



- Preliminary Specifications of Klein's new Mantis Side Scan Sonar

KLEIN MANTIS

Next Generation Side Scan Sonar

Klein Mantis Sonar System

- Next generation Technology: Designed for both commercial and military applications.
- Advanced Imaging: Utilizes multi-channel side scan sonar with dynamic beam steering and focusing.
- Superior Resolution: Offers up to 30% better along-track resolution compared to conventional systems.
- Enhanced Coverage: Achieves a maximum swath width of 700 meters (350 meters per side at low frequency).
- High Speed Performance: Maintains sharp imagery at high tow speeds, ensuring 100% bottom coverage.
- Robust Design: Engineered for optimal motion tolerance and extended operational range.
- Professional Standard: Meets stringent survey specifications for both commercial and military missions.

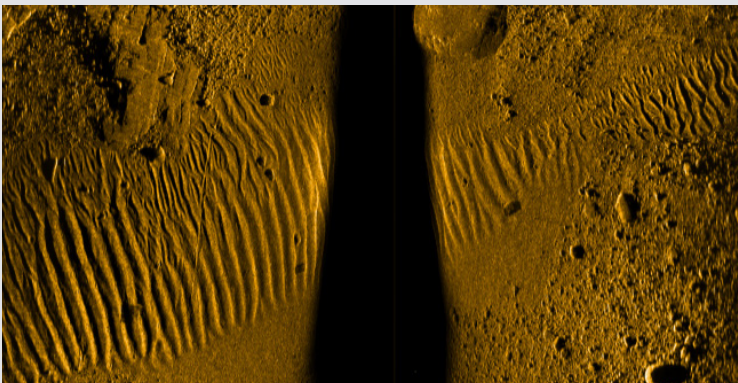
SmartArray Technology™

- As a pioneer in the sonar industry, Klein announces its latest breakthrough in sonar technology with its *SmartArray Technology™*. By embedding the electronics in the transducer, Klein can reduce the total integration footprint, reducing size and power while optimizing space.

APPLICATIONS:

- Surface Mine Counter Measures (SMCM) & Q-route surveys
- Port and harbor security
- Hydrographic & Geophysical surveys
- Pipeline and offshore survey

The Difference is in the Image®



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

*Specifications subject to change.

**To achieve tow speeds higher than 6kt, 25% of the tow cable length, coaxial or fiber optic, needs to be faired.

Preliminary Specification: MANTIS

Side Scan Sonar Specifications

Technology	Dynamic Focus Technology Dual Frequency, Multibeam Side Scan Sonar
Frequency	300 & 600 kHz
Maximum Range (Per Side)	300 m @ 300 kHz 150 m @ 600 kHz (Environment Dependent)
Maximum Tow Speed	**8 knots
Horizontal Beamwidth	0.29° @300kHz 0.125° @600kHz
Vertical Beamwidth	40°
Across Track Resolution	@300kHz: 2.4cm @600kHz: 1.2cm
Along Track Resolution	@300kHz: 1.02m at 200m @600kHz: .022m at 100m
Vertical Beam Center	15° Down from Horizontal
Altimeter	360 kHz: Up to 100 m (Environmental Dependent)

Mantis Towfish

Body Length	<= 194cm
Outer Diameter	<= 15.2cm
Weight (in air)	<= 46kg (100 lbs)
Maximum Depth Rating	1000m
Output Data Format	Klein SDF or XTF or Both
Standard Sensors & Accessories	Heading, Roll and Pitch Sensor Depth (Pressure) Sensor: 0-2000 m Water Temperature Sensor: 0-35° C AmSteel® Safety Cable

Optional Accessories

- AHRS System
- INS/DVL Package
- Responder/USBL Interface
- Magnetometer Interface
- Active Depressor
- Fiber Optic Capability

Sonarpro®NXT Visualization Software

- Full control of sonar system set-up & operation
- Data acquisition and recording
- Ability to launch multiple software applications on the same workstation
- Fully integrated viewer, navigation and target analysis
- Import raster and/or vector charts to navigation window
- Save targets as true GEO-TIFF with associated World file
- Suvey grid/route setup
- User-friendly Graphical User Interface (GIU)
- Real-time transmission of target position over network in UDP protocol