

SYSTEM 4900 SIDE SCAN SONAR

DUAL-FREQUENCY SIDE SCAN SONAR FOR SURVEY AND RECOVERY

The Klein System 4900 is a versatile Side Scan Sonar that can be used for many different survey and recovery applications. The high fidelity, high-definition imaging abilities and the portability of the System 4900 make it an ideal tool for Search and Recovery (SAR) missions while its rugged construction, selectable frequencies and 300 m operational depth rating provide superb capabilities for the coastal survey and security communities.

The System 4900 employs both a user selectable CW pulse transmission mode and advanced broadband CHIRP signal processing technology which, when coupled with Klein's proprietary despeckling algorithms, provide extraordinary long range, high resolution seafloor images.

Image quality is further improved by the System 4900 transducer designs which are optimized to provide very narrow horizontal beam widths and thereby exceptional along-track resolution. The combined result of these discriminating features is high quality image resolution at low frequency long ranges that is comparable to or better than high frequency, short range resolution images of competitive systems. When sonar detail and range is important, look to Klein for the solution!

Key Features:

- Dual, Simultaneous Frequencies
- CHIRP and CW Modes of Operation
- Operates on AC or DC
- Depth Rated to 300 m
- Hydrodynamic Stainless Steel Tow Fish
- Integrated Magnetometer and Responder Interfaces
- Easy Operation



The 455/900 kHz provides long range detection, 200 m per side at 455 kHz, and high definition images for classification to 75 m per side at 900 kHz. The digital telemetry system of the System 4900 can drive up to 1000 m of armored tow cable as standard.

The System 4900 towfish does not require an optional keel weight for submergence; it has been designed to provide portability, submergence and optimal stability at all depths to a maximum of 300 m.

Applications:

- Search and Recovery
- Inland Water Surveys
- BOEM Surveys
- Port and Harbor Security
- Hydrographic Surveys
- Archaeological Surveys
- Treasure/Wreck Hunting
- Hull Surveys

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Specifications:

System 4900 Towfish	
Construction	316 Stainless Steel
Body Length	1.42 m (56 in)
Outer Diameter	8.9 cm (3.5 in)
Weight (in air / in water)	24.7 kg (54.5 lbs) 13.5 kg (29.7 lbs)
Maximum Depth Rating	300 m
Standard Towfish Sensors & Accessories	Compass: Heading +/- 0.5° RMS Roll and Pitch Sensor Depth Pressure Sensor: 0-300 psia Water Temperature Sensor: 0-35° C Safety Cable Reusable Carrying Case, Tow Fish
Optional Towfish Accessories	K Wing I or II Depressor Wings Ruggedized Laptop Hull Scan Bracket Pole Mount Bracket Magnetometer - Option Ready Responder - Option Ready
Topside Assemblies: Dimensions / Weight (H x W x D)	
Transceiver Processor Unit - Splashproof	20 in x 16 in x 7.5 in
Laptop (Windows 7 & SonarPro® Installed)	3.8 cm (1.5 in) x 39 cm (15.6 in) x 30 cm (11.8 in) - 7.0 lbs
System Power Requirements	
Input Voltage	12 VDC or 110/220 VAC (50-60 Hz) - Selectable
Power Consumption	75 w
K Wing Depressor (Optional) Specifications	
Construction	Fiberglass, Lead Filled, Stainless Steel Hardware
Dimensions (HxWxD)	10 cm (4 in) x 64 cm (25.2 in) x 43 cm (16.9 in)
Weight (in air / in water)	13.6 kg (29.9 lbs) in air / 9 kg (19.8 lbs) in water
Depressive Force vs. Speed	2 knots - 20.5 kg (45 lbs) 4 knots - 34 kg (75 lbs) 6 knots - 50 kg (110 lbs) 8 knots - 73 kg (161 lbs)

Side Scan Sonar Specifications	
Technology	Single Beam
Frequency	455 kHz / 900 kHz
Pulse Type	FM CHIRP and CW
Horizontal Beamwidth	0.3° @ 455 kHz / 0.3° @ 900 kHz
Across Track Resolution	2.4 cm @ 455 kHz 1.2 cm @ 900 kHz
Maximum Operating Range	200 m @ 455 kHz, 75 m @ 900 kHz
Vertical Beam Center	Tilted Down 20° From Horizontal
Output Data Format	SDF (Sonar Data Format), or XTF (Extended Triton Format) or both - selectable

The System 4900 conveniently operates from AC or DC power sources. The standard system configuration is supplied complete with a robust stainless steel towfish (with heading, pitch, roll & depth sensors and magnetometer responder interfaces installed for simple integration), and IP-65 rated splashproof transceiver processor unit (TPU), a laptop workstation with Windows 7 and SonarPro® software installed, 50 m of lightweight kevlar tow cable, a safety cable to prevent loss of the towfish should it become hung up on bottom debris and a portable carrying case for easy transport.

Available options: depressor wing, hull mount bracket, pole mount bracket, responder and magnetometer.

This technical data and software is considered as Technology Software Publically Available (TSPA) as defined in Export Administration Regulations (EAR) Part 734.7-11. Specifications subject to change without notice. SonarPro® is a registered trademark of Klein Marine Systems, Inc.

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