

▶ Performance

- water depth range:

SBM: 2-1,000 m HBM: 0.5 - 30 m

(depends on array geometry)

- sediment penetration: SBM: up to 60 m

HBM: up to 20 m

- layer resolution: up to 5 cm

- motion compensation: heave

- beam width @ 3 dB for all frequencies:

SBM: $\pm 1.5^{\circ}$ / footprint < 5.5 % of water depth HBM: $\pm 2.5^{\circ}$ / footprint < 9.0 % of water depth

▶ Transmitter

primary frequencies:
 approx. 100 kHz (band 85 – 115 kHz)

secondary low frequencies:
 4, 5, 6, 8, 10, 12, 15 kHz (band 2 – 22 kHz)

- primary source level:

SBM: $> 247 \text{ dB}//\mu\text{Pa}$ re 1 m HBM: $> 235 \text{ dB}//\mu\text{Pa}$ re 1 m

- pulse width: 0.07 – 1 ms

- pulse rate:

SBM: up to 60/s

HBM: up to 13/s per transducer

- multi-ping mode (SBM)

- pulse type: CW, Ricker

Acquisition

- primary frequency (echo sounder, bottom track)
- secondary low frequency (sub-bottom data, multi-frequency mode)
- sample rate 96 kHz @ 24 bit

SES-2000 sixpack

Parametric Sub-bottom Profiler

System Components

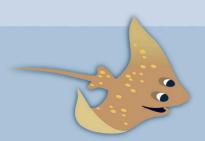
- transceiver unit 19 inch / 9 U
 (WHD: 52 cm x 44 cm x 40 cm; 39 kg)
- transducer excl. 15 m cable each
 (WHD: 6 x [0.21 m x 0.06 m x 0.21 m];
 6 x 5 kg)
- system control: internal PC

▶ Software

- SESWIN data acquisition software
- SES Convert SEG-Y/XTF data export
- SES NetView remote display
- ISE post-processing software
- 3D volume renderer

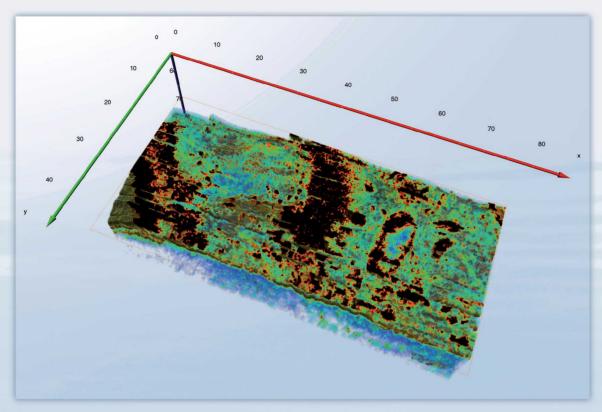
Power Supply Requirements

- 100 240 V AC / 50 60 Hz
- power consumption: < 350 W

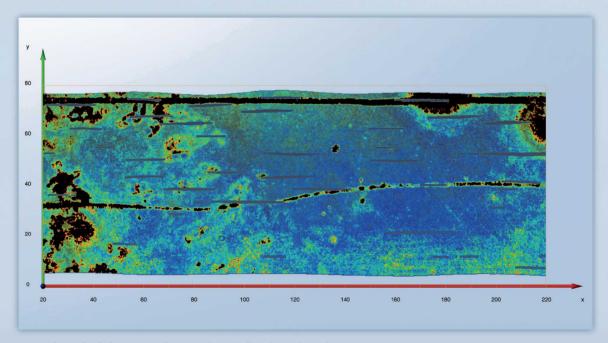




Survey example of SES-2000 sixpack



Clipped 3D volume with shallow buried wooden shipwreck (0.50 m bsf, length c. 13 m, width c. 5 m) from the coast of the Baltic Sea near Rostock, Germany



Time slice of sub-bottom volume with a shallow buried pipeline (upper section) and power cable (central section) from a river crossing (depth of burial is about one metre)

Innomar Technologie GmbH

Schutower Ringstraße 4 D-18069 Rostock Phone (Fax) +49 381 44079-0 (-299) E-Mail info@innomar.com



www.innomar.com