

HVFlo

PORTABLE WATERPROOF LOGGING FLOW METER 



HVFlo Xci features MACE Doppler ultrasonic velocity sensors utilizing MACE Advanced Signal Processing (MASP) technology that “see” across the entire stream profile to give a true average velocity. MASP allows HVFlo Xci to produce superior results under a very wide range of hydraulic operating conditions.

Even under full pipe, surcharge, or reverse flow conditions, HVFlo Xci will produce accurate, repeatable results every time.

A MACE WebComm card can be installed to give remote access to your data via GSM/3G cell networks. WebComm alarms allow users the ability to send SMS or email alarms to an unlimited number of personnel within an organisation.

Benefits

- The HVFlo Xci operates under a very wide range of hydraulic conditions, and will produce accurate, repeatable results even under full pipe, surcharge or reverse flow conditions
- Lightweight for easy handling
- Rechargeable battery offers long-life without costly new batteries
- Excellent data storage, typically 2 years @ 5 minute logging
- Typically 180 day battery discharge cycle @ 5 minute logging
- IP68 to 3 meters

Applications

- Inflow & Infiltration Studies
- Combined Sewer Overflow Studies
- Pump Station Monitoring
- Long & Short Term Sewer Flow Monitoring
- Sewer System Capacity Analysis
- Storm Water monitoring
- Industrial discharge monitoring
- Quantifying Rehabilitation Effectiveness
- Billing Networks
- Compliance metering

HVFlo Xci is a high performance battery operated open channel flow monitoring solution for wastewater, stormwater and industrial discharge applications



HVFlo XCi Specifications



GENERAL

Weight	Approx. 5kg (11lbs)
Dimensions	36.5cm (H) x 26cm (W) x 17cm (D) 14.4" (H) x 10.2" (W) x 6.7" (D)
Enclosure rating	IP68 to 3 metres
Enclosure material	UV stabilized polycarbonate - vented to atmosphere
Operating temperature (with internal battery installed)	-15 to +50° C (5 to 122° F)
Operating temperature (with internal battery removed and external power used)	-20 to +65° C (-4 to 150° F)
Program memory	2 Mb flash (sufficient for 600,000 discrete readings)
Data storage	Typically 2 years data logging - 3 parameters @ 5 min
Power source	Internal 12Volt 7.2Ah battery
Power usage	Typically 180 days at 5 minute intervals with daily data upload via MACE WebComm
Units of measure	User definable (metric/US)
Application software	FloCom+ PC software for system configuration, data downloading and velocity profile testing. Minimum system requirements - Windows® XP
Remote communications	MACE WebComm card via GSM/3G cell networks
Factory backup	24 months - parts and labour guarantee

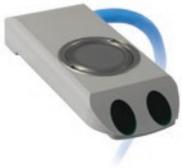
DEPTH MEASUREMENT

Method	Ceramic pressure transducer with large flat sensing diaphragm which allows straight, undeflected flow over the sensing area to reduce drawdown effects at high stream velocities and provides for self cleaning with an impervious Alumina ceramic surface.
Full scale range	4m (13ft) above the transducer face
Accuracy	0.2% of full scale at constant temperature in a static stream. 1% of full scale over a stream 5 to 55° C (41 to 130° F)
Resolution	1mm (0.04")
Overrange	60m (200ft) without damage
Min. operating depth	17mm (0.67")

VELOCITY MEASUREMENT

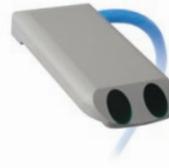
Method	Submerged Ultrasonic Doppler
Range	±0.025 to ± 8.0 m/s (±0.08 to ± 26ft/s)
Resolution	1mm at 1.0 m/s (0.04" at 3.3ft/s)
Accuracy	±1% up to 3.0 m/s (±1% up to 10ft/s)
Urethane sensor cable	9mm (D) up to 50m (L) (0.35" (D) up to 164ft (L))
Min. operating depth	40mm (1.57")
Max. operating temperature	60° C (140° F)

DOPPLER AREA/VELOCITY SENSOR



ZX SnapStrap mounted, combined velocity and depth sensor for use in partially full pipes or open channels

Pipe size	0.15 to 2.54m (6" to 100") diameter
Max. channel width*	3m (10ft.)
Dimensions	12.5cm (L) x 5cm (W) x 1.6cm (H) 5" (L) x 2" (W) x 0.63" (H)
Wetted materials	PVC, Alumina ceramic and epoxy
Pipe intrusion area	8cm ² (1.25 sq.")

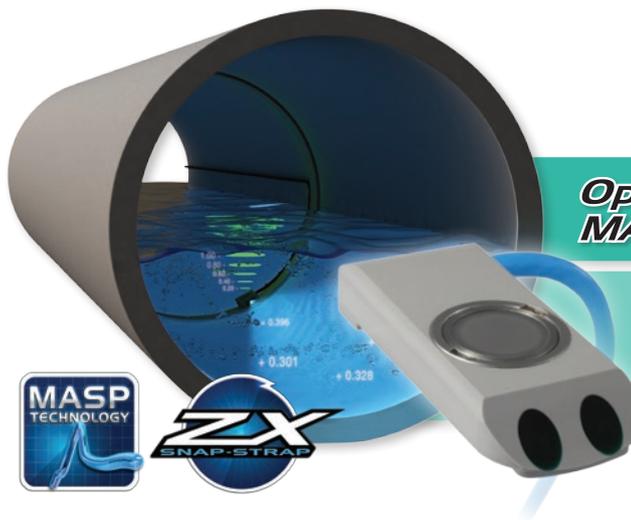


DOPPLER VELOCITY SENSOR

ZX SnapStrap mounted, velocity sensor for use in full pipes or open channels (when used in conjunction with a depth sensor)

Pipe size	0.15 to 2.54m (6" to 100") diameter
Max. channel width*	3m (10ft.)
Dimensions	12.5cm (L) x 5cm (W) x 1.6cm (H) 5" (L) x 2" (W) x 0.63" (H)
Wetted materials	PVC and epoxy
Pipe intrusion area	8cm ² (1.25 sq.")

*MACE Doppler ultrasonic sensors **will** operate in wider channels, but a reliable stream gauging **must** be performed for best system accuracy.



Open channel flow measurement MACE Area | Velocity Sensor

- ✓ Patented Doppler ultrasonic sensor with MASP Technology
- ✓ Easy to install in existing pipework with MACE ZX SnapStrap
- ✓ Operates in regular and irregular cross-sections
- ✓ Reliable under difficult hydraulic conditions

Note to end users: These specifications are subject to change at any time without notice. MACE takes no responsibility for the use of these figures. Please consult MACE for the latest specifications before using them in contract submittals or third party quotes etc. MACE reserves the right to change specifications without prior warning. All quoted figures are based on test conditions and are subject to variation due to site conditions.