

# Echoes Compact

High-performance, portable sub-bottom profiler for inland & coastal environments

Designed for USVs and small vessels, Echoes Compact sub-bottom profiler delivers high-resolution images of sedimentary deposits & buried objects from very shallow water down to 400m of water depths. One-man portable, it is ideally suited for river, lake and ocean surveys regardless of the seabed topography.



## FEATURES

- One-man portable Chirp system
- Widest spectrum coverage (5 – 15 kHz)
- Versatile implementation: USV kit, pole-mounted or simply roped
- Vertical resolution (7.5 cm)
- Penetration up to 40 m in clays
- Good penetration from clay to sands due to a powerful low frequency signal

## BENEFITS

- 2-parts splittable system
- True flat bandwidth ultimate resolution capacity and power efficiency
- Perfect positioning and heave compensation
- Compatible with any bathymetric echosounder

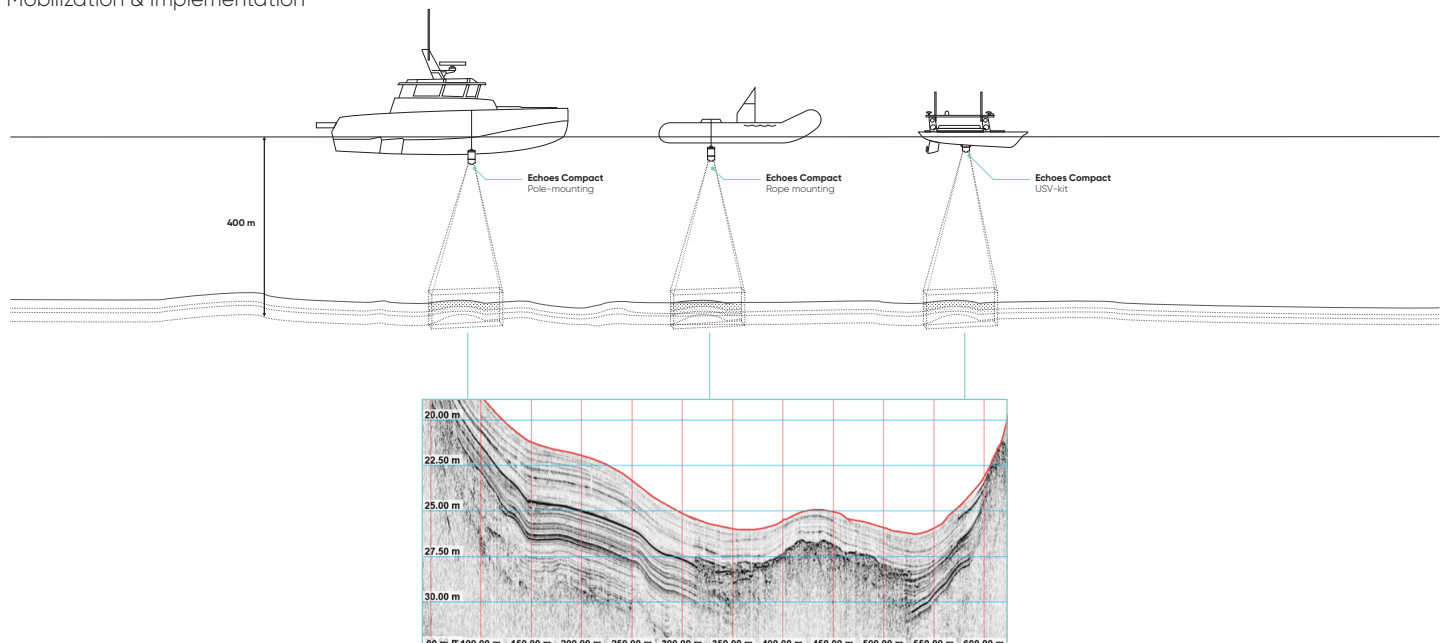
## DELPH SEISMIC SOFTWARE

- All-in-one optimized geophysical processing and interpretation
- Easy access to all data collected for geologists and geophysicists
- Compatible with leading industry sensors and formats
- Best possible 2D/3D QC
- Visualization and reporting capabilities

## APPLICATIONS

- Pre and post dredging
- Sedimentology / Paleoseismology
- Archeology and Geo-archeology
- Buried objects detection (boulders, pipelines)
- De-risking survey

Mobilization & Implementation



## Technical specifications

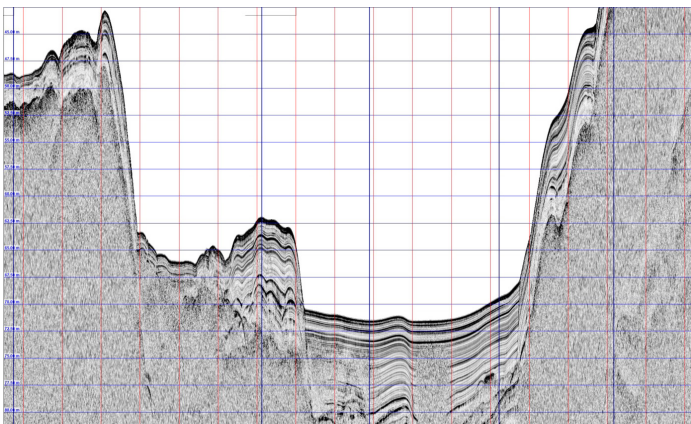
	<b>Echoes Compact</b>
Array configuration	3 tonpilz transducers mounted on a plate
Operational frequency range	5000 Hz - 15000 Hz
Mean acoustic level	194 dB (ref 1 $\mu$ Pa@1m) @ 1kVA
RVS (Receiving Voltage Sensitivity) (ref. 1 $\mu$ Pa)	-199 dB
Beam aperture @ 10 kHz	30°
Vertical resolution (c=1500m/s)	7.5 cm

## Mechanical/Mobilization specifications

	<b>Echoes Compact</b>
Recommendation for water depth below transducers	1 to 400 m
Height	400 mm
Diameter	290 mm
Weight in air/water	25/10 kg
Small & light junction box	48 VDC / 220 VAC
Signal emission power/Echoes mean power	1 kVA/170W
Deck cable length	2/15 m
Transport	<ul style="list-style-type: none"><li>• 2 small stacable boxes (&lt;20 kg each)</li><li>• Pelicase-like</li></ul>

## Results

High-resolution sub-bottom profiling data



Bathymetry & layers modeling using Delph Geo

