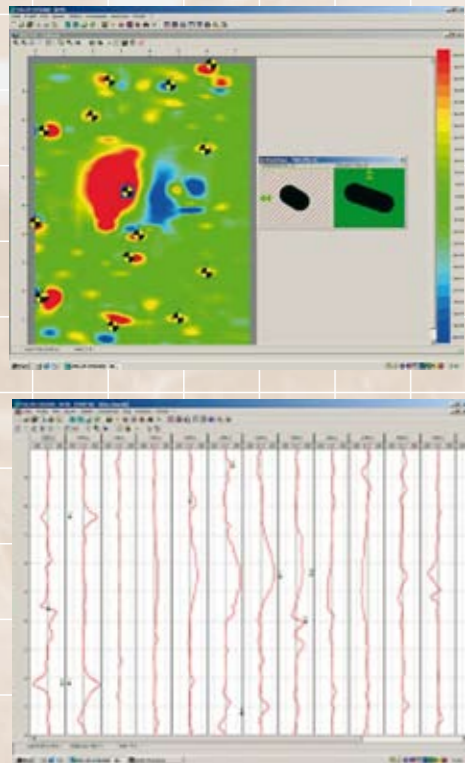


VALLON EVA2000®

The evaluation software VALLON EVA2000® allows the processing of the survey data. The magnetic interferences are displayed as colour field map.

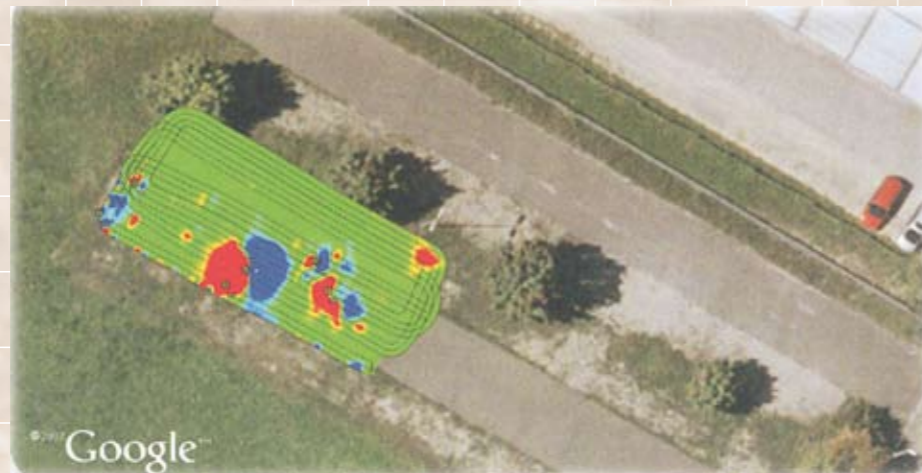
Topographic maps can be inserted true-to-scale (bmp, jpg, dxf etc.). With DGPS the local coordinates in meters and the GPS-coordinates are used. All common systems of coordinates can be displayed. All maps can be exported (dxf).

The automatic algorithm calculates all objects in a field at the touch of a button. Object position and object depth are indicated on the object list. Filter functions facilitate the evaluation. Many import functions allow to process strange data formats as well.



Nr.	X rel	Y rel	Depth	Phi	Theta	Max-Val	Max-Val EMI	Magn. Moment	LSQ	Auto	Fit-Area	Datalayer	Remark
	m	m	m	°	°	nT	µV	Am²	nT		m²		
2	2,41	12,94	6,17	84	29	69		346,489	44,2		58,18	VET1	
4	12,74	5,00	7,12	44	107	94		469,865	28,4		56,47	VET1	

2/2 Objects visible



Technical Data

Measuring range: $x1 = \pm 2-2000 \text{ nT}$, $x10 = \pm 20-20000 \text{ nT}$
 Compensation range: $\pm 500 \text{ nT}$
 Power supply: 1 set of accumulators 12 V 9.2 Ah
 Distance of sensors: 1700 mm
 Diameter of sensor tube: 35 mm
 Sensitivity steps: 7
 Max. sensitivity: Ferromagnetic parts (steel) are detected according to their size and magnetic condition
 Battery life: approx. 40 h
 Compliance to environmental conditions: according to MIL STD-810E 501.3, 502.3, 503.3, 506.3, 514.4
 Operation temp.: -32° C to $+60^\circ \text{ C}$
 Signal outputs:
 1. Analog data output 0 to $\pm 6.1 \text{ V}$ and RS232
 2. Headset
 Inputs:
 1. Ext. battery power supply 9-12 VDC
 2. SEPOS® navigation system
 3. Sensor tube

Dimensions (approx.):
 Metal transport case: 2040 x 340 x 230 mm
 Textile bag for carrying device* 960 x 350 x 870 mm
Weights (approx.):
 1. Sensor tube: 1.8 kg
 2. Electronics: 1.1 kg
 3. Carrying bar: 1.9 kg
 4. Accu pack: 3.3 kg
 Weight of carrying device in bag: 4.8 kg

All technical data are subject to change without prior notice.
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Ferrous Locator VET2

Difference Magnetometer for the location of large bombs in large depths

High detection sensitivity

Ease of operation

Comfortable carrying device

Height adjustment of sensor tube

Data output

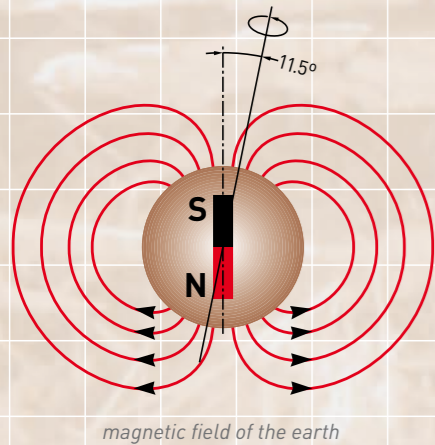
No sensor adjustment required



General

The Ferrous Locator VET2 has been designed for searching specifically in large depths for unexploded bombs, depots and other ferrous objects which could not have been detected with the standard Ferrous Locators.

During conventional detection the measuring data are read off on the indication meter. By connecting a data logger the measuring data can be stored, displayed as graphs and evaluated subsequently.



Measuring Principle

The magnetic field of the earth is homogeneous with regards to the field strength and the direction of the field strength. If a ferromagnetic object is brought into this homogeneous field, the own field of the object is superposing the local homogeneous magnetic field of the earth.

With increasing distance from the object the field distortion is decreasing.

The extent of the distortion depends on several factors. The most important ones are the size of the object to be detected and its permeability. The larger the object to be detected, the larger the detection distance.

If the buried object is magnetized, i.e. it has an own magnetic field, the field lines are reacting according to the polarity of the object.

The north pole of the object displaces the field lines of the earth, whereby the south pole of the object attracts the field lines.



In general, the total disturbance of magnetized objects is larger than the disturbance of objects having no own field. But very rarely the total disturbance might even be smaller depending on the position of the object.

The VET2 is a differential magnetometer, i.e. two sensors are arranged in geometrically true alignment with a distance of 1700 mm and are connected in a way that they measure the value zero in a homogeneous field.

Each sensor passing a ferrous object is differently affected. The indication meter deflects to plus or minus depending on the position of the object.

**) Field lines of the northern hemisphere*



The measuring accuracy is guaranteed over long time under normal field operation and all weather conditions.

Sensor adjustment is not necessary!

Main Components

The components of the VET2 are stored in:

- Rigid metal case:
- Sensor tube
 - Electronics
 - Carrying bar with handle
 - Battery compartment
 - Charging set
 - Headset



- Carrying bag:
- Carrying device with pads



Electronics

The electronics is arranged in a rigid watertight housing with easily accessible operating elements:

- 7 steps sensitivity switch
 - Volume control
 - Integrated loudspeaker
 - Headset socket
 - TEST-key
 - Compensation key
 - Indication meter (retractable)
-
- Mode Selector for:
 - for linear indication in the measuring range x 1 or x 10
 - Logarithmic indication in all sensitivity steps
 - Battery check on load



- Rigid sockets for:
- Sensor tube
 - Headset
 - External power supply
 - Data output analog or digital RS 232
 - SEPOS®-Detector

The inbuilt, non-magnetic loudspeaker is directed to the operator.

Sensor Tube

The sensor tube of the VET2 can continuously be adjusted to the height of different operators by means of the simple clamp.



Optional Accessories for Computer-Aided Data Acquisition

1. SEPOS®

For an exact calculation of the position and depth of objects with software VALLON EVA2000® the data acquisition must be as accurate as possible.

This includes also a constant survey speed which is very difficult in practise.

The result are wrong entries of the track length, wrong object depths and positions, that means increasing costs and risks for explosive ordnance disposal. But these disadvantages are things of the past if you use SEPOS®.

The SEPOS® navigation system consists of a SEPOS®-detector and SEPOS®-marks, which are integrated in the SEPOS®-rope in a distance of 100 cm. The SEPOS®-marks correct each 100 cm the walking speed, that means 1 correction per meter.

The SEPOS®-detector is fixed at the lower end of the sensor tube. Whilst walking along the tracks, the data acquisition is started automatically when the SEPOS®



detector passes the first SEPOS®-mark respectively is stopped at the last SEPOS®-mark.

Thus the track length is automatically determined, even if the operator has different walking speeds.

With normal walking speed 20 resp. 40 measuring points per second are recorded, this corresponds to a measuring point distance of approx. 5 resp. 2.5 cm.

Connection of GPS-navigation is also possible.

2. Vallon Field computer VFC2* (ruggedized PDA)

Realtime display of the measured graphs, storage and calculation of the survey data at site. Storage capacity 1 GB for 100 ha. Connection of GPS-Navigation possible. Data survey can also be made without navigation system, however, not as accurate.

**) VET2 can be operated with predecessor model VFC1 as well*



Further accessories:

- Side handlebars when using DGPS
- Rod for DGPS