DOF6000-P Portable Series

The DOF6000 series flowmeter consists of Flow calculator and the Ultraflow QSD 6537 Sensor.
The Ultraflow QSD 6537 Sensor is used to measure water velocity, depth, and conductivity of water flowing in rivers, streams, open channels and pipes. When used with a companion Lanry DOF6000 Calculator, flow rate and total flow can also be calculated.
The flow calculator can calculate the cross-sectional area of partially filled pipe, open channel stream or river, for stream or river, with up to 20 coordinate points describing the river's shape of cross section. It is suitable for various applications.

Ultrasonic Doppler *Principle in Quadrature Sampling Mode is utilised to measure water velocity. The 6537 Instrument transmits ultrasonic energy through its epoxy casing into the water. Suspended sediment particles, or small gas bubbles in the water reflect some of the transmitted ultrasonic energy back to the 6537 Instrument's ultrasonic receiver instrument that processes this received signal and calculates the water velocity.*

Water depth *is measured with two methods. An ultrasonic depth sensor measures water depth using the ultrasonic principle from a top mounted sensor on the instrument. Depth is also measured using the pressure principle from a bottom mounted sensor in the instrument. These two sensors provide flexibility in depth measurement. Some applications, for example measuring from the side of a pipe, better suits a pressure principle, while other applications in clear open channels better suit an ultrasonic principle.*

The 6537 Instrument has a ***4 electrodes conductivity instrument (EC) i****ncluded to measure the quality of the water, with four electrodes exposed to the water at the top of the instrument. Water quality is measured on an ongoing basis and this parameter can be recorded along with velocity and depth to better analyse the nature of the water in open channels and pipes.*

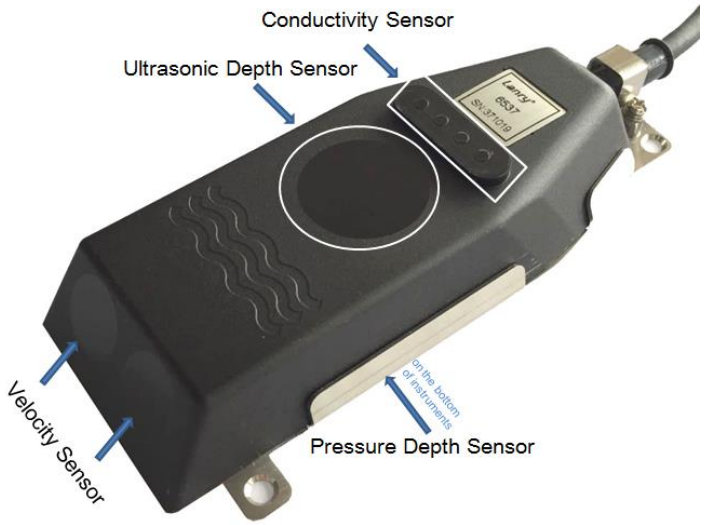
Features：

- Rechargeable battery can work up to 50 hours.
- 20 coordinate points to describe cross section of the river's shape.
- One instrument can measure the velocity, depth and conductivity simultaneously.
- Velocity Range : 0.02mm/s to 13.2m/s bi-directional, accuracy is ±1% R. Flow rate range is optional (0.8m/s; 1.6 m/s; 3.2 m/s; 6.4 m/s;13.2m/s).
- Pressure Depth Range: 0 to 10m; Accuracy: ±2mm. Ultrasonic Depth Range: 0.02-5m; Accuracy: ±1mm.
- Measure velocity in both forward flow and back flow.
- Depth is measured by both the pressure sensor and ultrasonic level sensor principles.
- With barometric and pressure compensation function.
- IP68 Epoxy-sealed body design, designed under water installation.
- RS485/MODBUS output, connect to computer directly.

Specification:

Sensor:

Velocity:	Velocity range:	20mm/s-0.8m/s; 20mm/s-1.6m/s; 20mm/s-3.2m/s (default); 20mm/s- 6.4m/s; 20mm/s-13.2m/s Bidirectional velocity capability
	Velocity accuracy:	±1% R
	Velocity resolution:	1mm/s
Depth (Ultrasonic):	Range:	20mm - 5000mm (5m)
	Accuracy:	± 1mm
	Resolution:	1 mm
Depth (Pressure)：	Range:	0mm to 10000mm (10m)
	Accuracy:	±2mm
	Resolution:	1 mm
Temperature：	Range:	0°C - 60°C
	Accuracy:	±0.5°C
	Resolution:	0.1°C
Electrical Conductivity (EC):	Range:	0 to 200,000 µS/cm, Typically ± 1% of measurement
	Accuracy:	±1% R
	Resolution:	±1 µS/cm
	recorded as a 16-bit value (0 to 65,535 µS/cm) or a 32-bit value (0 to 262,143 µS/cm)	
Tilt (accelerometer):	Range:	±70° in roll and pitch axes.
	Accuracy:	±1° for angles less than 45°
Output:	SDI-12:	SDI-12 v1.3, Max. cable 50m
	RS485:	Modbus RTU, Max. cable 500m
Environmental：	Operating temperature:	0℃~+60℃water temperature
	Storage temperature:	-20℃~+60℃
	IP class:	IP68
Others：	Cable:	The standard cable is 15m, the maximum option is 500m.
	Sensor material:	Epoxy-sealed body, Marine Grade 316 Stainless Steel Mounting Bracket
	Sensor size:	135mm x 50mm x 20mm (L x W x H)
	Sensor weight:	1kg with 15m of cable

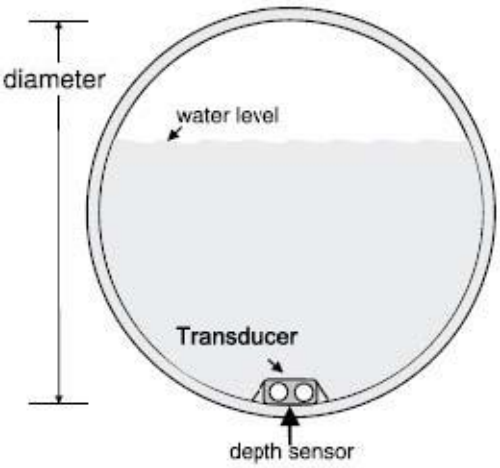


Sensor Functions

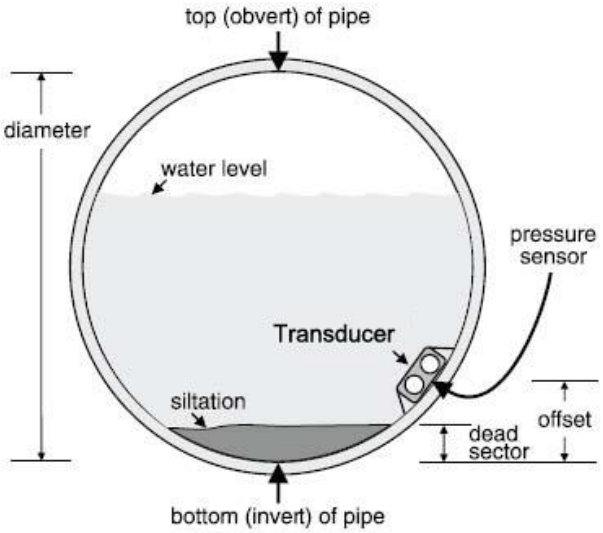
Calculator:

Type:	Portable
Power supply:	Calculator:85-265VAC (Charging battery)
IP class:	Calculator: IP66
Operating temperature:	0℃~+60℃
Case material:	Fiber Glass
Display:	4.5” color LCD
Output:	Pulse,4-20mA（Flow & Depth）,RS485/Modbus, Datalogger, GPRS
Size:	270L×215W×175H (mm)
Weight:	2.4 kg
Data storage:	16GB
Application:	Partially Filled Pipe: 150-6000mm; Channel: width >200mm

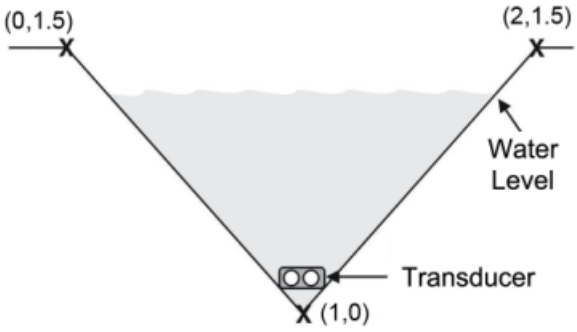
Installation Details:

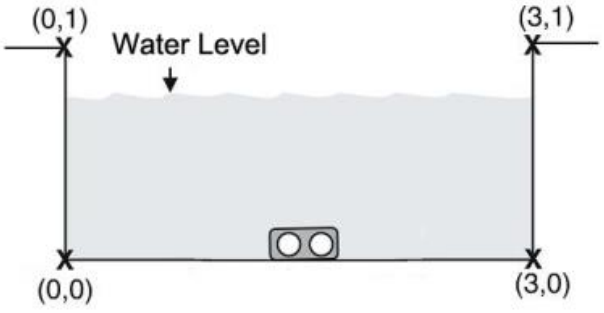


Partially pipe

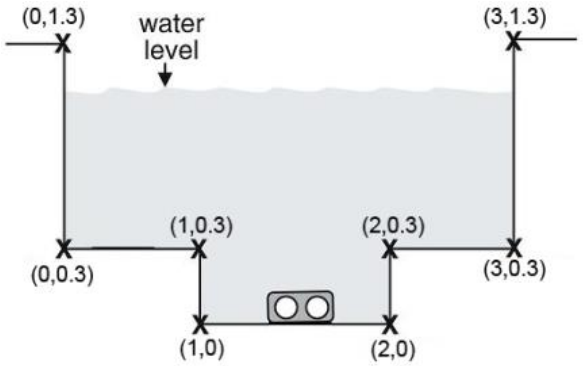


Pipe with siltation on bottom

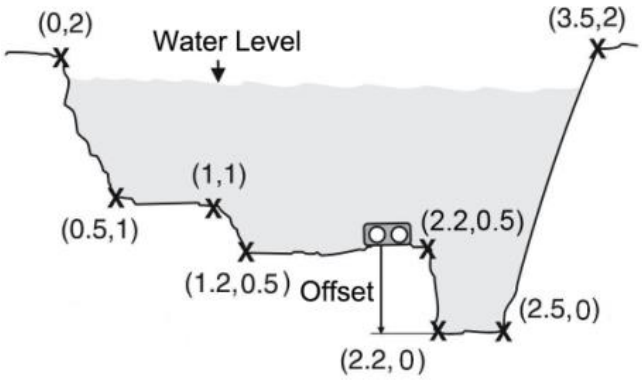




Triangle Channel



Rectangular channel



Polygonal channel

Irregular-shaped channel

Configuration code:

DOF6000	**Doppler open channel flow meter**					
	Caculator					
	W	Wall-mounted				
	P	Portble				
		Power supply				
		A	85-265VAC			
		E	24VDC (only for Wall-mounted Caculator)			
			Output			
			N	None		
			C	4-20mA		
			P	Pulse		
			F	RS485 (Modbus)		
			D	Data logger		
			G	GPRS		
				Level range		
				6537	0 to 10m	
					Sensor cable length	
					15m	15m (standard)
					XXm	more length, please contact us

DOF6000	—	**P**	—	**A**	—	**N**	**M**	— **6537**	— **15m**	(example configuration)

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