



## ULTRASONIC FLOWMETER

**QStar Ultrasonic Flowmeters (UFM)** are available in two models: a portable for mobile sampling measurements and a fixed for measuring tasks over an extended period of time for continuous measurements in fixed installations.

Both units use the proven and highly precise ultrasonic transit time difference method. By employing the latest digital signal processors, these robust measurement flowmeters are extremely accurate and drift-free.

## FEATURES / BENEFITS

- Quickstart guide makes installation fast and easy
- Setup is completed in less than five minutes
- User-friendly menu is displayed on large, backlit LCD screen
- Parameters Calculator (Proprietary)
- Available via USB drive, Smartphone web app and online
- Calculates flowrate accurately based on pipe size and velocity
- Includes Reynolds number calculation
- Three sets of Transducers cover ½" to 240" pipe sizes
- Heat Resistant (up to 300° F) Transducers Included
- Integrated Heat Quantity Measurement Capabilities (Standard)
- Heat measurement inputs
- Pre-programmed software

## PRODUCT CONFIGURATION

### PRODUCT IDENTIFIER 1

**QM** = QStar Ultrasonic Flowmeter

### CLAMP-ON MOUNTING TYPE 2

**E** = Energy-Fixed\*

**F** = Fixed

**P** = Portable

### TRANSDUCER CHOICE AND PIPE SIZE 3

**05** = 1/2 MHz for Pipe Sizes 8" to 240"

**10** = 1 MHz for Pipe Size 1.5" to 16"

**20** = 2 MHz for Pipe Sizes 1/2" to 4"

1 2 3  
--->>>> **QM + F + 05**

## APPLICATIONS

### Power Stations

- Circulating water/service water
- District heating networks
- Pump protection
- Condensate, feed water and light oil measurement

### Water and Waste Water Management

- Sewage treatment plant
- Drinking water networks, verification of water meters
- Pump protection
- Distribution and consumption metering
- Leak detection

### Building Services Engineering

- Hot and cold water
- Cooling systems and air-conditioning units
- Hydraulic compensation
- Pump control and setup
- Optimization of heating systems

### Chemicals and Petrochemicals

- Crude and light oil
- Industrial and Waste Water
- Aggressive and toxic fluid
- Measurement of heat carriers, (thermal oils)

### Food and Beverage Industry

- Hygienic, reliable measurement of fluid
- Dosage measurements
- Cleaning solutions
- Water
- Beverages

## SPECIFICATIONS

Model:	OSTAR PORTABLE	OSTAR FIXED
Operation:	Intuitive via 8 main keys (Soft Keys), plain text display	Intuitive via 8 main keys (Soft Keys), plain text display
Languages:	English, Spanish and French	English, Spanish and French
Units:	Metric / US	Metric / US
Outputs:	2x 4-20 mA, 1x Relay, 1x MicroUSB 1x Pulse	2x 4-20 mA, 1x Pulse, 1x MicroUSB 1x Relay, RS232 (opt.)
Inputs:	2x PT100	2x PT100
Integrated Data Logger:	2 GB	N/A
Data Logged:	Measurement and totalizers	N/A
Data Format:	Can be exported into standard office programs	N/A
Memory Cycle:	Adjustable, 1 second to 24 hours	N/A
Power Supply:	Integrated rechargeable battery and 100-240V AC adapter	85-264VAC, 18-36VDC (opt.)
	Battery Duration: Approximately 5 hours	Power Consumption: 10 W
Protection Class:	IP40	IP65, Ex/ATEX (in preparation)
Housing:	Aluminium, PVC	PVC, wall-mounted
Dimensions:	10.4 x 7.5 x 2.7 in. (26.4 x 19 x 6.8 cm)	10.2 x 9.4 x 4.7 in. (25.9 x 23.9 x 11.9 cm)
Operating Temp:	-4° F to 140° F (-20° C to 60° C)	-4° F to 140° F (-20° C to 60° C)
Transducer Temp:	-40° F to 300° F (-40° C to 149° C)	-40° F to 300° F (-40° C to 149° C)
Weight:	3.3 lbs (1.5 kg)	2.9 lbs (1.3 kg)
Display:	QVGA (320x240), black and white, adjustable backlighting	QVGA (320x240), black and white, adjustable backlighting
Carrying Case:	20 x 16 x 16 (50.8 x 40.6 x 40.6 cm)	N/A

## MEASUREMENT

Principle:	Ultrasonic transit time difference with AFC technology
Values Meas:	Flow, flow speed, heat flow
Totalizers	Heat quantity, volume
Meas. Range:	+/- 98 ft/s (± 30 m/s)
Signal Damping:	0 - 100 sec (adjustable)
Diagnostic Functions	Acoustic velocity, signal strength, SNR, signal quality, amplitude, energy  Oscilloscope function allows graphical display and analysis of signals.

## MEASUREMENT ACCURACY

Inner Diameter Ø	Range	Deviation
<b>.39 - .98 in.</b> <b>(1.0 - 2.5 cm)</b>	6.56-98.42 ft/s (2-30 m/s)	2.5% of reading
	0-6.56 ft/s (0-2 m/s)	± 0.16 ft/s (0.05 m/s)
<b>.98-1.97 in.</b> <b>(2.5 - 5.0 cm)</b>	6.56-98.42 ft/s (2-30 m/s)	1.5% of reading
	0-6.56 ft/s (0-2 m/s)	± 0.10 ft/s (0.03 m/s)
<b>1.97-11.81 in.</b> <b>(5.0 - 30.0 cm)</b>	6.56-98.42 ft/s (2-30 m/s)	1% of reading
	0-6.56 ft/s (0-2 m/s)	± 0.07 ft/s (0.02 m/s)
<b>11.81-236.22 in.</b> <b>(30.0 - 600.0 cm)</b>	3.28-98.42 ft/s (1-30 m/s)	1% of reading
	0-3.28 ft/s (0-1 m/s)	± 0.03 ft/s (0.01 m/s)
Repeatability for majority of applications is <0.2%		

**Service & Warranty:** For technical assistance, warranty replacement or repair contact your **FLOMEC®** or **GPI®** distributor:

In North or South America: **888-996-3837 / FLOMEC.net**

Outside North or South America: **+61 2 9540 4433 / FLOMEC.net**

Wichita · Sydney · Mexico City

GREAT PLAINS INDUSTRIES 