

# 1171 SONAR

6000 M MULTI-FREQUENCY IMAGING SONAR HEAD  
WITH COMPOSITE TRANSDUCER

## HIGH-PERFORMANCE DOMED IMAGING SONAR P/N 975-22100000

Kongsberg Mesotech is recognized as a leader in single-beam scanning sonars, developing systems with the highest quality and highest resolution on the market. Our sonars are feature-packed and continuously being developed to meet the stringent requirements of the ever-changing subsea industry.

The 6000 m 1171 series of sonar heads has been optimized to meet the requirements of deep-ocean applications.

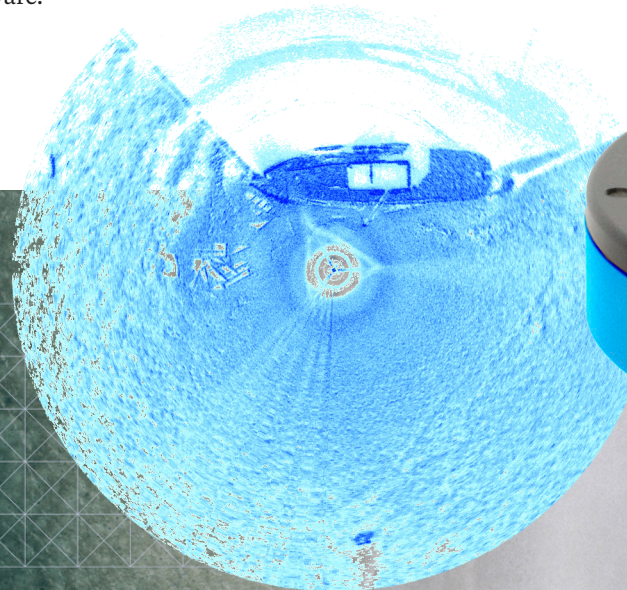
These sonar heads provide a high level of image quality. The wide-band composite transducer is protected within an oil-filled, pressure-compensating dome.

The multi-frequency design allows optimization of the imaging frequency for different applications. The telemetry is RS485 and RS232 compatible and is automatically sensed and configured at startup.

The sonar head is configured and controlled using the MS1000 Software.

### HIGHLIGHTS

- Depth rating: 6000 m
- Robust design
- Low maintenance
- Compact
- Lightweight
- Suitable for ROV / AUV applications



# TECHNICAL SPECIFICATIONS

## PERFORMANCE DATA

**Tunable in 5 kHz steps from 400 kHz - 1000\* kHz in both CW and LFM modes**

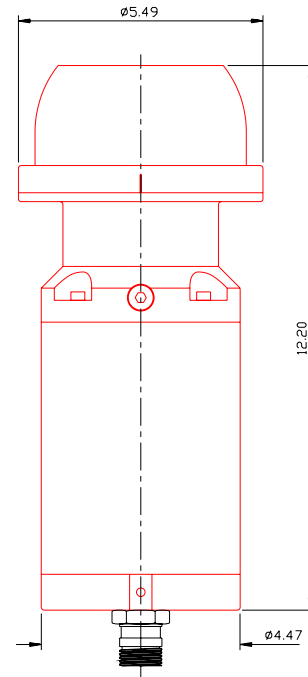
Preset Frequencies	450 kHz	500 kHz	675 kHz	800 kHz	900 kHz
Beam Widths	2.0° x 36°	1.7° x 39°	1.3° x 29°	1.2° x 25°	1.0° x 21°

\* Excluding 560-590 kHz, which is blocked from use

Maximum ranges	200 m @ 450 kHz, 100 m @ 675 kHz, 75 m @ 800 kHz
Minimum range	0.5 m
Range Resolution	≥3.75 mm (variable, determined by transmit-pulse width)
Range Sample Options	238, 476, 952, 1904 (Low Resolution, High Resolution, Zoom x 2, Zoom x 4)
Sampling Resolution	0.26 mm (0.5 m range @ 1904 samples), 21 mm (10 m range @ 476 samples)
Scan Speed	typical: 3.7 sec/360° @ 5 m and 1.8° step size (@ 460 kbps) nominal: 34 sec/360° @ 100 m and 1.8° step size (@ 460 kbps)
Scan Angle	360° continuous (user adjustable for limited sector scans)
Step Size	0.45° - 7.2° (user selectable)
Transmit Pulse Widths	5 µs to 1000 µs (auto selected for optimized operation)
Receive Bandwidth	Based on 'Wide' setting: 493 kHz (0.5 m range), 109 kHz (10 m range)
Telemetry	RS485 or RS232 asynchronous serial data
	Fixed Downlink/Uplink: 9600 bps to 921 kbps (user selected for compatibility with other serial communication equipment)
	Optimized Downlink/Uplink: 9600 bps to 921 kbps (auto set to highest rate allowed by the quality of the telemetry link)

## PHYSICAL SPECIFICATIONS

Power Requirement	22-26 VDC @ ≤ 0.8 A
Temperature Range	-10 to +40°C operating -30 to +40°C storage
Operating depth	6,000 m
Connector	Mini Burton 5507-1508-0002
Materials	Aluminum 6061-T6, 300 Series S.S., Urethane
Finish	Anodized, Black/Blue MIL-A-8625 type II
Dimensions	Diameter (bulkhead): 5.49 in / 140 mm Diameter (Housing): 4.47 in / 114 mm Length: 12.2 in / 310 mm (excluding connector)
Weight	In Air: 14.2 lb / 6.4 kg In Seawater: 7.3 lb / 3.3 kg
Case to Common Capacitance	32 nf



Specifications subject to change without any further notice.

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