

MAGNEX® 120 LW

Magnetic anomaly locator

- Detection of ferromagnetic objects
- Normal landuse, wateruse, bore hole inspection
- Digital survey, single or multi-channel system



Characteristics

- Effective detection of ferromagnetic objects
- Bore hole probing
- Use on land and in water
- Option for digital recording of data: EPAD® data logger and EPAS® software
- Digital multi-channel systems
- Robust and reliable
- Ergonomic design

Mode of functioning

The MAGNEX® 120 LW uses the gradiometric principle to detect magnetic anomalies: A ferromagnetic object interacts with the magnetic field in its vicinity, the intensity and field direction (polarity) of which are evaluated as detection information for localizing the position of the object.



Detection of ferromagnetic objects

Areas of application

The MAGNEX® 120 LW serves for the finding of ferromagnetic objects which are buried underground or underwater. A further important field of use of the Magnex® 120 LW lies in the probing of bore holes where magnetic anomalies have been proven at relatively great depths or in detection fields with a lot of surface bound interference.

MAGNEX® probes belong to the group of top products on the international market.

MAGNEX® probe

The probe contains an inductor system developed by EBINGER. Their spacing is approx. 430 mm. The probe is of a robust and watertight design and offers excellent long-term stability in respect of parallelism and tilting compensation.

Bore hole probing

A special watertight cable with integrated traction relief is available as accessory for borehole inspection. The cable, the standard length of which is 25 m, links the watertight probe with the device electronics. On request EBINGER can supply the cable in other lengths.



Bore hole probing

Efficiency through multi-channel systems

- Increased productivity when surveying large areas
- Reduced personnel requirement
- Improved data quality
- Rapid and simple assembly and dismantling
- Modular design
- GPS option

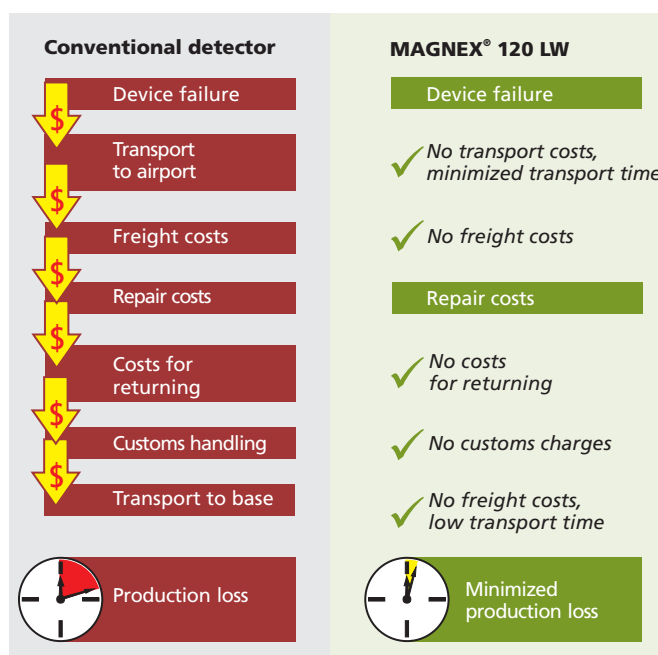
To improve productivity and increase the quality of the data obtained when field mapping, EBINGER offers the MAGNEX® 120 LW as multi-channel systems. If required these can be enhanced with a GPS system.

3-channel system

The TR01-03 carrier is fitted with three MAGNEX® 120 LW probes which are arranged at distances apart of 50 cm. The power supply consisting of the MAGNEX® 120 battery box is integrated in the carrier.

The carrier can be handled by one operator in one day and the productivity is increased by a factor of three. The average area able to be mapped by one operator is around 1.8 to 2 hectares.

For mapping on largely level ground the TR01-03 carrier can be enhanced with the TR01-02RAD wheel set.



High productivity through modular design



3-channel system with carrier and wheel set

5-channel system

With the 5-channel system the average area able to be mapped per person and day is around 3.6 hectares.

The extension set TR01-05 UPGR permits two further MAGNEX® 120 probes to be used giving a total of five probes. For high resolution mapping these can be mounted at distances apart of 25 cm.

The TR02-05 carrier has a width of 2 metres and can carry five MAGNEX® 120 probes, these being mounted at distances of 50 cm from each other.

By reason of its dimensions the TR02-05 carrier is delivered as standard with the TR01-02 RAD wheel set.

Vehicle-mounted multi-channel system

For mapping large areas or for long paths as well as also for use on water EBINGER offers vehicle-mounted and GPS-supported multi-channel systems with data recording and visualization software.

Depending on the particular detection location and the working conditions the average mapping result is in the range of approximately 12 hectares per day for a four metre wide vehicle-mounted frame.

Type	Designation	Number of probes	Distance apart	Carrier width	Wheel set	Mapping performance per day
3-channel	TR 01-03	3	500 mm	1,500 mm	optional	approx. 1.8 ha
5-channel	TR 01-05	5	250 mm	1,500 mm		
5-channel	TR 02-05	5	500 mm	2,000 mm	optional	approx. 3.6 ha
For vehicles				4,000 mm	standard	approx. 12 ha



5-channel system MAGNEX® 120 LW



Vehicle-mounted multi-channel system

Digital recording of measured data

The EPAD® data logger and the EPAS® software are perfectly matched to one another and form the first-class EBINGER system for recording, processing, visualizing and evaluating digital data for explosive ordnance disposal work.

The EPAD® data logger can be used in the field as a single channel or multi-channel system (up to 6 channels). The EPAS® software carries out the complex data processing and evaluating steps automatically in the background. The EBINGER system is characterized in particular by the simplicity of use as well as by its multilingualism.

EPAD® data logger, EPAS® software and EBINGER locators: the ideal tools for explosive ordnance disposal.

Work planning advantages

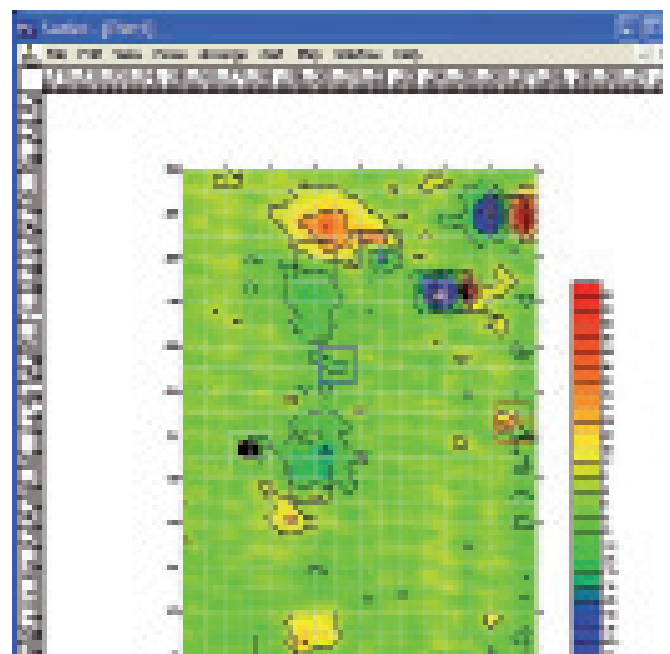
- Reduced expense for excavations
- Material and personnel requirement planning can be optimized
- Clearance priorities can be defined
- Easy planning of clearance priorities

The EPAS® software presents the detection data as two-dimensional colour-coded maps and/or as ISO line charts. Each way of visualization can be configured separately in respect of limit values and sensitivity. The detection data visualization can be superimposed on geographical maps.

The models, which are used in the evaluation of the magnetic anomaly and pulse-electromagnetic induction data, facilitate interpreting of the objects that have been localized in respect of their horizontal position, approximate depth and orientation. All object data are summarized in tabular form, this information assisting at the excavating of target objects.



EPAD® data logger with EPAS® software



The desktop elements of the EPAS® software:
The map shows the distribution of the target objects

Operating

The MAGNEX® is ready for use as soon as the battery tube has been screwed on. The operating devices such as step switch and manual zeroing compensation knob lie to hand. With the step switch six sensitivity ranges between 10 nT/m and 3,000 nT/m can be selected.

Sensitivity ranges able to be set	
Stage 1	3,000 nT/m
Stage 2	1,000 nT/m
Stage 3	300 nT/m
Stage 4	100 nT/m
Stage 5	30 nT/m
Stage 6	10 nT/m

Optional accessories

- Headset
- Compensation tool
- Rechargeable battery set with charging device



MAGNEX® 120 LW in its carrier case

Technical data

Power supply	
Battery	6 x Type Mono 1.5 V (LR20)
Recharge. battery	7 x Type Mono 1.2 V (HR20)
Operating time*	
Dry batteries	approx. 40 h at + 20 °C
Recharge. batteries	approx. 25 h at + 20 °C
Temperature range	approx. - 20 °C to + 55 °C
Dimensions	see sketch
Carrier case	approx. 850 x 350 x 170 mm
Weight	in operation approx. 4,300 g with case approx. 11,000 g

Fulfills military standards. Environmental test to MIL-STD 810F Method 501.4, 502.4, 506.4(II), 507.4, 509.4, 510.4(III), 514.4, 516.4(I) EMC test to MIL-STD-461D.

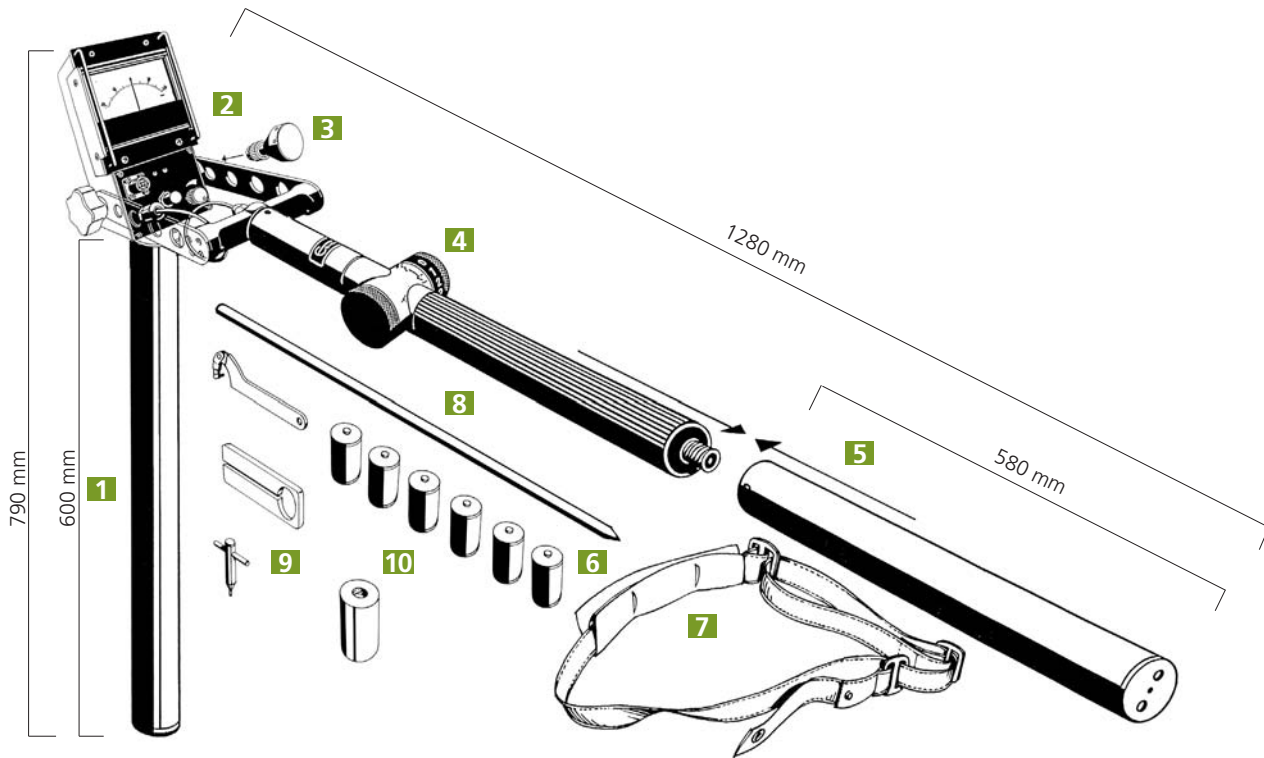
*Depends on the temperature and quality of the batteries / rechargeable batteries used.

System enhancements

- Water and bore hole cable
- Multi-channel carrier
- EPAD® data logger with EPAS® software



Electronics with LED display



Construction

The MAGNEX® 120 LW consists of the following components:

- | | |
|--|---------------------------------------|
| 1 Unscrewable probe | 5 Battery tube |
| 2 Probe bracket with electronics and display instrument | 6 Batteries |
| 3 Removable signal transducer | 7 Carrier belt |
| 4 Operating part with step switch and zero-point compensation | 8 Test rod |
| | 9 Compensation tool (optional) |
| | Carrier case (not illustrated) |
| | 10 Ballast (optional) |



Probe with ballast and bore hole extension cable



Areal probing



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