

Pipe location



*UtiliTrac
UT 830
UT 9000
Application note
System Combiphon®
Glass-fibre Probe System
FerroTec FT 10
M 130*



UtiliTrac | The standard
in pipe and cable detection



UtiliTrac

Design meets functionality

The **UtiliTrac** sets new standards in locating underground pipes and cables.

Its ergonomic design and intuitive trigger controlled functions ensure comfortable and effortless work even when used over the full working day.

The **UtiliTrac** folds and is carried in the signal generator's case and, weighing only 7 kg, can easily be transported by hand or is compactly stowed in your vehicle.



The receiver

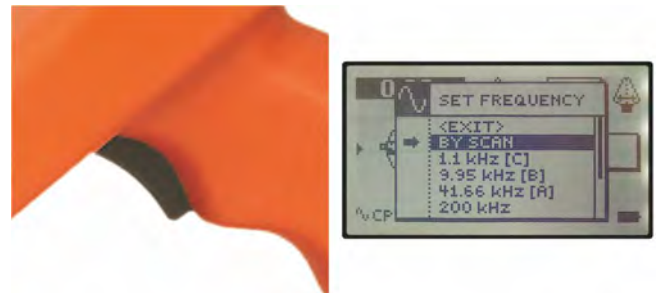
The display

The “compass” display shows the user the orientation and location of the service being traced and is not dependant on the locator's orientation i.e. it works in any direction. Depth to the service and signal strength is shown allowing you to see if you are still tracing the correct service or if perhaps the signal has “jumped”.



Operation

Single trigger operation provides the user with intuitive and simple navigation through the menu. The unit can automatically scan and tune to active frequencies or be tuned at the user's discretion.



Compact design

The **UtiliTrac** is the first folding receiver which can be perfectly stowed in the compact generator case.



The aerial

The new aerial technology allows the **UtiliTrac** to clearly indicate pipelines and sondes in the screen display.



The G100 signal generator

The carrying case

The compact design and the patented aerial construction make the 10 W transmitter **G 100** the perfect partner for the receiver. The aerial construction provides above-average inductive coupling strength, allowing a greater distance between the transmitter and the receiver.



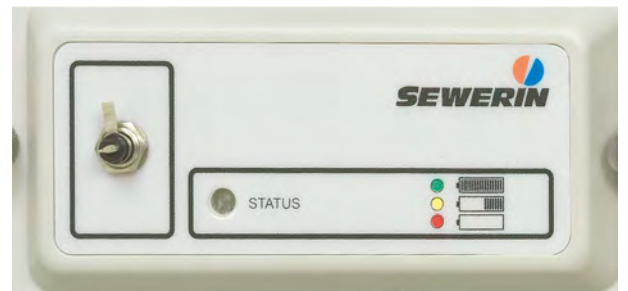
The control unit

Both the frequency and the current can be adjusted clearly and quickly using the arrow keys. The user can also select an energy-saving "pulsed output".



The battery display

A long life lithium ion rechargeable battery provides operating time of up to 36 hours. The battery status is indicated by LEDs.





Capacitive coupling

The **G 100** offers the user two signal outputs for the "simultaneous" tracing of two different, parallel services with different frequencies.

As soon as two cable sets are connected to the **G 100**, the operator can adjust them individually to the control unit.



Accessories

Sondes	Type	Location depth	Dimensions (L x Ø)	Power supply	Operating time
	SR-116Kx (116 kHz)	11,5 m	140 x 19 mm	6 V lithium battery	approx. 8 h
	SR2-640 (640 Hz)	4,2 m	178 x 32 mm	AAA "micro", LR03, 1.5 V	approx. 20 h
	SR2-116x (116 Hz)	18 m	178 x 32 mm	AAA "micro", LR03, 1.5 V	approx. 10 h
	Cartridge 3350 (116 kHz)	4,4 m	49 x 14 mm	Button cell "393" silver oxide	approx. 10 h
	Mini pig transmitter "A" (42 kHz)	5 m	110 x 15 mm	Button cell "393" silver oxide	approx. 10 h



Glass fibre probes (suitable for coupling):

- Glass fibre rod – 60 m / Ø 6 mm
- Glass fibre rod – 100 m / Ø 6 mm
- Glass fibre rod – 60 m / Ø 4.5 mm



Cable clamps:

- AZ 135 – pipelines up to Ø 135 mm
- AZ 5 – pipelines up to Ø 50 mm
- AZ 11 – pipelines up to Ø 110 mm



As an **alternative** to the **G 100** signal generator, with 10 W transmitting power, the more powerful **G1** generator with up to 50 W transmitting power can be used. There are various accessories available for this generator.

Please contact us for a comprehensive quotation, including additional technical specifications and information on accessories.

UT 830

Reliable pipe location.
Versatile use – clear results – one frequency!



UT 830 – the measuring device you'll always want to have with you

If you're looking for a precise, reliable and versatile pipe locating device, the **UT 830** is the one for you – no matter where you're working or how difficult the conditions, the 83 kHz frequency is perfect for actively locating underground gas and water pipes. The **UT 830** can also be used to passively detect power and cathodic-protected lines. Exclusive technical functions provide fast, accurate and reliable results. And then there's the high protection class, robust construction and easy operation which make the **UT 830** your perfect companion on virtually every measuring task.

Versatile use

- With its IP65 protection class, extremely robust construction and compact size, the **UT 830** is equipped for all working and weather conditions – even in difficult environments.
- The **UT 830** proves particularly versatile, for example in the building trade, thanks to its ability to passively locate power and cathodic-protected lines. 50 Hz, 100 Hz and 150 Hz frequencies are available for this.
- Take advantage of exceptionally long battery life: 75 hours for the receiver, up to 150 hours for the transmitter. This guarantees maximum availability and minimum downtime.

Clear results

- Thanks to its adaptive filtering, the **UT 830** offers impressively fast response times. The extremely quick and reliable directional arrow display means that pipes can be located in very tight location corridors, thus guaranteeing precise results – regardless of the operating mode or operating style at that!
- Check your results with the exclusive PEAK function. This allows you to easily hide from view surrounding pipes picked up because of the high frequency at the touch of a button, thus preventing measurement errors and the unintentional location of parallel pipes.
- The fully automated depth measurement gives you an accurate overview of the position of the pipe at all times.
- Thanks to the special internal positioning of the aerials, locating main pipes and branches is child's play. This saves you walking long distances and allows you to work more efficiently.

One frequency

- Its 83 kHz frequency means that the **UT 830** can accurately locate underground gas and water pipelines beyond insulated connection points – even with long pipelines and weak signals.
- Thanks to its easy and self-explanatory operation on just one frequency, even less experienced users quickly and intuitively get to grips with the **UT 830** without extensive training. Visual and acoustic signals provide feedback, facilitate progress and inspire confidence in the measurement results.



Pack contents

- **UT 830 R** receiver
- **UT 830 R** receiver bag
- **UT 830 T** transmitter
- **UT 830 T** transmitter bag
- **UT 830** cable set
- Earthing spike



Please contact us for a comprehensive quotation, including additional technical specifications and information on accessories.



reddot award 2014
honourable mention



UT 9000

Reliable pipe location.
easy – always – efficient



UT 9000 – easy – always – efficient



A new dimension in pipe location

When it comes to locating underground pipes and cables, precision is key. The more precise the measurement, the lower the risk of digging up the wrong spot. Performance, practical handling and simple operation are just as important for fast and efficient work. Likewise, reliability, versatility and a sturdy design are also essential for obtaining reliable measurements in difficult conditions and inaccessible environments.

The **UT 9000** is a cutting-edge location system, which fulfils these requirements with a pioneering design and sets new standards in pipe location.



Cutting-edge technology for outstanding performance

With the **UT 9000**, the **UT 9000 R** receiver is best combined with the **UT 9012 TX** generator, the most powerful transmitter in its class. The system features automatic frequency selection, extremely long battery life, amazingly simple operation and, above all, versatility – enabling you to rise to any work challenge.

Find the optimal frequency immediately, connect two pipes simultaneously or locate extra long pipe sections. Accurately locate pipes in difficult environments and all weathers, or reliably determine the depth of the pipe – just work more quickly, more accurately and thus more efficiently!



So simple

Operation made easy

Use the **UT 9000** easily without extensive training. The receiver and generator have a logical operating concept. The structured menus on the clear display show both intelligible symbols and textual information and thus reliably guide you to your objective.

Intelligent frequency selection

The **UT 9000 R** scans the ambient noise, detects any interference signals and suggests the optimal frequency for passive or active location. This speeds up your work and makes location more reliable.



Comfortable

The balanced **UT 9000 R** receiver fits nicely into the hand. It ensures ergonomic carrying comfort and effortless work.

Internet updates

You can update the software easily online and individually preset the device. From 70 frequencies you can select the relevant ones for you and install your personal start screen, for example with your company logo. This ensures the **UT 9000** is always up to date and meets your personal requirements.

Always ready for use

Reliable depth measurement

If the receiver is exactly over a pipe, the **UT 9000** conveniently and automatically determines the depth at which the pipe is located. The calculated value is the distance between the bottom edge of the aerial and the centre of the pipe. The highly sensitive aerials in the **UT 9000 R** ensure above-average location success rates and exceptionally attainable depths.

High protection rating

Dirt, dust, extreme temperatures, rain? Not a problem thanks to the IP65 protection rating and the extremely sturdy construction. The **UT 9000** is always ready for operation, no matter where you are or what the weather.

Brilliant LC display

The graphic display is perfectly legible at all times, even in the brightest sunshine or in the dark. The clear and coherent layout of directional arrows and measurements makes work easier and reliably guides you to your objective.

Maximum availability

Benefit from extremely long operating times: 30 hours for the **UT 9000 R** receiver, 100 hours for the **UT 9012 TX** generator. This maximises the availability of the devices and means that you can work without interruption and independently of external power sources.



Impressively efficient

Powerful performance

The **UT 9012 TX** generator transmits at 12 Watts, offering unrivalled performance. You can track signals for longer and reliably locate even the longest of pipe sections.

Precise location

If you're not sure about the accuracy of a depth measurement, you can easily and conveniently verify the values using the offset depth by the 45° method (triangulation method). This gives you even more reliable and accurate results. The offset depth measurement returns first-class values, even when obstructions above the pipe in question prevent a direct measurement.



Location and calibration in just one step

S+H Locator software connects Trimble GNSS technology to the UT 9000. Location data is transmitted wirelessly via Bluetooth from the pipe locating device to the Trimble GIS receiver (e.g. GeoExplorer) and stored there along with the exact positions. The whole process is controlled by means of a button on the **UT 9000**.

Handy remote control

The radio remote control for the receiver is much more powerful than any of the Bluetooth connections previously available on the market. It allows you to toggle the frequency and output of the **UT 9012 TX** generator up to a long distance. This saves tedious running backwards and forwards, and thus time.





Flexible use

Passive location

Passive location involves locating signals already present on cables or pipes with just the receiver. This measuring method is suitable for active power and telecom cables as well as metal gas and water pipes.

Active location

With active location, the **UT 9012 TX** generator generates a frequency on the metal pipe to be located. The pipe can be energised by direct contact or – if there is no access – by induction. The process allows precise location results, even in difficult environments.

Location with probes

Using probes for the location process means that non-metal pipes can be located by inserting a glass fibre rod into the pipeline in question. The glass fibre rod is fitted with an embedded copper strand so that it can be energised by the **UT 9012 TX** generator and located using the **UT 9000 R** receiver. In this way, the path of the pipe in question can be determined very quickly and accurately.

A sonde is used to clearly determine the end of the glass fibre rod. This small, battery-operated transmitter generates its own field, which is detected precisely by the **UT 9000 R** receiver. The exact depth can also be measured. The sonde can also be used without a glass fibre rod. This opens up a wide variety of uses with pipeline cleaning pigs, channel cameras and other applications.



Pack contents

- Receiver **UT 9000 R**
- Generator **UT 9012 TX** or **UT 9005 TX**
- Set of cables
- Earthing spike
- USB cable
- Bag for **UT 9000 R** receiver
- Bag for generator



Accessories for even more options

- Y-cable
- Cable clamp
- Lithium-ion rechargeable battery
- Vehicle cable
- Fibre glass rods
- Cable drum
- Headphones
- Cover hammer and lifter
- Sondes
- Step voltage probe
- Antenna for EMS ball markers

Please contact us for a comprehensive quotation, including additional technical specifications and information on accessories.

It's all plain sailing on the mud flats.

Pipe location in the Wadden Sea using the Pellworm example

Mudflats – complex beauty

The Wadden Sea in the North Sea with its coastal regions in Denmark, the Netherlands and Germany is the largest system of mudflats in the world. It is the natural habitat for many species and seawater-resistant plants, making it one of the most fascinating landscapes in Europe. It is, however, also one of the most unpredictable. The tide comes in over the mudflats twice a day and is only safe to walk on for a maximum of six hours when the tide goes out. In the event of fog or bad timing, the incoming tide can put walkers' lives at risk. The small offshore islands, the Halligen, can find themselves under water during storm tides. And despite all this, the inhabitants of the North Sea coast love "their" Wadden Sea and build their lives around the difficult conditions.

Small islands – big problem

Supplying power and drinking water to the islands has been a problem ever since they were inhabited. The Halligen in particular lie just a couple of metres above sea level. The marsh soil does not retain any freshwater, which meant that rainwater had to be collected in reservoirs. If supplies ran out in times of drought or the drinking water became salty from storm tides, freshwater was transported from the mainland by ship, plane or helicopter. But even that was impossible during storms or hard winters. A solution for an all-weather water supply was therefore needed.

In the 1960s the first pipes were laid through the Wadden Sea to connect the Halligen and the island of Pellworm to one of the main water supply networks on the mainland.

The Wasserverband Nord utility company continues to supply freshwater to the islands in this way. The pipes are jetted into the bed of the Wadden Sea. This is a highly technical operation, usually carried out by ships. Above-ground pipes would be extremely susceptible to damage from shipping, temperature fluctuations and pronounced slopes in the seabed. The pipes, which are plunged by ships, cannot be laid in a straight line because of the swell. A nightmare for any cartographer.

How can a freshwater pipe between the mainland and Pellworm be accurately located and documented in these conditions? Wasserverband Nord asked Sewerin to help it find the answer.

It's all plain sailing on the mud flats. And this is where our story begins:





It's all plain sailing on the mud flats. Pipeline location using the Pellworm example

André Bischof, Product Manager at Sewerin, swears by his many years of experience using the best running and mountain biking gear. But right now gooey mud is seeping through his pores and sticking to his shoes. Step by step he battles on. "Hi!" comes a cheerful voice from behind, and the Wasserverband Nord worker smiles at the sole hanging off André's shoe as he plods through the mudflats. He did warn him. The mudflats are something else.

The same goes for the task: Wasserverband Nord, with the help of Sewerin, would like to accurately locate and document a freshwater pipe between the mainland and Pellworm using a cable running parallel to the pipe.

One chance to get it right

Locating pipes in the mudflats means working in the most challenging conditions, both for man and equipment - and not just footwear. In this narrow window set by high and low tide, no one has time to read detailed instructions for equipment. The nearest mains socket is miles away; that means that a long battery life and a strong transmitter with excellent range are required. The material will have to withstand seawater, mud and rain and the long distances to be covered can mean an arduous journey when carrying equipment. The location process needs to be quick, efficient and results-oriented.

One chance to get it right - further attempts will cost time and money. And no one wants that.

Effective, fast and successful - is that even possible in the mudflats?

The conditions for a successful day in the mudflats are ideal: good weather, experienced staff from Wasserverband Nord with local knowledge go with us onto the mudflats. Sewerin has provided cutting-edge technology in the form of the UT 9000 which is supported by an external GPS system, the Geo-Explorer by S+H Systemtechnik GmbH. After a brief calibration, the two systems are communicating complementing each other perfectly. Following a short explanation of how the device works, one of the WV Nord workers makes his way onto the mudflats to locate the pipe. We go too.

Plain sailing on the mudflats

He finds the device easy and effective to use. The self-explanatory menu navigation guides him to the position of the pipe one step at a time. Their light weight and superior ergonomics make the devices easier to transport through the sticky mud. The bright sunshine is both a blessing and a curse. The sun is nice and warm, but while the digital camera used for the documentation has to be switched to the manual viewfinder, the high-contrast LC display of the UT 9000 is clearly legible, even in these extreme lighting conditions. The further we move away from the mainland onto the mudflats, the greater the distance from the transmitter; nevertheless the display is clear and accurate and hardly any changes of direction are required. We make good progress.

Or perhaps not?

Even the most experienced mudflat walkers get stuck in the mud sometimes and the UT 9000 ends up in the seawater. After a brief moment of panic, the all-clear signal. Thanks to its sturdy and waterproof housing, the device is unscathed and immediately ready to go again. But then the next tideway becomes impassable due to high water. As the UT 9000 boasts the "offset depth" feature, it has no bother recording the pipe's position and depth even here. The depth is simply measured a few metres further out from the passable mudflat floor. We get all the information we need without wasting precious time.

That was easy after all!

"That was easy!" Our man on the mudflats is happy. We leave the mudflats having located the pipe we were looking for in the shortest time, saved the coordinates and accurately documented the location. All thanks to the cooperation of those involved and a technology that keeps its promises. Except for André's shoes.

It's all plain sailing on the mud flats. Another story with a happy ending.



System COMBIPHON®



Acoustic location of plastic pipes

Acoustically locating plastic pipes

The principle

Plastic pipes cannot be located by conventional electromagnetic means because they are not electro-conductive.

The acoustic method of locating pipes applies a different principle: pipes transmit mechanical vibrations better than the surrounding ground. When the pipe is caused to vibrate appropriately, these vibrations spread along the pipe to the earth's surface where they can be picked up by a



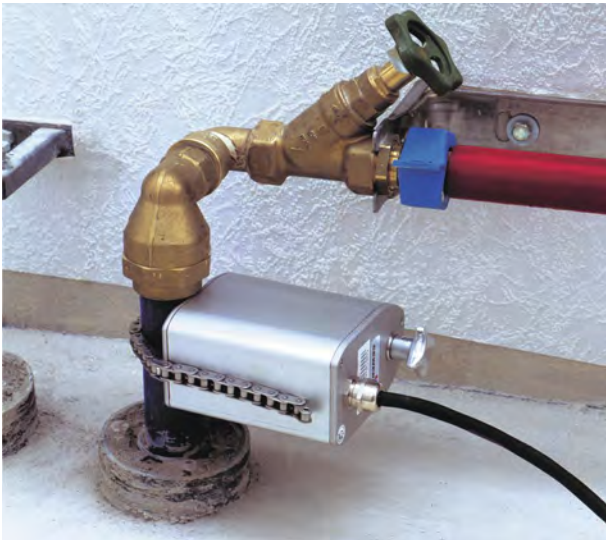
ground microphone. In the same way as water leaks are detected by acoustic means, the pipeline is located where the intensity is greatest. This method can also be used to locate fibre cement pipes and metal pipes.

The **COMBIPHON**[®] system consists of the **Generator G5** central control unit and various impulse generators. It can therefore be used anywhere.

Generator G5 remote control

When locating house connections, adjustment of the intensity is unavoidable – for example, a high intensity is required over a large distance, whereas this would cause sound contamination close to the generator.

A remote control means that the user does not have to keep going back to the generator.



Water or gas house service connections

are caused to vibrate using a Knocker. This steadily taps the pipe from the outside like an electric hammer.

Gas or air-filled pipes can sometimes be problematic as there is no transmitting water column.



Water mains

require more energy to vibrate. The water column is set in motion by controlling the volume using a Stopper at a hydrant. The resulting waves then propagate.

The pressure is controlled using a manometer to prevent pressure spikes in the pipe. The sound can be detected over large distances.

Acoustic pipeline location

Locating pipes with the ground microphone

Once the pipeline has been caused to vibrate by the Knocker or Stopper, the location is pinpointed using the ground microphone.

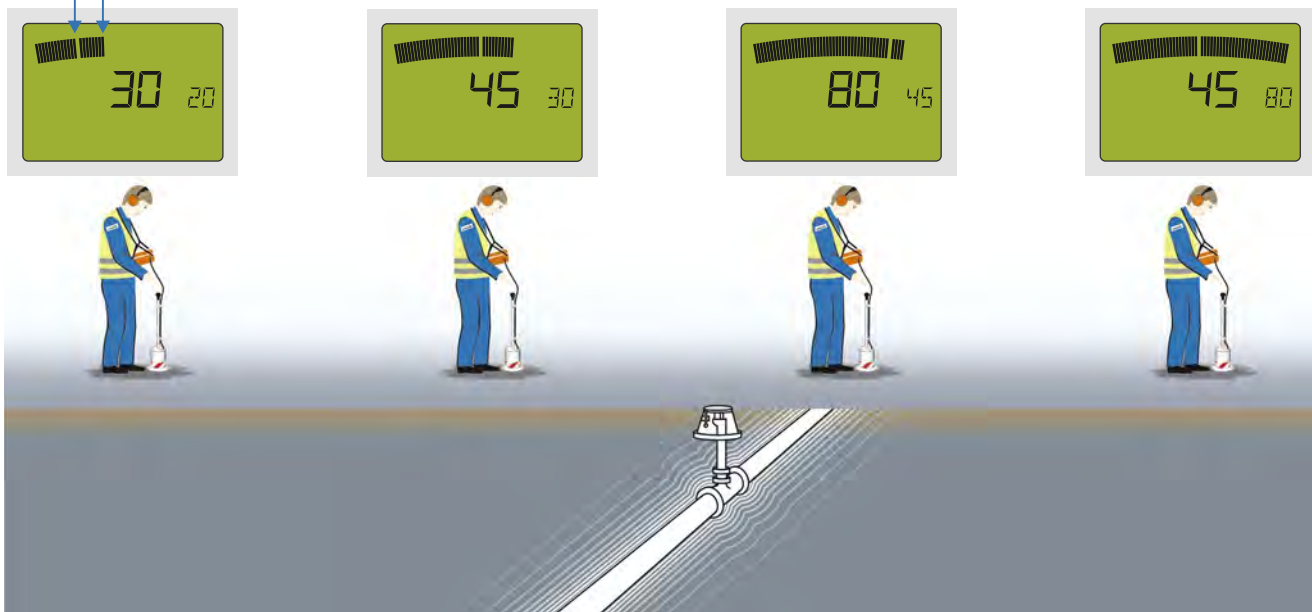
This involves systematically testing the ground surface at short intervals. The **AQUAPHON® A 100** receiver displays an accurate visual and acoustic comparison of the noise intensities.

Is the noise getting louder or softer?

The volume increases as you get closer to the vibrating pipeline. The signal is loudest directly above the pipe, thereafter the intensity starts to decrease again. The visual display is particularly helpful for novices or those who do not use the system often.



- **Analogue minimum value** for the noise intensity at the current measuring point.
- **Analogue value** for the noise intensity at the current measuring point.



The hearing protection function

The **AQUAPHON® A 100** fulfils all the current occupational health and safety requirements. Adequate hearing protection is particularly important. In the past an unpleasant and sometimes even dangerous acoustic pressure occurred if the test rod slipped off the contact point, the headphones were activated too early or too late or an object fell to the ground directly beside the ground microphone.

This is a thing of the past now thanks to new technology. The incoming sound signal is continuously monitored. If the noise gets very loud, the sound relayed by the headphones is muffled. If the signals continue to get louder, the headphones are switched off.

The **AQUAPHON® A 100** automatically recommences its work once the source of the noise goes quiet. The hearing protection function can be customised to various operational environments and different users.

The filter optimisation function

The **AQUAPHON® A 100**'s innovative filter optimisation function makes it easier to accurately pinpoint water leakages. This is particularly useful where the ground microphone has identified a leak noise but the exact position of the leak is difficult to determine because of loud ambient influences.

The receiver records a noise sample using the ground microphone and analyses it. It then automatically switches to a suitable frequency range which distinguishes the structure-borne sound from the leak particularly clearly.



Microphones

Ground microphone BO-4 1 is ideal for fixed surfaces. The solid metal soundproofing with separate acoustic centre can be optimally adjusted to the unevenness of the ground thanks to its freedom of movement.

Ground microphone 3P-4 2 is used for non-fixed surfaces. A spike can be screwed on for soft ground. The three feet provide stable contact at all times.



AQUAPHON® A 100

AQUAPHON® AF 100
Combi device for electro-acoustic water leak detection and pipeline location

Features of the **AQUAPHON® A 100**

Automatic microphone recognition, therefore various frequency settings

Digital signal processor

Filter optimisation function

Slider function

Memory function

Large illuminated display

Integrated NiMh rechargeable battery, integrated automatic charging/buffering function, battery status display



As well as acoustic pipeline location, the **A 100** can also be used for professional, electro-acoustic water leak detection.

The **A 100** receiver is also available for locating metal pipes and fibre glass probes.

Please contact us for a comprehensive quotation, including additional technical specifications and information on accessories.

103184 – 10/09 – Subject to technical changes.

Glass-fibre Probe System

Glass-fibre probe system / Location of non-metallic pipes



Glass-fibre rod GSK / sluice / generator G1



Glass-fibre rod GFS

Because electrical current cannot flow through non-metallic pipes, additional equipment must be used to locate such pipes. Glass-fibre probes and mini pig transmitters are used for this purpose. The glass-fibre probe, containing a continuous length of copper, is inserted into the pipe section to be located, connected to the signal generator and traced using the FERROPHON®. With this method it is possible to follow the route of the pipe.

To detect the end-point of the glass-fibre rod a mini pig transmitter can be screwed onto the probe tip. This small, battery-driven transmitter generates an electro-magnetic alternating field which can be located with a pipe locator. Even the depth of a non-metallic pipe can be determined.

The mini pig transmitter may also be used without the glass-fibre rod. This opens various operating modes in combination with pipeline cleaning pigs, sewer inspection cameras, etc.!

Typical use

- **At water authorities**
Detection of operating service pipes (with sluice) and main conducts
- **At gas suppliers**
Detection of pipes out of operation
- **In waste water networks**
Sewers' routing, empty pipes, drainage pipes

Technical Data

- Glass-fibre rod **GFS 100 m/6 mm**
(Length 100 m, rod diameter 6 mm; conductive glass-fibre rod, mounted on reel with 55 cm diameter, screwed-on brass ball)
- Glass-fibre rod **GSK 60 m/4.5 mm**
(Length 60 m, rod diameter 4.5 mm; conductive glass-fibre rod, mounted on reel with 45 cm diameter, screwed-on brass ball)
Especially suited for narrow radia.

Accessories



Mini pig transmitter „A“, water-proof (16 bar) pig transmitter for the exact determination of the end-point of the glass-fibre rod, detectable up to approx. 5 m depth. Frequency „A“ resp. 42 kHz, approx. 10 h operating time.

This mini pig transmitter can only be used in combination with the FERROPHON® system (receivers EL, ELH, AF 100). Can be screwed-on to all glass-fibre rods. Length approx. 110 mm, diameter 15 mm.



Sluices for glass-fibre rod GFS (6 mm) or GSK (4.5 mm), to insert the glass-fibre rods into pipes under pressure (e. g. house service lines).



Terminal part of spring
screw-on, especially suited for narrow pipe radia.

Please contact us for a comprehensive quote, including additional technical specifications and information on accessories.
103485 – 11/2014 – Subject to change.

FerroTec FT 10 | Magnetometer for locating concealed objects
fast – convenient – precise



FerroTec FT 10 – fast – convenient – precise



Easy location of ferromagnetic objects

The **FerroTec FT 10** helps you safely and reliably locate concealed shaft covers, sliding rods and caps, as well as pavement markers and other objects. The only requirement is that they are made of iron, cast iron or steel. The ergonomic design, convenient operation and precise measuring technology make your work fast and easy.

The measurement principle: sturdy technology with an ergonomic design

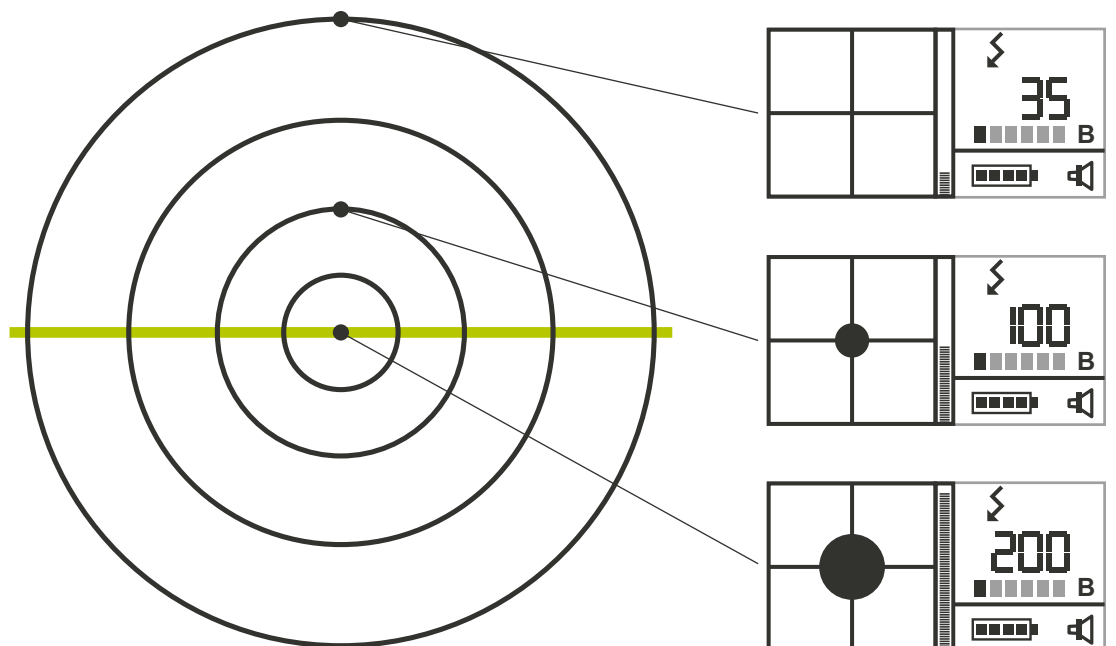
Objects containing iron cause changes in the earth's magnetic field which can be picked up by the two magnetically sensitive sensors in the **FerroTec FT 10** (fluxgate magnetometers) and converted to an acoustic signal. In addition, the display shows you getting close to the object you are looking for. The closer you are to the object, the stronger the signal. At maximum signal strength, the **FerroTec FT 10** is exactly above the object.



Fast and reliable results

The **FerroTec FT 10** recognises 50 Hz alternating fields and directs you towards the exact position of power cables, thus preventing mix-ups and false detections and protecting you against electrocution during excavation.

The **FerroTec FT 10** recognises polarity changes in large objects, for example in shaft covers. This means that you can – depending on the orientation of the object – classify its position and size.



Display when locating power cables

Easy operation for effortless measurements

The **FerroTec FT 10** allows you to work for hours, or even the whole day, without fatiguing. Its lightweight, balanced construction and ergonomic design mean that it is exceptionally comfortable to carry.

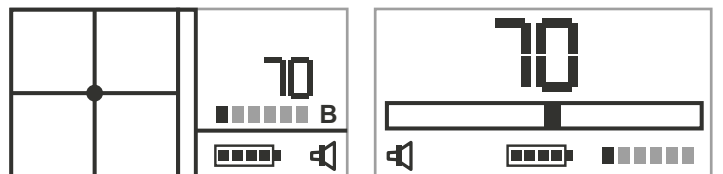
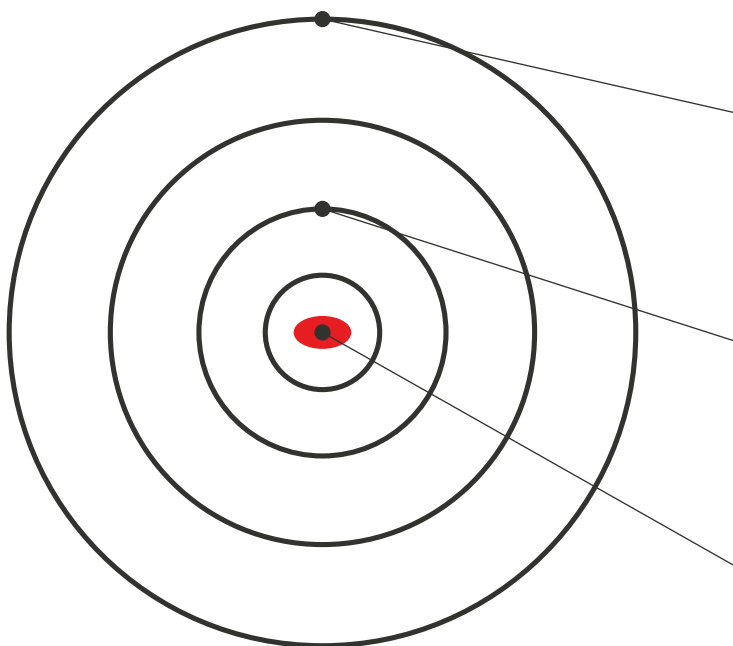
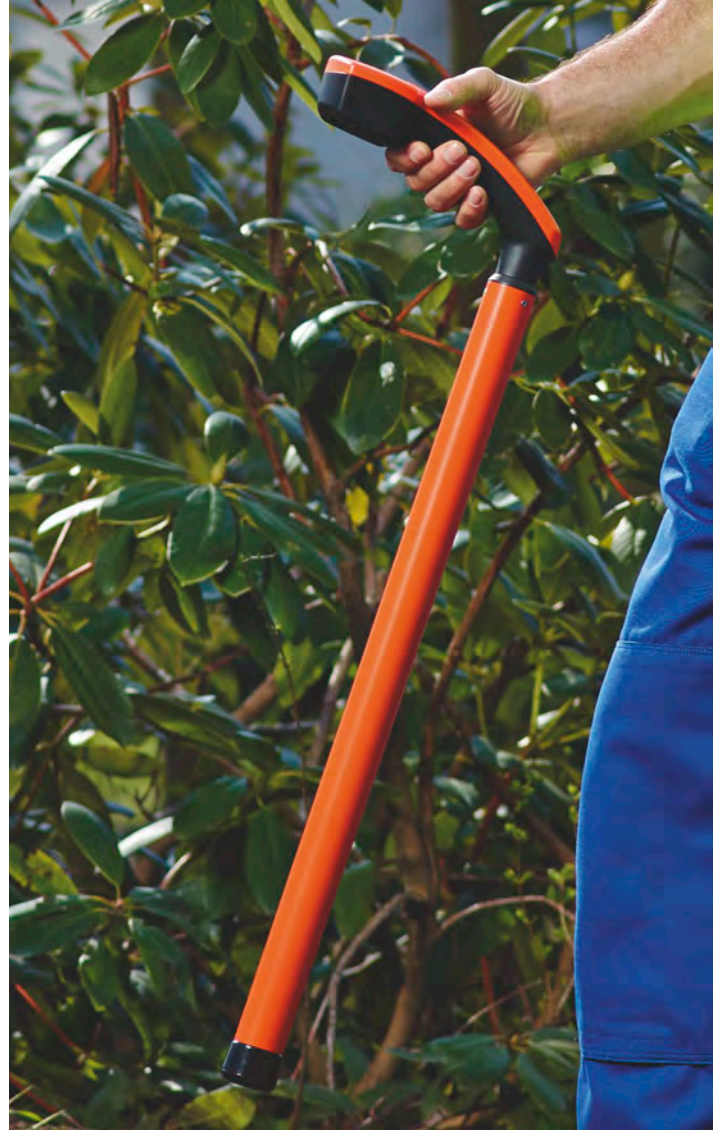
Carry and operate the magnetometer easily with one hand – it doesn't matter if you're right or left-handed. Your other hand is kept totally free for work.

The device can be operated intuitively without extensive training using just five buttons, which can be pressed using the carrying hand. By simply placing your thumb on the capacitive sensor field you can very comfortably activate the **FerroTec FT 10** and quickly start and stop locating procedures.

Select the display on the screen to suit your personal habits. In addition to the acoustic signal, you can choose between the unique aiming circle view and the conventional bar view. This helps less experienced users reliably find the maximum value.

Thanks to the IP65 protection class and the extremely sturdy construction, dirt, dust and rain pose no problem. You can work whatever the weather and are always ready for deployment.

Benefit from the long operation time of the integrated rechargeable battery: one charge is enough for 10 hours, i.e. a full day's work – this means no more cumbersome battery changes and increased availability.



Display when locating objects

Precise location in all environments

Thanks to its outstanding 3 nT (Nanotesla) sensitivity, the **FerroTec FT 10** is one of the most powerful magnetometers on the market. It is six times more sensitive than its predecessor, which means you can discover objects at the lowest depths. We chose not to use magnetic headphones so as not to distort the extremely high location precision.

The zero point key offsets the current magnetic field so that you can identify changes in the field immediately and safely rule out surrounding interference.

The sensitivity of the **FerroTec FT 10** can be adjusted in six levels and thus adapted to individual environmental influences.

In addition, you can increase the respective sensitivity to the maximum with the sensitivity boost to verify unclear results and reach even greater depths.

Objects that do not contain iron, e.g. precious metals, are not picked up and will not distort the measurement result.

Mass of location object in kg	Location depth in m
100.0 kg	15.0 m
50.0 kg	10.0 m
5.0 kg	7.0 m
1.0 kg	2.5 m
0.5 kg	1.0 m

Maximum location depth according to object mass at a sensitivity of 3 nT



Pack contents

- **FerroTec FT 10** magnetometer
- Chargers
- Transport bag

Please contact us for a comprehensive quotation, including additional technical specifications and information on accessories.

M 130 – Electronic Valve Box Locator



The locator M 130 detects deeply and is hardly effected by metal pieces at the surface, humidity and temperature variances. The one-button-operation simplifies the handling of the instrument, continuous re-adjustment is not necessary. The special electronics reduces false signals caused by objects such as bottle-lids, beverage cans or other small parts of metal.

As a result of the downward-directed search field, the detector can be used in immediate proximity to metal fences or parked cars. The one hand held unit is designed for use by one hand only and offers optimal ergonomics for fatigue-free working. The strength of the signal allows reliable detection of the objects sought; even when the instrument is quite rapidly moved.

Typical use

At water authorities

- Location of valve boxes
- Recognition of valve keys, even when boxes are missing
- Search of underground re-hydrants

or at gas suppliers

- Search of covered condensate collectors
- Finding blow-off units at pipes' ends

or in waste water networks

- Finding manhole covers
- Detection of pits in winter



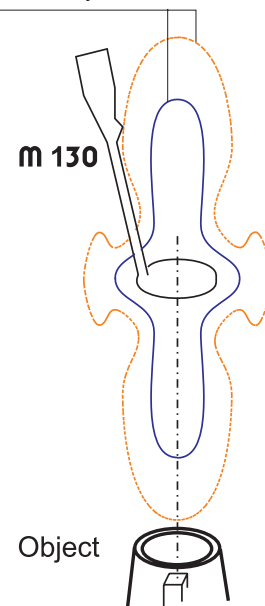
Features

- Easy to handle
- Downward-directed field
- Deep seeking
- Fast reaction
- Compensation of interfering signals
- Excellent ergonomics
- Shock-resistant plastic housing, made from hardshell ABS

Technical Data

- Detection depth: up to 95 cm, depending on the size and shape of the object
- Optical and acoustical output signal via LED and speaker
- Standard 3.5 mm stereo jack socket for headphones if required
- Search head diameter: approximately 21 cm
- Weight: 1.1 kg
- Total length: 96 cm
- Operating time: typically > 30 hours intermittent use
- Power supply: 4 type AA batteries (alternatively equivalent accumulators)

Downward-directed field,
two different settings of
sensitivity



Please contact us for a comprehensive quote, including additional technical specifications and information on accessories
103474 – 04/2012 – Subject to technical changes.



BELGIË

Levenseseenweg 607
1930 Zaventem
T: 02 - 757 92 44
F: 02 - 757 92 64
info@euro-index.be
www.euro-index.be

NEDERLAND

Rivium 2e straat 12
2909 LG Capelle a/d IJssel
T: +31 - (0)10 - 2 888 000
F: +31 - (0)10 - 2 888 010
verkoop@euro-index.nl
www.euro-index.nl

