SYSTEM 4000 SIDE SCAN SONAR

SIMULTANEOUS – DUAL FREQUENCY - MULTI-PURPOSE - SHALLOW OR DEEP WATER

The Klein System 4000 Side Scan Sonar is a state-of-the-art versatile multi-purpose sonar that can be used to conduct a variety of survey applications in shallow and deep water. System 4000 is depth rated to 2000 m and features dual 100/400 kHz simultaneous frequency operation. Klein's proprietary wide bandwidth processing is further enhanced in the System 4000, resulting in Klein's trademark image quality.

The System 4000 employs both a user selectable CW pulse transmission mode and advanced broadband CHIRP signal processing technology which, when coupled with Klein's proprietary algorithms, provides both extraordinary long range and simultaneous high-resolution seafloor images.

Designed for reliability and to provide great tow stability, the System 4000 also features the new Smart Telemetry which measures the electrical parameters of the tow cable (including slip ring and deck cable) and selects data rate and filter settings that maximize data throughput. This results in continuous, high quality imaging over a broad variety of cable types and cable lengths, in excess of 7,500 meters of 0.68" equivalent cable. This feature is designed to support surveyors and rental companies who frequently switch equipment to different winches and different cables.

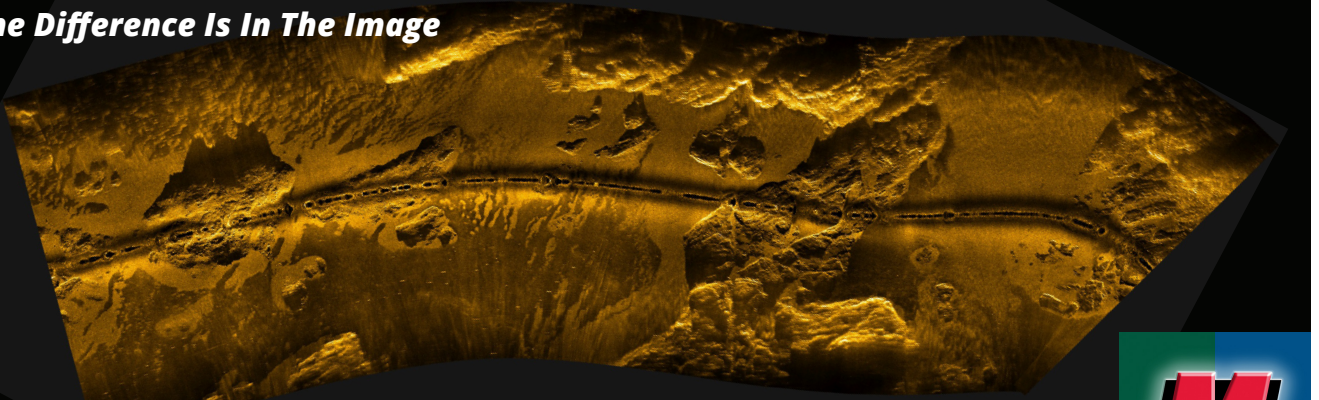Optional fiber optic interfaces are available for greater tow cable lengths.

Applications:
- Wide Area Search and Recovery
- Cable & Pipeline Surveys
- Hydrographic Surveys
- Archaeological Surveys
- Geological Surveys
- Treasure/Wreck Hunting
- Port and Harbor Security

Key Features:
- 100/400 kHz (Simultaneous)
- Broadband CHIRP and CW Sonar Transmission Modes
- Smart Telemetry
- Depth Rated to 2000 m
- Hydrodynamic Stainless Steel Tow Fish with:
    - Heading, Pitch and Roll Sensors
    - Depth (Pressure) Sensor
- Easy Operation
- Ergonomic design for one person launch and recovery

The Difference Is In The Image

SYSTEM 4000 SIDE SCAN SONAR

SIMULTANEOUS – DUAL FREQUENCY - MULTI-PURPOSE - SHALLOW OR DEEP WATER

Specifications:

System 4000 Towfish - General Specifications	
Construction	316 Stainless Steel
Body Length	1.42 m (56 in)
Outer Diameter	8.9 cm (3.5 in)
Weight (in air/in water)	27.3 kg (60 lbs) / 14.9 kg (32.7 lbs)
Maximum Depth Rating	2000 m
Standard Towfish Sensors & Accessories	Heading, Roll and Pitch Sensor Depth (Pressure) Sensor, 0-2000 m Water Temperature Sensor: 0-35° C Safety Cable

Topside Assemblies	
Transceiver Processing Unit (TPU)	19 in rack mount, 2U
Workstation PC	19 in rack mount, 21.5 in LCD monitor, keyboard and mouse with SonarPro® installed

System Power Requirements	
Input Voltage	110/220 VAC (50/60 Hz)
Power Consumption	120 W

Optional Accessories

- K-Wing I Depressor Wing
- K-Wing II Depressor Wing
- Power Fail Emergency Pinger Interface
- Responder Interface
- Magnetometer Interface
- Fiber Optic tow cable interface
- Splash Proof (IP-65) Tranceiver Processing Unit 12 VDC or 110/220 VAC (50-60 Hz)
- Ruggedized Laptop PC

Side Scan Sonar Specifications	
Technology	Single Beam
Frequency	100 kHz/400 kHz (Simultaneous)
Pulse Type	FM CHIRP and CW
Horizontal Beamwidth	0.7° @ 100 kHz 0.3° @ 400 kHz
Vertical Beamwidth	50°
Across Track Resolution	9.6 cm @ 100 kHz 2.4 cm @ 400 kHz
Maximum Operating Range (Per Side)	600 m @ 100 kHz 200 m @ 400 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 standard 4000 system features a highly-reliable, robust stainless steel towfish (heading, pitch, roll & pressure sensors installed), a stainless steel safety cable, a 19" rack mounted transceiver processor unit (TPU), a 19" rack mount industrial PC (SonarPro® acquisition software installed) with 21.5" LCD monitor & mouse and a 100 m terminated light weight tow cable.

Klein Marine Systems is deeply committed to customer support. We are currently servicing valued customers in 80 countries, and relying on a network of competent International Representative to meet and exceed the service needs of our customers around the world. We provide 24 hour / 7 day a week support.