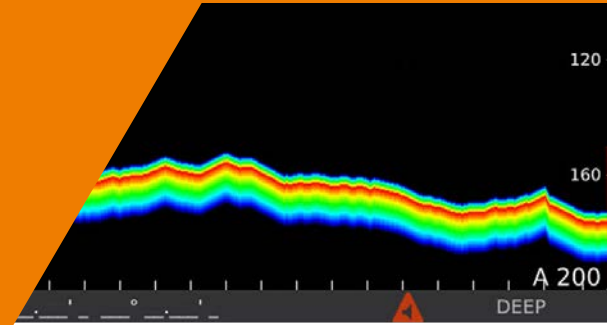
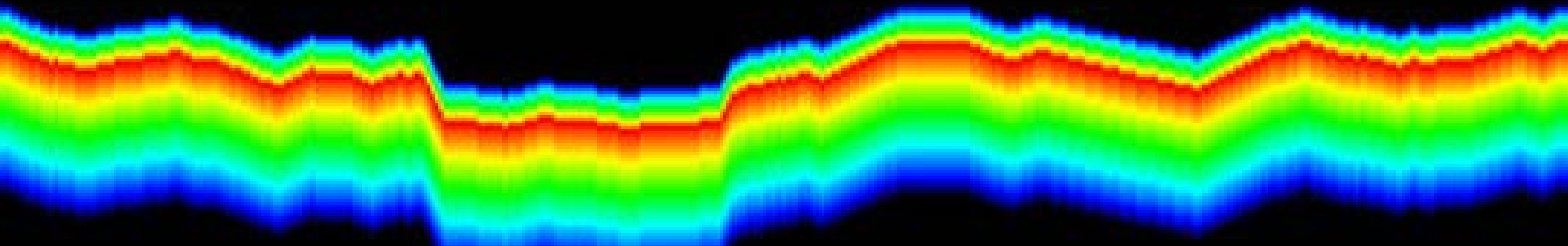


Wärtsilä ELAC LAZ 5200

Navigation Echo Sounder



The new ELAC LAZ 5200 navigation echo sounder is available as a single or dual frequency system with a maximum measuring range of up to 6,000 m. It provides reliable seafloor detections from shallow to deep waters, both stand-alone and fully integrated into a bridge system.



Wärtsilä ELAC LAZ 5200

Safe navigation guaranteed by reliable depth information and easy bridge integration

The water depth below a vessel is one of the most important information for safe navigation. The ELAC LAZ 5200 navigation echo sounder guarantees reliable detection of the seafloor in shallow as well as in deep water and is designed for an automatic and smooth operation. It meets the requirements of IMO for navigation equipment and is type approved by DNV-GL.

Based on the reliable and robust ELAC LAZ 5100, the new ELAC LAZ 5200 combines decades of experience in the area of echo sounders with the most modern requirements of commercial shipping. New features are an open control and data interface for complete IBS integration and the standardized support of BAM systems.

ELAC LAZ 5200 is suitable for vessels of all sizes as a stand-alone or completely integrated system. It can operate a variety of transducers with 50 kHz, 100 kHz and 200 kHz as a standard.

State of the art design

All electronics are of a completely new design and are based on modern microprocessor architecture. Likewise, the user interface has been redesigned in order to meet the requirements for convenient operation without altering it too much compared to the familiar ELAC LAZ 5100.

All data are displayed on a 10.4" monitor as digital information and coloured echograms including deep range scale diagrams.

The water depth is presented as a colored echogram to show the trend of the water depth below the vessel. In addition, the current water depth is displayed digitally together with information about the ship's position, date and time.

Due to the 10.4" size of the display, all requirements for the representation according to IMO Resolution A.224 are fulfilled even for two-frequency operation.

Form, fit and enhanced functionality

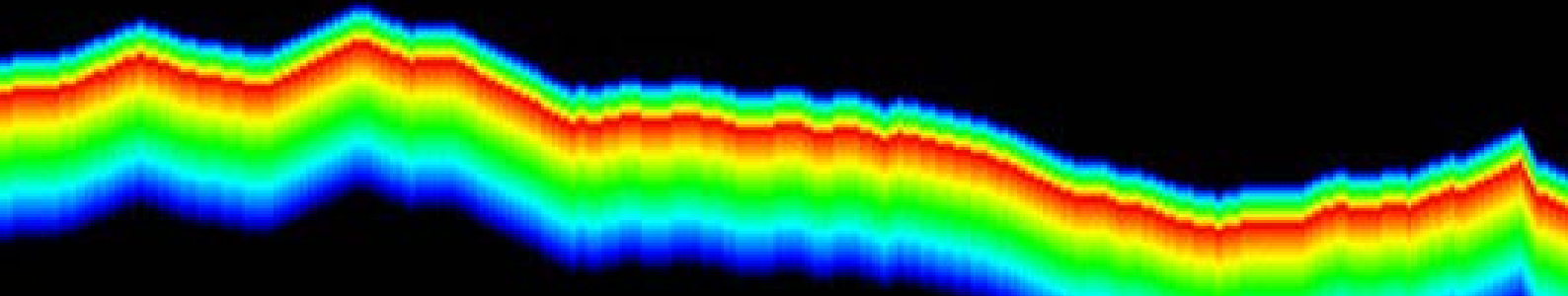
For easy integration of the ELAC LAZ 5200 in exchange to the previous LAZ 5100 and LAZ 5000 navigation echo sounders, the transmit and receive unit has the same dimensions in length

Key features

- Meets IMO and SOLAS requirements
- Design according to MED 2014/90/EU
- Single or dual-frequency version available
- Interface to Bridge Alert Management (BAM) according to IMO Resolution MSC.302(87) / IEC 61924-2
- Interfaces to ship navigation system according to IEC 61162-1
- Interface to ship navigation system according to IEC 61162-450 (LWE)
- More than 170 hours of data storage for water column data, depth data, position, date and time, settings
- Up to 6,000 m depth performance
- Large variety of transducers operable
- Automatic and reliable operation from shallow to deep water depths
- 10.4" high contrast LCD display
- Open architecture for complete integration in Integrated Bridge Systems (IBS) using middleware based software (OpenDDS)



Wärtsilä ELAC LAZ 5200



and width as its predecessors. Most of the already installed transducers are supported by the new ELAC LAZ 5200.

Bridge Alert Management (BAM) support

On modern merchant vessels, Bridge Alert Management (BAM) systems improve the handling of alerts. The presentation, classification, distribution and priority of alarms are harmonized, independently from the sensor or system. This makes it easier for the bridge crew to identify any alert situation. The ELAC LAZ 5200 is fully compliant with the requirements for alerts and interconnection with Bridge Alert Management Systems according to IMO MSC.302.

Open interface for complete IBS integration

A modern Integrated Bridge System (IBS) reduces the workload of the bridge crew with their uniform user interface and thereby increases the navigational

safety of the ship. The ELAC LAZ 5200 is designed for a complete integration into an Integrated Bridge System (IBS).

The ELAC LAZ 5200 includes an open system architecture based on Open DDS (Data Distribution Service). Thus; the system can be controlled externally and provides display data via Ethernet, to allow any kind of bridge suppliers or integrators to develop their own user interfaces. The Ethernet interface allows complete control of the echo sounder and provides the entire water column data for display as deep range scale diagrams on the multi-functional displays of the IBS. Thus, the complete echograms can be displayed on the IBS, and not only a single depth line as before, fulfilling the IMO resolution A.224 requirements concerning display of data.

Remote display dimming control

The ELAC LAZ 5200 supports four different colour schemes to allow better visibility under different ambient light

conditions, additionally to the brightness control (dimming) between 0-100 percent. The brightness and the color scheme can be controlled remotely via the NMEA DDC (Display Dimming Control) protocol.

Transducers

Wärtsilä ELAC Nautik has developed special transducers for the operation with ELAC echo sounders. Together with the transducers LSE 297 (50 kHz), LSE 329 (100 kHz) and LSE 313 (200 kHz), the echo sounder system provides an excellent performance and combines long ranges with high resolution.

All ELAC LAZ 5200 navigation echo sounders and the related transducers are developed and manufactured at Wärtsilä ELAC Nautik's factory in Germany and pass an extensive quality control process.

A 100 % quality control ensures that the delivered components are without any defects, providing maximum performance for many years.



Universal digital display
Wärtsilä SAM 4900



Inboard housing of transducer for ice protection and changing of transducer without docking



200 kHz transducer LSE 313
(without housing)

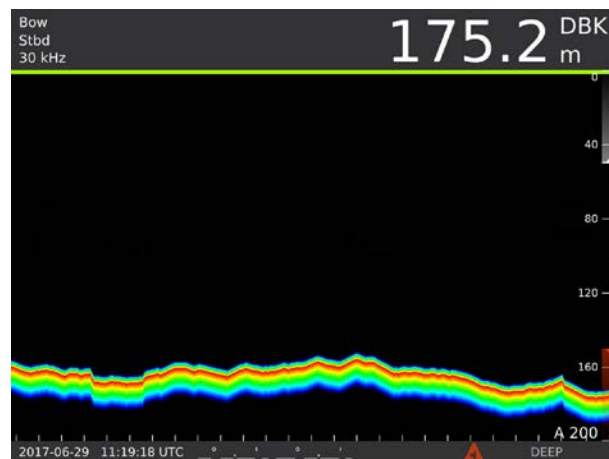
Specifications and technical data

Technical data	
Frequencies	200 kHz / 100 kHz / 50 kHz / 30 kHz / 15 kHz ¹
Display	10.4" graphic colour display
Scale ranges	0-10, 20, 50, 200, 500, 1000, 2000 and 6000 m ¹
Units	Meter, fathom, feet (selectable)
Measuring accuracy	± 0.5% of scale range
Trim correction	Up to 9.9 m
Draft correction	Up to 99.9 m
Output power	Adjustable, max. 1,000 W RMS ²
Interfaces	According to IEC 61162-450 and IEC 61162-1
Input Protocols	NMEA 0183 GGA, VTG, DDC, ACK
Output Protocols	NMEA 0183 DPT, DBT, ELAC, ALR
BAM sentences	ALC, ALF, ACN, HBT
Remote control and display	Open format based on OpenDDS
Environmental conditions	According to EN 60945
Operating temperature	-15° to +55° C
Degree of protection	IP 23
Power supply	95-240 V AC, 50-60 Hz
Power consumption	Approx. 35 W (average)

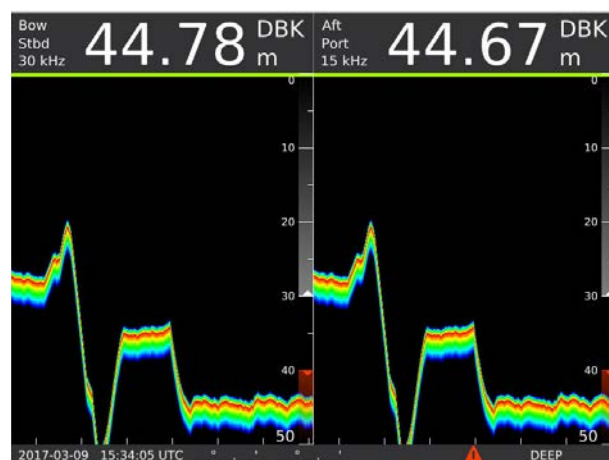
Physical data	
Dimensions	288 (H) x 336 (W) x 99 (D) mm
Weight	5.5 kg

1 Non IMO conforming

2 depending on installed transducer and selected range



Wärtsilä ELAC LAZ 5200 – 1 Channel display



Wärtsilä ELAC LAZ 5200 – 2 Channel display

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