DEL-MAK MÜHENDİSLİK
KATALOG

DEL-MAK
Mühendislik Maden Makina
İnş. Taş. San. Tur. ve Tic. Ltd. Şti.

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a.p. van den berg
The CPT factory

Onshore CPT SYSTEMS

Cone Penetration Test equipment for onshore in-situ soil investigation, A.P. van den Berg has more than 50 years of knowledge and experience in building this. The company in Heerenveen, the Netherlands provides a complete range of solutions including pushing systems that are available seperately as well as mounted on a frame or vehicle. The CPT systems are based on customer's wishes regarding design and pushing capacity. Furthermore, all Cone Penetration Test equipment designs include operational excellence, safety and durability, so will save you time and money.

With the continuous product development from its own engineering & development department you are assured of the latest technology. In-house production allows for tailor-made CPT systems, while the first class service & support guarantee an optimal use and life-time of your equipment.


CPT Track-Truck


CPT Truck


CPT Crawler


CPT Morooka Crawler


Midi CPT Crawler


Mini CPT Crawler


CPT Trailer


CPT SKID


Lightweight CPT system


CPT Penetrometers


CPT accessories


Showroom CPT equipment

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HYSON 200 kN PROFESSIONAL

HYSON 200 kN PROFESSIONAL including operation console

HYSON 200 kN PROFESSIONAL

For pushing down the cone into the soil during a cone penetration test you need a sturdy and reliable pusher. The HYSON 200 kN PROFESSIONAL is a twin cylinder type penetrometer, with a track record of more than 30 years, is such a pusher. Especially for the most demanding conditions such as working from a jack-up barge or when in need of high production this system is the best choice.

Standard equipped with a proven hydraulic push/pull clamp that is easily changed from 36 mm to 56 mm necessary for working on near-shore jobs. The catching clamp will prevent the rods from falling down when working on open water.

The piston rods are connected to the lower beam and connected with each other by the upper beam of the CPT rig. When the cylinders are moving, the upper beam moves up and down. The lower beam is immobile and can be mounted to a local truck or crawler to create a so called ballasted system. For mounting to a truck see our drawing 013959 as reference.

Hydraulic push/pull clamp

Hydraulic catching clamp

Specification HYSON 200 kN PROFESSIONAL

Type	HYSON 200 kN
Pushing force	nominal 200 kN
Pulling force	nominal 260 kN
Force limitation	By pressure safety valves
Speed during pushing	2,0 or 7,6 cm/s
Speed during pulling	1,6 or 6,2 cm/s
Stroke CPT rig	1250 mm
Cylinder bore	Ø120 mm
Diameter piston rods	Ø90 mm
Centre-to-centre distance cylinders	350 mm
Feed-through passage between upper and lower beam	Ø100 mm
Colour	Spray painting in one colour RAL 7035.
	Other RAL colours are optional for which we will charge an additional fee.

Standard equipment for the HYSON 200 kN PROFESSIONAL

- Operating console including levers for moving the pusher up and down and closing and opening of the hydraulic push/pull clamp and catching clamp.

  Details: including pressure gauges for all the hydraulic functions.
- Carriage

  Details: This part is mounted under the upper beam and is used to hold the parts to push and pull the CPT string.
- Levelling instrument.
- A casing support system is mounted between the lower beam and the ground level.

  Details:
  - The support pipe has rubber dirt wipers for cleaning the Ø36 mm rods.
  - The support pipe has rubber dirt wipers for cleaning the Ø56 mm casing tubes.
  - The length of the casing support has to be specified by the customer. We can advise you on this.

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Power pack for HYSON 200 PROFESSIONAL

Engine	Electrically started Hatz silent pack diesel engine, type 2L41C (25,7 kW @ 3000 rpm)
Hydraulic system	pump, hydraulic oil tank, valves, oil cooler, generator, 12 VDC battery and filters.
Connection to HYSON 200 kN	Hydraulic hoses are included for connecting the HYSON 200 kN to the power pack.
Power convertor	Standard equipped with and 220 Volt 800 VA power convertor.
Colour	Spray painting in one colour RAL 7035. Except for Hatz diesel which will be standard yellow.
	Other RAL colours are optional for which we will charge an additional fee.

Also included

- Two copies of the instruction manual in English
- Instruction/training on the HYSON 200 kN PROFESSIONAL of 8 hours in Heerenveen

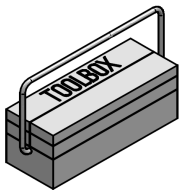
Optional functionalities

The functionalities described below can be integrated without any problems in newly to be built HYSON 200 kN PROFESSIONAL.

1. Power convertor

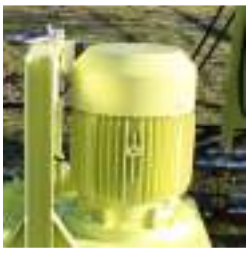
Standard the HYSON 200 kN PROFESSIONAL power pack is equipped with and 800 VA power convertor to power the data acquisition system and lap top. To be able to connect extra electrical peripheral equipment, an electrical converter of 1500 VA can be integrated on the power pack. The convertor will be mounted in a special housing including two wall sockets.

2. Toolbox



We can supply you a toolbox including tools for maintenance on the HYSON 200 kN BASIC.

3. Electric motor

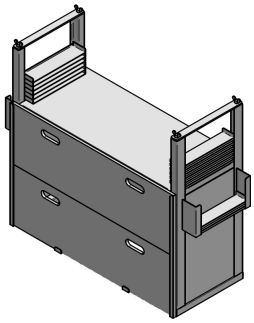


Instead of a power pack with a diesel driven motor we can also supply you with an electric motor for powering the hydraulics for the HYSON 200 kN PROFESSIONAL.

4. Additional valves

Four additional valves integrated in the hydraulic console for operating possible other functionality like levelling jacks.

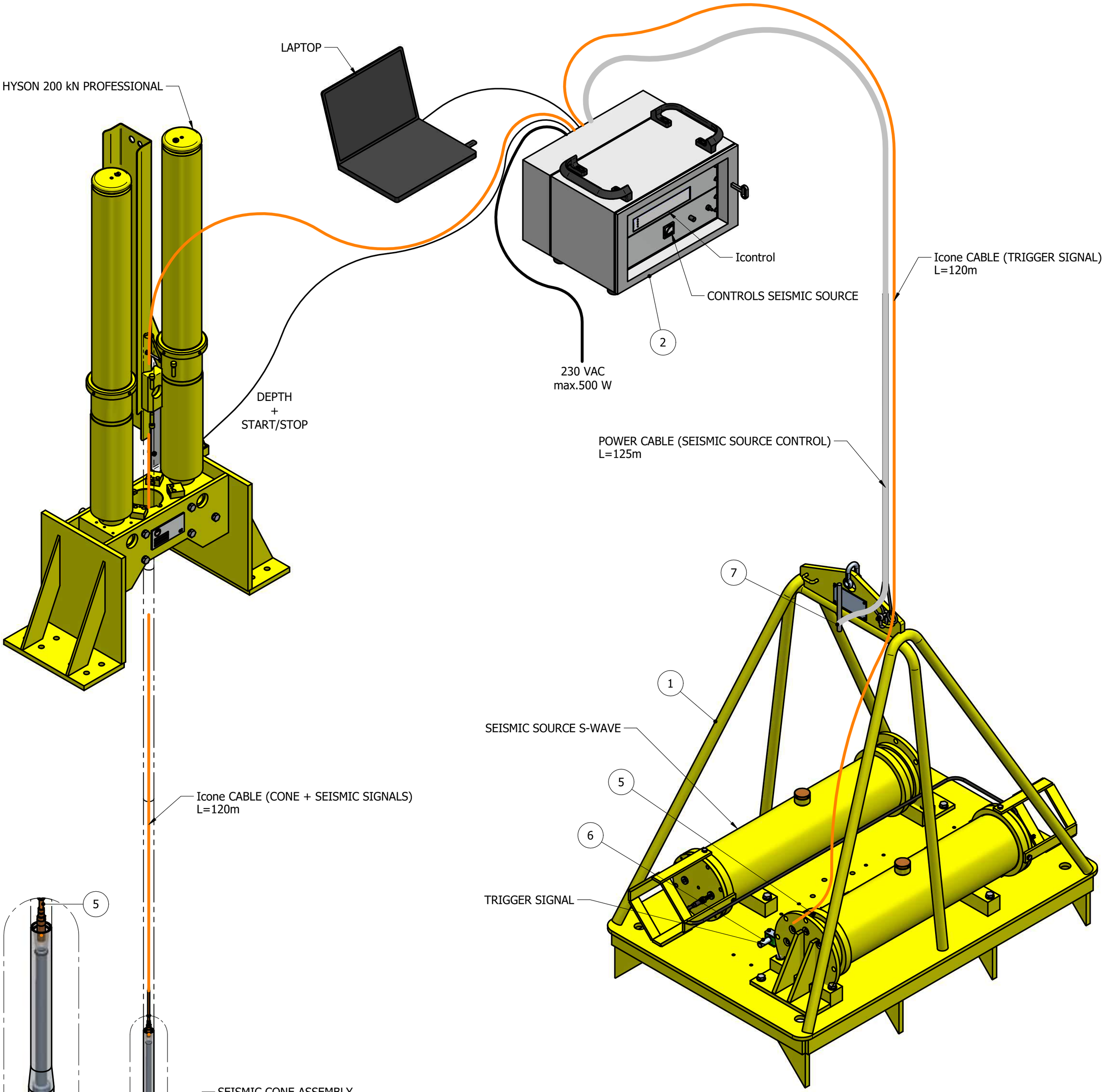
5. Rod rack



Rod rack suitable for the storage of 63 rods with cable. The CPT rods are divided over 7 racks of 9 rods. Rods are not included. Underneath the rod rack is a storage place which can be opened and closed using a wooden locking plate.

5. Support/training

We can provide you with support during mounting and local training against day rate and travel expenses. Our experienced engineers can help you with the final assembly on site and training of your operators. See below some of the recently delivered projects for the HYSON 200 kN mounted locally.



ELECTRICAL WIRING DIAGRAM: Icontrol SEISMIC LAYOUT, DRAWING 006560 SH2

POS	QTY	DESCRIPTION	PART NR	DWG NR	REV
7	1	CABLE TRIGGER UNIT	-	007508	B
6	1	SEISMIC TRIGGER MODULE	0101409A	007024	I
5	2	CABLE Icone CC4-L-CC4	1888LLLA	007900	J
4	1	ASSEMBLY SEISMIC Icone	0101410A	004636	D
3	1	Icone ELCI-CFPXY-10-AR	01002XXB	009900	-
2	1	CONTROL BOX Icone SEISMIC	-	012563	-
1	1	SEISMIC SOURCE OFFSHORE 2xS		001029	D

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MANUAL DRAWING

SEISMIC SOURCE NEARSHORE Icone

012559 REV B

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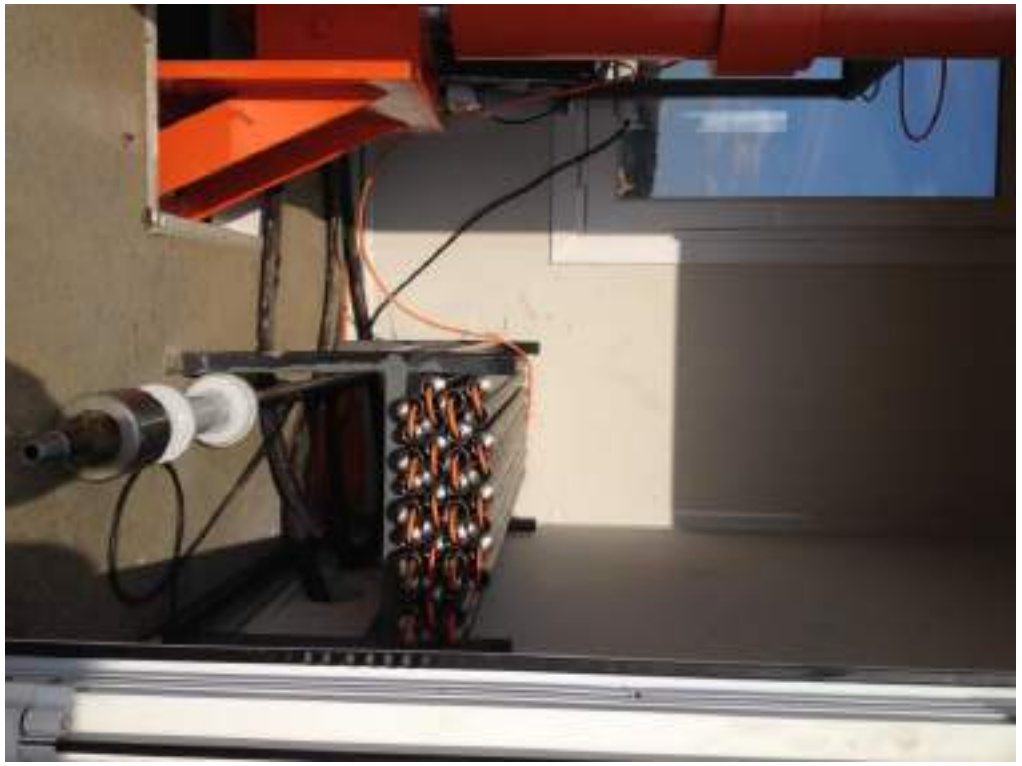

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C17-PRO VERTICAL DIGITAL INCLINOMETER SYSTEM

Datasheet C17-PRO

Advanced PRO Features

- Robust reinforced Kevlar® cable, 6.8kN breaking strength
- Sim enabled large 8" display robust field tablet
- Borehole recognition system
- Low wear, non slip stainless steel cable markers.
- Auto run feature for rapid borehole runs
- Includes In-Profile borehole analysis software[2]
- Review datasets graphically upon completion of borehole run
- Small diameter probe for traversing tighter bend radius in inclinometer casing
- Over 40 hours reel battery life.
- Permanently moulded cable for reliable connection and long service life

Description

The Vertical Digital Inclinometer Pro System is used to measure lateral deflections within a borehole. The system comprises a biaxial probe, cable reel and ultra-rugged Field Tablet supplied with 'In-Port Pro' data capture software.

The probe incorporates MEMS technology allowing highly accurate and repeatable readings, transferred via a digital signal. Bluetooth communication enables a cable free data transmitting system with no connectors to corrode or break.

The robust reinforced Kevlar® cable consists of a non slip cable marker system which, when used in conjunction with the cable gate, provides highly accurate and repeatable depth control.

With all these combined features, the Vertical Digital Inclinometer Pro System is a robust and highly accurate system that is light, compact and easy to operate in any site environment.

Features

- No connectors between probe, cable reel and Field Tablet
- Probe is manufactured from 316 Stainless Steel
- Precision sprung wheel assemblies
- Bluetooth connection between cable reel and Field Tablet
- Accurate and precise measurements using MEMS sensors
- Repeatable depth control using low wear stainless steel markers and cable gate system
- Ultra-rugged Field Tablet allows easy transfer of data
- Enhanced 'In-Port Pro' software to use with Field Tablet for easy data capture
- Large 8" high visibility touchscreen display

Benefits

- Moulded cable connection eliminates water ingress and connection problems
- Digital signal allows interference-free data transmission
- Advanced electronics ensure long, trouble free use in a harsh site environment
- Easy data transfer via Bluetooth, direct connection or internet using Wi-Fi or GSM network
- Waterproof Field Tablet for continuous use in harsh site environments
- Very long battery life
- Lightweight and easily portable

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MEMS

Microelectromechanical Systems, or MEMS, is a technology that uses miniaturised mechanical and electromechanical elements that are made using the techniques of microfabrication. The physical dimensions of MEMS devices can vary from well below one micron all the way to several millimetres.

Our MEMS microsensor is a small discrete device that converts a measured mechanical signal, gravity (g) into a voltage signal.

Operation

The inclinometer probe is inserted into the inclinometer casing and lowered to depth, ensuring the probe wheels are correctly aligned and slotted within the keyways of the casing. The probe is connected by a graduated cable to the cable reel.

Displacement readings are taken at regular intervals of 0.5m (2ft for imperial systems) within the casing (the gauge length between the probe wheels). This is measured and controlled by stainless steel markers crimped around the cable, these pass through a notch in the cable gate, giving an exact position for each reading.

By pressing the screen button or using auto run mode you can save readings from the MEMS sensors, which are transmitted to the Field Tablet from the cable reel via Bluetooth transmission.

An initial or 'base' set of inclinometer readings are obtained at each increment within the casing.

The summation of each incremental reading provides a profile of horizontal displacement of the casing as a function of depth.

When you take all subsequent readings at identical depths the comparison of successive casing profiles indicates the depth, direction, magnitude and the rate of change of movement.

You can see the clearest indication of movement by plotting the change in displacement of the casing against depth using 'In-Profile' Inclinometer Data Management Package.

Associated products

For details on:	Catalogue code:
EC Casing	C9
Standard Casing	C18
'In-Profile' Software	C13
Inclinometer Test Probe	C10

View our full product range on www.soilinstruments.com

Applications

Inclinometer systems are used to measure lateral displacement in the ground or structure. They are useful for determining the depth, direction, magnitude and rate of movement.

Typical applications include:

- **Slope failures and landslides**
- **Shear and slip zones**
- **Diaphragm or sheet pile walls**
- **Monitoring bending in piles**
- **Verifying design assumptions and finite element analysis**
- **Embankments**
- **Dams**
- **Retaining walls**

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THE TECHNICAL RATING FOR THIS PRODUCT: **BASIC**

As the correct installation of any monitoring sensor or system is vital to maximise performance and accuracy, Soil Instruments makes the following recommendations, for the skill level of the installation contractor.

ADDITIONAL SUPPORT

ADVANCED	The installer is trained and experienced in the installation of this type of instrument or systems, and is ideally a specialist Instrumentation and Monitoring contractor.
INTERMEDIATE	The installer already has previous experience and/or training in the installation of this instrument or system.
BASIC	As a minimum the installer has read and fully comprehends the manual, and if possible has observed these instruments or systems being installed by others.

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Her Çaptaki Kuyularda Test İmkanı

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DC type inclinometer casings

Description

DC type inclinometer casing is the high-precision casing which the guide grooves inside of inclinometer casing and the connecting parts of the coupling are proceed by a broaching machine.

Both end surface of DC casing is proceeding by CNC turning center, and it is finished by O-ring.
DC casing was designed as snap-in type. So after taking off the protective tube of O-ring, it can be directly inserted. DC casing is possible to install quickly.
ABS bond is unnecessary. And to rivet and to tape is unnecessary because DC casing is waterproof by O-ring.

To improve the waterproof and the strength of connection, ABS solvent bond should be pasted on the connection part of casings.
After DC inclinometer casing is connected each other, it doesn't require riveting, and taping

And there are two types of DC inclinometer casing such as Ø59㎜ and Ø73㎜ according to internal diameter. And if the big displacement is expected, the telescopic section should be used.

In case of using DC 70, it can be installed with NX drill, and in case of DC 85, Ø100㎜ drill should be used to install it.

The length of connecting for DC casing is designed at 1.5m and 3.0m.

Features

- Proceeded casing by CNC lathe machine with high precision and high sincerity
- Two types of cutting length (1.555m and 3.055m)
- Mechanical structure that the coupling is not necessary.
- Available to quick installation.
- Flush type without projection part at the outside diameter
- Simple installation (unnecessary solvent, rivet, and taping)

Specification

Model		DC 70	DC 85
Casing	ID, OD	Ø59×Ø70㎜	Ø73×Ø85㎜
	Groove depth	1.5㎜	
	Thickness	5.5㎜	6㎜
	Weight	3.6kg/3m	4.5kg/3m
	Spiral	Less than 0.3˚/ 3m	
	Connecting length	1.5m / 3m	
	Cutting length	1.555㎜ / 3.055㎜	
	Load test	More than 320kg - f	
	Collapse strength	16bar	13bar
	Operating temperature	-30~80℃	
	Material	High impact ABS resin	
Bottom cap	Dimensions	Ø70×64㎜	Ø85×64㎜
	Material	High impact ABS resin	
	Weight	70g	100g
Top cap	Dimensions	Ø70×35㎜	Ø85×35㎜
	Material	High impact ABS resin	
	Weight	36g	46g
Telescopic section	Expendable length	150㎜	
	Material	High impact ABS resin	
	Dimensions	Ø75×400㎜	Ø90×400㎜
	Weight	0.6kg	1.0kg
Accessories		Protection cap 2nos	

Component

- Pipe chain clamp
- Spring anchor
  - RCA-70 : for Ø70㎜ casing
  - RCA-85 : for Ø85㎜ casing
- Casing connection tool
  - RCT-70 : for Ø70㎜ casing
  - RCT-85 : for Ø85㎜ casing

Keeping

Direct sunlight and heat can be caused of twist of ABS casing, so it should be stored in bows during transport and before installation.
Also it should be kept flat and horizontally supported during long term storage in filed.

Package

DC 70, DC 85 casings are packed 12pcs in a carton box.

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S17 DIGITAL HYDROSTATIC PROFILE GAUGE

Datasheet S17

Description

The Digital Hydrostatic Profile Gauge is used to monitor the profile of settlement or heave and is predominately used for monitoring beneath embankments or structures where access to the surface is not possible.

The system comprises a probe assembly, attached to a nylon tube containing a hydraulic solution, which connects to a reel/hub assembly.

The reel contains a precision hydrostatic pressure sensor, power supply, analogue to digital converter and a Bluetooth transmitter. Data is transferred via a wireless link from the cable reel to the Field PC and saved each time a reading is taken.

Wireless connection between the instrument and the Field PC makes taking readings fast and simple.

Features

- **Provides a settlement monitoring profile**
- **Bluetooth connection between cable reel and Field PC**
- **Single ended access**
- **Enhanced, easy interface software compatible with most office systems and applications**
- **Repeatable position control using metal markers**
- **Large data storage capacity**
- **Provides full data security**

Benefits

- **No field connections required**
- **Uses low cost access tubing**
- **Cost effective over many profile measurements**
- **Portable system**
- **No need for special borehole casing (such as inclinometer casing)**
- **Easy to use**

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Operation

The Digital Hydrostatic Profile Gauge is positioned on the concrete block or reference datum pin.

The probe is pulled along the borehole and is positioned using physical markers on the connecting tubing.

The Field PC software guides the user to position the probe at each one metre marker interval; these are marked and numbered on the tubing. At each interval, the user initiates a reading which records the pressure differential at that point between the reel and the probe. This reading is transmitted from the cable reel to the Field PC via a wireless link.

The probe is datumed at an external topographic reference point for each profile. As the distance position of the probe is known from the markers, subsequent profiles can determine the delta pressure at each given point. From this information, the change in elevation of each point along the profile can be measured.

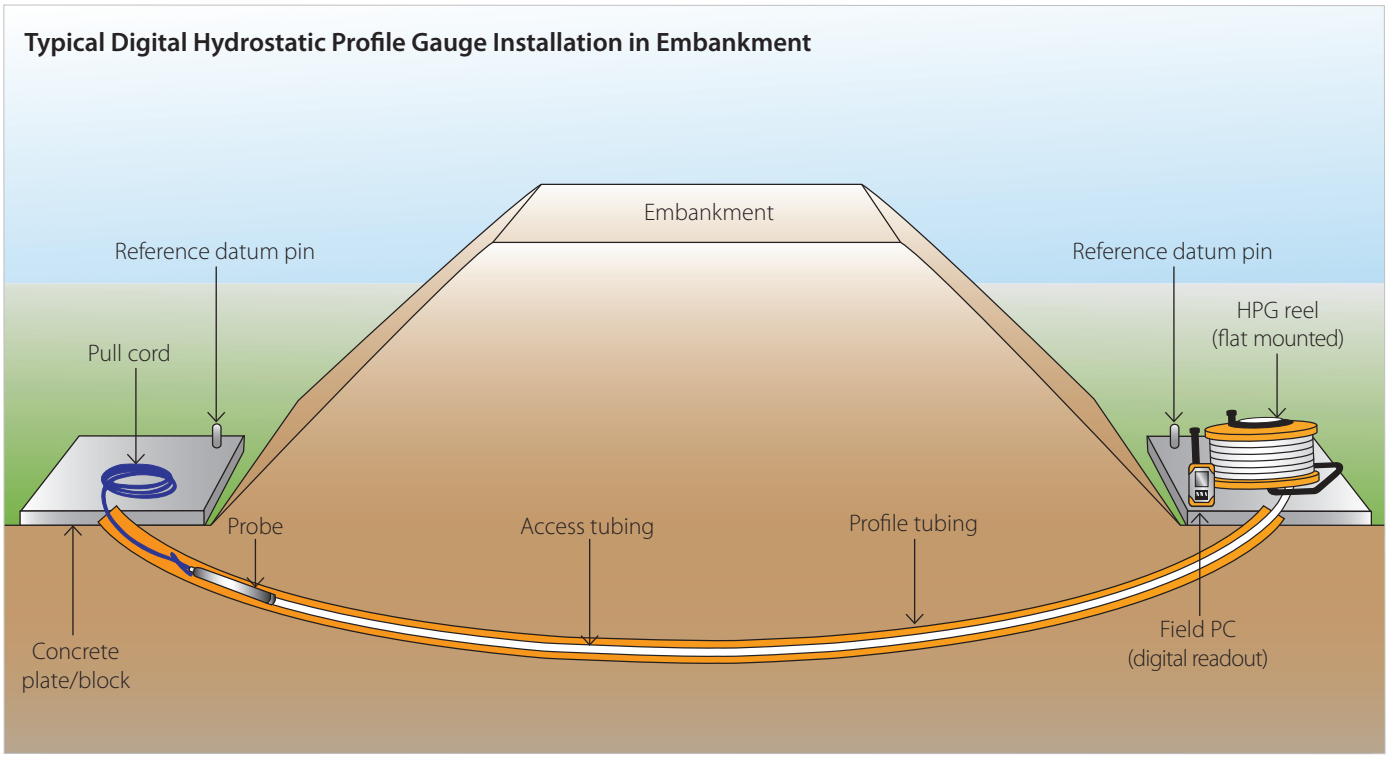
Applications

The Digital Hydrostatic Profile Gauge is used to monitor the profile of settlement or heave and is beneath embankments or structures where access to the surface is not possible.

Typical monitoring applications include:

- Vertical displacements beneath storage tanks
- Bridges and dams
- Highway embankment construction
- Settlement of landfill
- Railway embankments
- Settlement beneath structures

Typical Digital Hydrostatic Profile Gauge Installation in Embankment



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THE TECHNICAL RATING FOR THIS PRODUCT: **INTERMEDIATE**

As the correct installation of any monitoring sensor or system is vital to maximise performance and accuracy, Soil Instruments makes the following recommendations, for the skill level of the installation contractor.

ADDITIONAL SUPPORT

We offer installation and monitoring services to support this system. For more information please email : **sales@soilinstruments.com** or call : **+44 (0) 1825 765044**

ADVANCED	The installer is trained and experienced in the installation of this type of instrument or systems, and is ideally a specialist Instrumentation and Monitoring contractor.
INTERMEDIATE	The installer already has previous experience and/or training in the installation of this instrument or system.
BASIC	As a minimum the installer has read and fully comprehends the manual, and if possible has observed these instruments or systems being installed by others.

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W7 WATER LEVEL METER

Datasheet W7

Description

Water Level Meters are used to measure the depth of water in standpipes, wells and boreholes.

The meter comprises a Stainless Steel probe fitted to a flexible graduated cable which is wound on to a hand reel containing a transistorised switched circuit, audio (buzzer) and visual (LED light) indicators and a battery

The meter is simple to use and being portable, can be used at many locations. The tape design prevents it from sticking to wet surfaces, such as the lining of a borehole, ensuring accurate measurements.

There are two versions of the Water Level Meter; one with a small diameter probe and one with a diameter standard probe.
The standard probe version is also available with an optional digital temperature indicator.

Features

- **One instrument reads at many locations**
- **Contoured tape for accurate readings**
- **Tape range; 30m–500m with 1mm divisions**
- **Lightweight**
- **Simple, reliable and easy to operate**
- **Audible (buzzer) and visual (light) water level alert signals**
- **Sensitivity adjustment for variations in water conductivity**
- **Digital temperature indicator option available**
- **Non-stretch polyethylene coated steel tape**
- **Ø12mm slimline probe available**

Benefits

- **Easily portable**
- **Tape design prevents tape sticking to wet surfaces**
- **Economic water level monitoring**
- **Ideal for boreholes with small diameters**

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İnş. Taş. San. Tur. ve Tic. Ltd. Şti.

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Operation

The sensor probe incorporates an insulating gap which acts as a switch, the circuit being completed when contact is made with the water.

The cable consists of a non-stretch contoured tape with stranded steel conductors, graduated at one millimetre intervals.

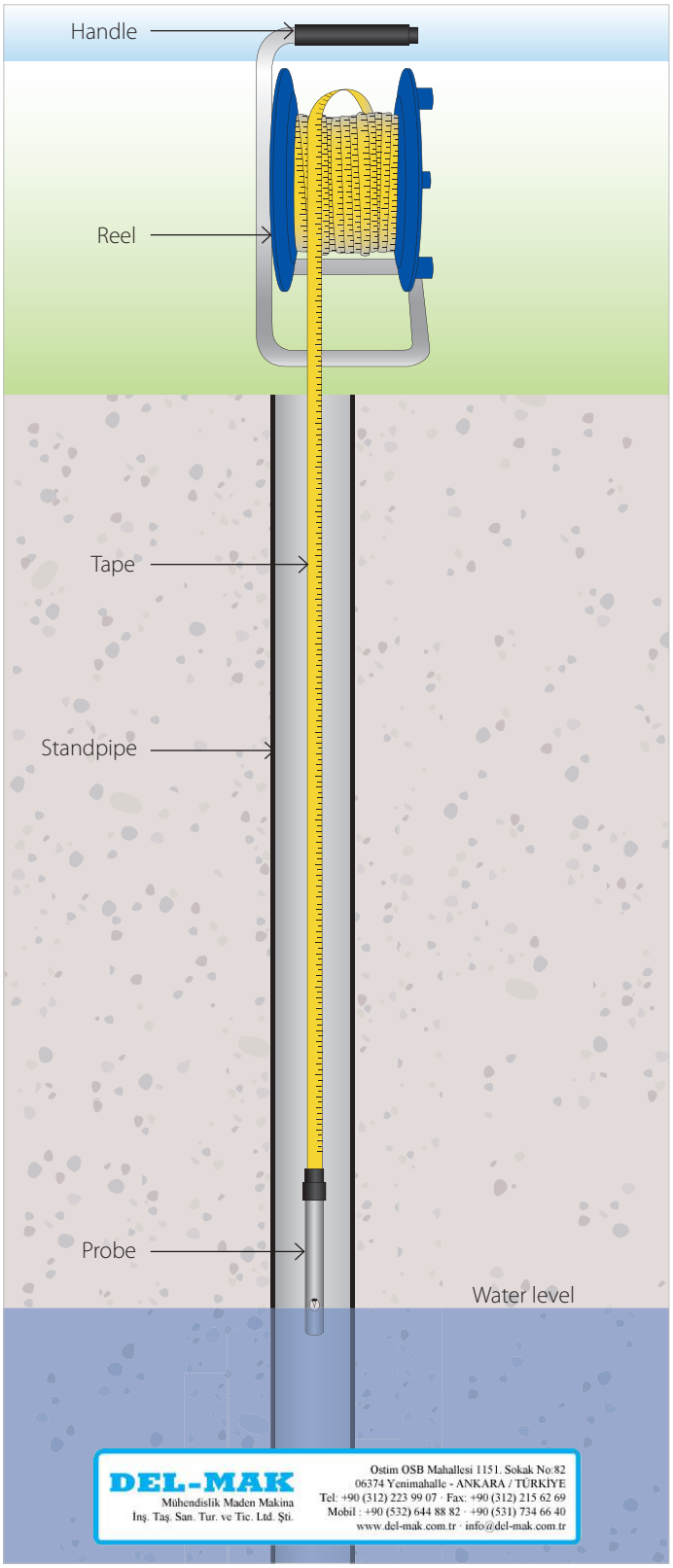
The probe is lowered down a borehole on the end of the tape. When it makes contact with water a buzzer sounds and an LED light comes on, both located on the reel. A reading can then be taken from the tape at the top of the borehole to indicate the water depth.

A sensitivity control is accessible inside the hand reel to enable adjustment to suit the water conductivity.

Applications

The Water Level Meter is ideal for site investigations such as:

- Water levels in open boreholes
- Control of de-watering and drainage operations
- Construction control and stability monitoring of dams, reservoirs and embankments
- Hydrological and hydrogeological investigations of water resources
- Pollution and environmental studies
- In-situ permeability measurements and pumping tests
- Stability investigations of natural and cut slopes



Associated products

For details on:	Catalogue code:
VW Standpipe Piezometer	W1

View our full product range on www.soilinstruments.com

THE TECHNICAL RATING FOR THIS PRODUCT: **INTERMEDIATE**

As the correct installation of any monitoring sensor or system is vital to maximise performance and accuracy, Soil Instruments makes the following recommendations, for the skill level of the installation contractor.

ADDITIONAL SUPPORT

We offer installation and monitoring services to support this system. For more information please email : **sales@soilinstruments.com** or call : **+44 (0) 1825 765044**

ADVANCED	The installer is trained and experienced in the installation of this type of instrument or systems, and is ideally a specialist Instrumentation and Monitoring contractor.
INTERMEDIATE	The installer already has previous experience and/or training in the installation of this instrument or system.
BASIC	As a minimum the installer has read and fully comprehends the manual, and if possible has observed these instruments or systems being installed by others.

James Fisher
Testing Services

JFTS Equipment

Specialist testing systems for construction, power and rail sectors.

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Foundation testing systems:
Pile integrity testing

TECO-LITE

A wireless accelerometer time-domain system used to assess the integrity of concrete piled foundations.

The TECO-Lite system is supplied with an impulse hammer and Bluetooth accelerometer, which uses a rugged PDA to receive and analyse data wirelessly to measure the acceleration response of the foundation.

Data is transferrable via USB or Blutooth to the windows-based TEAP analysis software for more detailed analysis and reporting. The flexibility of this system means it can be used to test precast concrete piles, cast-in-place foundations and timber piles of most dimensions. Typical anomalies that may be located include shaft discontinuities, overbreak or bulges, reductions in section or necking and zones of poor quality concrete.

Benefits:

- Wireless Accelerometer
- Rapid testing - up to 300 piles per day
- Operates for up to 8 hours on a full charge
- Compliant with ASTM D5882

TECO

A time-domain system used for checking the integrity of concrete piled foundations. Can be upgraded to combined TDR2/TECO.

This versatile system can be used to test pre-cast concrete, cast-in-place concrete and timber piles of most dimensions. It also comes equipped with a wired accelerometer, impulse hammer and rugged solid-state acquisition unit. The TECO is designed for speed of operation, low power consumption and ease of use in inclement weathers. A user-friendly menu system guides the operator and displays data in an easy to follow format. Data is easily transferred to TEAP analysis software via USB for analysis and reporting. The site unit can measure pile length and provides the operators with a choice of filters to suit the application..

Benefits:

- Operates for up to 8 hours on a full charge
- Rapid testing - up to 300 piles per day
- Backlit LCD screen for dark/ daylight working
- Storage for over 700 results
- Compliant with ASTM D5882

Can be combined with a TDR2 system.

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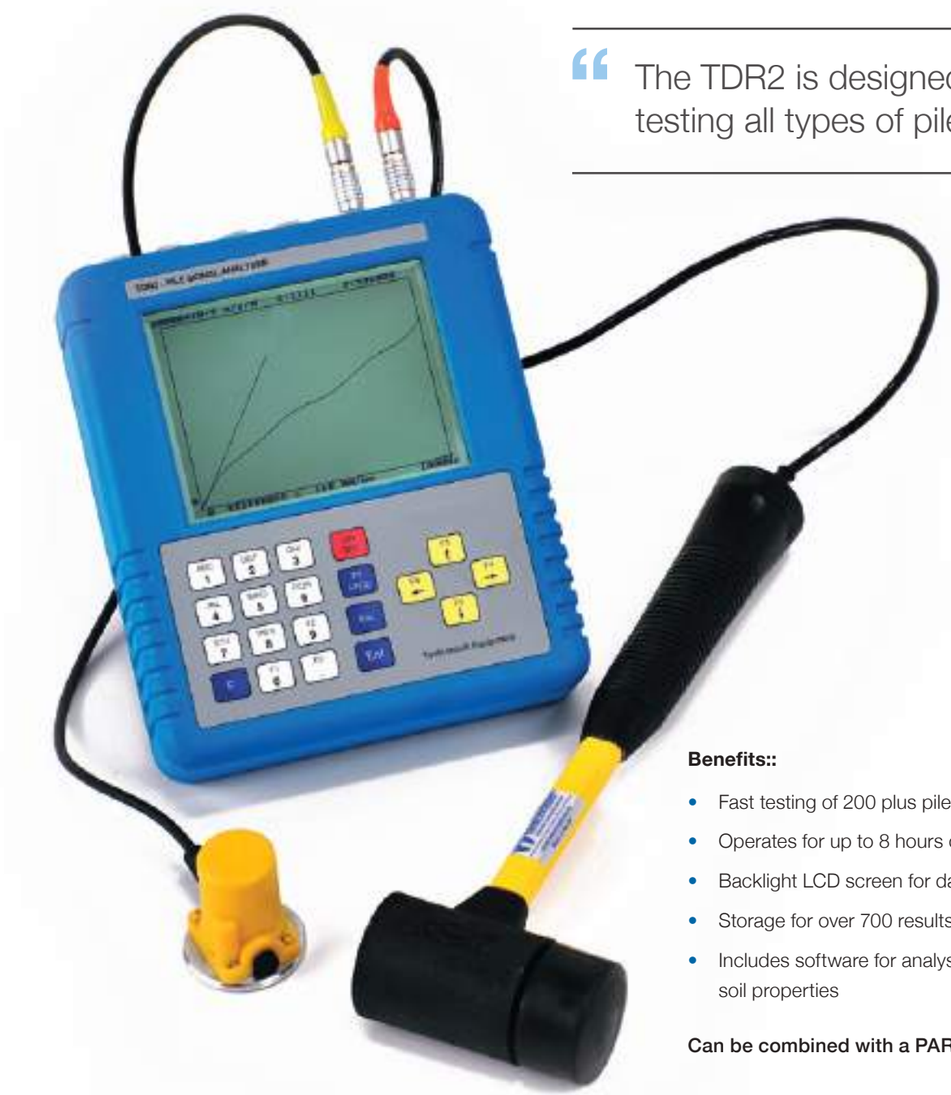
TDR2 system

A lightweight, rugged pile integrity testing system for measurement in time and frequency domain.

Supplied with instrumented force hammer and geophone sensors, the TDR2 is designed for rapid testing all types of pile and can locate the depth and relative size of any significant pile shaft anomalies including over-break, cracks, reductions in section and zones of poor quality concrete. It can calculate the depth of anomaly and pile head stiffness.

The TDR2 unit is supplied as standard with both simulation and impedance profiling software, enabling detailed analysis of changes in the pile section and the influence of soil.



> “The TDR2 is designed for rapid testing all types of pile.”

Benefits::

- Fast testing of 200 plus piles per day
- Operates for up to 8 hours on a full charge
- Backlight LCD screen for dark/daylight working
- Storage for over 700 results
- Includes software for analysis of pile and soil properties

Can be combined with a PARAS or TECO system.

PARAS

A hydrophone system for assessment of sub-structure foundations.

Designed to check the depth and integrity of concrete, masonry or steel foundations that are considered to be inaccessible or unsuitable for other non-destructive conventional pile testing techniques; PARAS offers an alternative.

Benefits:

- Compliant with NFP94-160-3
- Storage for over 700 results
- Can be combined with TDR2 pile testing system
- Used on sheet steel piling and foundations under structures
- Operates for up to 8 hours on a full charge
- Easy data export
- All weather signal acquisition

Can be combined with a TDR2 system.

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SCXT3000

An ultrasonic cross-hole logging system for assessment of concrete piles, diaphragm walls and other mass concrete foundations.

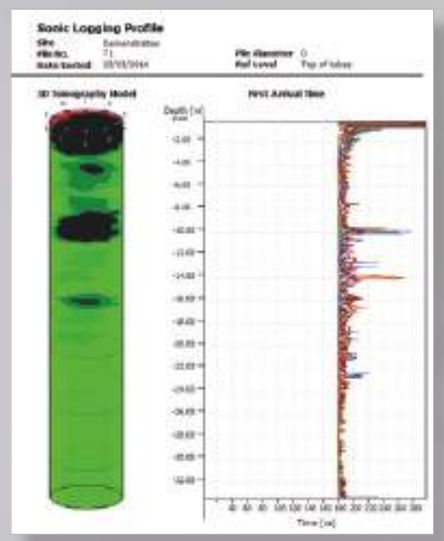
Supplied with a high performance, battery powered aluminium Military spec rugged notebook computer as standard, enabling testing in challenging site conditions. The stainless steel electronic winch features a display and control to enable testing by a single user. Transducers are fitted with submarine connectors and supplied with 100m cables as standard, although other lengths are available if required.

Full analysis can be carried out on site, including 2D and 3D tomographic imagery and assessment of signal FAT (First arrival time) and energy. The versatile software enables the test reports to be customised to suit client requirements.

> “The versatile software enables the test reports to be customised to suit client requirements.”

Benefits:

- Calculation of FAT and energy changes
- Compliant to ASTM 6760 and AFNOR NFP94-160-1
- Military spec rugged notebook
- Accommodates up to 12 tubes and 66 profiles
- 320GB of storage
- 1cm resolution and storage of every signal
- Waterfall, FAT and energy plots
- Automatic levelling of profiles



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Foundation testing systems:
Dynamic load testing

> “The SIMBAT high speed opto-digital theodolite captures real-time elastic and permanent displacement without calculation producing more accurate test result.”

SIMBAT

Widely regarded as the most accurate dynamic load testing method available.

Suitable for both cast-in-place and pre-cast piles, the SIMBAT multi-blow dynamic load testing technique has been developed from the original method first formulated in the 1980s. Dynamic pile testing is generally seen as a much quicker and more cost-effective load performance test than traditional static test methods.

The SIMBAT system offers the following advantages over traditional dynamic testing techniques:

- The Simbat high speed optical/digital theodolite captures real-time elastic and permanent displacement without calculation.
- High and low strain blows enable conversion from dynamic to static reaction without the need to assume soil damping factors.
- Acceleration data is corrected using displacement data from the theodolite.
- A simulation model available and is based on accurate displacement rather than calculated velocity

Benefits:

- Most accurate high strain dynamic testing method available
- Unique theodolite measures elastic and permanent displacement remotely
- Instant dynamic reaction and displacement readings
- Storage for over 700 results
- Compliant to EN ISO 22477-4

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Foundation testing systems:

Static load testing

SLT2

A purpose-designed semi-automatic system to perform and monitor static pile tests and improve operational safety.

Whilst load is applied manually as for traditional static load test, the load, pressure and displacements are all monitored, displayed and recorded remotely on a supplied computer. This enables the operator to monitor to test safely and accurately from distance, eliminating the need for personnel to enter potentially dangerous testing zones.

The user-friendly software allows operators to view data in real-time whilst plotting the load settlement data and calculating rate of settlement as the test progresses. Should the test be stopped for any reason, data is backed up at every minute, to enable testing to recommence without any loss of data.

Benefits:

- Rugged transducers suitable for use on construction sites
- Supplied with notebook PC and SLT2 software
- Displacement and load displayed in real-time
- Load / settlement graph plotted in real-time
- All data recorded as test proceeds
- Includes test report feature

ASLT

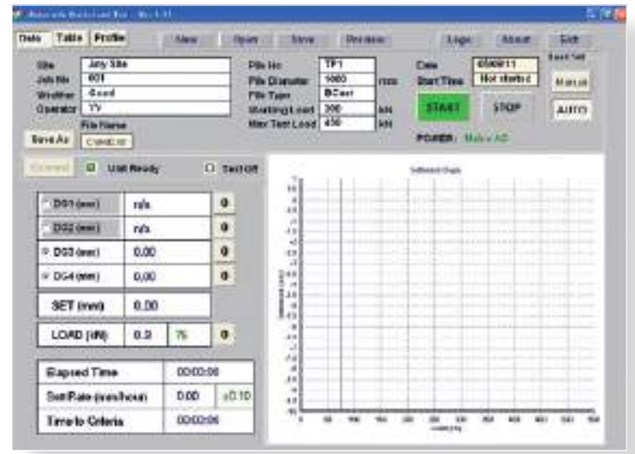
A fully automatic system to perform and monitor static load tests on foundations with improved operator safety and test accuracy.

The ASLT system is supplied with a rugged site notebook, pre-loaded with the ASLT controlling software and calibrated load, pressure and displacement transducers. The ASLT has all the features of the SLT2, with the addition of a 110VAC powered hydraulic load maintainer. The system also incorporates a data acquisition battery back-up, which allows testing to continue using a manual pump in the event of a power failure, without the loss of any data.

The ASLT software enables the user to programme a test load template, for the load maintainer to follow automatically. This includes safety cut-outs in the event of excessive movement.

Benefits:

- Fully automatic control and logging
- Remote control option available
- Supplied with calibrated sensors to suit required range
- Data displayed in real-time
- Power failure protection
- Customised alarming conditions



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Ground testing systems:
Plate load testing

PLATEMAN

The PLATEMAN system has been engineered for safe, accurate and efficient plate load testing.

PLATEMAN provides dynamic plate load test information in real-time, allowing you to act on data immediately and with confidence. The Bluetooth wireless remote logging capability ensures the safety of site operatives, whilst the robust protective casing enables testing to be conducted in all weathers. The Rugged PDA's graphical user interface enables the user to create custom loading profiles, and presents sensor information, test curves and rate of settlement in real-time. Estimated CBR can be calculated immediately and data can be transmitted by 3G/4G direct to your office for production of detailed test reports using the PLATEMAN PC software.

The system features a GPS tag for each test result and also includes a lightweight, adjustable reference beam to attach transducers. This that can be easily transported between test locations without dismantling and used in most site situations.

Benefits:

- Wireless remote logging
- Compliant to BS1377 and DIN18134
- Customisable loading templates prompts for reliable data
- Easy to handle and transport between test locations
- Test results viewed in real-time
- Instant estimated CBR calculation
- GPS location tag on all test results
- 3G/4G transmission of data direct from site possible

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SPT Hammer Energy **SPTMAN**

A user friendly system for measuring the energy of SPT hammers.

The SPTMAN system measures the actual energy transferred from the SPT trip hammers or window sampler drop weights, to the top of SPT drive rods. The hammer energy coefficient is then calculated by comparison with the theoretical potential energy.

The heart of the system is a purpose made rugged, portable signal analyser with solid-state memory, which is connected to any suitable SPTMAN instrumented rod. The standard instrumented rod supplied is 54mm diameter. Tests are carried out using as easy to follow menu display which enables the user to enter hammer information, and then display hammer energy and energy ratio in real-time.

Benefits:

- Instant hammer energy measurement and transfer coefficient calculation
- Storage for over 700 results

Complies with the relevant parts of both BS EN ISO 22476-3 and ASTM D 4633-10.

Soil testing systems:
Direct shear

SB2010

The SB2010 large scale shear is the most up-to-date and technologically advanced fully automatic direct shear box available.

Designed and developed to determine the shear strength of soil specimens in accordance with BS1377 Part 7 1990, the SB2010 can also be used on geo-synthetics and can be supplied with inserts for testing smaller samples and core samples. The fully automatic SB2010 incorporates a PC controller for setting test templates, operating the machine, logging and displaying test data in real-time and also for reporting.

Benefits:

- Complies to BS1377 Part 7 1990
- Fully automatic loading and displacement measurement
- Integral reference arm, optional rated winch for easy handling
- Hydraulically controlled 100KN vertical loading system
- Precision stepper motor for 100KN horizontal loading
- Direct measurement of load by calibrated load cells
- Full calibration and support services available

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Corrosion testing systems:
LPR Rate of corrosion

BGCMAP

The BGCMAP corrosion system has been designed assess potential corrosion in steel below ground using LPR technologies to help develop effective maintenance schedules for the electrical power industry.

The BGCMAP system provides a rapid and reliable way of assessing the potential life of buried steelwork using Linear Polarisation Resistance (LPR) techniques to determine the rate of corrosion. This can be used to define effective and targeted inspection and maintenance schedules for lighting columns and transmission tower foundations. Powered by rechargeable batteries, the system integrates GPS technology to provide an accurate location, date and time stamp for every test result.

The BGCMAP system glossary is designed specifically for the transmission line and road lighting industry and can be classified in terms of structure, component, line, segment, circuit and street. The user is also able to enter details of the inspector as well as soil and weather conditions. The unit will automatically determine Ecorr and then apply a current to the structure from which polarization resistance Rp and corrosion current ICorr can be determined.

Benefits:

- On-site measurement of ECorr, the full LPR curve, and polarisation resistance
- Integrated GPS provides location date and time stamp for every test result
- Transmission line and road lighting terminology
- Storage for over 700 results
- Battery operated, rugged unit for use in remote locations
- PC based software for determination of ICorr, estimation of rate of steel loss and reporting

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Railways:

Signal Lever Force Indicator (SLFI)

SLFI

The SLFI improves safety, by providing railway asset managers with the information they need to assess manually operated signal levers.

Excessive signal lever pull force often indicates that maintenance is required somewhere in the system. The Signal Lever Force Indicator (SLFI) can provide routine measurements that can be used as part of an ongoing maintenance regime to trigger targeted lubrication or component replacement. Furthermore, high pull forces can often be a cause of back injury to signal operatives and, by identifying these situations early, the SLFI supports pre-defined safe operating levels.

The real-time force measurements from the SLFI can be used to develop energy-efficient practices and form part of a training programme that demonstrates how force can vary according to the technique used to operate signal levers.

Benefits:

- Instantly measure pull force
- Pre-set warning lights for excessive load
- Adaptable for different lever types
- Use as part of an ongoing maintenance regime

Fully-calibrated across the working range.

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Vibration monitoring:
Vibration monitor

AXILOG II

A state-of-the-art vibration monitoring system designed to quantify vibration and determine the risk of damage on buildings and other structures.

The AXILOG II system is a user friendly tri-axial vibration monitoring system, which is easy to operate, providing real-time measurements of vibration levels in accordance with BS, SBR or DIN guidelines with the additional advantage of remote monitoring. Multiple alarm levels can be programmed into the system, providing the operator with an early warning in the event of pre-set levels being exceeded. The automated reporting function and long battery life make this product ideal for long-term monitoring. The AXILOG II is supplied with a two-year calibration certificate and rugged carry case.

Benefits:

- Built-in modem as standard
- Real-time remote monitoring
- Multiple alarm notifications for important events
- Automatically generates reports for easy long-term monitoring
- Rugged lightweight system
- Up to 3 months' internal battery life

Built-in GPS sensor to record location.

Training

Equipment support services

JFTS offers an end to end support service on all of its products, including training, consulting and a worldwide sales network.

Training

- Online training
- On-site training
- Technical seminars
- Teaching aids

Consulting

- Recommendation of suitable testing regimes
- Assistance with analysis and reporting

Repair and calibration

- UK based repair workshop for fast turnaround repairs

Research and devlopment

- Development of new systems
- Custom software solution

Equipment hire

- Available for certain systems

Worldwide sales network

- Distributors in major centres

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EURO DRILL

ROTARY HEADS FOR PILE RIGS
DREHANTRIEBE FÜR DREHBOHRGERÄTE

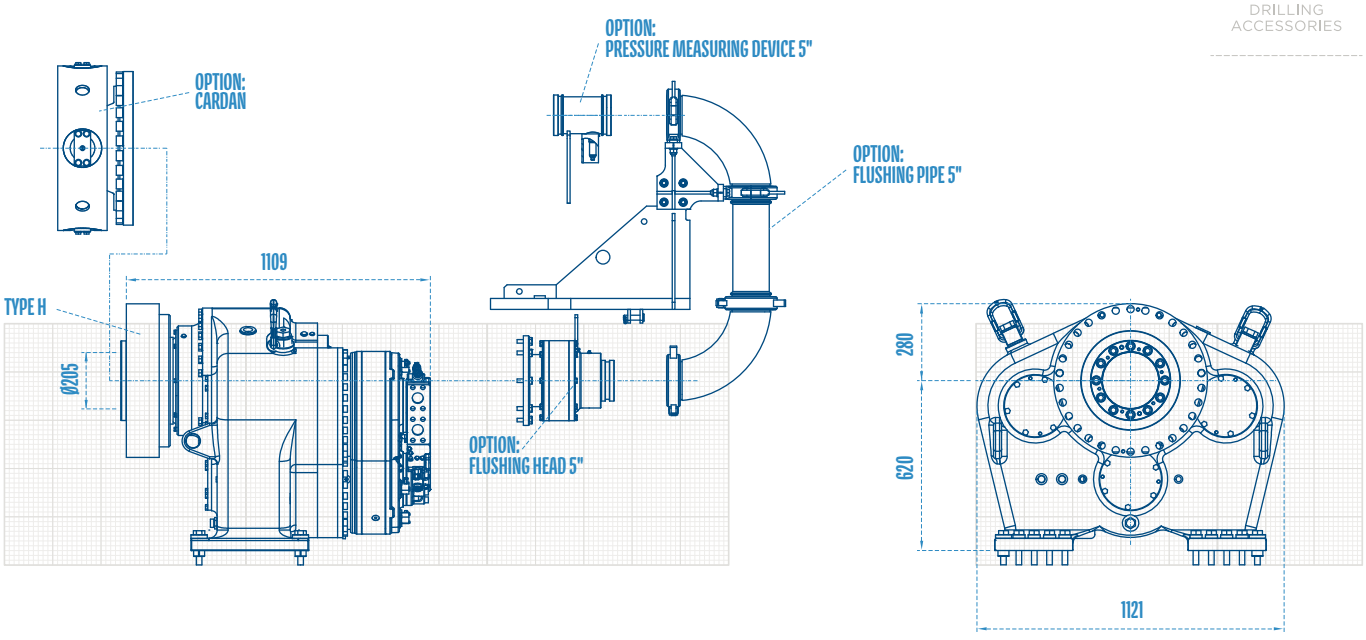
RHP 15

Options Optionen

- > Hydraulic or electric shifting
  Hydraulische oder elektrische Schaltung
- > Mounting plates
  Montageplatten
- > Flushing heads 4“ & 5“
  Spülköpfe 4“ & 5“
- > Pressure measuring device
  Druckmesseinrichtung
- > Cardanic joint
  Kardan Gelenk
- > Shock absorber
- > Speed sensor

Up to
100 MIN-1
Bis zu

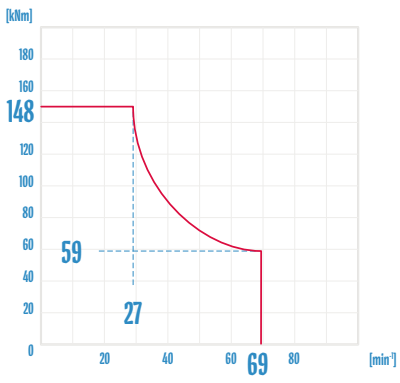
X-SERIES
VIBRATION HEADS
CORING HEADS
DOUBLE HEAD DRILLING SYSTEMS
ROTARY HEADS FOR PILE RIGS
DRILLING ACCESSORIES



2250 kg **Weight** Gewicht
500 kN **Traction** Zugkraft

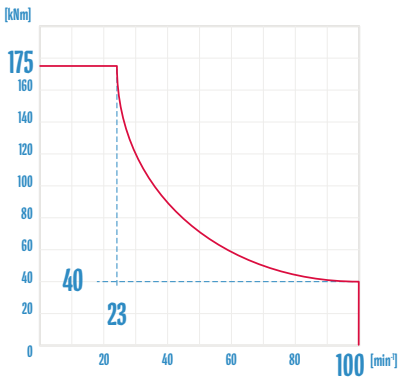
Rotary mechanism RHP 15 Drehantrieb

3 x type 160



p = 320 bar & Q = 800 l/min

3 x type S



p = 320 bar & Q = 800 l/min

Drive shafts Abtriebswellen

> Flange connection
Flanschverbindung

Other connections on request
Weitere Verbindungen auf Anfrage

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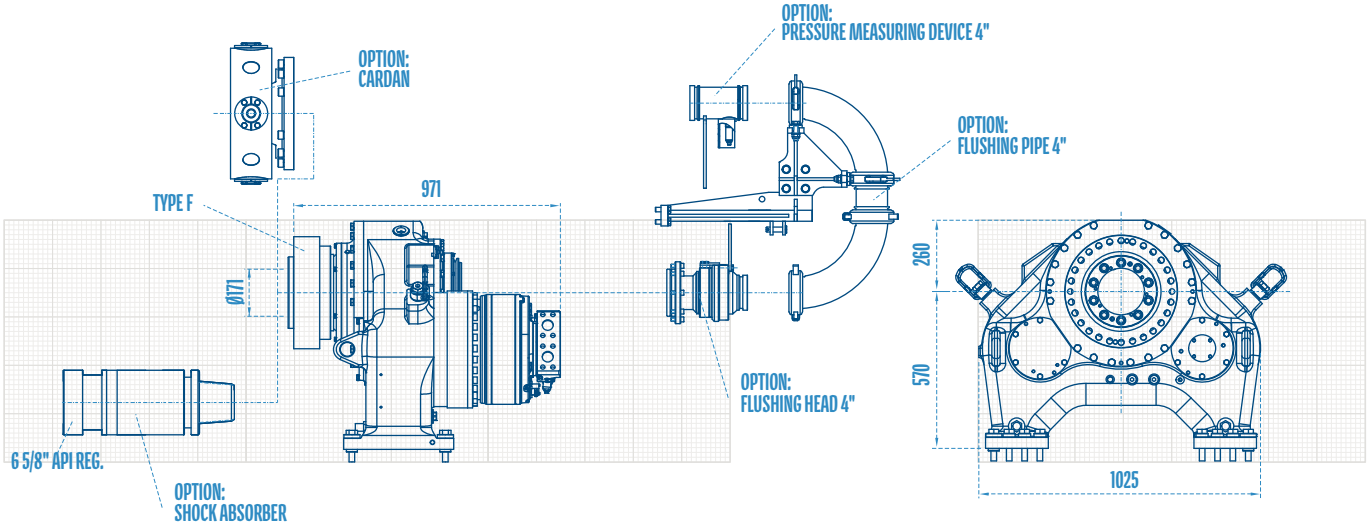
EURO DRILL

ROTARY HEADS FOR PILE RIGS
DREHANTRIEBE FÜR DREHBOHRGERÄTE

RHP 10

Options Optionen

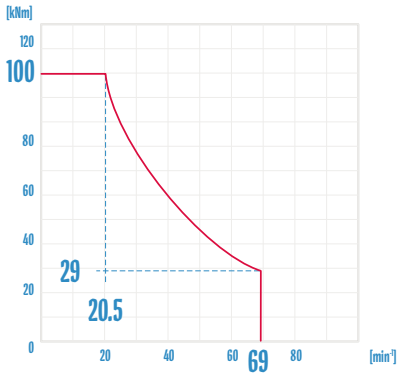
- > Hydraulic or electric shifting
  Hydraulische oder elektrische Schaltung
- > Mounting plates
  Montageplatten
- > Flushing heads 4“ & 5“
  Spülköpfe 4“ & 5“
- > Pressure measuring device
  Druckmesseinrichtung
- > Cardanic joint
  Kardan Gelenk
- > Shock absorber
- > Speed sensor



1400 kg **Weight** Gewicht
350 kN **Traction** Zugkraft

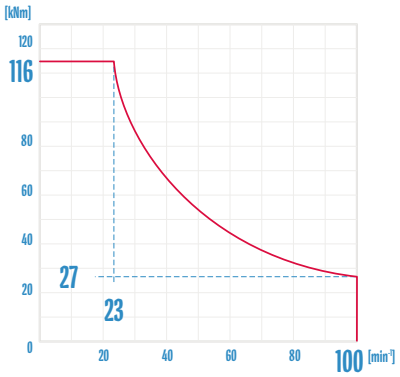
Rotary mechanism RHP 10 Drehantrieb

2 x type 160



p = 320 bar & Q = 400 l/min

2 x type S



p = 320 bar & Q = 540 l/min

Drive shafts Abtriebswellen

> Flange connection
Flanschverbindung

> API 8 5/8“ Reg Box

Other connections on request
Weitere Verbindungen auf Anfrage

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