

# Diver Sonar DSE I

- **Active/passive handheld sonar**
- **200 m maximum range for active mode**
- **2000 m range for passive mode**
- **Up to 60 m depth**
- **32 beams and 2° resolution**
- **4 hours maximum endurance**



## APPLICATIONS

Generally, conditions under water set close limits to divers' visual control and this applies also to underwater cameras. Only with acoustic energy it is possible to penetrate even muddy waters. The sonar beams allow to look forward and detect and display objects and obstacles e.g. rocks, shipwrecks etc. on the diver's path ahead at a considerable distance.

Thus, the Diver Sonar provides independency and safety for operation in rivers, lakes and shallow coastal waters.

## OPERATIONAL FEATURES

The Diver Sonar is a rugged non-corrosive equipment especially designed for survey operations under water.

All sensors, electronics, controls and the display are integrated in one unit. The batteries are housed in a separate pack easy to replace beneath the unit.

With just two buttons - each one at the left and the right hand side - the equipment is operated easily by the diver's thumbs even while wearing diving gloves. All functions are menu-controlled and indicated on the display.

In water, the Diver Sonar is slightly buoyancy-positive. If released, it floats up slowly to the surface. The different water densities are compensated with adjustable trim weights.

It operates in active sonar mode with a horizontal search sector of 64° and a vertical search sector of 12°. The sector is divided into 32 beams of 2° each, which are adequately scanned.

An audio channel enables acoustic observation over a frequency range from 1 kHz to 50 kHz. During the use of this mode the display of the active sonar mode is faded out.

In active mode the sonar results are presented on the

display in a way easy to interpret. In addition the diving depth and a north reference enable the diver to determine his position and guide him on his mission.

The equipment operates with replaceable batteries or with rechargeable NiCD accumulators. An alarm signal appears on the display when the battery's capacity is close to zero.

For special application the Diver Sonar can be split into two sub-units by means of two adapter plates and a connection cable (available as option). This version allows e.g. separate operation of the sonar head under water and monitoring with the display on the shore.



# Diver Sonar DSE I

## TECHNICAL DATA

Field of view:	
Active mode	horizontally 64°, vertically 12°
Passive mode	horizontally 15°, vertically 30° (at 50 kHz)
Operating modes:	
Active	with high frequency - results shown on display
Passive	from 1 KHz to 50 kHz - via headphones (active mode presentation is faded out)
Source level:	190 dB $\mu$ Pa/m
EL-Display:	effective display size approx. 192 x 120 mm
Scale ranges:	0 - 12 m 0 - 25 m 0 - 50 m 0 - 100 m 0 - 200 m
Max. operation depth:	60 m
Power source:	- non-rechargeable batteries - rechargeable NiCd accumulators
Endurance:	with non-rechargeable batteries approx. 180 min. with rechargeable accumulators approx. 240 min.
Nonmagnetic	STANAG 2897



## SYSTEM CONFIGURATION

Sonar unit  
 Battery pack  
 Headphone  
 Transport case  
 Sensor protection cap  
 Tubus (dazzling protection)  
 Safety line

Option:  
 Battery charger  
 Battery adapter  
 Adapter plates  
 Connection cable



## WEIGHT & DIMENSIONS

(approx., with handling rails)

Height: 396 mm  
 Length: 732 mm  
 Width: 392 mm  
 Weight: 31 kg

Technical data are subject to change without notice.  
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