

Integrated measuring systems for the whole water cycle



Open Channel Flowmeter *Mainstream IV*



Portable



Measures from 1 cm/s to 5 m/s

Measurement accuracy: 1 mm/s

Bi-directional velocity
measurement

Portable version -
1 year battery life

Memory capacity
250 000 values



Permanent



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Application

The Mainstream Doppler flowmeter measures and records flows for open channels and part-filled pipes.

The Mainstream is used:

- either in portable configuration, for survey and diagnostic work, for precise flow data in sewer networks,
- or in fixed configuration, for regulatory works and overflow survey.



Main features

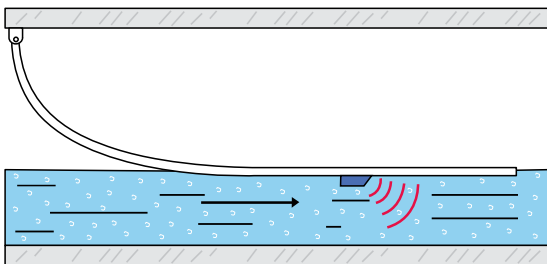
The Mainstream embeds a CPU, a level sensor and a velocity sensor:

- Level is measured by ultrasonic probe or using a piezo-resistive sensor,
- Velocity is measured by a Doppler-effect velocity sensor.

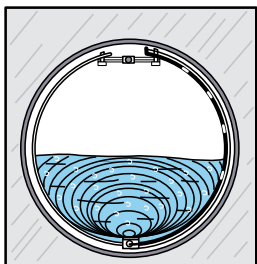
The Mainstream is the only flowmeter that measures actual mean velocity:

- Accurate measurement, irrespective of downstream effect,
 - Constant performance in stable conditions or in transient conditions.
- Suitable for infiltration water measurement, due to its signal quality at low velocities, down to 1 cm/s,
 - All our sensors are calibrated on our own calibration benches, with COFRAC interface.

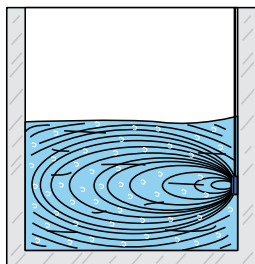
Various installations



With floating support



With hooping and separator



On rectangular channel



Portable Mainstream







Level/velocity sensor with support



Permanent Mainstream

Technical specifications

 <p>Mainstream Permanent version</p>	CPU	Display	Backlit LCD screen. On/Off key.	
		Weight	1.5 Kg.	
		Waterproofing	IP 66.	
		Material	Aluminium alloy case.	
		Data recorded	Flow	Instantaneous / Totals
			Recording	Intervals - fixed station: 5 seconds to 1 hour.
			Memory capacity	250,000 values - FIFO memory.
		Operating temperature	-40°C to +90°C.	
		Power supply	24 V DC \pm 2% + 12 V DC backup battery, charged by 24 V.	
			Input	Possibility of connecting two level sensors and one velocity sensor.
Output signals	2 contacts (Vmax 40 V, Imax 0.3 A) activated as required, by level, velocity, flow, volume, signal quality or battery voltage.			
	3 output signals 4-20 mA, as required, for depth, velocity, flow, signal quality: - active (24 V DC supply): common optic-isolated; Rout: 47 Ω ; External Rmax: 600 Ω ; Aux. Imax: 125 mA			
	- passive (12 - 24 V DC supply): optic-isolated; Rout: 47 Ω ; Vmin: 8 V, Vmax: 24 V			
Software	WINFLUID interface. Operates with Winfluid release 2.97 or later.			
Dimensions	260 x 160 x 90 mm.			
 <p>Mainstream portable version</p>	Portable CPU	Display	Backlit LCD screen. On/Off key.	
		Weight	5 kg with internal battery.	
		Waterproofing	IP 68.	
		Material	Copolymer polypropylene resin	
		Data recorded	Flow	Instantaneous / Totals.
			Recording	Intervals from 5 seconds to 1 hour.
			Memory capacity	250,000 values - FIFO memory.
		Operating temperature	-10°C to +70°C.	
		Power supply	Rechargeable internal battery	12V-7.5Ah. En option : 12V - 12Ah.
			Battery life	1 year for 1 measurement per minute. External battery facility (12 V - 24 V).
Input	Possibility of connecting one level sensor and one velocity sensor.			
Output signals	Portable: 2 contacts (Vmax 60 V, Imax 0.2 A), activated as required, by depth, velocity, flow, volume or signal quality.			
Software	WINFLUID interface. Operates with Winfluid release 2.21 or later.			
Dimensions	280 x 250 x 125 mm.			
 <p>Doppler-effect velocity sensor</p>	Material	Machined PVC.		
	Method	Dual acoustic beam measuring velocity.		
	Measurement range	1 cm/s to 5 m/s in both directions.		
	Data	Mean velocity.		
	Resolution	1 mm/s.		
	Min. water level	Velocity measurement from 15 to 20 mm above the sensor.		
	Temperature range	-10°C to +85°C.		
 <p>Piezo-resistive depth sensor</p>	Material	Titanium or stainless 316L.		
	Sensor	Piezo-resistive level sensor, immersed, 4-20 mA (12 - 24 V) passive.		
	Measurement range	As required (0 - 150 cm, 0 - 350 cm).		
Option	Level sensor	Ultrasonic air signals 4-20 mA (12 - 24 V) active.		

Products available for sales and rental. Please contact us for more information.

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