

Deep Tow Sub-bottom Profiling Combined with Klein Powered Side Scan Sonar

Fully Integrated, Cost-effective, Compact Solution

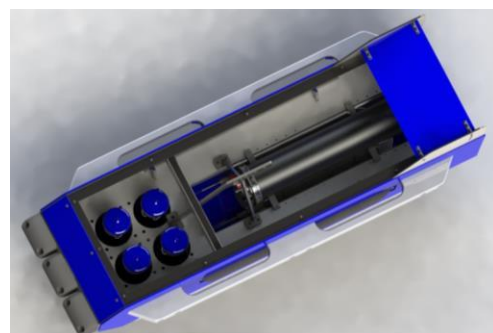
The HMS-665 Multi-Sonar Tow System is designed for applications that require high resolution side scan and sub-bottom imagery in depths of up to 3,000m. This combined side scan and sub-bottom survey tool offers a fully digital platform capable of collecting high resolution Klein powered side scan with FSI HMS-621 sub-bottom data, as well as a range of customer selected sensor data. The long range, high resolution side scan and sub-bottom CHIRP data along with the ancillary sensor capability provide the surveyor with a cost effective solution over multiple system and sensor surveys resulting in savings in both instrument cost and survey time.

Single Workstation

- Klein powered side scan sonar, operating at 100/400 KHz simultaneously, allows 1,200 meter or greater swath, with resolution equivalent to much higher frequency systems at longer ranges.
- FSI HMS-621 CHIRP/CW based sub-bottom profiler, operating in the 1 to 10 KHz region, allows for extended sediment penetration with greatly improved resolution over conventional CW systems.
- Range, Gain, TVG, Pulse Width, and other programmable parameters are under user friendly software GUI control.
- Integrated CHIRPceiver True 24-bit data acquisition.>110 dB dynamic range.

Rugged Tow System

- A fully integrated digital platform with high performance CHIRP side scan and sub-bottom transducer arrays, digital multiplexor, subsea electronics, and RS-232 and power ports for optional sensors.
- Ruggedized, stable tow vehicle includes pitch, roll and heading sensors, optional position responder / transponder, plus other customer selected sensors.
- Broadband CHIRP match filter processing, combined with a narrow side scan sonar horizontal radiation pattern provides optimal cross-track and along track resolution.
- Horizontal beam width of 1° at 100 KHz and .3° at 400 KHz
- Tow System will operate in depths up to 2,000 meters and more (3000m-6,000m versions available) with low-maintenance construction



SYSTEM SPECIFICATIONS

TOWFISH

Sonar Frequency

Operating Depth

Range

Range Settings

Side Scan CHIRP frequency Range

Side Scan Transducers

Sub-Bottom Transducer

Frequency Resolution Processing

Standard Sensors

Optional Input

Construction

Length

Width x Height

Weight in air

Weight in water

TOPSIDE DATA ACQUISITION COMPUTER

Operating System

Storage

Network Interface

I/O Ports

Display

TOPSIDE TRANSCEIVER

Power Supply

Network Interface

Dimensions

CABLES

Deck Cable (Kevlar)

Armored Tow Cable

100 / 400 KHz **Klein Powered Sidescan**

2,000 meters **Deeper Options Available**

25 to Over 600 meters on each channel

25 to 750m in 12 steps

Simultaneous 100 KHz and 400 KHz CHIRP or CW

Multi-element array, dual channel 100 / 400 KHz,

Horizontal beam width of 1° at 100 KHz and .3° at 400 KHz;

Vertical beam 60°

2X2 Transmit projector array; dipole dual hydrophone array;

30° conical radiation pattern

Selectable CHIRP bands from 1 KHz to 10 KHz (2 KW output),

synchronous with side scan

Calibrated transmit waveform;

CHIRP or CW signal processing

True 24-bit data acquisition with >110dB dynamic range

Fully calibrated Precision Pressure Sensor Module,

Heading, Pitch, and Roll

Magnetometer input optionally available

Stainless steel, polyethylene

208.7 cm (82 inches)

38.4 cm X 53.3 cm (15.125 in X 21 in)

Approximately 158 Kg (350 lbs)

Approximately 45 Kg (100 lbs)

MS Windows OS

Large internal hard drive, writeable CD/DVD

100/1000 base T Ethernet

(compatible with ADSL communication interface)

Four (4) RS-232 serial I/O ports, Multiple USB Ports

>24" Flat Panel LCD Display with video output for second display

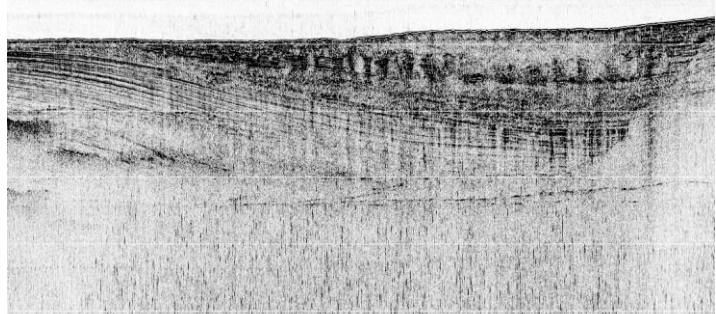
Auto-sensing 100-240 VAC; output 380 VDC maximum

Ethernet

2U Rack Mount 48.3 cm (19 inches)

75 meter coax

Coax up to 8,000m



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE
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Falmouth Scientific, Inc.

33 Jonathan Bourne Dr., Pocasset, MA USA 02559-0326

sales@falmouth.com • Tel: 1-508-564-7640 • Fax: 1-508-564-7643 • www.falmouth.com