SeaBat® T51-P

A Portable and True 800kHz Experience



The SeaBat T51-P brings industry-unique true 800 kHz multibeam capability to a compact and rapidly deployable survey platform. The SeaBat T51-P combines the proven SeaBat T51 sonar head with the Portable Sonar Processor (PSP), providing unprecedented clean survey data for faster operational surveys and reduced processing time.

Featuring a revolutionary dual-frequency architecture with a flexible lower-frequency band of 350-430 kHz and a high-frequency band of 700-800 kHz, the SeaBat T51-P delivers exceptional detail while maintaining outstanding survey efficiency in a wide range of environments.

Designed for rapid deployment and dependable operation. The system's simplified architecture, flexible power options and reduced interfacing requirements support efficient mobilization across a wide range of survey vessels and operational environments.

Product benefits

- Unrivaled clean and ultra-high data quality for faster operational surveys and reduced processing time
- Industry-unique true 800 kHz operation for exceptional feature definition and object detection
- Dual-frequency operation with 350-430 kHz and 700-800 kHz frequency bands for operational flexibility
- Rugged portable architecture designed for rapid mobilization and dependable field operation
- Up to 1024 true beams and swath coverage up to 170° for maximum survey efficiency

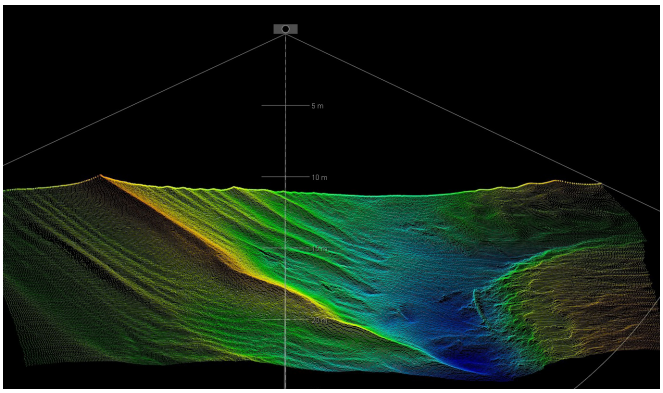
SeaBat T51-P standard configurations:

Portable Sonar Processor

- Reduced cable connections – fast mobilization
- Single-point, accurate, sensor time-tagging
- Water-resistant IP54 rated
- 24VDC and 100-230VAC for maximum flexibility
- 25m cable to wet-end components

SeaBat T51 sonar head assembly

- 400 and 800 kHz wide-band array
- Robust titanium housing
- Less than 6kg in water



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SYSTEM SPECIFICATIONS

Input voltage:	24VDC or 100-230VAC 50/60Hz
Power (typical / max):	150W / 300W
Ingress protection:	Water resistant (IP54)
Transducer cable length:	25m (standard) Optional: 10m or 50m
Temperature (operational / storage):	Portable Sonar Processor: -5°C to +45°C / -30°C to +70°C
	Sonar wet-end: -2°C to +36°C / -30°C to +70°C

	height [mm]	width [mm]	lenght [mm]	weight [kg/air]	weight [kg/water]
T51 Rx (EM7222):	87	460	102	8.7	5.3
T51 Tx (TC2186):	88	79	280	4.2	3.0
Portable Sonar Processor:	131	424	379	14	N/A

T50 Acoustic performance:	800kHz	400kHz
Across-track receiver beam width[1]:	0.25°	0.5°
Along-track beam width[1]:	0.5°	1°
Number of beams:	Min 10, Max 1024	
Swath coverage (up to):	150° Equi Distant, 170° Equi Angle	
Typical depth (CW[2]):	0.5-85 meters	0.5-150 meters
Max depth (CW[3]):	125 meters	250 meters
Typical depth (FM[2]):	0.5-85 meters	0.5-180 meters
Max depth (FM[3]):	150 meters	300 meters
Ping rate (range dependent):	Up to 50 pings/s	
Pulse length (CW):	15 – 300µs	
Pulse length (FM):	300µs – 5ms	
Depth resolution:	6 millimeters	
Depth rating (sonar head):	50 meters	

For relevant tolerances for dimensions above and detailed outlined drawings see Product Description

[1] Nominal values

[2] This is a depth range within which the system is normally operated, from the minimum depth to a depth value corresponding to the max. swath -50%.

[3] This is the single value corresponding to the depth at which the swath is reduced to 10% of its max. value. For actual swath performance refer to Product Description.

[4] An extinction coverage of +/-20° is observed at about 530 meter water.

T51-P SCOPE OF SUPPLY

- Receiver EM7222
- Projector TC2186
- Portable Sonar Processor
- 25m Receiver cable
- 25m Projector cable
- Waterproof cable set
- Wet-end bracket
- 3-year warranty

OPTIONAL EXTRAS

- 10m or 50m cable
- Hydro dynamic fairing
- Dual head bracket
- Motion and positioning sensors
- Valeport sound velocity sensors
- Teledyne PDS survey package
- RESON Service Level Agreements
- X-Range - improve range and reduce external noise
- Multi-Detect - multiple detections for enhanced detail over complex features and water column targets
- FlexMode – increase data density where you need it most
- Pipe Detection & Tracking – optimize detection of pipes
- Full rate dual head across the entire frequency range

TELEDYNE | RESON

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Specifications subject to change without notice.
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