

# SYSTEM D3500TF DIGITAL SIDE SCAN SONAR

HIGH-DEFINITION SIDE SCAN SONAR FOR DEEP WATER SURVEYS

The Klein System D3500TF is a digital CHIRP/CW Side Scan Sonar designed for deep water surveys to 3000 m depth. The high fidelity, high definition imaging abilities make the D3500TF system an ideal and versatile tool for various deep water survey applications.

The D3500TF employs both a user selectable CW pulse and CHIRP transmission modes. Klein's advanced broadband CHIRP signal processing technology coupled with Klein's proprietary display algorithms, provides extraordinary long range, and high resolution seafloor acoustic imagery.

Dual simultaneous frequency (100/400 kHz) operation is standard in the D3500TF. 100 kHz provides long range, 600 m per side, search capability while 400 kHz provides higher resolution imagery for target classification to 200 m range per side.

The system includes a multiple rate telemetry link, which automatically senses and maximizes the uplink data rate based on the coaxial tow cable characteristics. Up to 5000 m of coaxial tow cable can be used with the DT3500TF or an unlimited length of fiber optic tow cable can be employed. The D3500TF towfish is designed so that the operator has plug and play interchangeability between coaxial or fiber optic tow cables without modification.

The D3500TF operates from 110/230, 50/60 kHz power sources. The standard system configuration is supplied complete with a rugged stainless steel towfish (with heading, pitch, roll & depth sensors installed), a 19" rackmount transceiver processor unit (TPU), a workstation with Windows 7 and SonarPro® software installed, and a 100 m lightweight Kevlar test/tow cable. Available options include; laptop, a safety cable, to prevent loss of the towfish should it become hung up on bottom debris, a depressor wing, a responder interface, a magnetometer interface a motion reference unit, an altimeter, and fiber optic tow cable interfaces.



## Applications:

- Geology / Geophysical
- Geo Hazard Mapping
- Cable and Pipeline Routing & Inspection
- Archaeological Surveys
- Search and Recovery (SAR)
- Submarine Rescue
- Oceanographic Surveys
- Minerals & Mining
- Benthic Habitat Mapping

## Key Features:

- Dual, Simultaneous Frequencies (100/400 kHz)
- CHIRP and CW Modes of Operation
- Depth Rated to 3000 m
- Hydrodynamic Stainless Steel Tow Fish
- Optional Magnetometer and Responder Interface Units
- Automatic Variable Rate Bandwidth Telemetry
- Easy Operation

*The Difference Is In The Image*

**KLEIN MARINE SYSTEMS, INC.** - Salem, NH



# SYSTEM D3500TF

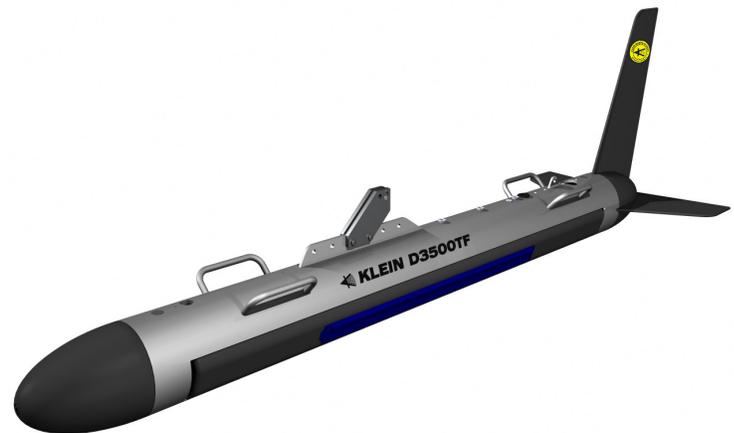


## HIGH-DEFINITION SIDE SCAN SONAR FOR DEEP WATER SURVEYS

### Specifications:

System D3500TF Towfish	
<b>Construction</b>	316 Stainless Steel
<b>Body Length</b>	1.94 m (76.4 in)
<b>Outer Diameter</b>	15.2 cm (6.0 in)
<b>Weight (in air / in water)</b>	70 kg (154 lbs) in air 47.7 kg (105 lbs) in water
<b>Maximum Depth Rating</b>	3000 m
<b>Standard Towfish Sensors</b>	Compass: Heading +/- 0.5° RMS Roll and Pitch Sensor Depth Pressure Sensor Safety Cable Kit
<b>Optional Tow Accessories</b>	K Wing II Depressor Wing Altimeter Responder Interface Magnetometer Interface F/O Interfaces: (TPU, slip ring, and sub-sea shackle)
Topside Assemblies	
<b>Tranceiver Processing Unit (TPU)</b>	19" rack mount
<b>Workstation PC Windows 7 and SonarPro® Installed</b>	19" rack mount, 21.5" LCD display, keyboard and mouse
System Power Requirements	
<b>Input Voltage</b>	110/230 VAC (50/60 kHz)
<b>Power Consumption</b>	120 w

Side Scan Sonar Specifications	
<b>Technology</b>	Single Beam
<b>Frequency</b>	100 kHz/400 kHz Dual Simultaneous
<b>Pulse Type</b>	FM CHIRP and CW
<b>Horizontal Beamwidth</b>	0.7° @ 100 kHz / 0.3° @ 400 kHz
<b>Vertical Beamwidth</b>	50°
<b>Across Track Resolution</b>	9.6 cm @ 100 kHz, 2.4 cm @ 400 kHz
<b>Maximum Operating Range (per side)</b>	600 m @ 100 kHz, 200 m @ 400 kHz
<b>Vertical Beam Center</b>	Tilted down 20° from horizontal
<b>Output Data Format</b>	SDF (Sonar Data Format), or XTF (Extended Triton Format or both - selectable)



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. Cleared for public release. Data, including specifications, contained within this document are summary in nature and subject to change at any time without notice at Klein Marine Systems' discretion. Call for latest revision. All brand names and product names referenced are trademarks, registered trademarks, or trade names of their respective holders. Rev 12/17