# SeaBat® T20-P

### High resolution multibeam echosounder

### Superior acoustic quality engineered for the demanding marine environment

The T20-P is a new addition to the leading SeaBat product range engineered from the ground up to evolve with your business. Combined with the Portable Sonar Processor the T20-P provides uncompromised survey data in a highly portable waterproof 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 T20-P can be supplied in ruggedized flight cases with total weight and dimensions suitable for checkin on commercial airlines and can be transported by one person.

#### **PRODUCT FEATURES & BENEFITS**

#### **Features**

- Sonar User Interface highly configurable to suit your needs.
- Snippets & sidescan backscatter
- Full water column backscatter
- Tracker powerful tool for automated control
- **Selectable Beam Density** you can define what you need to get the job done

#### **Optional extra features**

- 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 –** unique to SeaBat, optimize detection of pipes
- Full Rate Dual Head simultaneous pinging of both heads to ensure high along track resolution
- **Normalized backscatter** designed for accurate, reliable and repeatable seabed classification



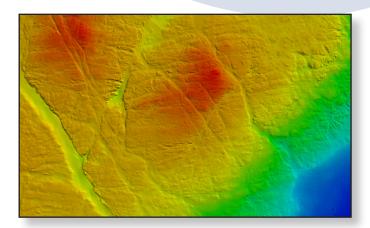
#### **T20-P Standard configuration**

#### 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
- 10m cable to wet-end components

#### T20 sonar head assembly

- 190 420kHz wide-band
- Robust titanium housing
- Less than 8kg in water



#### 3 years warranty

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



## SeaBat T20-P High resolution multibeam echosounder



#### **SEABAT T20-P SYSTEM SPECIFICATIONS**

Input voltage	24VDC or 100-230VAC 50/60Hz
Power (typical / max)	200W / 300W
Ingress protection	Water resistant (IP54)
TRANSDUCER CABLE LENGTH	10m (standard), 25m, 50m, 100m (optional)
Temperature (operational / storage)	Portable Sonar Processor: -5°C to +45°C / -30°C to +70°C

Sonar wet-end:  $-2^{\circ}$ C to  $+36^{\circ}$ C /  $-30^{\circ}$ C to  $+70^{\circ}$ C

	height [mm]	width [mm]	depth [mm]	weight [kg/air]	weight [kg/water]
T20 Rx (EM7219)	102.0	254.0	123.0	5.0	2.2
T20 Tx (TC2181)	86.6	93.1	280	5.4	3.4
Portable Sonar Processor	131	424	379	14	N/A

T20 Acoustic performance	400kHz (max. frequency)	200kHz(min. frequency)			
Across-track receiver beam width <sup>1</sup>	1° (center)	2° (center)			
Along-track beam width <sup>1</sup>	1°	2°			
Number of beams	Min 10, Max 1024				
Swath coverage (up to)	140° Equi distance 170° Equi Angle (12x water depth with dual head)				
Typical Depth (CW <sup>2</sup> )	0.5-150 meters	0.5-375 meters			
Max Depth (CW <sup>3</sup> )	250 meters	550 meters			
Typical Depth (FM <sup>2</sup> )	0.5-180 meters	0.5-450 meters			
Max Depth (FM³)	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				

For relevant tolerances for dimensions above and detailed outlined drawings see Product Description <sup>1</sup> Nominal values

<sup>2</sup>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%. <sup>3</sup> 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. <sup>4</sup> An extinction coverage of +/-20° is observed at about 530 meter water.

#### **T20-P SCOPE OF SUPPLY**

- Receiver EM7219
- Projector TC2181
- Portable Sonar Processor
- 10m Receiver cable
- 10m Projector cable
- Waterproof cable set
- · Wet-end bracket

### **OPTIONAL EXTRAS**

- Normalized backscatter
- 25m, 50m, 100m cable
- Fairing
- · Dual head bracket
- Motion and positioning sensors
- RESON Sound Velocity Probes
- RESON Teledyne PDS Survey Package
- · RESON Service Level Agreements (SLA)



www.teledynemarine.com/reson

Tel. +45 4738 0022 (Europe) • Tel: +1 805 964 6260 (USA)

Email: reson@teledyne.com