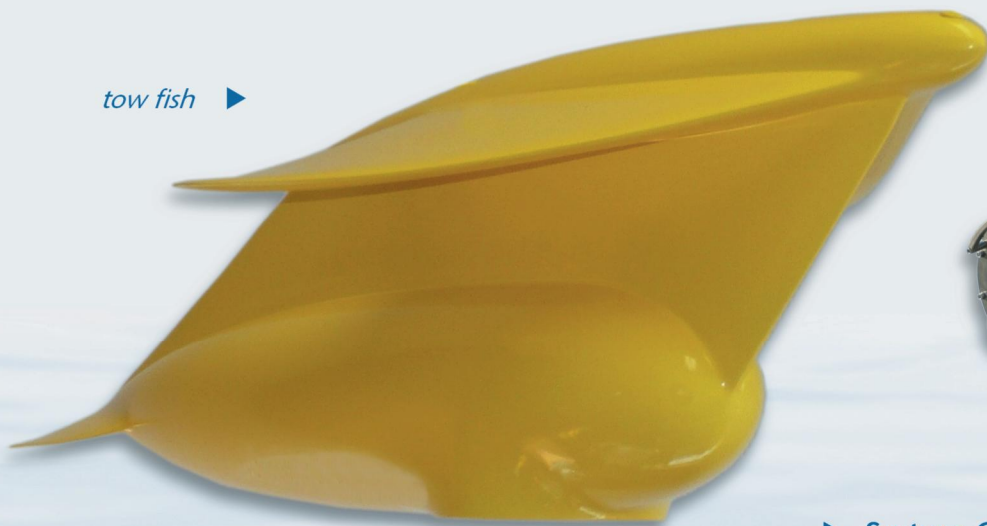




tow fish ▶



▲ subsea housing with transceiver electronics

▶ Performance

- depth rating: 600 m
- range below transducer: 1–500 m
- penetration: up to 50 m, depending on sediments and noise level
- layer resolution: up to 5 cm
- motion compensation: heave, pitch
- beam width @ 3 dB: $\pm 2^\circ$ / footprint < 7% of altitude for all frequencies
- automatic altitude control

▶ 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: >240 dB// μ Pa re 1 m
- pulse width: 0.07–1.3 ms
- pulse rate: up to 40 pings/s
- multi-ping mode
- pulse type: CW, Ricker, LFM (chirp)

▶ Acquisition

- primary frequency (echo sounder, bottom track)
- secondary low frequency (sub-bottom data, multi-frequency mode)
- sample rate 70 kHz @ 24 bit

▶ System Components

- tow fish (L 2.15 m \times W 0.95 m \times H 0.65 m / 52 kg)
- subsea housing with all transceiver electronics (D 0.30 m \times L 0.75 m / 49 kg)
- transducer (L 0.26 m \times W 0.23 m \times H 0.16 m / 18 kg)
- integrated sensors: heave, roll, pitch, altitude, depth
- topside unit (control PC, data modem)
- winch with tow cable (cable coax e.g. Rochester A320327)

SES-2000 towfish

Parametric Sub-bottom Profiler

▶ Software

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

▶ Power Supply Requirements

- 100–240 V AC / 50–60 Hz
- power consumption: < 250 W