



**together**  
*we make the world safer.*

Detectors and systems for explosive ordnance clearance



# 04

## Together

**Together we are successful.** Our “Together” philosophy strengthens cooperation and leads to joint successes, promotes innovation and creates trust.



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## Detection of landmines and IEDs

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## Data acquisition and evaluation

**Innovative and powerful.** Our hardware and software solutions enable data to be recorded, comprehensively analyzed and documented. Efficiency and accuracy take centre stage.



# 1965

Founding year

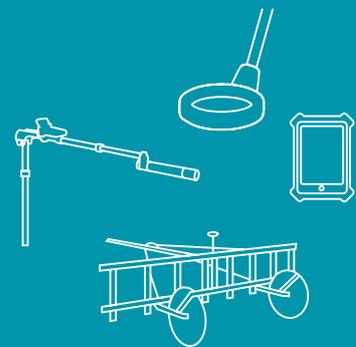
## Together we are successful

This fact characterises the way we work together at VALLON. Our success is based on the commitment and expertise of each individual. Teamwork and the continuous development of our employees are at the heart of our corporate culture. Because only together can we drive innovation and deliver top performance – every day anew.

# togge

## Continuous improvement

The best possible use of proven technologies and continuous innovations are at the centre of everything we do. Our research and development department works closely with customers, universities and specialized institutes. Together, we break new ground and develop cutting-edge technologies that continue to set new standards in the industry. Through these efforts, we continuously improve our product portfolio and ensure that we can offer our customers the best product for their particular application.



Large product variety



*Global player  
with family values.  
Owner-managed in  
3<sup>rd</sup> generation.*

## **Together against the invisible danger**

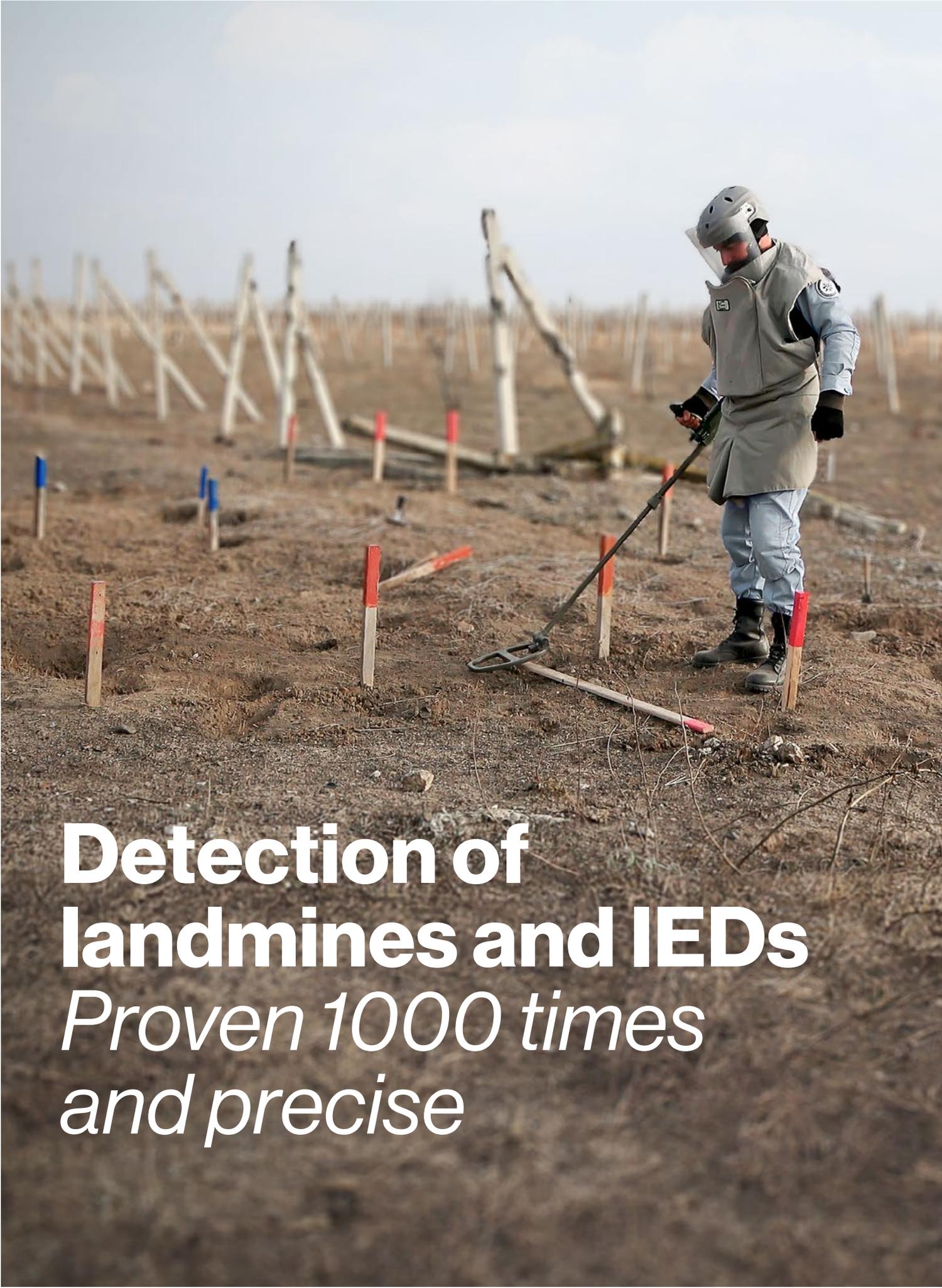
“Together we make the world safer” – our customers are partners with whom we work closely and trustingly. For us, working together means understanding their challenges and developing customized, high-quality solutions – whether for humanitarian aid organisations, armed forces or explosive ordnance disposal services. This is how we create trust and long-term relationships based on what we have achieved together.

# together.

## **Highest standards are our benchmark**

“Quality: Made in Germany” is not just a promise for us, but our daily aspiration. Together, we focus on strict control processes and continuous optimization. Our quality management system ensures that every product that leaves our company meets the highest standards and performs as a reliable detector in a wide variety of scenarios. “Together” also means that we work closely with our suppliers and select them carefully to ensure that every component meets our strict specifications. Our suppliers are also aware of their great responsibility.



A deminer in full protective gear, including a helmet with a clear face shield and a heavy body vest, is using a metal detector in a field of landmines. The field is marked with numerous wooden stakes, some with red and blue caps, indicating the locations of mines. The background shows a line of wooden stakes stretching across the horizon under a clear sky.

# Detection of landmines and IEDs

*Proven 1000 times  
and precise*



VALLON offers a versatile product portfolio for humanitarian and military demining that can be used both on land and under water. The fourth-generation metal detectors from VALLON set new standards in functionality, quality, robustness and reliability. They are optimally equipped with GNSS, Bluetooth® and Wi-Fi. The web interface, optimized for mobile devices, enables simple configuration, GNSS data downloads and firmware updates.

Proven third-generation models such as the VMC1 and VMH3CS remain an integral part of our portfolio due to their specialized functions. We offer modern dual-sensor detectors for the reliable detection of IEDs and metal-free objects. The MW1630B and VMW1 can also be used up to a depth of 60 m and 30 m under water respectively.

With VALLON detectors, you can rely on advanced technology and proven reliability – for precise results in different environments.

# VMH4 and VMF4

## *The all-rounder with exchangeable search coil*

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### **4<sup>th</sup> generation metal detectors**

The VMH4 and VMF4 are the ideal partners for the detection of landmines, unexploded ordnance (UXO) such as grenades and submunitions as well as improvised explosive devices (IEDs) including wires and cables.

The detectors offer highly effective ground compensation for mineralized soils. They are robust and durable, meet the stringent requirements of MIL-STD-810G and are available in olive and sand colours.



# One detector – flexibly customizable

Versatile application options thanks to exchangeable search coils.

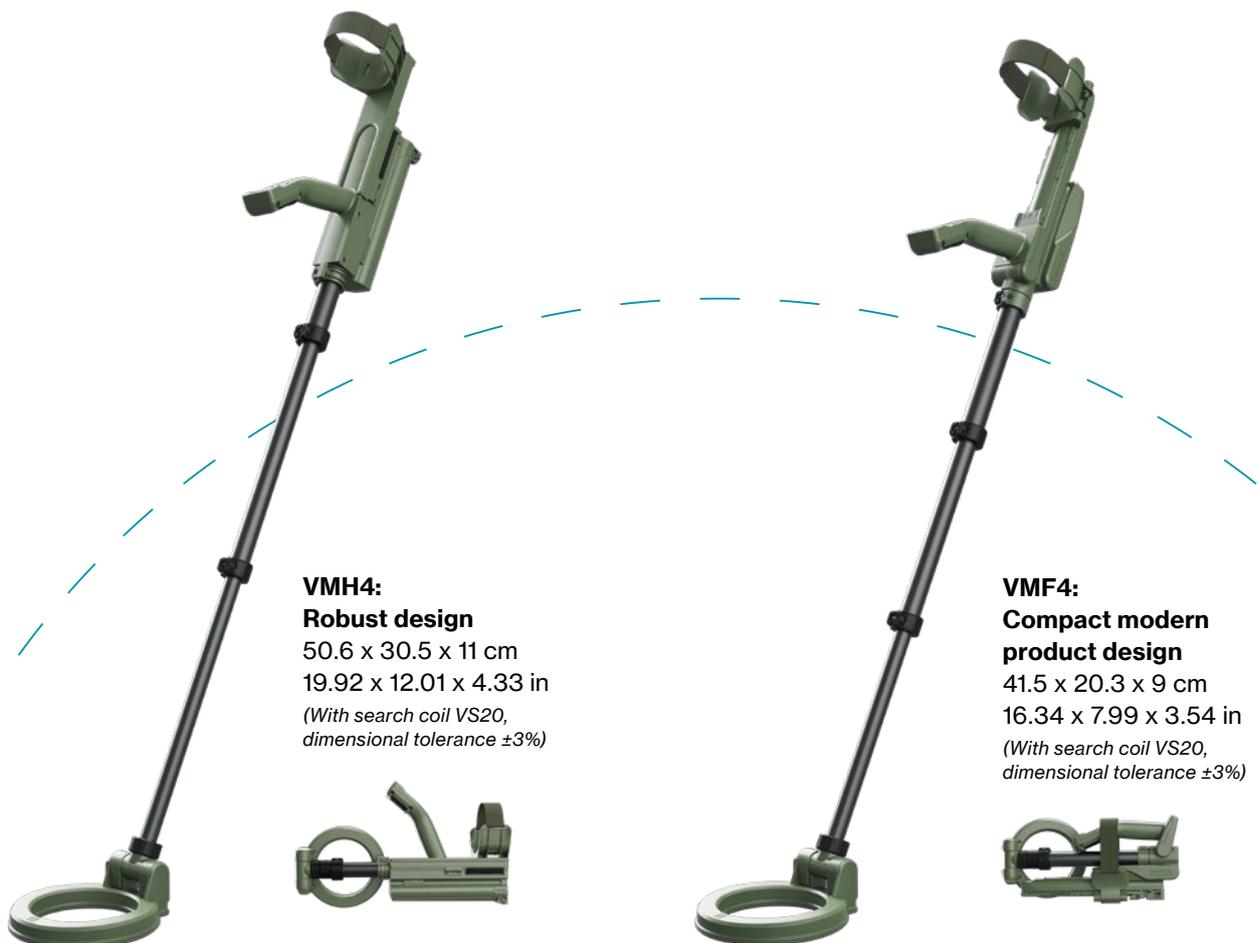


**Search coils VS20 & VS25**  
For detecting landmines and objects with a low metal content.

**UXO search coil VS30 & VS60**  
For locating submunitions, UXO and larger metal objects.

**Stick probe VSP4**  
Ideal for searching in areas that are difficult to access.

Specially developed for low-fatigue continuous use in humanitarian and military demining, they offer maximum reliability and efficiency.



**VMH4:**  
**Robust design**  
50.6 x 30.5 x 11 cm  
19.92 x 12.01 x 4.33 in  
(With search coil VS20,  
dimensional tolerance ±3%)

**VMF4:**  
**Compact modern product design**  
41.5 x 20.3 x 9 cm  
16.34 x 7.99 x 3.54 in  
(With search coil VS20,  
dimensional tolerance ±3%)

# VMC4

## *The ultra-compact specialist*

Weighing less than 1.5 kg (3.31 lbs), the VMC4 is optimized for special assignments. Its ultra-compact design makes it particularly easy and efficient transport.

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### Ultra-compact product design

28.3 x 12 x 6.2 cm

11.14 x 4.72 x 2.44 in

(Dimensional tolerance  $\pm 3\%$ )

### Optimized for special forces

The VMC4 is the ideal partner for the detection of landmines and improvised explosive devices (IEDs), including wires and cables. It features highly effective ground compensation for mineralized soils and offers an ultra-compact, robust and durable design. It complies with MIL-STD-810G. The VMC4 is available in the colours olive and sand.



# 4<sup>th</sup> generation metal detectors: *VMF4, VMH4 and VMC4*

## Proven itself thousands of times

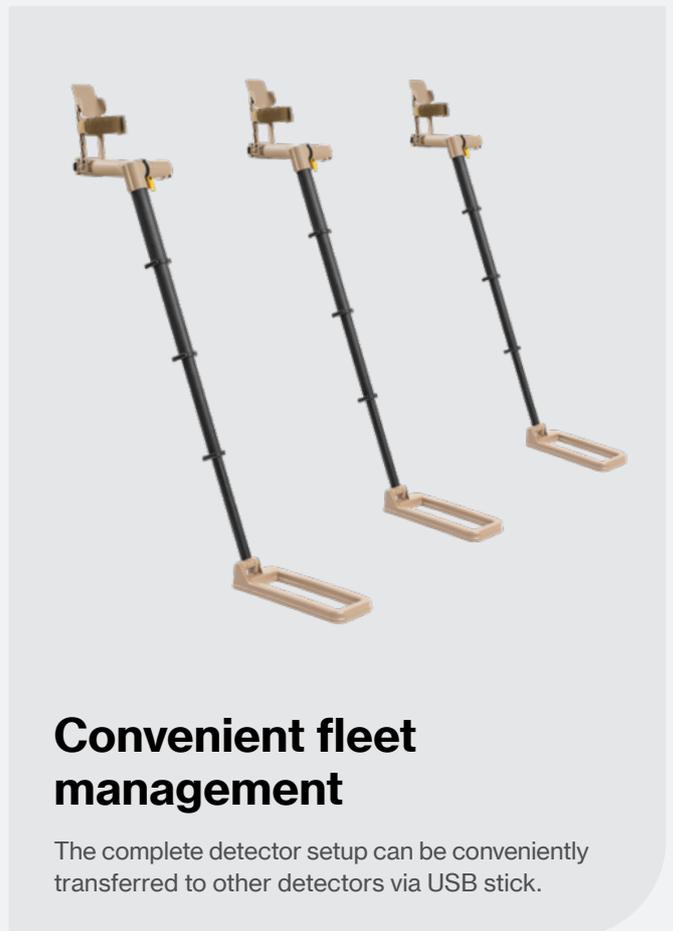
The fourth-generation metal detectors offer clear and intuitive user guidance. The robust operating unit, which has been tried and tested thousands of times, enables easy handling even under adverse conditions.

The pinpoint button enables increased detection accuracy, while the infrared LED display supports use with night vision devices.



## State of the art

The Bluetooth® and Wi-Fi interfaces allow wireless access to the detector, setting a new standard. The web interface, optimized for mobile devices, simplifies the configuration of all detector functions, the download of GNSS data and firmware updates.



## Convenient fleet management

The complete detector setup can be conveniently transferred to other detectors via USB stick.

# Proven classics

## *Metal detectors*

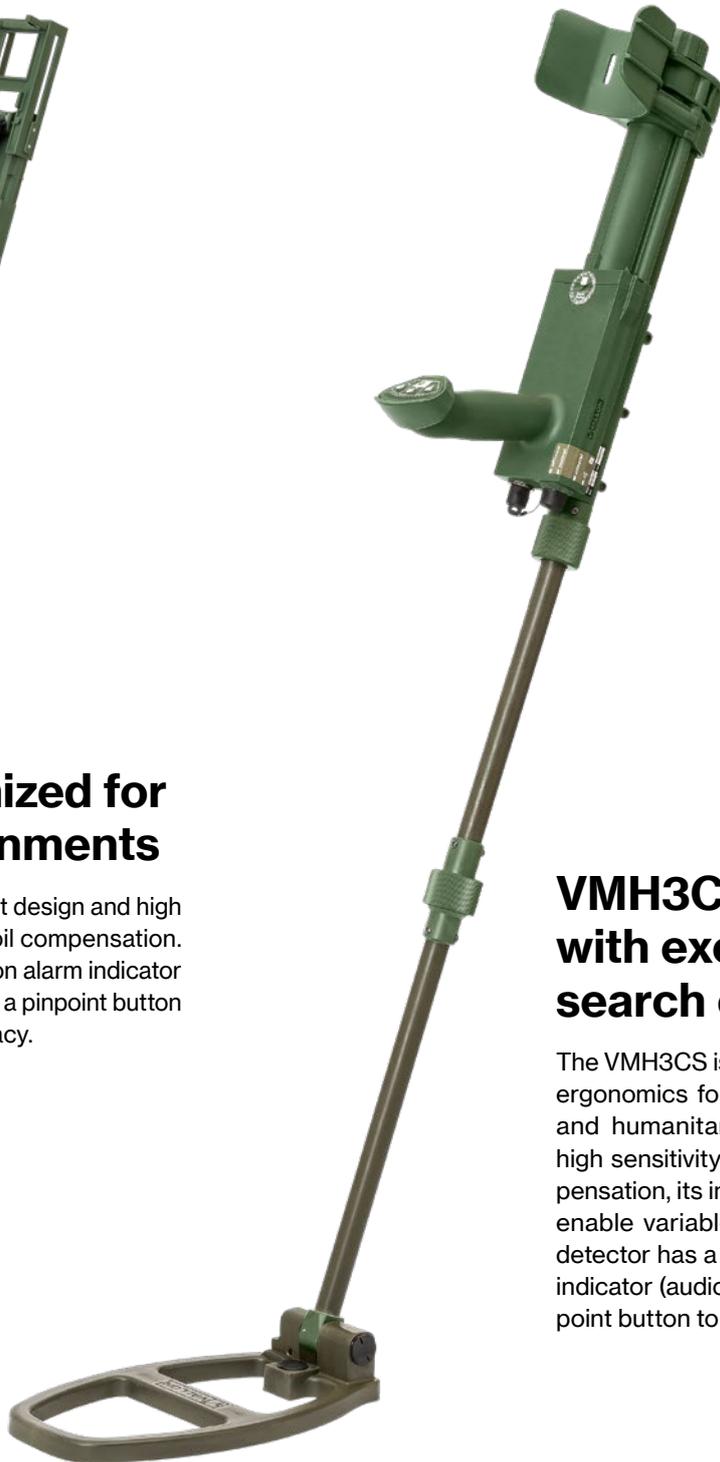
### *of the 3<sup>rd</sup> generation*

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#### **VMC1 – optimized for special assignments**

The VMC1 offers a compact design and high sensitivity with effective soil compensation. It has a clear metal detection alarm indicator (audio/visual/vibration) and a pinpoint button for greater locating accuracy.



#### **VMH3CS – with exchangeable search coil**

The VMH3CS is characterized by optimized ergonomics for continuous use in military and humanitarian mine clearance. With high sensitivity and effective ground compensation, its interchangeable search coils enable variable optimization of use. The detector has a clear metal detection alarm indicator (audio/visual/vibration) and a pinpoint button to increase locating accuracy.

The 3<sup>rd</sup> generation detectors have been tried and tested worldwide and continue to be highly valued. They have proven their reliability and efficiency thousands of times over in both humanitarian and military demining operations.



**MW1630B –  
for underwater use  
up to 60 m/~200 ft**

The MW1630B can be used on land and in water up to a depth of 60 meters (~200 ft). It is saltwater-resistant and characterized by a high level of sensitivity. The alarm signal is clearly audible.



**VMW1 –  
for underwater use  
up to 30 m/~100 ft**

The VMW1 can also be used on land and in water up to a depth of 30 meters (~100 ft). It impresses with its high sensitivity and effective ground compensation. Its compact design and low weight make it easy to transport. The detector has a clear metal detection alarm indicator (audio/visual).

# Dual-sensor detectors

## *“Minehound”*

VALLON dual-sensor detectors are the first choice for humanitarian and military demining. They enable the reliable detection of improvised explosive devices (IEDs) with minimal or no metal content.



### **VMR3G – with graphic display**

The VMR3G combines metal detector (MD) and ground-penetrating radar (GPR) in an innovative dual-sensor search head. Sophisticated software with intelligent algorithms and effective ground compensation ensures excellent detection accuracy.

A highlight is the 3.5 inch display with integrated light sensor for automatic brightness adjustment and the intuitive user interface, which is available in numerous national languages. The robust mechanical construction with high-quality carbon fibre telescopic shaft guarantees durability and stability. The clear alarm signal(audio/visual/vibration) of MD and GPR via the colour graphic display ensures reliable signalling during use.





## **VMR3 – with LED display**

This dual-sensor detector offers the same advanced technology as the VMR3G, but with an LED display. This ensures reliable signalling during use through clear alarm indications (acoustic/optical/vibration).



# **Cable detector “Wirehound®”**

## **VR1 – for cables and wires**

The VR1 “Wirehound®” is a special detector for cables and wires, equipped with a ground-penetrating radar (GPR) for precise detection regardless of the orientation of the cables and wires. With its high detection sensitivity, it recognises wires from a length of 10 cm (3.94 in).

An integrated OLED display enables simple operation and the selection of different languages. The alarm is clearly indicated acoustically, visually and by vibration, ensuring reliable signalling in any environment.



# Detection of UXO

*Versatile  
and modular*



For the detection of unexploded ordnance (UXO) and the subsequent data analysis and documentation, VALLON offers a comprehensive product portfolio. Our solutions are optimized for civil, humanitarian and military applications.

VALLON offers a variety of active systems such as the large loop metal detector VMX10 and the submunition detector VMXC1-3.

This portfolio is complemented by passive magnetometer systems such as the modular VX1, which can be used in a variety of applications on land, in boreholes and under water. Our multi-channel systems are available in different versions – handheld, pushable or as a trailer. For special requirements, we also develop customized multi-channel systems on request, which can be combined actively and passively.

With UXO detection solutions from VALLON, you can rely on proven engineering and innovative technology – for precise and reliable results under a wide range of conditions.

# Active metal detectors *for the detection of UXO*

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Coil size  
1 x 1 m (3.28 x 3.28 ft)

## VMX10 – the large loop metal detector

The VMX10 was specially developed for locating unexploded ordnance (UXO) in heavily mineralized soils.

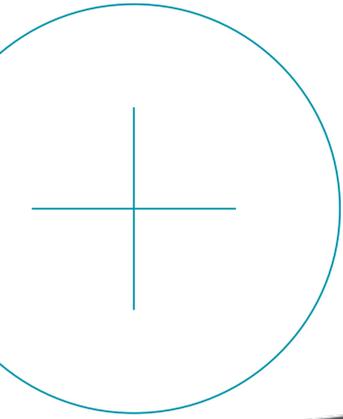
It offers coil sizes of 1 x 1 m (3.28 x 3.28 ft), 2 x 1 m (6.56 x 3.28 ft), 2 x 2 m (6.56 x 6.56 ft) and has an electronic unit with OLED display and highly effective ground compensation. With 14 adjustable delay levels for suppressing interference factors, it is extremely versatile. It offers the option of data acquisition with suitable VALLON hardware and software.



Coil size  
2 x 1 m (6.56 x 3.28 ft)



Coil size  
2 x 2 m (6.56 x 6.56 ft)



## VMXV1 – wheeled carrier

The VMX10 can be optionally equipped with the VMXV1, a wheeled carrier system in lightweight design. This enables convenient operation by just one person and increases the area coverage. The VMXV1 has puncture-proof, robust wheels for all terrains, an antenna holder for optional GNSS and can be transported easily and safely in a case.



Active metal detectors are ideal for the detection of explosive ordnance in heavily mineralized soils, where magnetometer systems often reach their limits.

## VMXC1-3 – for UXO and submunitions

The VMXC1-3 UXO detector was specially developed for the professional detection of larger metal-containing objects such as submunitions and grenades. The special UXO firmware is the basis for use in this demanding area of application.

The detector is also characterized by its well-balanced design, which ensures fatigue-free operation even when used for several hours. It is particularly suitable for work in heavily mineralized soils, which lead to many false alarms with magnetometers.



# Modular magnetometers *for the detection of UXO*

The modular UXO detector kit VX1 is the ideal solution for precise and comprehensive UXO detection on surfaces, in boreholes and under water.

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## **VX1 – the modular UXO detector**

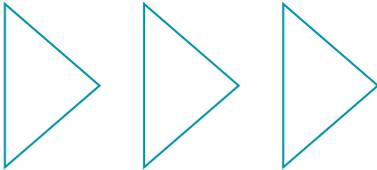
The VX1 is an extremely robust and versatile magnetometer system for UXO detection with high search sensitivity and polarity-dependent detection display. With simple operation and high efficiency, the VX1 fulfils the highest demands in civil, humanitarian and military explosive ordnance disposal.

In combination with VALLON field computers and software solutions, it becomes an all-rounder for fast data acquisition and professional analysis. The detachable VSM4 digital probe also enables scalable use in all VALLON multi-channel systems.





*Modular UXO detector kit  
for use on land*



*Modular UXO detector kit with SEPOS®-Borehole for  
precise probe position determination*

## **SEPOS®-Borehole option**

The SEPOS®-Borehole option enables precise positioning of the probe and optimally compensates for changes in speed during data acquisition, resulting in increased data quality. SEPOS® communicates directly with VALLON hardware for data acquisition and is specially developed for use with the modular UXO detector kit VX1 in boreholes.





**VXB3.1 – Magnetometer borehole with VFC4.2**  
*(Digital probe VSM4plus, borehole cable and central electronics unit VCU3)*



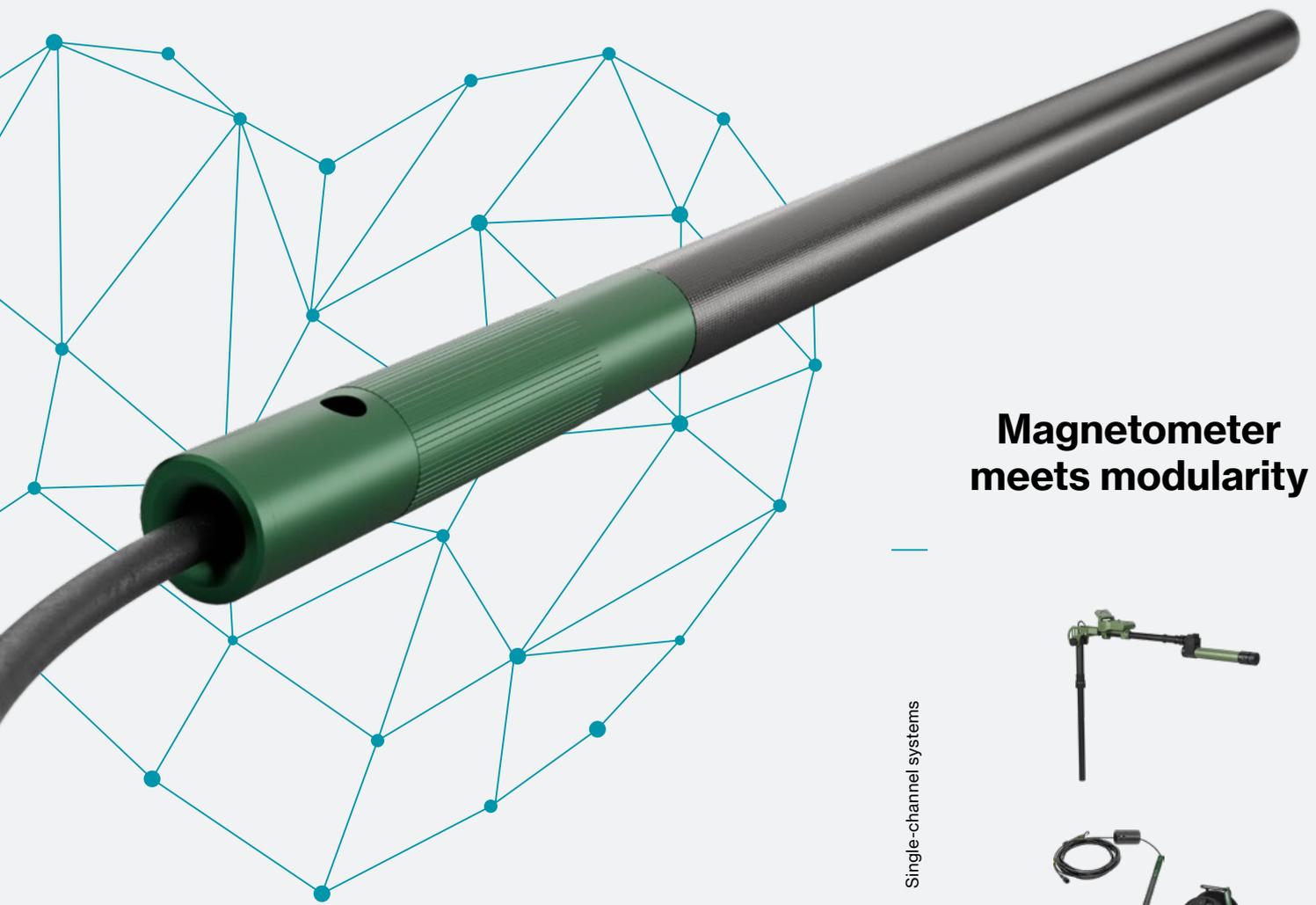
**VXB2.1 – Magnetometer borehole with VFC4.2**  
*(Digital probe VSM4 with borehole cable and central electronics unit VCU2)*

## VXB2.1/VXB3.1 with VFC4.2 – magnetometer kit, optimized for continuous use in boreholes

The VXB3.1 offers a compensation range of  $\pm 75,000$  nT and a measuring range of up to  $\pm 300,000$  nT, while the VXB2.1 covers a compensation range of  $\pm 7,500$  nT and a measuring range of up to  $\pm 20,000$  nT. Both sets impress with extremely fast commissioning and do not require sensor calibration. The EVA4mobile® Android app facilitates the recording of borehole and surface data, while the powerful 6-inch VFC4.2 field computer enables the efficient processing of very large amounts of data.



**VFC4.2 field computer**  
*with integrated EVA4mobile® license*

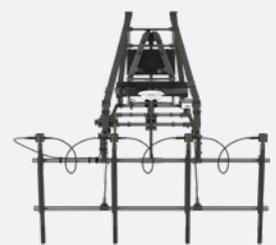


## Magnetometer meets modularity

Single-channel systems



Multi-channel systems



## Digital Probe VSM4

*a fully digitalized  
1-axis differential  
magnetometer probe*

The VSM4 digital probe is the centerpiece of our magnetometer systems. It can be used modularly in all VALLON systems.

# Multi-channel systems

## *Optimized solutions for any terrain size*



### **Carrying frame VXP3 – for medium- sized areas**

The VXP3 carrying frame in lightweight carbon construction is ideal for probing medium-sized areas. It is foldable and therefore easy to transport. The two versions can hold 3 or 5 probes. A wheel set and an antenna holder for GNSS are optionally available.



The multi-channel systems from VALLON offer optimized UXO detection for a wide variety of types of terrain. From medium-sized to very large areas, they guarantee the precise and efficient detection of unexploded ordnance.



## VXV handcart – for large areas

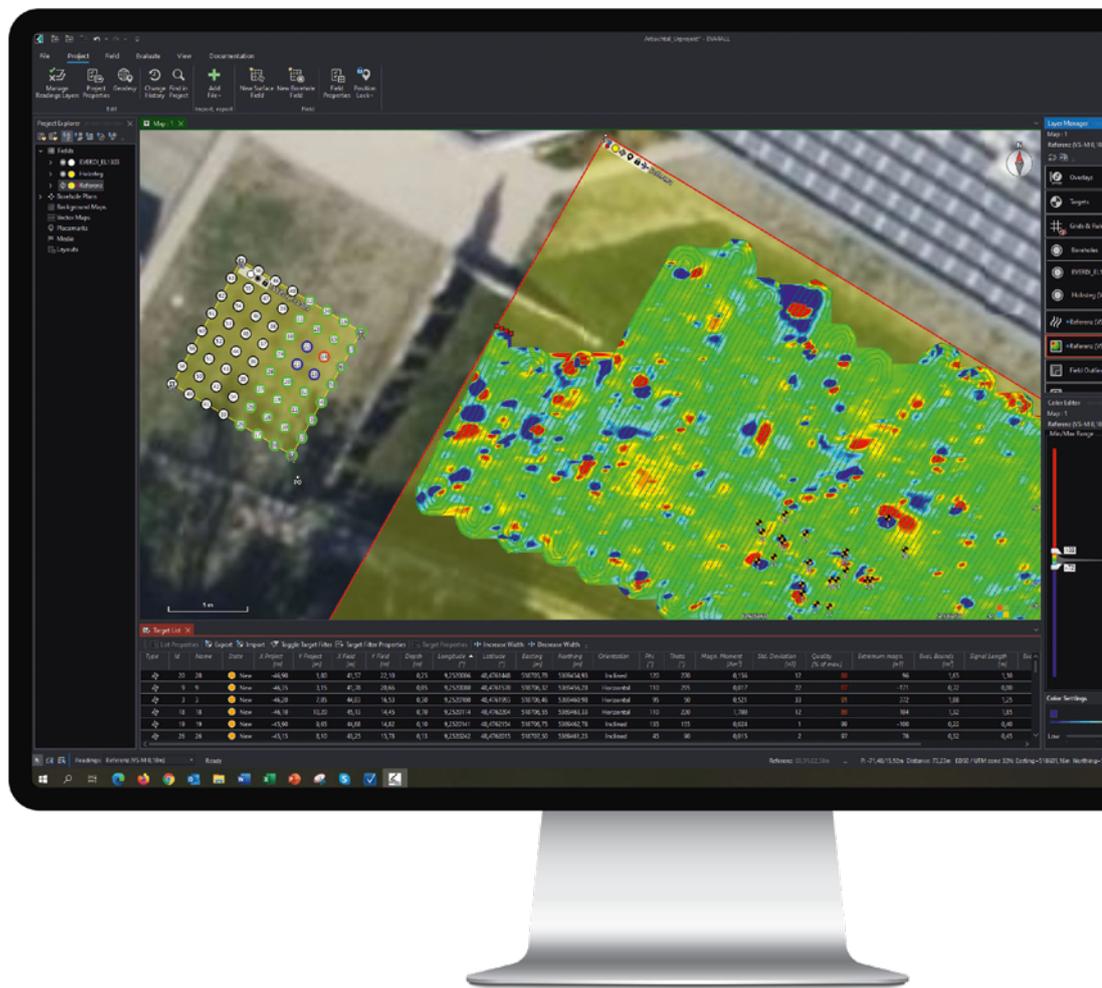
The VXV is a rugged everyday use handcart for surveying large areas and impresses with its robust and durable aluminum glass reinforced plastic construction. The versatile variants offer flexible application options with 3 to 8 probes. The handcart has a custom non-ferrous durable wheel design, which are removable for transport. An antenna holder for the optional integration of a GNSS is included in the scope of delivery.

## VXVT trailer – for very large areas

The VXVT impresses with its high-quality aluminum and glass reinforced plastic construction, which enables fast and convenient data collection while surveying very large areas. With infinitely adjustable probe spacing, length-adjustable drawbar and standard ball coupling, it offers a high degree of flexibility. The spring-mounted wheel set with extra-large custom durable non-ferrous wheels and the antenna holder for optional GNSS round off the package.

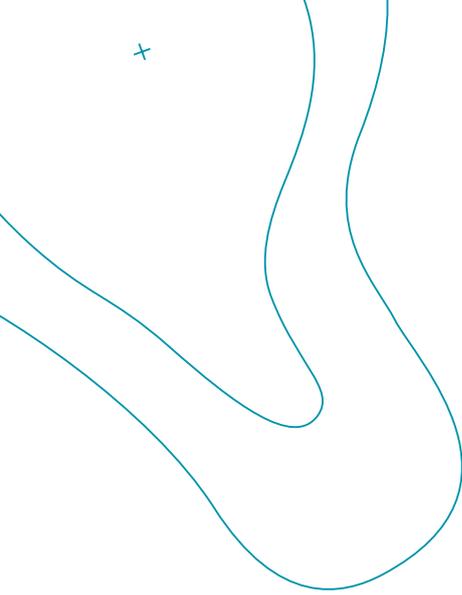
# Software for data acquisition and evaluation

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## EVA4ALL®

EVA4ALL® is a modern software for Microsoft Windows for the evaluation, visualisation, georeferencing and documentation of surface and borehole data. It sets standards in the handling of large amounts of data. With innovative functions for data evaluation, simplified object calculation and customizable project reports, EVA4ALL® offers an efficient and flexible solution for your detection projects.



## EVA4mobile®

EVA4mobile® is an Android app for recording surface and borehole data with VALLON detectors. Available with the VFC4.2/VFC4.1plus field computers or as a Bluetooth® beacon licence solution, it offers excellent field navigation in combination with differential GNSS systems. The app includes tools for field definition, project management and sensor configuration management and offers the best possible protection against data loss.

VALLON offers powerful hardware and software solutions for data acquisition, georeferencing, evaluation and documentation. The software is optimized for use with VALLON metal detectors and magnetometers.



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