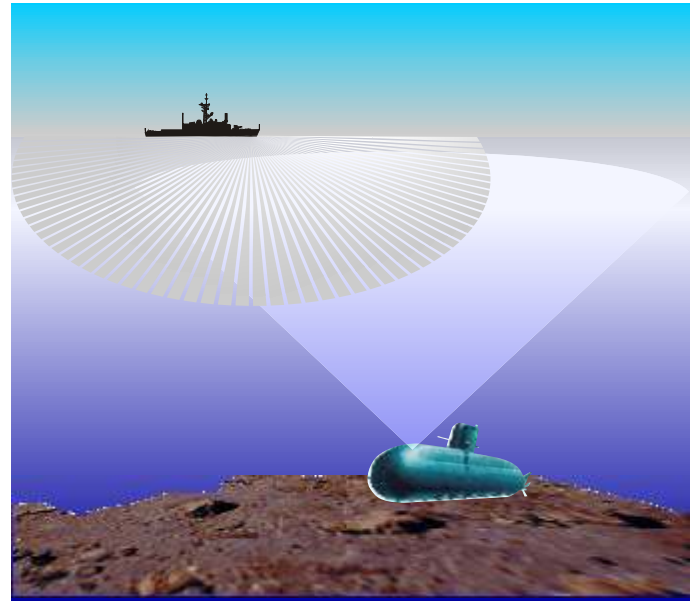


Sonar Beacon Equipment

- Emergency pinger for submarines
- Compact and rugged construction
- Operation independent of ship's mains supply
- BITE: test of transducer and electronic circuits
- Long operating life
- Main control unit watertight and pressure-proof case, even with the submarine's interior flooded the equipment remains operational



APPLICATIONS

A submarine in distress raises the urgent need for quick detection and salvage. Search and rescue highly depend on efficient systems which alert passing vessels and provide locating signals to rescue units. The ELAC Sonar Beacon Equipment is such a system designed to transmit acoustic signals in case of emergency.

OPERATIONAL FEATURES

The ELAC Sonar Beacon Equipment SBE are proven systems meeting all requirements for instrumentation on board submarines. The SBE - independent with its own power supply - provides acoustic signals which can be detected by passive sonars on board of ships or by handheld diver units allowing to locate the disabled submarine. SBE's transmission power and transducer performance admit long range signal detection.

Systems are available with one or two frequencies. The use of a low frequency transducer provides very long ranges of detection and a high frequency transducer offers very precise guidance of rescue equipment in the close range.

With regard to the importance of these life-saving alarm systems extreme reliability is guaranteed. The

SBE systems are pressure-proof, shock resistance and non-magnetic as well as protected against climatic influences.

Different alternatives of alarm modes are offered:

- Alarm activated manually via main control unit
- Alarm activated manually via remote control unit
- Automatic alarm activated by water pressure (beyond IP 54 barrier) at main control unit
- Automatic alarm activated by remote water contact switch

The SBE is standard on all U 209 and U 214 class Submarines.

Sonar Beacon Equipment

TECHNICAL DATA

Output Data

Source level	more than 180 dB +/- 2 dB rel 1 mPa/1 m on transducer axis
Operating frequency	3.5, 5, 10, 12, 35 kHz standard, others on request
Pulse length (PL)	50 ms (can be varied acc. to customer's request)
Pulse repetition rates (PRR)	10 sec (can be varied acc. to customer's request)
Operating life	more than 1200 hrs (5 kHz, PL 50 ms, PRR 10 sec)
Non-operating life	up to 6 years

Transducer Data

Beam pattern	omnidirectional (upper hemisphere)
Operating pressure	50 bar
Test pressure	64 bar

Dimensions and Weights

Main Control Unit STG 94

Height	320 mm	
Width	230 mm	
Depth	200 mm	
Weight	30 kg	
Max. operating pressure	housing	electronics
	50 bar	50 bar

Transducer

	LSE 294	LSE 194	LSE 194-53	LSE 147	LSE 258
Frequency	3,5 kHz	5 kHz	10 kHz	12 kHz	35 kHz
Diameter	121 mm	121 mm	121 mm	121,5 mm	166 mm
Height	350 mm	210 mm	210 mm	167 mm	125 mm
Weight (with 15 m cable)	33,7 kg	10,4 kg	10,4 kg	9,5 kg	8,4 kg

Pressure Hull Penetrator ZKD



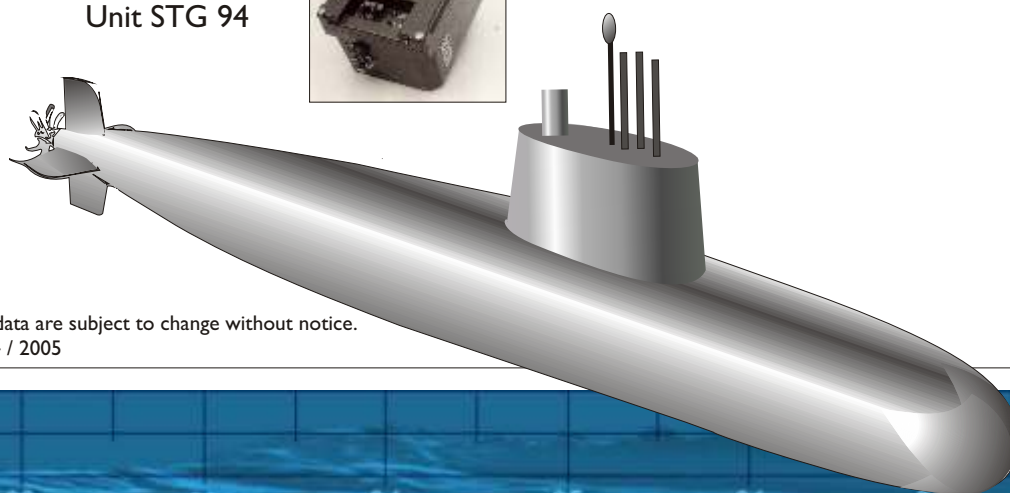
Main Control Unit STG 94



HF Transducer
LSE 258
35 kHz



LF Transducer
LSE 147
12 kHz



Technical data are subject to change without notice.
Version 04 / 2005

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