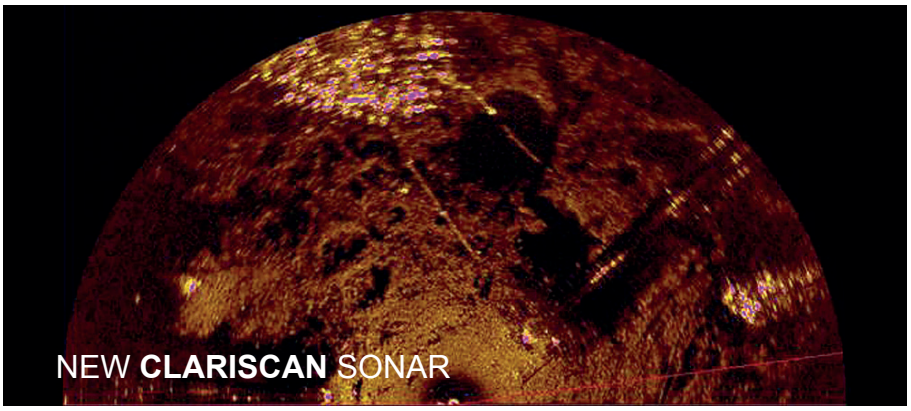
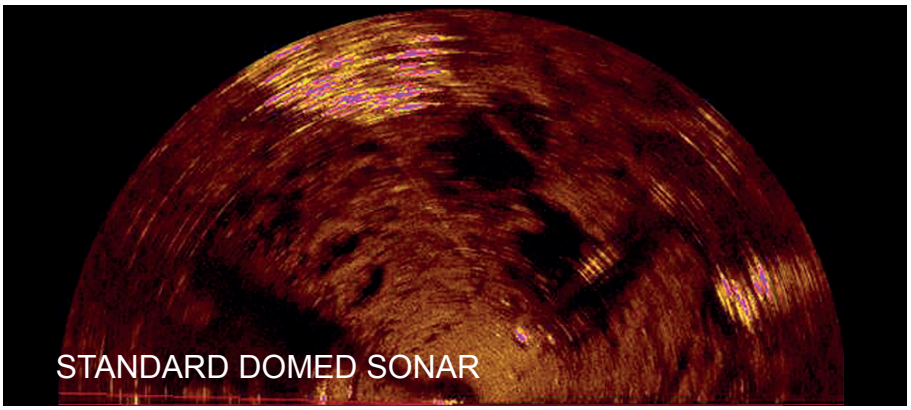
CLARISCAN

P/N 975-21190000

KONGSBERG





HIGH-PERFORMANCE DOMED SCANNING SONAR

- **New patented[1] acoustic lens technology**
- **Improved image resolution and sharpness**
- **Improved operating range and frequency**
- **4000 M operating depth**

Mesotech's latest innovation in domed sonar technology combines the Company's wide-bandwidth composite transducer with a patented acoustic lens to provide unprecendented image clarity from a domed sonar head.

Oil filled domes were introduced to provide protection and eliminate flooding on the traditional exposed transducer shaft. This solved the flooding issues but introduced beam defocusing in two conditions, warm & shallow and cold & deep. The beam defocusing effect becomes more extreme in warm shallow water as temperature increases and cold deep water as depth increases.

The Company's engineers designed an acoustic lens that maintains beam focus through operational temperature and depth changes, significantly improving sonar performance and resulting in images that are much sharper. The Clariscan acoustic lens behaves like an optical contact lens, correcting refraction caused by oil in the dome.

APPLICATIONS

- Obstacle avoidance
- Pipeline survey
- Target detection
- Underwater construction support

ELECTRICAL SPECIFICATIONS

Tunable in 5 kHz steps from 300-600 kHz[2] and 605-1200 kHz in both CW and LFM modes								
Preset Frequencies	330 kHz	450 kHz	600 kHz	675 kHz	800 kHz	900 kHz	1000 kHz	1100 kHz
Beam Width (nom)	2.7° x 26°	2.2° x 19°	1.6° x 16°	1.4° x 36°	1.2° x 31°	1.0° x 25°	0.9° x 22°	0.8° x 20°

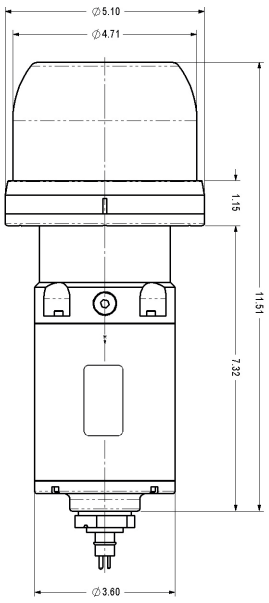
Maximum range: 300 m @ 330 kHz, 100 m @ 675 kHz, 50 m 1000 kHz
Minimum range: 0.5 m
Range Resolution: ≥3.75 mm (variable, determinded by transmit-pulse width)
Sample Options: 238, 476, 952, 1904 (Low Resolution, High Resolution, Zoom x 2, Zoom x 4)
Sampling Resolution: 0.26 mm (0.5 m range @1904 samples), 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: 9600 bps to 921 kbps (user selected for compatibility with other serial communication equipment)

Optimized Downlink: 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: 4,000 m
Connector: RMG-4-BCL
Materials: Aluminum 6061-T6, 300 Series S.S., Urethane
Finish: Anodize, Black/Blue MIL-A-8625 type II
Dimensions: Diameter: 5.1 in / 130 mm
Length: 11.5 in / 292 mm (excluding connector)
Weight: In Air: 9.5 lb / 4.3 kg
In Seawater: 4.2 lb / 1.9 kg



[1] US Patent 8,879,360 B2
[2] Excluding 570-580 kHz, which is blocked from use

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