



Graw Radiosondes

Reliable Upper Air Data for Mission-Critical Decisions



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Graw Radiosondes

Upper Air Sounding Systems for defence operations

Weather as a critical operational factor

Weather conditions play a critical role in defence operations and training. Rapidly changing atmospheric conditions and localised phenomena such as wind shear can impact safety, planning, and execution.

Access to reliable Upper Air data supports risk mitigation and operational decision-making in complex environments.

Why Graw Radiosondes

Graw Radiosondes is a trusted partner in Upper Air meteorology. With decades of experience, we are pioneers in modern radiosonde technology. Since 1938, we have offered reliable, field-proven solutions for civil and defence applications worldwide.

Decades ago, Graw began designing radiosondes specifically to meet the stringent requirements of the German Army. While our technology has evolved, our core mission remains unchanged: providing robust and field-proven equipment that performs when it matters most.

Proven technology for time-critical defence operation

Graw Radiosondes delivers Upper Air Sounding equipment designed for continuous, reliable performance in demanding environments.

Based on mature, field-proven technology made in Germany, our systems are used in daily operations worldwide – from the USA and Canada to European countries, as well as Africa, India, and Asia. Providing real-time Upper Air data, they support mission-critical decisions in flight operations, ballistic calculations, and maritime navigation, contributing to personnel safety and operational readiness.

Ground operation



Naval operation



Reliable performance
wherever you operate



Airfield operation



Range support

Radiosondes

Lightweight. Reliable. Precise.



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DFM-17 radiosonde

Encrypted data transmission for tactical stealth operations

As one of the lightest radiosondes in the world, the DFM-17 is ideally suited for mobile applications. It is ready to use with ultra-fast and wireless initialisation and a time-delayed start function. Secure, encrypted data transmission makes the DFM-17 a reliable choice for tactical operations where fast response times are crucial. A configurable transmission cut-off allows the radiosonde to be remotely deactivated after a predefined altitude or time. This ensures controlled transmission termination.



Radiosonde DFM-17 – Measuring temperature, humidity, wind, pressure, altitude

PS-15 pilotsonde

For light applications when only wind and pressure measurement is needed

Its simple handling and fast deployment make the PS-15 well suited for routine and mission-driven operations. As a robust and proven solution, the PS-15 supports operational planning when a focused set of atmospheric parameters is sufficient.



Pilotsonde PS-15 – Measuring wind, pressure, altitude

Your benefits

- Very small and lightweight (DFM-17 < 63 g, PS-15 < 48 g)
- Accurate, reliable due to Multi-GNSS technology (L1; GPS, GLONASS, Galileo, BeiDou)
- Secure and encrypted data transmission
- Powerful transmitter with cut-off function ensuring maximum receiving range (< 350 km)
- High battery performance for long transmission times > 240 min

Mission-ready sounding systems

For field and vehicle deployment

Sounding system GS-U for mobile and ultra-mobile applications

The GS-U mobile sounding system is designed for reliable Upper Air measurements in mobile and demanding operational environments. Housed in a rugged Pelicase, the system is protected to IP65 and suitable for field deployment under harsh environmental conditions.

Reliable data processing in a compact, portable design

A proven SDR receiver ensures stable and reliable signal reception. The integrated battery pack allows autonomous operation. For extended missions, the GS-U also supports connection to an external power supply, providing maximum operational flexibility.

Your benefits

- Rugged and compact design for field and vehicle deployment
- IP65 protection against dust and water ingress
- Integrated battery pack for autonomous operation for up to 3 hours
- Proven SDR receiver technology for reliable data reception

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The GS-U variants at a glance

Feature	GS-U Standard	GS-U Long Range	GS-U MIL
Rugged Pelicase housing	✓	✓	✓
Ultra-light magnetic-based 400 MHz antenna	✓	–	–
Mobile tripod with 400 MHz omni-directional antenna	–	✓	✓
Receiving range	< 40 km	< 350 km	< 350 km
MIL-STD-810	–	–	✓

Simultaneous Upper Air Sounding

Supporting complex and demanding operations



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multiSonde system

The multiSonde system is designed for environments where multiple Upper Air measurements are required simultaneously. Available as a stationary solution for airfields or launch sites or as a mobile variant for vehicle deployment, the system adapts seamlessly to different operational scenarios.

The ability to receive and process data from up to eight radiosondes at the same time provides a significant advantage for defence applications. It enables parallel real-time measurements across different launch sites or operational areas.

The multiSonde system improves decision-making in complex missions such as airfield operations, range support, maritime tasks or distributed ground deployments. It supports efficient workflows where time, coordination, and data reliability are critical factors.



Up to 8
radiosondes

multiSonde system, mobile and rugged Pelicase version



multiSonde system, rack version

Your benefits

- Scalable system concept for 4 to 8 simultaneous soundings
- Redundant Ethernet connections for highly reliable network integration
- Sounding data can be processed on multiple independent workstations

Data evaluation software

Mission support from launch preparation to reporting

Central software for operating Graw sounding systems

grawMet supports the entire workflow from radiosonde initialisation and launch preparation to data processing, visualisation and reporting. Designed for efficient handling in operational environments, grawMet simplifies radiosonde initialisation and reduces workload for

personnel. Guided processes and a clear user interface support fast and reliable system operation, even under time pressure and in mobile deployments.

Your benefits

- Intuitive GUI with fast sounding preparation
- Automatic generation of all important reports
- Reduced workload due to clear visualisation and automated process handling
- Data transmission via TCP/IP in real time

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Automated reporting for defence applications

For defence applications, grawMet enables the automated generation of meteorological reports required for operational use. Custom-defined reports can be easily configured, additional standardised formats can be integrated to meet specific operational requirements.

- BWD – Ballistic Wind Data for ballistic corrections
- METB2 – Meteorological Message, Type B2 for fast weather assessment for land operations
- METB3 – Meteorological Message, Type B3 for low-level ground operations
- METCM – Meteorological Message for Combat Operations
- METTA – Meteorological Terminal Tactical Area for airport/terminal reporting

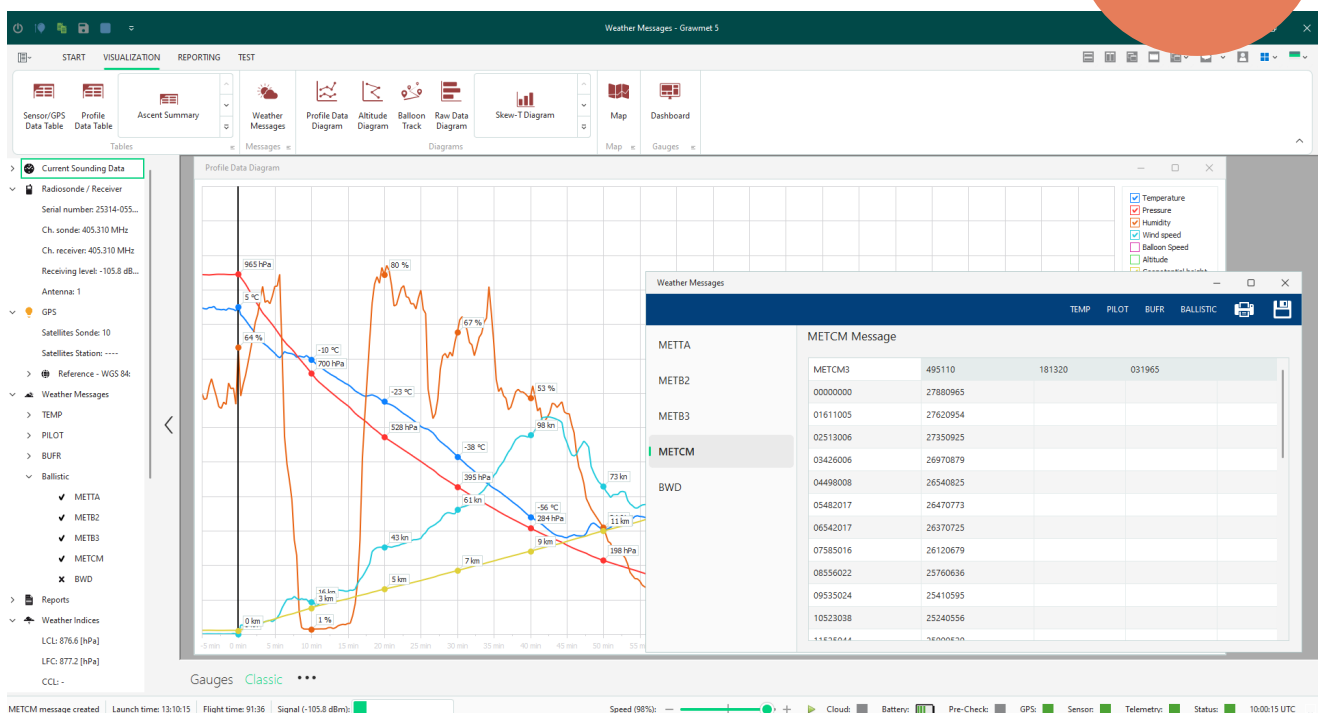
Graphical visualisation

grawMet supports various graphical display options: profile data, altitude diagram, flight map, tephigram, T-Log (P), skew-T, emagram, Stüve diagram, balloon track and hodograph.

Data transmission

Received data can be transferred via HTTPS, FTP, SFTP and email. By using grawGo, which can be securely hosted on-premises, the data can be consolidated for central monitoring purposes.

Complex
customisable
reports



Accessories

Supporting mobile and stationary defence applications

For
helium or
hydrogen



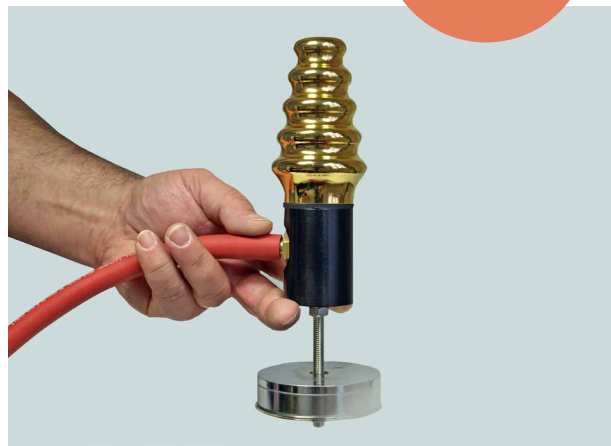
Balloon filling device SO-2 for helium or hydrogen gas

With automatic gas cut-off valve for
stationary or mobile applications

The balloon filling device SO-2 provides an easy way to hold the balloon nozzle during inflation and to fill it with the correct amount of gas. The balloon nozzle is mounted on a calibrated spring and the gas flow is controlled by attaching the appropriate weights.

This simple and robust mechanical filling technology is ideal for mobile field applications.

For
helium



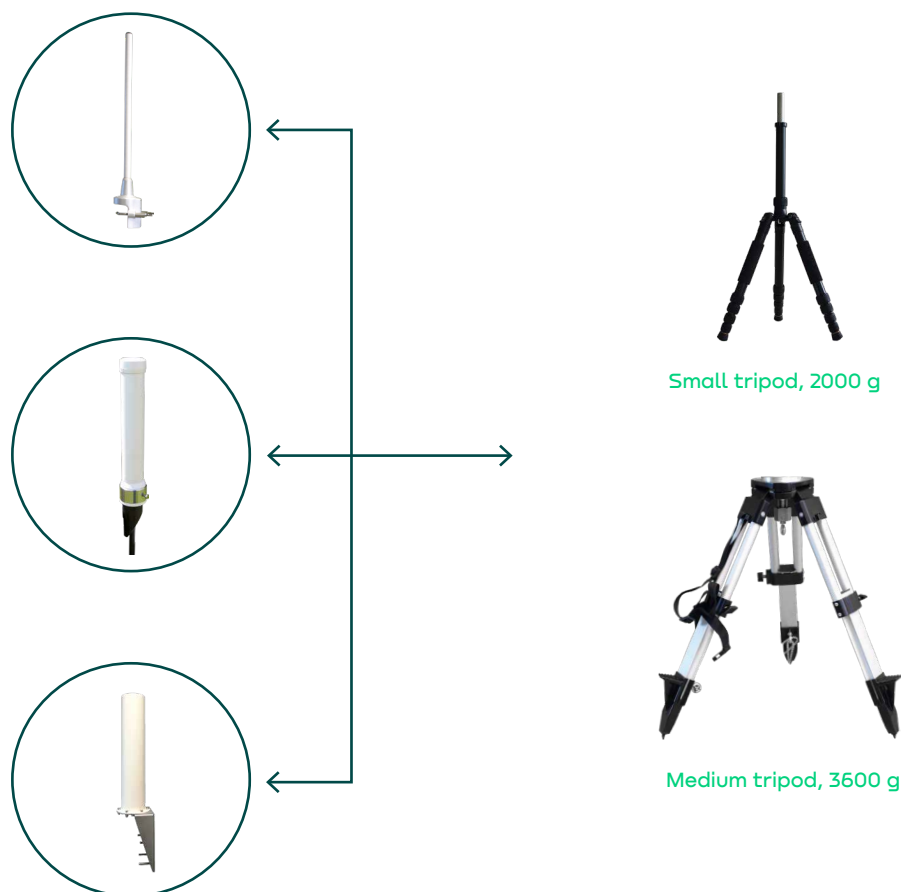
Light balloon filling device SO-3 for helium gas

For ultra-mobile, light applications

The SO-3 balloon filling device is an extremely compact version. To save weight, there is no mechanical construction for a filling stop, making it ideal for transport in a rucksack as hand luggage.

With this variant, the correct amount of gas is achieved by attaching weights and simply lifting the device off the ground.





Antennas, tripods and other accessories

Our antennas are suitable for fixed installation or mobile use with tripods. Besides the omni-directional and the GPS antenna, we offer a helical antenna for use in calm wind conditions and ascents directly overhead. For fixed installation, we provide the lightning protection box.



lightning protection box.

Your benefits

- Lightweight equipment for mobile applications
- Different variants available for ground troops, vehicles, naval or stationary use (airfields, launch sites)
- On request with compact transport box



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