

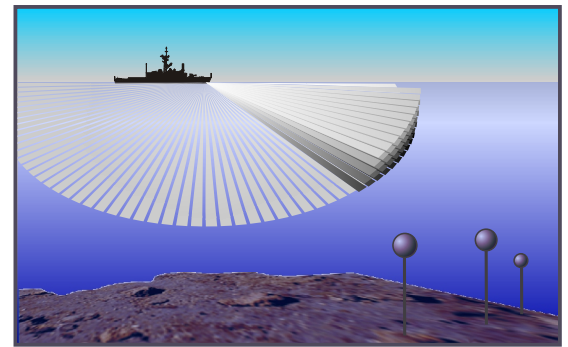


communications
ELAC Nautik

VANGUARD

Multi-Purpose Sonar NDS 3070 for Surface Ships

- Navigation
- Detection
- Collision Avoidance
- Obstacle Avoidance
- Mine Avoidance
- Torpedo Alarm
- Surveillance modes for ship's self protection
- Pinger location
- Long range LF mode combined with high resolution HF mode
- 2D LF active sonar sector and omni
- 3D HF forward looking sonar with 90° sector
- Broad band passive sonar capabilities
- Interfaces for log, compass, sound velocity, roll and pitch, printer
- Designed to meet defense standards



More than 70 years of experience in sonar system development lead to an innovation which will increase the safety of your surface vessel forces in war and peacetime even under bad conditions. From the beginning ELAC Nautik focused its developments on performance, reliability, easy handling and easily accessible COTS technology.

The Multi-Purpose Sonar System VANGUARD is a versatile two frequency active and broadband passive sonar system conceived for use on surface vessels to assist navigation and permit detection of dangerous objects.

The system is designed primarily to detect mines but will also be used to detect other moving or stationary underwater objects.

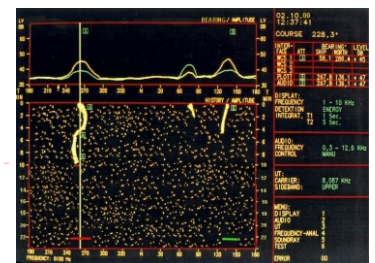
It can be used as a navigation sonar, i.e. as a navigational aid in narrow or dangerous waters. In addition it can complement the sensors on board anchoring surface vessels with regard to surveillance and protection against divers.

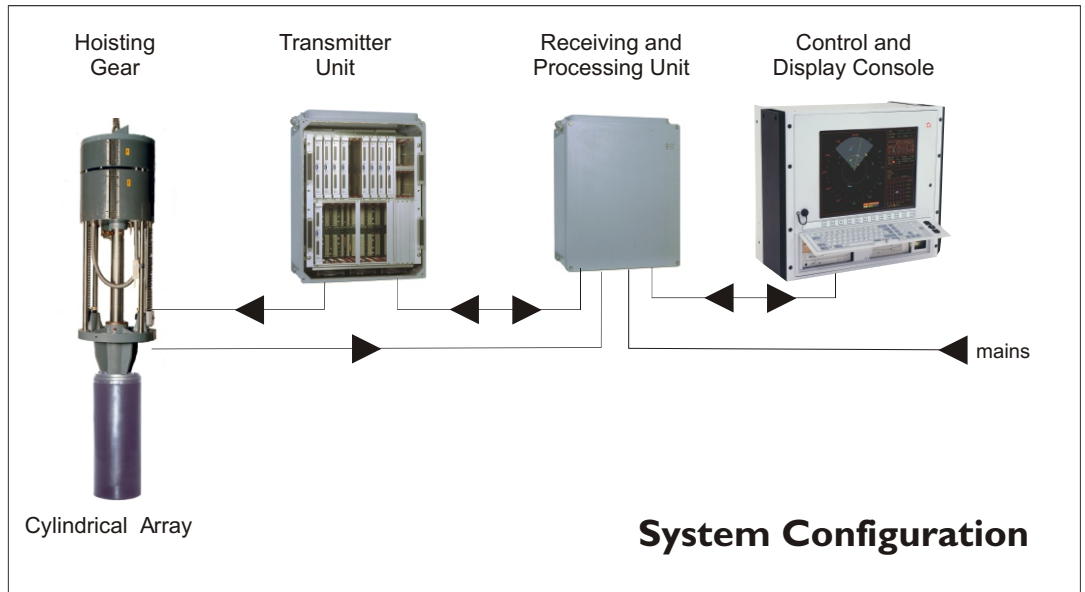
Furthermore, a passive mode is also available to detect and receive sonar signals and underwater noise over a wide frequency range.

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Technical Data

Operating frequencies		
active mode:		30 kHz (LF) and 70 kHz (HF)
passive mode:		8 to 40 kHz
Measurement ranges:		100, 500, 1000, 2000, 4000 m
Typical detection ranges		<u>30 kHz</u> <u>70 kHz</u>
mines:		2000 m 880 m
obstacles:		3300 m 1200 m
small submarines:		4000 m 1450 m
Bearing accuracy LF:		< 2°
Bearing accuracy HF:		< 1°
Environmental conditions		
Shock:		i.a.w. BV 0430
Vibration:		i.a.w. BV 0440
Climatic resistance:		i.a.w. DEF-STAN 07-55
Temperature range operation:		-7°C to +45°C
Temperature range storage:		-40°C to +70°C
Protection (inboard equipment):		i.a.w. DIN 40 050
Electromagnetic compatibility:		i.a.w. BV 3012
Airborne noise level:		i.a.w. DIN 45 635 (A)
Reliability:	MTBF: Electronics	> 1.800 hrs
	Transducer	> 40.000 hrs
Power supply:		115V AC at 50/60 Hz
Power consumption:		approx. 800 VA
Display:		15" VGA TFT
Control and Display Unit		
Weight:		approx. 54 kg
Dimensions:		D 3881 x W 515 x H 549