

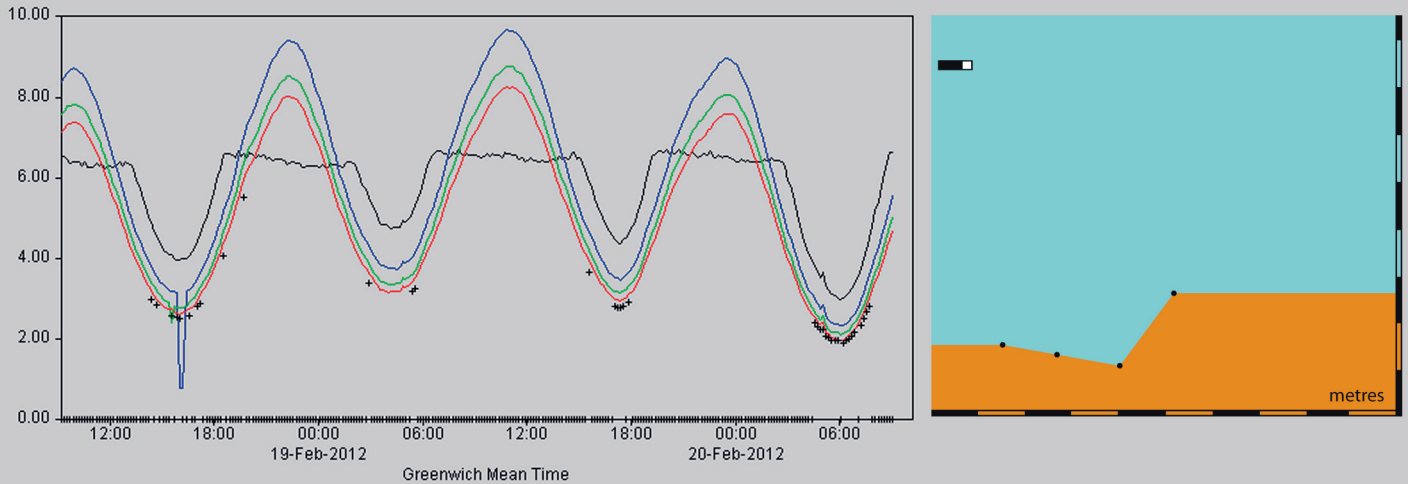
What's the distance to the seabed? How deep is my scour hole? What shape does it have? At what rate does sedimentation build up in my dam/reservoir? The answers to these questions are provided by the **Nortek Scour Monitor**; an instrument that measures the distance to the seabed along four downward looking narrow acoustic beams that fan out in a single axial plane. Changes in seabed level (scour) are measured in real-time and relayed back from the field, even during storm periods, thus providing invaluable information for modelers of these crucial changes, as they occur.

# Scour Monitor

Acoustic measurements  
of distance to seabed

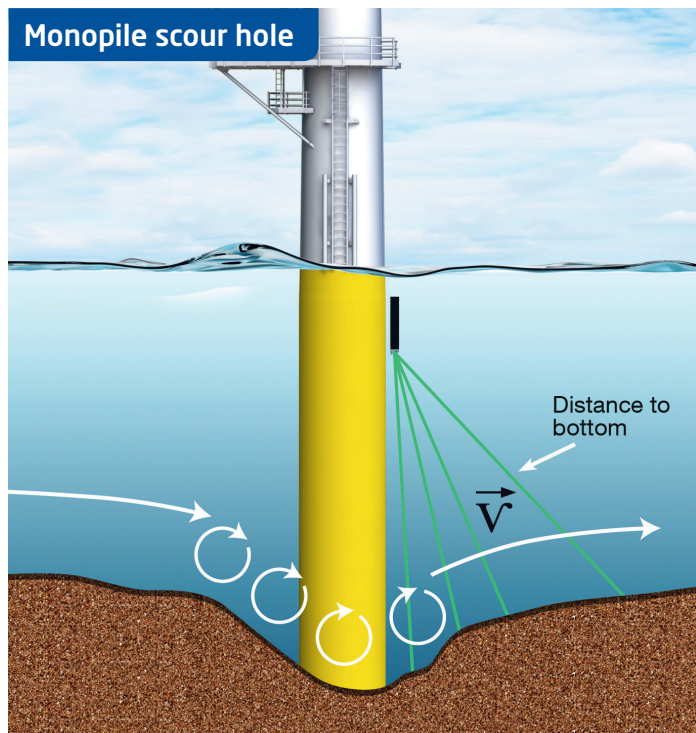
## Distance to bottom measurements

— Acoustic Range at Denton Wharf  
— Acoustic Range at Denton Wharf  
— Acoustic Range at Denton Wharf  
— Acoustic Range at Denton Wharf  
+ Bed Level at Denton Wharf



The distance from the Scour Monitor to the seabed along each of the four beams is instantly displayed on a password-protected web site. The displayed data are corrected for tilt and beam angles, to provide true bottom elevation as a function of time. Data are displayed both graphically and numerically.

## Monopile scour hole



The intensity of the acoustic return signal along four narrow beams, with angles 10, 20, 30, and 45 degrees from the vertical is measured. The bottom reflection provides a strong peak in signal amplitude, which is used to determine the exact distance.

## The scour monitor



The Scour Monitor head, showing the four transducer arrangement. The instrument has no protruding parts, making mounting arrangements less susceptible to damage.

CURRENT AND WAVE MEASUREMENTS IN THE OCEAN, LAKE AND LABORATORY



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True innovation makes a difference

## Transducer

Frequency:	<b>2.0 MHz</b>	<b>1.0 MHz</b>
Beam width:	1.7°	3.4°
Beam angles:	10°, 20°, 30° and 45°	10°, 20°, 30° and 45°
Resolution:	1-1.5 cm	2-3 cm
Blanking distance:	0.1 m	7.0m

## Measurement

Vertical range:	10 m	30 m
Along beam range:	19.4 m	45.4 m
Number of cells:	96	96
Measurement region:	0.1 m - 10 m	7.0 m - 30 m
Cell size:	20 cm	40 cm
Accuracy:	10 cm	20 cm

## Temperature: Thermistor embedded in sensor head

Range:	-4°C to 30°C
Accuracy/resolution:	0.1°C/0.01°C
Time response:	10 min

## Tilt: Liquid level

Accuracy/resolution	0.2°/0.1°
Maximum tilt:	30°
Up or down:	Automatic detect

## Data communication

I/O:	RS232, RS422
Baud rate:	9600 standard, 300-115200 (User setting)

## Internal recording

Capacity:	9 Mb expandable
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## Power

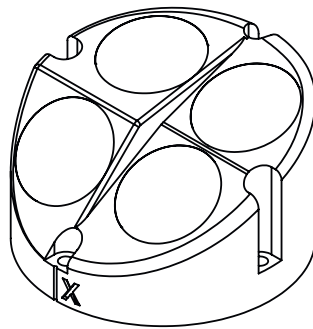
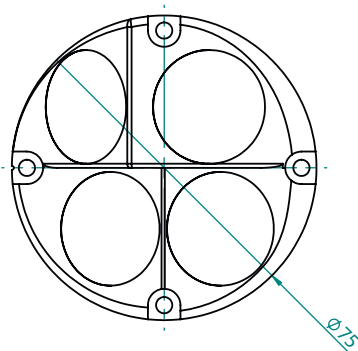
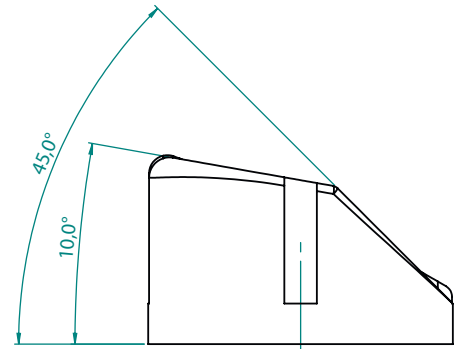
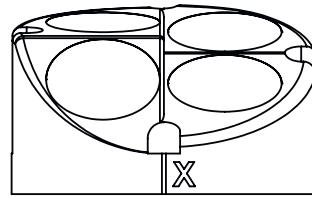
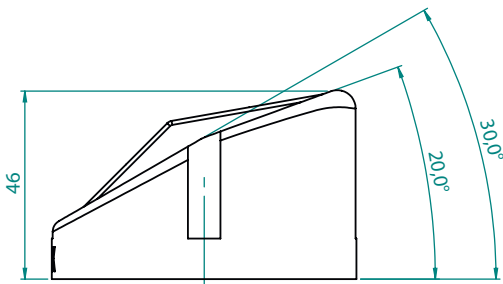
DC input:	9-16 VDC
Internal battery:	18AA Alkaline cells/50 Wh
New battery voltage:	13.5 VDC

## Materials

Standard model:	Delrin® and polyurethane
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## Dimensions

Weight in air:	1.7 kg
Weight in water:	0.7 kg buoyant
Length:	590 mm
Diameter:	75 mm




All dimensions in mm.



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