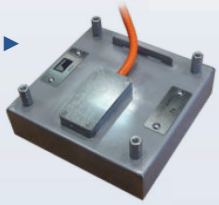
Innomar quattro
Parametric Sub-Bottom Profiler

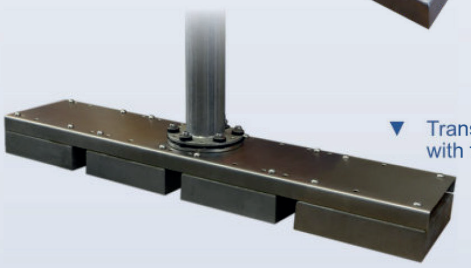
A **NORBIT** Company



▲ Topside unit

Single transducer ▶





▼ Transducer line array with four transducers

▶ General & Applications
- First / latest product generation: 2015 / 2021
- Detection and 3D visualisation of buried objects

▶ Performance
- Water depth range: 0.5–100* / 2–600** metres
- Seabed penetration: up to 20* / 50** metres (depending on seabed type and noise)
- Range resolution: up to 5 cm (depending on pulse settings)
- Depth accuracy: 2.5 cm + 0.03% water depth
- Motion compensation: Heave online; Roll, Pitch in post-processing (ext. sensor data required)

▶ Transmitter
- Principle: parametric (nonlinear) acoustics
- Frequencies: 100 kHz (HF) / 4–15 kHz (LF)
- Primary Source Level: ~235* / 245** dB//µPa re 1m
- Beam width: ~5° (±2.5°)* for all frequencies
- Pulse type: CW, Ricker
- Pulse width: 0.07–1 ms (CW)
- Pulse rate: up to 60 Hz, multi-ping mode

▶ Data Acquisition
- Digital, 2 channels (LF and HF, "SES3" format)
- Sample rate 96 kHz @ 24 bit; resolution <1 cm
- LF sub-bottom data: raw (full-waveform)
- HF data: processed (envelope)

▶ System Components
- Topside unit (transceiver electronics, IP20): Housing 19 inch / 7 U, desktop W 52 cm × D 40 cm × H 34 cm / c. 32 kg
- Transducer (no depth rating), 4 units each with: W 21 cm × D 21 cm × H 6 cm / c. 8 kg (w/ cable); cable length 15 m, moulded to transducer
- System control & data acquisition PC: MS Windows® based, 10" TFT display

▶ Optional Features
- SESWIN extended remote control
- KVM extender
- External DC power adaptor (12 V or 24 V)

▶ Power Supply Requirements
- 100–240 V AC (fuse 16 A slow)
- Power consumption: typ. 200 W / max. 300 W
- Power-on inrush current: c. 20 A

▶ Software
- SESWIN data acquisition software
- SES-Convert SEGY data export
- SES-NetView remote display
- ISE post-processing software (optional)

* single transducer / ** all four transducers as 2 × 2 matrix