Teledyne RESON

SeaBat® T20-R

High resolution Multibeam Echosounder with fully integrated Inertial Navigation System

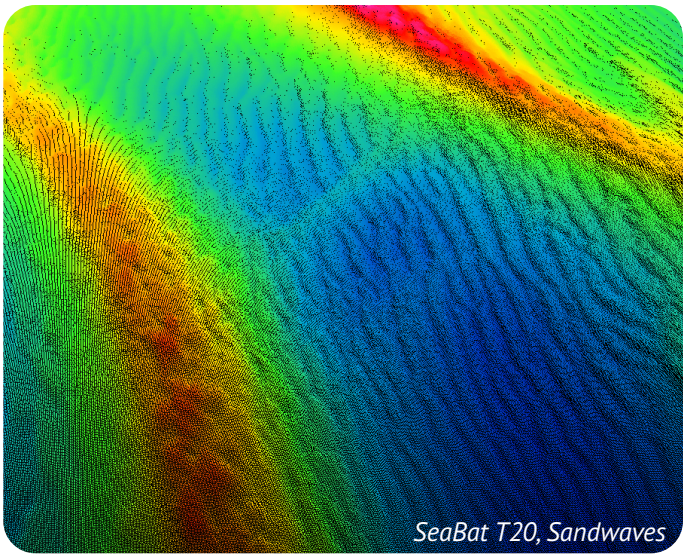
Superior acoustic quality engineered for the demanding marine environment

The SeaBat T20-R is a new addition to the leading SeaBat product range engineered from the ground up to evolve with your business. Combined with a Rack-mounted Sonar Processor (RSP), SeaBat T20-R provides uncompromised survey data in a highly compact package designed for small vessel use.

The solution includes a range of powerful software features at an attractive price, with the option for future feature expansions to grow with your needs.

The Rack-mounted Sonar Processor comes with an optional industry leading fully integrated Inertial Navigation System for accurate sensor time tagging and motion stabilization.

The SeaBat T20-R is designed for very fast mobilization on any type of survey vessels, securing minimal interfacing and low space requirements.



SeaBat T20, Sandwaves

SeaBat T20-R Standard configuration

Rack-mounted Sonar Processor (RSP)

- Single point for all cable connections – for fast mobilization
- Accurate sensor time-tagging and motion stabilization from the optional integrated INS
- 10m cable configuration
- 2U form factor in standard 19" rack

SeaBat T20 sonar head assembly

- 190 – 420kHz wide-band sonar arrays
- Lightweight sonar bracket
- Robust titanium housing
- Less than 8kg in water

3 years warranty

Our hardware is quality-tested to meet the most demanding standards. Backed by the full support of our comprehensive after-sales program and 3 years of warranty, you can be sure that the SeaBat T20-R won't let you down.

PRODUCT BENEFITS

- All-in-one, fully flexible and fully integrated survey system
- The compact system allows for fast mobilization, minimal interfacing and extremely low space requirements
- Impressively clean and high data quality for faster operational surveys and reduced processing time
- Fully frequency agile from 190 to 420 kHz, allowing for improved swath performance and reduced survey time under challenging conditions
- The new compressed water column data significantly reduces data volume while maintaining the required information

SeaBat® T20-R

SEABAT T20-R SYSTEM SPECIFICATIONS

Input voltage	100-230VAC 50/60Hz
Transducer cable length	10m (standard) Optional: 25m, 50m or 100m
Temperature (operational / storage)	Rack-mounted 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]	depth [mm]	weight [kg/air]	weight [kg/water]
T20 Rx (EM7219)	102.0	254.0	123.0	5.0	4.2
T20 Tx (TC2181)	86.6	93.1	280	5.4	3.4
Rack-mounted Sonar Processor * Standard 19" rack-mount	88 (2U)	478*	462	12.3-13.8	N/A
Teledyne Type 20/30 IMU	123	118	95.6	3.0	1.6

T20 Acoustic performance	400kHz	200kHz
Across-track receiver beam width[1]	1° (center)	2° (center)
Along-track beam width[1]	1°	2°
Number of beams	10 - 1024	
Swath coverage (up to)	10°-140° Equi distance, 10°-165° Equi Angle	
Typical Depth (CW[2]**)**	0.5-150 meters	0.5-375 meters
Max Depth (CW[3]**)**	250 meters	550 meters
Typical Depth (FM[2]**)**	0.5-180 meters	0.5-450 meters
Max Depth (FM[3]**)**	300 meters	575 meters
Ping rate (range dependent)	Up to 50 pings/s	
Pulse length (CW)	15 – 300µs	
Pulse length (FM)	300µs – 10ms	
Depth resolution	6mm	
Depth rating (sonar head)	50 meters	

Teledyne INS Type -20	Roll/Pitch 0.02°	Heading[4] 0.015°	Heave[4] 5cm/5%	TrueHeave 2cm/2%	Optional postprocessing with POSPac MMS. Optional Fugro MarineStar®.
Teledyne INS Type -30	Roll/Pitch 0.01°	Heading[4] 0.010°	Heave[4] 5cm/5%	TrueHeave 2cm/2%	

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 With 4m GPS base line. Heave 5cm/5% whichever is greater for periods +/- 20sec
5 An extinction coverage of +/-20° is observed at about 530 meter water.

T20-R Scope of supply

- Receiver EM7219
- Projector TC2181
- Rack-mounted Sonar Processor
- 10m Receiver cable
- 10m Projector cable
- Waterproof cable set
- Wet-end bracket
- Nuts and bolt for ease of installation
- 3-year warranty

Optional extra features

- Integrated INS Type 20 or Type 30
- 25m, 50m or 100m cable
- Hydro dynamic fairing
- Dual head bracket
- RESON Sound Velocity Probes
- Teledyne PDS Survey Package
- RESON Service Level Agreements
- Normalized backscatter
- Motion and positioning sensors
- 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

PLD-17370-6

TELEDYNE RESON
Everywhereyoulook™

Teledyne RESON
Tel. +45 4738 0022 (Europe) • Tel: +1 805 964 6260 (USA)
Email: reson@teledyne.com
www.teledynemarine.com/reson/