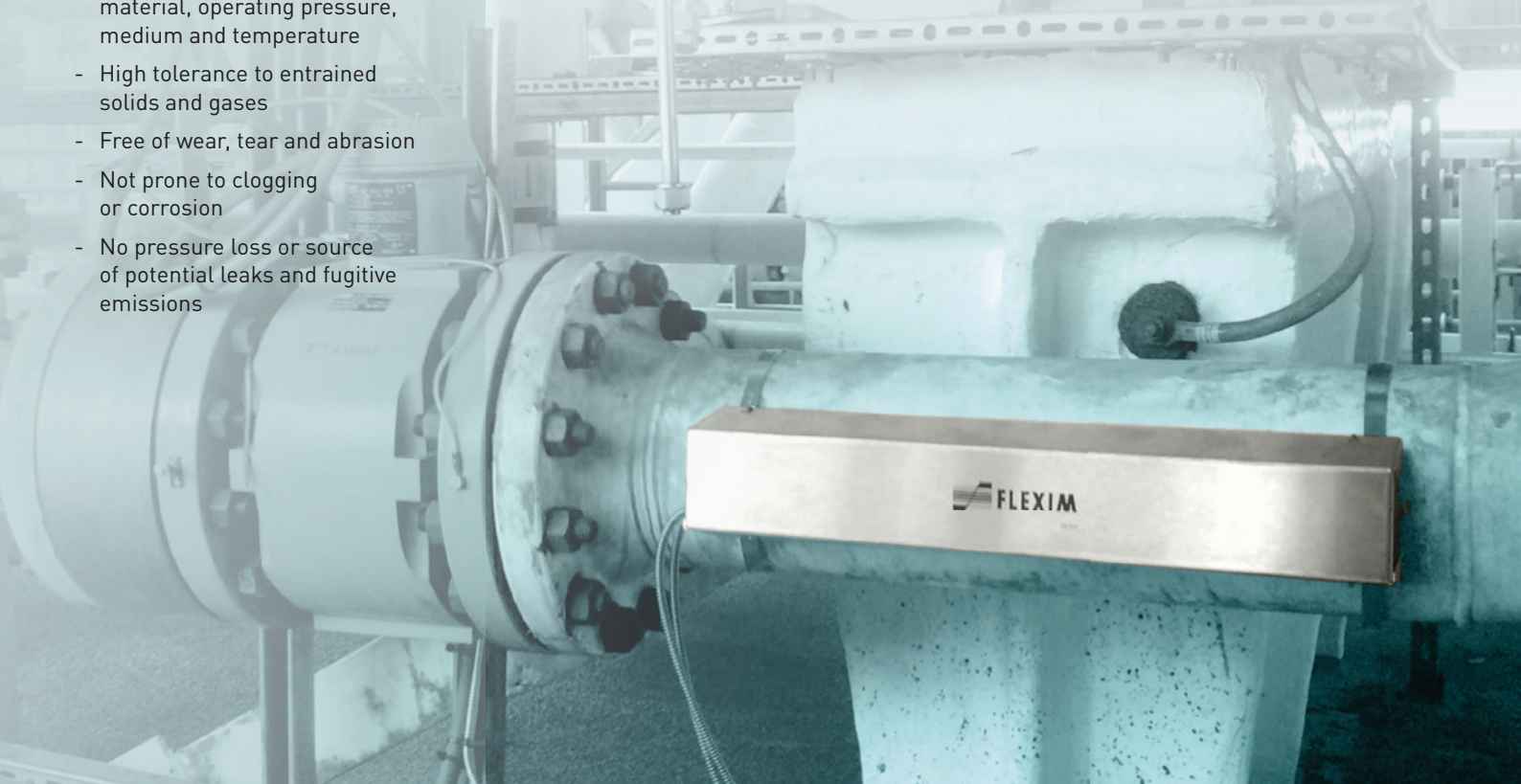
## Rugged, Reliable, Versatile

With its flameproof housing and stainless steel (SS316, IP68 optional) corrosion resistant transducers residing inside the VARIOFIX mounting fixture, ensuring a permanent contact pressure and high mechanical stability, the FLUXUS® F/G80X series is perfectly suited for every demanding industrial application.

The connection and electronic compartment of the FLUXUS® F/G80X series are hermetically sealed, so that the measurement system provides maximum operational reliability and safety, being ATEX / IECEx Zone 1 and FM Class I, Div. 1 approved.

Not only is the FLUXUS® F/G80X rugged and reliable, it is precise. Thanks to carefully matched and temperature compensated transducers (fully ANSI / ASME MFC 5M compliant) the FLUXUS® F/G80X offers an unmatched zero point stability and precise bi-directional flow measurement over an virtually unlimited turndown range.

The F808 single channel liquid flow meter is also available with an extra low flow option, allowing reliable and repeatable measurements, typically between 3 and 20 l/h on line sizes from ¼ to 1½ inches.



# FLUXUS® F/G80X

**ATEX / IECEx Zone 1 and  
FM Class I, Div. 1 approved  
liquid and gas flow meter**



## Technical facts

FLUXUS® F801	Explosion-protected offshore flowmeter for liquids
FLUXUS® G801	Explosion-protected offshore flowmeter for gases
FLUXUS® F808	Explosion-protected flowmeter for liquids
FLUXUS® F809	Explosion-protected flowmeter for liquids
FLUXUS® G809	Explosion-protected flowmeter for gases

### Measurement uncertainty (volumetric flow rate):

FLUXUS® F80X (liquids)	± 1% of reading ± 0.005 m/s
FLUXUS® G80X (gases)	± 1 ... 3% of reading ± 0.005 m/s

### Transmitter:

#### Explosion protection:

FLUXUS® F/G801	ATEX/IECEX Zone 1
FLUXUS® F808	ATEX/IECEX Zone 1, FM Class I - Div 1 / Div 2
FLUXUS® F/G809	ATEX/IECEX Zone 1, FM Class I - Div 1

#### Power supply:

FLUXUS® F/G80X	100 ... 230 V AC, 24 V DC
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#### Outputs:

FLUXUS® F/G801	4 - 20 mA active / passive, 4 - 20 mA HART active / passive 4 - 20 mA passive intrinsic safety, pulse / frequency / binary
FLUXUS® F808	4 - 20 mA active / passive, 4 - 20 mA HART active / passive
FLUXUS® F/G809	4 - 20 mA active / passive, 4 - 20 mA HART active / passive 4 - 20 mA passive intrinsic safety, pulse / frequency / binary

#### Inputs:

FLUXUS® F/G80X	-
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#### Digital Communication:

FLUXUS® F/G80X	Modbus RTU
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### Available transducers:

#### Explosion protection:

FLUXUS® F/G801	ATEX/IECEX Zone 1
FLUXUS® F808	ATEX/IECEX Zone 1, FM Class I - Div 1 / Div 2
FLUXUS® F/G809	ATEX/IECEX Zone 1, FM Class I - Div 1

#### Pipe size range (inner diameter):

FLUXUS® F801	10 mm ... 6500 mm
FLUXUS® F808	6 mm ... 6500 mm
FLUXUS® F809	10 mm ... 6500 mm
FLUXUS® G80X	7 mm ... 1600 mm

#### Temperature range (pipe wall):

FLUXUS® F80X	-40 °C ... +240 °C / WI: -200 °C ... + 600 °C
FLUXUS® G80X	-40 °C ... +200 °C

### FLEXIM GmbH

Berlin, Germany  
Phone: +49 30 93 66 76 60  
info@flexim.de

### FLEXIM Austria GmbH

Olbendorf, Austria  
Phone: +43 33 26 529 81  
office@flexim.at

### FLEXIM Instruments Benelux B.V.

Berkel en Rodenrijs, Netherlands  
Phone: +31 10 24 92 333  
benelux@flexim.com

### FLEXIM France SAS

Limonest, France  
Tél. : +33 4 27 46 52 10  
info@flexim.fr

### FLEXIM Instruments UK Ltd.

Northwich, UK  
Phone: +44 1606 781 420  
sales@flexim.co.uk

### FLEXIM Middle East

Dubai, U.A.E.  
Phone: +971 4430 5114  
salesme@flexim.com

### FLEXIM Instruments Asia Pte Ltd.

Singapore, Singapore  
Phone: +65 67 94 53 25  
salessg@flexim.com

### FLEXIM Instruments China

Shanghai, China  
Phone: +86 21 64 95 75 20  
shanghai@flexim.com

### FLEXIM S.A.

Santiago de Chile, Chile  
Phone: +56 22 32 03 62 80  
info@flexim.cl

### FLEXIM AMERICAS Corporation

New York, USA  
Phone: +1 63 14 92 23 00  
salesus@flexim.com

### FLEXIM Service and Support Center South America

Esco Argentina S.A., Buenos Aires  
Phone: +54 11 49 20 71 00  
flexim@escoarg.com.ar  
www.escoarg.com.ar

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



PolyAir Engineering Sàrl  
Champ Cheval 2  
1530 Payerne

026 520 75 00  
info@polyair.ch  
www.polyair.ch



[www.flexim.com](http://www.flexim.com)