

## Instruments and Safety

# Accurate CATALOGUE

### FREEPHONE 0800 500 380

www.accurate.kiwi www.safety.kiwi

# Accurate CATALOGUE

Accurate Instruments offers some of the world's best renown, professional trade instrumentation available, yet the pricing is often highly competitive. Many of the leveling, measuring, technical safety and inspection products required for use in today's industry are highly technical. Finding knowledgeable people to answer the questions, advise models applicable and suggest best practice operation is near impossible.

Our industry experienced sales and advisory team provide you, the tradesperson, operator, consultant or consumer, with the correct instrument, product information and support backup to meet your demands.

We have two showroom branches with full service and calibration facilities, in Auckland and Christchurch, where many of our products can be viewed and purchased.

> Accurate) NSTRUMENTS & SAFETY

> > AND STATE



Accurate Instruments has been supplying the New Zealand surveying, infrastructure, inspection and technical safety markets since 1994.

## Instruments and Safety



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We have New Zealand and the South Pacific covered. With showrooms, training facilities and full service calibration centres in Auckland and Christchurch. Both showrooms have many of our products on display for demonstration and purchase. Products are also available online with shipping throughout the Pacific.

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SHOT

## Introduction

## Be compliant, be safe

#### The right equipment and the right advice every time.

Accurate prides itself on keeping you and your workplace compliant and safe in your operation, by using the correct equipment that is tested, calibrated and certified - every time.

As an ISO9001 certified company for technology solutions and support, Accurate is a trusted partner to many of the industries' biggest (and smallest) operators.



## Service & Calibration Centres

Operating one of the largest technical service departments for survey, leveling and technical safety in Australasia, Accurate's Service Technicians provide the backup and support of our products, with calibration, certification and repairs of our equipment when required.

We have the computer software programmes, specialised tooling, vibration/shock analysis, digital calibration machines, collimator jigs and baselines that allow us to test, calibrate instruments, all within an acceptable industry time period.

Many of Accurate's Service Engineers are trained internationally at our manufacturers' facilities. They have the most current updates on all products, which include both hardware and firmware upgrades, modifications or factory changes.



### A proud Kiwi Company

Accurate Instruments (NZ) Ltd is a 100% New Zealand owned company.

Celebrating 25 years in operation in 2019, Accurate is proud to be owned by kiwi's and run by kiwi's.

Carrying significant experience in the industry, the owners actively work in the business and keep their finger on the pulse in this ever changing dynamic world.

Passionate about the industry and the staff, it is important to maintain great relationships with not only our team and customers, but also our suppliers, to ensure we can bring to market the best equipment and technology available.

### Health & Safety Compliance

One of Accurate's key goals is to provide a safe workplace and return its employees home each day - safely. We actively promote and practice safety within our business by recognising, minimising and mitigating our risks, administering PPE and ensuring compliance with our company responsibility under the Health and Safety at Work Act 2015.

#### **Calibration, QA testing and support**



# **Training & Education**

## **Industry Training** Courses

Accurate offers a wide range of training options starting from basic product knowledge, right through to extensive theory and practical training.

Our training caters to a wide variety of industry sectors. The content we provide is recognised and relevant. We regularly update all our content and keep our trainer's knowledge up to date. The courses all focus strongly on Health & Safety procedures and guidelines, so you are working confidently and safely. We make every effort to assist you with any of your applications and answer any questions you have.

Our Industry trainers are based nationwide and training is available anywhere in New Zealand or we can utilise our training centres in either Auckland or Christchurch.

#### NZ INDUSTRY AND **ACADEMIA LEVELS 3 & 4 STATEMENT OF ATTAINMENT CERTIFICATION\***

Accurate is proud to share a partnership with the ARA Institute of Canterbury. Together we can provide Skills for Industry Statement of Attainment Certificate Courses.

\*Attainment is only available on some courses.



## STANDARD COURSES > NOT LIMITED TO

- Cable Location
- Ground Penetrating Radar GPR
- Gas Detection
- Moisture Inspection
- Soil Testing
- Leveling & Setout

INDUSTRY STAGE 1

#### **Product Training**

Demonstrate and detail key functions of the instrument.

In addition to product training, we include theory on the founding sciences and methodologies that relate to the instrument's main application.

### **OUR TRAINERS**

#### **BILL GYDE**

#### **Cable Location / GPR**

Bill has wide experience with radar and electrical networks. He has been trained by IDS GeoRadar and also holds a Certificate of Competency in Opera Duo & GPR Theory. Bill also trains on the Zip Level model for Accurate.

#### **MARK GEMMELL**

#### **Moisture / CCTV**

A Level 1 Certified Thermographer and trained by Trotec on moisture measurement in Germany. With training from Pearpoint in United Kingdom and Australia. Mark delivers our moisture and CCTV content to the industry.

We can customise our courses to suit with combination courses also available.

#### **INDUSTRY** STAGE 2

#### **Theoretical Training**

#### **INDUSTRY STAGE 3**

#### Theory and **Practical Training**

This comprehensive module contains a combination of product and theory training but also incorporates practical training for on-site procedures.

#### DAVID OPENSHAW

#### **Cable Location / Setout**

With a double honours in Geology and Physical Geography, David oversees our Soil Testing, Site Leveling and Setout and Cable Location courses. He has also spent time as a land surveyor and teacher.

#### **JONO MILLAR**

#### CCTV

Jono oversees our push rod and tractor CCTV pipe cameras for underground pipe surveying. He has been factory trained by CUES Inc in Florida, USA on sewer and manhole inspection.

## **World's Trusted Brands**

Accurate offer only most trusted professional equipment. As the New Zealand approved suppliers for these manufacturer's equipment, we handle all the sales, support and backup in house.

We back this with knowledgeable factory trained staff to correctly advise on the best suited equipment to meet your application, modes of operation, best practice and technical support.



MSA Safety is the global leader in the development, manufacture and supply of safety products that protect people and facility infrastructures. MSA's core products include portable and fixed gas detection instruments, flame detection systems, self-contained breathing apparatus and industrial head protection products.

PRO SHOT —LASER—

Pro Shot lasers are iconic in New Zealand, being found on nearly every building or civil project in the past 25 years. Trusted by contractors and builders for their accuracy, reliability and performance, Pro Shot are designed and manufactured in California, U.S.A.

#### RADIODETECTION<sup>®</sup>

Founded in 1970 in Bristol, United Kingdom, Radiodetection has gone on to be one of the global leaders in the Utility locating and cable avoidance sector. There wide range of products include the industry standard Cat & Genny cable avoidance locator.



Owned by Trimble Navigation. Spectra can trace it's roots back to the

introduction of the first automatic laser level in the 1950's. Spectra equipment



production of personal fall protection systems. Products include confined space entry tripod's, recovery winches

## TROTEC



Popular with Engineers and consultants across the country, IDS Geo Radar, based in Italy, is a world leading provider of high-tech ground penetrating radar solutions, concrete and structural scanning and locating equipment in engineering and civil market sectors.

## PEARPOINT 78

One of the world's leading manufacturers of commercial pipe inspection equipment, Pearpoint's range of fully modular camera systems delivers pipeline inspection capabilities from 32mm pipes up to 1500mm. From simple plumbers push rod systems to the motorized

## Honeywell

Honeywell Industrial Safety offer personal protection and technical safety equipment with key established brands Howard Leight for hearing protection, Sperian for safety eyewear, Miller for height safety and North for respiration.

- From small beginnings in the late 1980's to a powerhouse today in Europe, Trotec offers diverse solutions in climate and measurement condition monitoring.
- From dehumidifiers to moisture meters, Accurate are proud to have represented Trotec in New Zealand for the past 15 years.
- The company that started it all, when they developed and produced back in the early 1990's.
- Today, owned by Fluke Corporation, PLS continue to set the standard in the industry for performance, quality and accuracy.

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Smart Tool Gen2.

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# Laser Levels

## Rotating, Grade, Pipe, Dot and Line Lasers

Site, construction, internal fitout leveling and alignment solutions from the world's best laser brands, all supported and serviced in New Zealand.



FIGTR.

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## **PRO SHOT ALPHA**

#### **HIGH ACCURACY AUTOMATIC HORIZONTAL** LASER WITH SLOPE MATCHING

Accurate's No.1 selling laser level. Made in the USA, the Alpha is a robust automatic self-leveling laser level, designed for builders, concrete placers, landscapers, commercial and civil contractors.

Simply mount the laser on a tripod, press power, and the laser automatically levels itself. The Alpha is powered by 4xC size alkaline batteries that are easy to replace - no worries about recharging.

With a high accuracy of +/- 1.5mm per 30 metres and an operating diameter of over 600 metrees, the Alpha covers even the largest construction sites.

Choose the package that includes the HL700, a 'mm' display digital laser receiver, and your height elevation is displayed numerically along with the arrows on the backlit LCD, down to +/- 0.5mm!

For extra large civil projects, the long range Alpha XD model with >1000 metres operational range is available. Waterproof, reliable and with the best standard warranty in the business.

Pro Shot lasers have been trusted by New Zealand trade professionals for 25 years. There yesterday - here today around tomorrow.

#### **KEY FEATURES**

- Made in the USA Highest Quality
- High-Accuracy Automatic Self-Leveling
- 610 Metre Operating Range
- Manual Slope Matching Mode
- IP56 Water and Dustproof
- 5 Year Warranty
- 5 Year Knockdown Damage Protection Warranty
- Optional XD Model for >1000m Long-Range

#### **POPULAR ACCESSORIES**





**BUILDING & CONSTRUCTION LASERS** 

+/- 1.5mm ACCURACY @ 30M

**PRO SHOT ALPHA WITH** 

(INCLUDES TRIPOD)

CEIVER, BATTERIES

PACKAGES



## **PRO SHOT ALPHA V**

#### SPECIALISED HIGHLY VISIBLE LONG RANGE **AUTOMATIC PLUMB LASER**

The Pro Shot Alpha V is a specialised plumb laser with a high accuracy of +/-0.7mm at 30meters.

Visible in optimum conditions up to nearly 100 meters, the large precise visible red dot projects upwards with the powerful laser and high quality optics creating precision accuracy for commercial applications.

To aid plumbing down applications, the Alpha V also has the option of either a solid or flashing plumb down beam.

- Operating Range up to 100m (optimum conditions)
- Accuracy (Up Beam) +/- 0.7mm per 30 Metres
- Accuracy (Down Beam) +/- 0.3mm per Metre
- Alkaline Battery Life of 65 Hours



## **PRO SHOT ALPHA C**

#### UNIQUE CONING AUTOMATIC GRADE LASER WITH FINE +/- CONING ADJUSTMENT

The Pro Shot Alpha C is a specialised automatic grade laser designed for coning grade applications where a cone or laser light is required.

This unique, adjustable, cone projecting head lets you set-up with the laser tool at the high point, or low point of a conical sloping reference of laser light.

The Alpha C can project as much as a 4% sloped cone of laser light either up or down, with increments of 0.25%.

- High Accuracy +/- 1.6mm per 30 metres
- 610 Metre Operating Range
- Coning Grade Range of +/- 4%
- Coning Increments of 0.5%

HOT ALPHA WITH

ATTERIES AND HARD CAS

(INCLUDES TRIPOD)

#### CONSTRUCTION PLUMB LASERS









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# SPECTRA PRECISION LL300S

#### HIGH ACCURACY SELF LEVELING LASER WITH REMOTE CONTROL SLOPE MATCHING CAPABILITY

Backed by a 5 Year Manufacturer's Warranty, the Spectra Precision LL300S is a high accuracy durable electronic self levelling laser with remote control slope matching capability and digital receiver technology.

It is well suited for commercial construction and civil horizontal levelling applications.

From world pioneer of the first rotating laser level -Spectra Precision, the LL300S features fast automatic horizontal self-leveling. Rugged and waterproof to IP66 specification, the LL300S is ideally suited for high accuracy levelling applications up to a long distance of 800 metres.

The LL300S also features fast Slope Matching. This can be easily controlled from the laser (with up/down arrows) or from the optional RC402N remote control or android based Spectra Laser App, paired with the smart ST805 transmitter.

The ST805 also extends the remote control operation of the laser out to over 100 metres! The LL300S can also be used for vertical leveling and string-line setout using the tripod.

#### **KEY FEATURES**

- High accuracy +/- 1.6mm per 30 metres
- Long 800 metre operating range
- Manual vertical leveling ability
- Digital Receiver and fingerprint technology
- Manual Slope Matching mode with remote function
- Android Laser Remote APP capability
- IP66 water and dustproof
- 5 Year Warranty

#### **POPULAR ACCESSORIES**

**SPECTRA ST805 TRANSMITTER** 



**SPECTRA LASER APP** 

SPECTRA LL300S WITH

HL700 RECEIVER, Batteries and har<u>d cas</u>i

(INCLUDES TRIPOD)

+/- 1.6mm

ACCURACY @ 30M

PACKAGES



PECTRA LL300S WITH HL76

REMOTE AND HARD CASE

(INCLUDES TRIPOD)

Q WEBSITE SEARCH LL300S

5 YEAR



# SPECTRA PRECISION **HV302**

#### AUTOMATIC HORIZONTAL & VERTICAL SELF LEVELING VISIBLE LASER LEVEL WITH SMART TECHNOLOGY

Available in either red beam or highly visible green beam models, the HV302 is one of the most advanced smart rotating lasers available on today's market.

High accuracy - check. Automatic horizontal and vertical self-leveling - check. Mutli-speed rotating beam with scanning and squaring - check. Remote control operation - check. All backed by a 5 Year Manufacturers Warranty.

Where the HV302 lifts the game is in its smart technologies, allowing for automated slope matching, fixed elevation laser beam locking, individual beam detection and smart connectivity. HV302 features and capabilities include;

- Automatic Grade Match
- PlaneLok
- Axis Masking
- Fingerprint Receiver Technology
- Android Laser APP

Even in brightly lit interior conditions, the high visibility green beam of the HV302G delivers consistently reliable and accurate performance, enabling you to work faster and smarter. The Spectra Precision HV302G laser level is covered by a 3 Year Manufacturers Warranty.

#### **KEY FEATURES**

- Precision horizontal and vertical self-leveling
- Choose either red or highly visible green beams
- Scanning, squaring and remote operation
- Automatic Grade Match for fast slopes
- PlaneLok eliminates beam drift by locking the laser Axis Masking
- Digital Receiver and fingerprint technology
- Android Laser Remote APP capability

#### **POPULAR ACCESSORIES**



#### **BUILDING & CONSTRUCTION LASERS**



COMPLIAN

COLUMN STREET, ST. VILLE

## **PRO SHOT AS2**

#### **DIAL-IN AUTOMATIC SELF LEVELING** SINGLE GRADE LASER LEVEL

One of New Zealand's most popular grade lasers. The Pro Shot AS2 is an economical yet performance driven dial-in fully automatic single grade laser.

Compared to many lasers in this price point which are simply slope matching or dial-in MANUAL grade lasers, the AS2 models are FULLY automatic. Designed for simple operation, the AS2 is ideal for civil construction, drainage, earthmoving and machine control applications.

Simply mount the laser in the direction of the required slope and dial-in the grade, with fine incriments of 0.01%.

A grade of up to 25% can be dialled into the AS2. For long range and higher accuracy applications, the AS2 Magnum has a 1000m working range and a compound dual grade slope kit.



#### **KEY FEATURES**

- Accuracy +/- 2mm per 30 metres
- 610 metre Operating Range
- Fully Automatic Dial-in Self-Leveling Single Grade
- 0-25% Single Grade Range
- 0.01% Dial-in Grade Increments
- Automatic Cross Axis self-leveling with Height Alert
- IP56 Water and Dustproof
- Dual Slope, 1000m operating range (AS2 Magnum)

#### LOOKING FOR BOOM MOUNTED RECEIVERS?

**CR700 DIGITAL BOOM RECEIVER** 



MCE R45 TC PRO BLUETOOTH **BOOM RECEIVER** 

PRO SHOT AS2 WITH R9

(INCLUDES TRIPOD)

R, BATTERI ARD CASE

+/- 2.0mm

ACCURACY @ 30M

PACKAGES



Q

WEBSITE SEARCH AS2

**PRO SHOT AS2 WITH** ALTO DIGITAL RECEIVER, ATTERIES AND HARD CAS (INCLUDES TRIPOD

YEAR WARRANTY





### SPECTRA PRECISION **GL422N**

#### **DIAL-IN AUTOMATIC DUAL GRADE LASER LEVEL** WITH SMART TECHNOLOGY

The GL422N from Spectra is one of the most featured packed fully automatic dual grade lasers available in its price bracket.

Compared to many stripped back basic dual grade lasers available, the GL422N is packed with features designed for efficiency, accuracy and performance.

GL422N smart features and capabilities include:

- Automatic Grade Match
- PlaneLok
- Axis Masking
- Fingerprint Receiver Technology
- Vertical Smart Alignment
- Android Laser APP

**GL412N SINGLE GRADE MODEL AVAILABLE UPON** REOUEST



#### **KEY FEATURES**

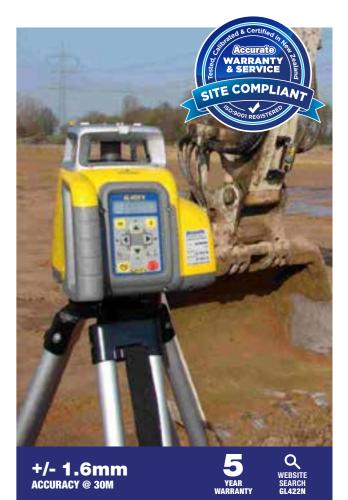
- Accuracy +/- 1.6mm per 30 Metres
- Long 800 Metre Operating Range
- -10 to +15% Dual Grade Range
- Automatic Grade Match for Fast Slopes
- PlaneLok Eliminates Beam Drift by Locking the Laser Axis Masking
- Digital Receiver and Fingerprint Technology
- Android Laser Remote APP capability

#### **POPULAR ACCESSORIES**



SEC0 5220-13 **H/DUTY WOODEN** TRIPOD

#### AUTOMATIC DUAL GRADE LASERS



**PACKAGES** 





TE COMPLIAN

Q WEBSITE SEARCH GL622N

5 YEAR

**GL612N SINGLE** 

GRADE MODEL AVAILABLE UPON

+/- 1.6mm

ACCURACY @ 30M

REQUEST

# SPECTRA PRECISION GL622N

#### DIAL-IN AUTOMATIC DUAL GRADE LASER LEVEL WITH SMART TECHNOLOGY & AXIS ALIGNMENT

The GL622N is a high precision dial-in self-leveling dual grade laser level with smart technology for performance critical civil construction, drainage, sports/tennis turf fields, parking lots and earthmoving contractors.

The Automatic Grade Match, PlaneLok and Automatic Axis Alignment features all add up to efficient time and accuracy gains on the job site. The RC602N remote control features a large backlit LCD enabling control of all of the GL622N functions. A Class1 GL622IR model is also available.

- Wide +/25% Dual Grade Range Capability
- Auto Axis Alignment for Exact Receiver Positioning
- Automatic Grade Matching & PlaneLok
- Axis Masking & Fingerprint Receiver Technology

LASER LEVELS

#### MACHINE CONTROL DUAL GRADE LASERS

# SPECTRA PRECISION GL700 SERIES

#### EXTRA HIGH PRECISION DUAL GRADE LASER FOR FINE GRADING AND MACHINE CONTROL

For machine fine grading control and finishing, the GL700 series from Spectra are one of the most accurate dual grade laser systems available.

Compared with the GL422N and GL622N, the GL720 models feature a different detection system that is designed to work with machine control receivers as well as a long range radio remote control, with an operation range of up to 230 metres. Standard features include Automatic Grade Match, PlaneLok and Automatic Axis Alignment.

- Precision Machine Detection System
- Rugged Heavy-duty Aluminium Housing
- Long-range Remote Operation of 230 metres
- Auto Axis Alignment, Grade Matching & PlaneLok





## LASER LEVELS

# SPECTRA PRECISION UL633N

#### AUTOMATIC DIAL-IN DUAL GRADE UP TO 25% WITH SELF LEVELING GRADE COMPENSATION

The world's first construction laser allowing total automatic control of all three axes. The Spectra Precision UL633N combines dual grade functionality, automatic dual grade axis alignment with trench and pipe laying setout.

Packed with smart technologies, the UL633N is truly an all-round high performance laser leveling system. UL633N features and capabilities include:

- Automatic Spot Align
- Spot Search
- Dual Automatic Axis Alignment
- Automatic Grade Match
- PlaneLok
- Axis Masking
- Electronic Leveling Vibration Filter

All features can be controlled from the intuitive RC603N remote. The UL633N is supplied standard with two HL760 digital laser receivers that can communicate with each other.

- Wide +/25% Dual Grade Range Capability
- Z Axis Pipe Laser Mode with Automatic Targeting
- Led Sf601 Spot Finder for Pipe Laying
- Auto Axis Alignment for Exact Receiver Positioning
- Automatic Grade Match For Fast Slopes
- Planelok Eliminates Beam Drift by Locking the Laser Axis Masking
- 2x Digital Receivers With Fingerprint Technology



#### **POPULAR ACCESSORIES**



www.accurate.kiwi

#### AUTOMATIC DUAL GRADE/PIPE LASERS









#### PACKAGE







## **Pipe Lasers**

Unsurpassed in the field of drainage, and with over 50 years experience in the development and production of pipe and drainage lasers, the latest Spectra Precision Dial-grade pipe lasers combine world leading technology and features with the accuracy, performance, reliability and robustness renown to the brand.



### LASER LEVELS



#### **RELATED PRODUCTS**

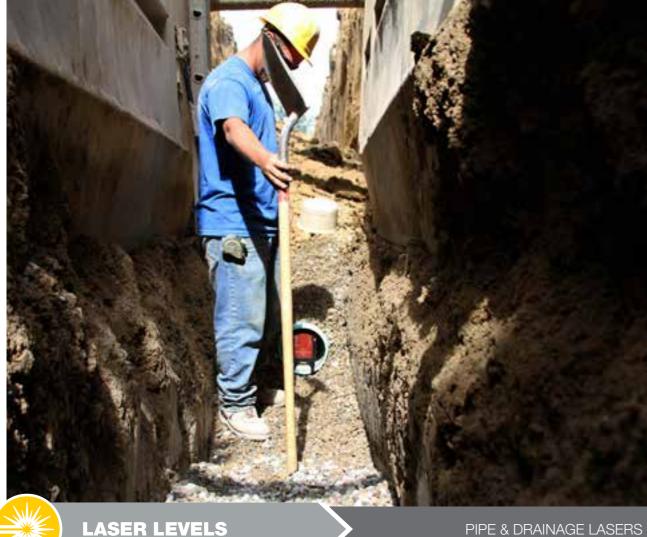
PORTABLE GAS DETECTION **COMING SOON** 



#### PIPE & DRAINAGE LASERS

**CONFINED SPACE TRIPOD & WINCHES COMING SOON** 







### **GEOMAX ZETA ARROW4 SERIES**

#### **ECONOMICAL RED BEAM DIAL-IN PIPE LASERS**

The Arrow4 pipe lasers have been designed with simplicity in mind. Economical in price but not performance.

The Arrow4 features a durable and rugged design and construction. The heavy duty cast aluminium pipe laser features a grade input range of -10 to +40%, with self leveling in both the main and cross axis.

The Arrow4S model has the additional feature of a rotating vertical beam for out of the trenchline alignment using a handheld digital laser receiver.

- Compact Durable easy-to-use Pipe Laser
- Large -10 to +40% Grade Range
- One Button 'Stake Alignment' Function
- Out of Trench Receiver Alignment Mode (Arrow4s)



## **PIPE LASER TRIVET SET**

Made in New Zealand and specifically designed to be used with a wide variety of pipe lasers, this heavy duty universal trivet is manufactured from stainless steel.

With a solid trivet base with adjustable feet, the concave design of the cradle is designed for various dimension pipe lasers to sit level. The attachable rubber connecting rings fit over the laser to fit it firmly in place.

Both the cradle and pole are height adjustable to suit the dimension of pipes being installed.

## 12V **PIPE BLOWER**

Using pipe lasers inside pipes often ends up with movement of the laser beam. Every drainage contractor somewhere, sometime has experienced this. This is referred to as refraction.

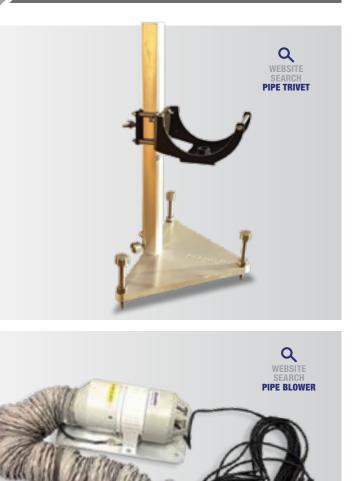
Refraction happens due to varying temperature and humidity inside the pipe as the laser light passes through it.

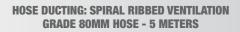
This 12V pipe blower helps alleviate the problem of refraction by increasing the air distribution in the pipe which in turn reduces the temperature fluctuation.

### **PIPE LASER TARGETS & PLATES**

Accurate offer a wide array of pipe targets and plates, both small and large, to suit not only the Spectra Precision and QBL/Geomax pipe lasers, but many other well known brands. Red or green, small or large, plates or complete target sets are usually readily available for supply.

#### PIPE LASER ACCESSORIES









#### PLUMB & LEVEL DOT LASERS

## PLS 3G & 3R

#### **SELF LEVELING PLUMB & LEVEL DOT LASER**

The PLS 3G and 3R models are the ideal laser tool for the contractor searching for a professional trade quality plumb dot laser.

Built on the reputation of 25+ years as a market leader in dot and line lasers, the PLS 3 is available as a standard red beam or highly visible green beam laser.

The PLS 3 models are ideally suited to HVAC, steel framers, electrical, interior fit out and general contractors who require the need to transfer floor to ceiling points.

- Accuracy +/- 3mm per 10 Metres
- Self Levelling Range of +/- 4°
- Operating Visibility Range Typically 15-20 Metres
- Alkaline or Rechargeable Battery Systems



#### Q WEBSITI SEARCH PLS3 +/- 3.0mm ACCURACY @ 10M

LASER LEVELS

#### PLUMB, LEVEL, SQUARE DOT LASERS



#### **SELF LEVELING PLUMB, LEVEL & SQUARE DOT LASER**

From the company that brought you the original plumb, level and square compact alignment tool, comes the latest generation PLS 5 models.

Available in the standard red or extra bright green laser diodes, the PLS 5 models are designed for general construction, boat builders, electricians, glaziers and commercial interior fit out contractors.

Exclusive to the PLS 5 models, the unique pendulum target transfers to the laser dot directly to the floor so your plumb and square layout can be correctly marked.

- Self Levelling Range of +/- 4°
- Operating Visibility Range Typically 20 metres
- Pendulum Target for Exact Point Markout
- Alkaline or Rechargeable Battery Systems



ACCURACY @ 10M



## PLS 6G & 6R

#### **COMBINATION PLUMB, LEVEL, SQUARE DOT** AND CROSS LINE LASER

Available in either red or green beam, the PLS 6 lasers are a combination of the popular PLS 5 dot and PLS 180 cross line lasers. The PLS 6 eliminates the need for two separate laser tools. It is a five beam point and a crossline laser combined into one easy to use convenient laser product.

The optional SLD receivers for either PLS 6 lasers extend the range of operation for internal or outdoor use.

**SLD LINE** 61 RECEIVER 1000 PAGE XX

- Accuracy +/- 3mm per 10 Metres
- Self Levelling Range of +/- 4°
- Operating Visibility Range Typically 15-20 Metres
- Optional Outdoor SLD Receivers Available

LASER LEVELS

### PLS 180G & 180R

#### **SELF LEVELING PLUMB & LEVEL CROSS LINE LASER**

Always a popular choice among internal fit out contractors, the PLS 180 models are available in the standard red or extra bright green laser diodes. Compared with lower cost models, the spread of the beam width is greater. The PLS 180 models can be placed on the floor, tripod mounted or magnetically mounted.

The optional SLD receivers for either PLS 180 lasers extend the range of operation for internal or outdoor use.



- Accuracy +/- 3mm per 10 Metres
- Self Levelling Range of +/- 4°
- Operating Visibility Range Typically 15-20 Metres
- Optional Outdoor SLD Receivers Available

#### **COMBINATION DOT & LINE LASERS**



#### **CROSS LINE LASERS**





## **3x360G Three-Beam Green Laser Level**

### The Professional Standard since 1990. Level. Layout. Build.™

Get the job done FAST & Accurate with the new generation of PLS dot and line lasers Our traditional red beam PLS self-levelling line lasers are now also available as bright Green Beam Lasers for continuous straight line horizontal levelling, cross lines, vertical (plumb) alignment.

### **PLS 3x360G**

THREE-BEAM 360 DEGREE LASER TECHNOLOGY INTEGRATED INTO AN AUTOMATIC PENDULUM DESIGN

Accuracy: 2mm @ 10m Working Range: Upto 35m, 65m with a receiver Kit Includes: Rechargeable Li-ion battery pack, power supply, magnetic L-bracket, green reflective target, canvas pouch and blow mold case



Auckland Showroom: 192 Marua Road, Mt Wellington, Christchurch Showroom: 4 Avenger Crescent, Wigram

FREEPHONE 0800 500 380 www.accurate.kiwi

Accurate Instruments (NZ) Limited is a 100% Kiwi owned company and is the master distributor in New Zealand for a number of international instrument manufacturers.





## PLS 3X360G & 3X360R

#### 360 DEGREE SELF LEVELING CROSS AND SQUARE LINE LASER

The PLS3x360 laser is the perfect all round internal fit out laser tool. Available in bright green or red beam models, the 3x360 features three full 360 degree laser beams for level, plumb and square.

This versatile laser level features best-in-class accuracy as well as a rechargeable battery pack and a magnetic bracket, that also allows for fine adjustments of the laser position. Use the superior-range detector with the 3x360G for your challenging work environments

- Accuracy +/- 2mm per 10 Metres
- Self Levelling Range of +/- 4°
- Operating Visibility Range Typically 15-20 Metres
- Rechargeable Battery Systems

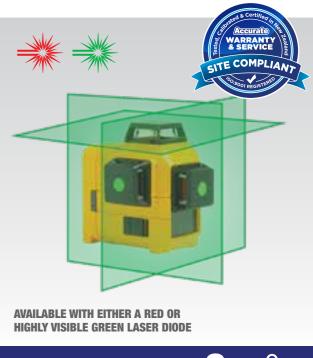
Available from your favourite Building Supply

Merchant or Tool Shop.

**BUY ONLINE** 



#### PLUMB & LEVEL DOT LASERS



+/- 2.0mm ACCURACY @ 10M





# SPECTRA PRECISION LP51

#### **SELF LEVELING PLUMB, LEVEL & SQUARE DOT LASER**

Available in either red or extra bright green laser diodes, the Spectra LP51 is an economical plumb, level and square dot laser.

It is ideal for transferring points from floor to ceiling, wall to wall or to reference a 90 degree square.

The LP51 will self-level up to 4 degrees. If the surface is too far from level the laser beams will flash twice a second to indicate the user. Package is supplied with a universal magnetic base and either a green or red target.

- Self Levelling Range of +/- 4°
- Operating Visibility Range Typically 20 Metres
- Universal Magnetic Base
- 3 Year Warranty





LASER LEVELS

#### COMBINATION DOT & LINE LASERS

## SPECTRA PRECISION LT52G & LT52R

#### COMBINATION PLUMB, LEVEL, SQUARE DOT AND CROSS LINE LASER

One of our most popular line and dot lasers, the LT52 from Spectra Precision is available in either standard red or extra bright green beam. This combination plumb, level, square dot and a horizontal cross line laser, eliminates the need for two separate laser tools.

The optional HR220 receiver extends the range of operation for long-range internal or outdoor use.



- Combination Plumb Level, Square, Dot and Line
- Self Levelling Range of +/- 3°
- Rechargeable Battery System
- Optional Outdoor Laser Line Receiver







# SPECTRA PRECISION LT20G

#### **GREEN BEAM SELF LEVELING CROSS LINE LASER**

The Spectra Precision LT20G Cross Line Laser Tool is an automatic self-levelling green beam laser that projects ultra-bright horizontal and vertical green laser lines. The laser beam fan angle is wide to allow maximum coverage.

The standard package includes a universal magnetic wall and ceiling mount so the laser can be used for suspended ceiling and partitioning. The LT20G has a pendulum lock to help protect the internal leveling mechanism during transport and non-use.

- Two Bright Highly-visible Green Laser Lines
- Accuracy +/- 3mm per 10 metres
- Pendulum Lock
- Operating Visibility Range Typically 15-20 Metres

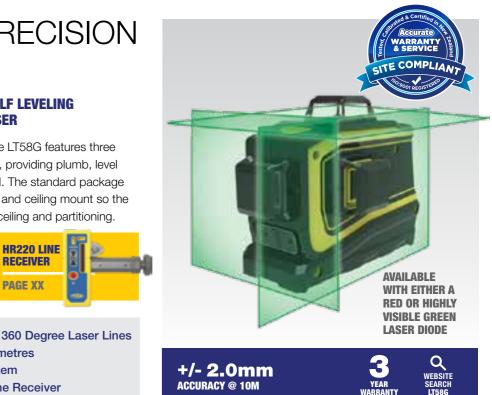
LASER LEVELS

# SPECTRA PRECISION LT58G

#### 360 DEGREE GREEN BEAM SELF LEVELING CROSS AND SQUARE LINE LASER

The ultimate internal laser tool. The LT58G features three extra bright 360 degree laser lines, providing plumb, level and square from the one laser tool. The standard package includes a universal magnetic wall and ceiling mount so the laser can be used for suspended ceiling and partitioning.

The optional HR220 receiver extends the range of operation for long-range internal or outdoor use.



- Three Highly-visible Green 360 Degree Laser Lines
- Accuracy +/- 2mm per 10 metres
- Rechargeable Battery System
- Optional Outdoor Laser Line Receiver

#### COMBINATION DOT & LINE LASERS



#### CROSS LINE LASERS

Accurate • 0800 500 380

## SPECTRA PRECISION **HL700**

#### **ADVANCED SUPERCELL DIGITAL MM** LASER RECEIVER

Using the same patented technology as the world renown Apache Storm, the HL700 displays the exact amount of millimetres (high or low) to level on an easy to read backlit dual sided LCD display.

The HL700 is different to all the basic conventional laser receivers AND simple digital receivers on the market. With 'light bar' technology, laser detection resolution is nearly infinite allowing greater accuracy and consistency when compared to basic receivers, as fine as +/- 0.5mm! The heavy-duty clamp includes a circular vial for accuracy.

- Patented SuperCell<sup>™</sup> Receiving Technology
- Laser Detection Height of 127mm
- Backlit LCD Display
- Automatic Height Capture Function





HANDHELD DIGITAL LASER RECEIVERS

DETECTION WINDOW

## SPECTRA PRECISION **HL760**

#### ADVANCED SUPERCELL DIGITAL MM ROTATING LASER RECEIVER WITH SMART COMMUNICATION

The HL760 is a smart communication 'mm digital readout' rotating laser receiver.

The built-in radio communication can be used for long range remote display and monitoring capability when paired with the Spectra Precision radio enabled lasers (HV302, GL422N, GL622N and UL633N) for PlaneLok, Auto Axis alignment and Grade Matching capabilities.

The HL760U model features a special light bar photocell that can detect BOTH red and green beam rotating lasers.

- Patented SuperCell<sup>™</sup> Receiving Technology
- Smart Communication with Spectra Model Lasers
- 2-way Connectivity with other HL760 Receivers
- Detects BOTH Red and Green Lasers (HL760U)





## SPECTRA PRECISION **HR1220**

#### SPECIALISED PULSING LASER LINE DETECTOR

The Spectra Precision HR1220 Laser Receiver features a universal photocell, that detects BOTH red and green laser beams, generated from Spectra Precision crossline lasers including;

- 1T52R & 1T52G
- LT56 & LT58G

The HR1220 receiver can extend the indoor working range of these crossline lasers as well as increasing versatility by allowing outdoor use ..

- Detects Both Red & Green Line Lasers
- Integrated Horizontal and Vertical Vials
- Volume Control
- Variable Accuracy Settings

LASER LEVELS

PLS **SLD** 

#### SPECIALISED PULSING LASER LINE DETECTOR

The PLS SLD receivers are available in either red or green (SLD-G) models, a unique laser receiver intended for use with PLS cross line lasers which feature a 'pulsing mode'.

They are designed to be used where the laser line cannot been seen by the user, typically outdoors after five metres. Two mounting points for the clamp on the back of the SLD allow for either horizontal or vertical detection.

A bubble on the clamp allows the user to ensure they are as plumb or level as possible when detecting the laser line.

- Dual-sided LCD Display
- Dual Horizontal and Vertical Mounting Points
- Volume Control
- Integrated Circular Bubble Vial on Clamp

#### CROSS LINE LASER RECEIVERS



#### **CROSS LINE LASER RECEIVERS**



# Machine Control

**2D and 3D Systems** for Excavators, Dozers, **Box Graders and Pavers.** 

From simple manual elevation control using magnetic boom receivers through to the latest in GNSS and onboard 3D positioning control we've got you covered.

## Boom Mounted Laser **Receivers**

Choose from a range of compact digital magnetic receivers, such as the advanced Spectra Precision CR700, or the heavy duty 360° machine mounted laser receivers.



**MACHINE CONTROL** 

### SPECTRA PRECISION **CR700**

#### **ADVANCED COMBINATION MAGNETIC BOOM/** HANDHELD SMART LASER RECEIVER

The best of both worlds - a magnetic boom mounted laser receiver with a digital 'mm' display for precise hand and machine leveling.

The Spectra Precision CR700 combination Laser Receiver is a machine mounted display receiver used on small grading and excavating equipment as well as a traditional laser receiver mounted to a grade rod or staff. The standard delivery package includes BOTH the magnetic mount for quick machine mounting and a grade rod clamp.

With super bright directional LEDs, the CR700 is ideal for entry-level machine grade display, specifically on miniexcavators and backhoes. This provides instant grade information to the operator and eliminates the need for a rod man in the trench.

The CR700 uses Spectra's patented SuperCell digital readout technology incorporated in the HL700 and HL760 laser receivers. This unique technology provides much more accurate and more consistent readings than traditional methods.

If you are using the CR700 with a Spectra Precision laser that already has an HL760 normal hand held recevier, the HL760 can be configured as an in cab display when paired with the CR700!

The LEDs are visible at long range and a vertical drift alarm warns if the laser is disturbed.

- Combination Hand/Magnetic Magnetic Receiver
- Super-Bright Coloured LED Elevation Indicators
- Smart Communication with Spectra Model Lasers
- Two-Way Connectivity with Other HL760 Receivers
- 200 Degrees Angle Detection Range
- 127mm Vertical Detection Range

#### **POPULAR CR700 LASER COMBOS**



Continu

CRTOD

#### COMBINATION MAGNETIC RECEIVERS











#### MACHINE CONTROL

360 DEGREE LASER RECEIVERS

Q

WEBSITE SEARCH LR





SPECTRA PRECISION **LR20** 

The LR20 360° machine mounted laser receiver allows compact machines to achieve tighter tolerances without the need for a grade checker. Designed specifically for the costconscious site prep contractor, the LR20 provides simple depth and slope display elevation information and is very easily moved between compact machines. Includes Mini magnetic mount.



The LR30 is a 5-channel heavy duty 360° machine mounted laser receiver designed primarily for earthmoving equipment including: dozers, backhoes, excavators, scrapers, and box blades. It works with all types of red beam rotating lasers for fast, no-hassle setup. Withstands all weather environments. The wireless LR30W model is designed to work with the in cab RD20 Remote Display.



The LR50 is a 5-channel mutli-purpose 360° machine mounted laser receiver Compared with the LR30, the LR50 has the added Blade Tilt and Excavator Boom Plumb Indicator functionality. The LR50 display the status of the receiver relating to plumb and tilt direction. It also allows proportional valve control through the optional CB30 dual control box. Optional wireless model available.

**LR60** With 8-channels and a larger vertical detection range compared to the LR30 and LR50, the LR60 is an advanced 360° machine mounted laser receiver which also includes patented angle compensation. This allows the operator to check

> levels with the dipper arm extended or retracted up to 30°. It features the same Blade Tilt and Excavator Boom Plumb Indicator functionality as the LR50.

**SPECTRA** 

PRECISION

LR SERIES COMPARISON	LR20	LR30	LR50	LR60
OPERATING RANGE	Typically 300m+ Radius	Up to 460m Radius	Up to 460m Radius	Up to 460m Radius
RECEPTION ANGLE	360°	360°	360°	360°
VERTICAL DETECTION HEIGHT	200mm	170mm	170mm	220mm
ANGLE COMPENSATION	-	-	-	Yes, Up to 30°
PLUMB INDICATION	•	-	•	•
WIRELESS/BLUETOOTH	-	Optional (LR30W)	Optional (LR50W)	Optional (LR60W)
REMOTE IN CAB DISPLAY	-	Optional RD20 display	Optional RD20 display	Optional RD20 display
CONTROL BOX COMPATIBILITY	-	Optional CB30 Control Box	Optional CB30 Control Box	Optional CB30 Control Box
MOUNTING TYPE	Mini Magnetic Mount	Clamping 38 - 50mm	Clamping 38 - 50mm	Clamping 38 - 50mm
MAGNETIC MOUNTING	•	Optional MM-1 Mount	Optional MM-1 Mount	Optional MM-1 Mount

Product specifications are subject to change, please confirm at time of purchase.



**MACHINE CONTROL** 



MCE **R45 BM** 

Manufactured in Australia, the R45 BM from MCE is a robust cost effective 220° magnetic boom laser receiver for the smaller digger. Economical and compact, the R45 BM has built-in magnets and a vertical detection range of 95mm.



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R45 SERIES COMPARISON	R45 BM
OPERATING RANGE	Up to 500m Radius
RECEPTION ANGLE	220°
VERTICAL DETECTION HEIGHT	95mm
ANGLE COMPENSATION	-
WIRELESS/BLUETOOTH	-
REMOTE IN CAB DISPLAY	-
CONTROL BOX COMPATIBILITY	-
MOUNTING TYPE	Magnetic (built in)

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#### MAGNETIC LASER RECEIVERS



#### MCE **R45 TC**

The R45 TC magnetic laser receiver is ideal for earthmoving equipment such as excavators, backhoe, trenchers and dozers. The R45 TC has the additional functionality of tilt compensation, up to 30°. In this mode, automatically compensate for the error introduced by deviations from a vertical position by adjusting the centre band automatically.

#### MCE **R45 TC PRO**

A popular seller, the R45TC Pro model is a Bluetooth equipped magnetic laser receiver. Used in conjunction with an Android device in enabled app, the operator can see everything from the cab of the machine. The Pro model also features CAN communication, working in conjunction with the optional DB Uni Pro display. The R45 TC Pro also includes the Angle Compensation functionality found in the R45 TC, with tilt compensation, up to 30°. In this mode, automatically compensate for the error introduced by deviations from a vertical position by adjusting the centre band automatically.

R45 TC	R45 TC PRO
Up to 500m Radius	Up to 500m Radius
220°	220°
190mm	190mm
•	•
-	•
-	Optional Android Device with APP
-	Optional DB UNI PRO display
Magnetic (built in)	Magnetic (built in)

Product specifications are subject to change, please confirm at time of purchase.

## Excavators & Dozers

From simple blade control through to fully integrated 3D GNSS, Moba/MCE and Spectra offer solutions for any budget, every application and novice to expert level knowledge skill.

## MACHINE CONTROL

## MOBA XSITE EASY

#### AFFORDABLE 2D SYSTEM FOR PRECISION EXCAVATING WITH OPTIONAL LASER CONTROL

Looking to improve the use of your excavator, digger or backhoe? Do you require the next step up from manual indicate boom mounted laser receivers? Then the Xsite® EASY 2D automatic excavation control system is the ideal solution for true one-man automatic control without breaking the budget.

From Moba, a world leader and pioneer in machine control development, the Xsite<sup>®</sup> EASY 2D excavator control system measures depth, range and incline of the bucket, as well as depicts the bucket position graphically and numerically on the display.

Using this information, the machine operator always knows the exact position, and machine work progress. This allows the operator to work exactly according to plan, design and precisely implementing the specifications.

Adding the Moba EL2 machine laser receiver allows the user to perform automatic grade and height control by laser, with a height detection range of 160mm.

An additional LED display shows at first glance whether the target height has already been reached, or if needs to be raised, further.

The Xsite® EASY system even works under water, allowing the excavator operator to always maintains an overview of the job. The system is ideally suited for use in foundation, trench or slope construction, leveling or underwater excavation.

The Xsite<sup>®</sup> EASY 2D will allow you to tender for a wider array of civil, infrastructure and earthmoving job tasks, without having to worry about additional human resources and the associated costs.

#### OPTIONALLY MEASURES THE INCLINE OF THE BUCKET WITH AN ADDITIONAL SENSOR-ANGLE MEASUREMENT

- Graphical & Numerical Display of Bucket Position
- Shows all Data and Bucket Position on Display
- Height Alarm Provides Overhead Cable Protection
- Laser Control Compatible for Height Detection
- Retro-Fittable for easy Machine Changing
- Optionally Measure the Bucket Incline (Sensor)

#### 2D EXCAVATOR & DOZER CONTROL





## MOBA XSITE PRO

#### DEPTH, INCLINE AND RANGE OF THE EXCAVATOR BUCKET, DEPICTING THE POSITION ON THE GRAPHIC

3D Excavation control is currently one of the most in demand systems in the Civil Infrastructure Industry and MOBA Mobile Automation AG has been an established name for more than 40 years.

With Xsite<sup>®</sup> PRO excavator control system, Moba offer a state of the art feature packed system, with simplicity that even a novice user can operate.

The large clear to view 8.4 inch graphic display indicates depth, incline and range of the excavator bucket, depicting the near exact position. The machine operator can then work to implement the specifications, without corrective work. This saves time, fuel, material and increases the efficiency during machine use.

Choosing from either a 2D or 3D GNSS controlled system (Xsite® PRO ADVANCED), the PRO ADVANCED system includes dual GNSS receivers, adding extensive 3D functionality.

Create simple 3D profiles with terrain models, which can be imported via common file formats, used without timeconsuming conversion.

With the two GNSS sensors mounted on the machine, both the position and the alignment of the machine, are known at all times so that precise working is possible.

The possibility to save points allows to document the working process. The work log is sent to the office via an Internet connection or USB stick.

Staking out and manual surveying can be reduced. This saves time, money and personnel, while accelerating the workflow.

This system can be used during pipe or cabling installation, documenting competed layers, dredging or slope **20131/30 ignss POSITION AND ON SITE CONTROL** 

- Choose from either a 2D or 3D System
- Creation of 2D Profiles directly on the system
- Display shows all the data and bucket position
- Enables efficient work underwater or for blind cuts
- Large graphic 8.4 inch touch-screen display
- CAN Interface





## 

### MCE CB.D2

#### BASIC AUTOMATIC DUAL CHANNEL/RECEIVER BLADE CONTROL

Manufactured in Australia, the CB.D2 from MCE is a simple to operate single or dual channel valve control system, designed for a wide array of earthmoving machinery, from box graders and drag along blade to agricultural land levellers, loaders or even mall graders.

Supporting both proportional or bang bang valve configurations, it is used to control the machine's hydraulics according to the output from the laser receiver. Choose to either automatically control machine's hydraulics or override and manually control the machine via the switches on the control panel.

The CB.D2 also works as an in cab display by replicating the display from the MCE R.ULS.CAN laser receiver inside the machine's cabin. The CB.D2 can also be integrated with an optional elevating mast.

## MCE RS007

#### BASIC AUTOMATIC SINGLE CHANNEL/RECEIVER BLADE CONTROL

The RS007 Laser machine control system from MCE is a simple single channel system with an electric output to control the PT solenoids of machinery. It consists of the CB.2001 control box, connecting cables and the R.3CHS. MC 360° laser receiver.

The CB.2001 features three grade accuracies and the user can choose from automatic control with override facility or manual control.

Simple to use and set-up, the rugged construction of the control box, connecting cables and R.3CHS laser receiver make it able to withstand harsh operating environments.

The R.3CHS.MC laser receiver features highly visible and adjustable LED's indicating the position of the laser beam, with user selectable accuracy and automatic compensation of errors induced by vibration.

#### BASIC DOZER & BOX BLADE CONTROL







## SPECTRA PRECISION CB30

### AUTOMATIC DUAL CHANNEL/RECEIVER BLADE CONTROL

The CB30 from Spectra Precision, is a in cab control box with dual channel proportional valve control, suitable for dozers, box graders, skidsteer loaders or small graders.

Used in conjuction with either the LR50 or LR60 Spectra machine receivers, it is designed for simple elevation display to more complex grading jobs, that require automatic elevation and slope blade control

The CB30 allows automatic or manual control of the blade, with a temporary offset for large elevation differences or change of heights. Accuracy can be set between 0 and 50mm.

Hydraulic and electric kits are available for installation on different types, brands and sizes of earthmoving equipment.





# SPECTRA PRECISION **CB25**

#### BASIC AUTOMATIC DUAL CHANNEL/RECEIVER BLADE CONTROL

The CB25 from Spectra Precision, is a economical lower cost alternative to the CB30 system above, whilst still utilising proportional valve control.

Used in conjuction with either the LR50 or LR60 Spectra machine receivers, it is designed for simple elevation display to more complex grading jobs, that require automatic elevation and slope blade control

Switch from automatic to manual control with the quick flip of one switch, so there's no need to stop or change settings.

Hydraulic and electric kits are available for installation on different types, brands and sizes of earthmoving equipment.

OPTIONAL CB20 SINGLE CHANNEL HEIGHT ONLY SYSTEM AVAILABLE.





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## Paving

C R

Modular Sonic Sensor system for non-contact Surface Scanning.

**MACHINE CONTROL** 

## MOBA Matic 2 System

#### DIGITAL LEVELLING & SLOPE CONTROLLER FOR PRECISION PAVING

This modular system enables a flexible choice of sensors, depending upon the application. It achieves a high planarity during asphalt paving.

This system is easy to install and simple to operate. Using just four main buttons, all important functions can be controlled, as well as the height and slope of the paver screed, adjusted.

This increases the paving output of the machine, preventing the paving of too little or too much material, thus increasing the paving quality and planarity. The MOBA-matic II has firmly established itself as the world's leading and most flexible leveling system for pavers.

This modular system enables a flexible choice of sensors, depending upon the application. It achieves a high planarity during asphalt paving.

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With the MOBA-matic II control panel, screed control is even easier. Operation of the basic functions is extremely simple, through the use of just four buttons and a clearly understandable symbolic representation. In the 3.5 inch colour display, all connected sensors and system status are displayed for the operator.

In addition, slope and height values are displayed. Both sides of the screed can be conveniently operated using a MOBA-matic II, making it unnecessary to change sides. The night design makes it possible for the user to clearly see all details, even in darkness.

- Control the Height & Slope of the Paving Screed
- Flexible Selection of Leveling Sensors Available
- High Precision Paving Results
- Simple Intuitive Icon Driven Operation
- Colour Graphic LCD Display
- Durable Construction made to Handle Paving



COLOUR GRAPHIC DISPLAY WITH CLEAR INDICATION OF ALL SENSORS AND CLEAR, VISUAL ICON DRIVEN INSTRUCTIONS



**MACHINE CONTROL** 

## MOBA Big Sonic-Ski

### MODULAR SONIC SENSOR SYSTEM FOR NON CONTACT SURFACE SCANNING

The Big Sonic-Ski from Moba kit exists of an up to 13-metre long mechanic assembly with dismountable swing arms and a respective electronic kit of up to four ultrasonic sensors. Four sensors achieve the most precise and even results, in particular, with respect to road renovation works of large areas. The use of individually adjustable components within the mechanical construction further guarantees highest flexibility, e.g. in curves and over large distances.

The Big Sonic-Ski<sup>®</sup> extends the advantages of a single ultrasonic sensor. With up to four sensors, even large area unevenness, such as road waves, are compensated for. Through combining several sensors, the sensing of an extremely long range is made possible. With these measurements, the system calculates an average, and provides a virtual reference level.

The Big Sonic-Ski<sup>®</sup> achieves maximum planarity during asphalt paving, making it unrivalled in its precision. With four sensors, long unevenness that occur in regular intervals of five to seven meters, can be detected. Such unevenness often occurs during resurfacing, and can not be detected by less sensors. The individual sensors can each be positioned separately.

This increases the manoeuvrability of the machine, allowing work to be performed on even curvy roads, without problem.

The Big Sonic-Ski also features real-time temperature compensation with flexible scanning at freely selectable measurement points.

If you operate paving systems in New Zealand, call our FREEPHONE on 0800 500 380 to discuss this high precision paving solution.

- Functions with up to Four Sensors
- Temperature Compensation in Real-Time
- Best Possible Planarity
- Compensates for long stretches of unevenness
- No Artificial Reference Required
- Records the Reference over 13 Metres

#### 2D SONIC PAVER LEVELING SYSTEMS



WITH DISMOUNTABLE SWING ARMS AND A KIT OF UP TO FOUR ULTRASONIC SENSORS



**2D** SONIC PAVER LEVELING



**MACHINE CONTROL** 

## MOBA Matic 3D Paving

### 3D GNSS REAL-TIME SYSTEM FOR PAVING AND MILLING MACHINERY

Absolute smoothness with every paver.

With the MOBA 3D-matic levelling system, pavers achieve highly precise results. This system is easy to operate and use. The work process is accelerated making surveying and manual control measurement work no longer necessary.

On the well-organised 7-inch touch-screen display, the driver sees the position and height values for the project. If no project data is available, simple profiles can also be created with the system. The colour display is optimised for use in harsh conditions whilst the software was specialised for a particularly user-friendly handling and ease of operation. As such, the split screen mode for example allows the operator to have different values in just one overview.

Utilising an open data format, 3D Terrain models can be easily imported or created on the machine itself.

Both GPS and Total Station control can be used with the 3D-Matic dependant on the customer's needs for vertical accuracy.

As an add-on leveling system for pavers and milling machines, it is the perfect upgrade for any type of machine and can be retrofitted at any time. MOBA's many years of expertise in levelling technologies will pay off for you, too.

Thanks to an exceptional range of compatible sensors and CANbus-based communication, the modular system can be adapted to your individual requirements at any time. Choose between a GNSS antenna or a total station with prism for your personal project.

- Precision 3d Paving Sensor Technology
- Increased smoothness of finished Roading
- 7" Large Visual Touchscreen Display
- 3D Design File Uploading for Target Height and Slope
- Open Platform Data Format
- GNSS and Total Station Compatible





**3D** PAVER LEVELING

**MACHINE CONTROL** 

## MOBA Pave-ir

## INTELLIGENT THERMAL REAL-TIME VISUALISATION FOR THE ASPHALT PAVING

The optimal temperature of the installation material is a decisive factor in road construction, on which the quality of the road significantly depends. A thermal visualization of the installation process provides important insights into the quality of the material and opens up completely new optimization potentials.

PAVE-IR is the first system to simply and clearly create a thermal profile of the road - in real-time! The high-precision IR temperature scanner MTPS-100 provides a wide thermal profile of the built-in layer over a total width of up to 13m, which can optionally be used as evidence for all installation and supply temperatures. The fully automatic visualization of the temperature thus offers the possibility to detect individual points which might be affected by thermal segregation, and to react immediately!

Up to four further freely positionable high-performance sensors (IR spots) additionally measure material temperatures exactly at all points where temperature is critical, whether at the hopper, above the ground or at the screw.

This multiple measurement provides extensive, highprecision values. It thus is possible to assess the temperature of the delivered material in real time and, if necessary, to document it. Differences in the temperature of the installation material thus are visible during the entire process. As a result, measures can immediately be taken if necessary.

The unique IR technology of the scanner offers the decisive advantage of being able to accurately determine the temperature of the asphalt surface and the material.

The acquisition over a width of up to 13m is technically superior to camera-based solutions on the market.

#### • IR Thermal segregation detection

- Detailed thermal profile of the asphalt layer
- Real-time detection and temperature analysis
- Extensive high precision measurement
- Up to 13 meter width operation
- Cloud computing data handling

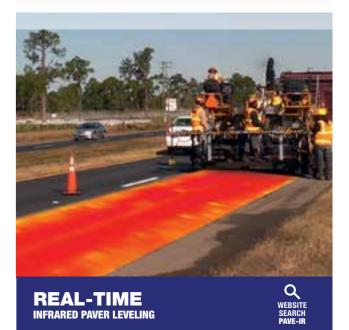
WEBSITE SEARCH

#### INFRARED PAVER LEVELLING SYSTEMS





VISUALISATION AND DOCUMENTATION OF THERMAL PROFILE AND ADDITIONAL DATA.



# Measuring Equipment

**Distance, Forestry and Angle Measurement** 



FUNC

CIOFF



25 + years of experience in the New Zealand market supplying precision laser tape measures, angle and range finders has made Accurate the one knowledge centre for measurement.



**ACCURATE HAS BEEN THE ONE-STOP SHOP FOR LASER TAPE MEASURES IN NEW ZEALAND FOR NEARLY 25 YEARS** 

Bluetooth low energy (LE, BLE), is marketed as Bluetooth Smart







#### LEICA DISTO **D1**

Low cost, yet high quality reliable laser tape measure Designed for simple point and shoot non-critical accurate measuring.



#### LEICA DISTO **D110**

Compact and simple operation +/- 1.5mm accuracy laser measurement. With area calculation and Bluetooth Smart with free apps.



#### LEICA DISTO **D2**

Our biggest seller, +/- 1.5mm accuracy laser with area, volume, setout, memory recall and Bluetooth Smart with free apps.



#### LEICA DISTO **X3**

High accuracy 1mm laser with angle compensation. IP65 rugged construction and area, volume and setout calculations with timer.



#### LEICA DISTO **S910**

Point-to-point measuring between 2-points from a 3rd location! Smart Base enables you to stand back from and measure distances and angles between multiple points.

X3, X4, D810 TOUCH AND S910 MODELS ARE ALSO AVAILABLE AS A PACKAGE KIT INCLUDING FTA ADAPTOR, TRIPOD & HARD CASE.

Q WEBSITE SEARCH DISTO

## TOP MEASURE **DLT DUAL**

#### **MEASURES FROM BOTH THE TOP** AND BOTTOM - AT THE SAME TIME!

The DLT Dual laser tape measure is a unique, compact, two-way laser tape measure that can measure both directions simultaneously!

It is ideal for anyone needing fast measurement of areas, volumes of buildings, ceiling heights etc, where ever the laser dots can be seen.

This device makes measuring heights fast, simple and accurate no more walking around or bending down to set the device on the floor! Just stand and point the two dots to the points you want to measure. It is designed for simplicity of operation.

Save previous measurements, areas, volumes, add and deduct on as well as Pythagoras and tracking.

#### DISTO **SPECIFICATION** COMPARISON D2 **D1** D110 ACCURACY 2.0mm 1.5mm 1.5mm RANGE up to 40m up to 60m up to 100n BLUETOOTH ~ ~ APP CONNECTIVITY ~ V × TILT SENSOR X × × AREA, VOLUME CALCULATION Area only × × 3 LINES OF DISPLAY 3 2 OUTDOOR VIEWFINDER × × × MEMORY RECALL 10 Values ¥ × TRIPOD MOUNT × × × P2P MEASURE MODE × × × WEATHER PROTECTION IP54 IP54 IP54 WARRANTY 2 YEARS\* 2 YEARS\* 2 YEARS\*

Product specifications are subject to change, please confirm at time of purchase.\*3 Year warranty extension if registered with Leica myWorld online.

Q WEBSITE SEARCH DLT DUAL



#### LEICA DISTO **X4**

1mm laser tape measure with Bluetooth Smart. IP65 design and digital viewfinder with zoom for outdoor measuring where laser dot cannot be seen. Point-to-point capability.

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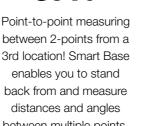
#### LEICA DISTO **D510**

Outdoor 1mm laser tape measure with Smart features. Bluetooth and a real-time digital viewfinder with zoom for outdoor measuring where laser dot cannot be seen.



**D810** 1mm laser measure with camera capture, USB

connectivity with dxf download, Bluetooth Smart, touchscreen and zoom digital viewfinder for outdoor measuring



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#### LASER TAPE MEASURES

## TOP MEASURE **MLT MINI**

#### **USB ULTRA COMPACT** LASER TAPE MEASURE

The MLT MINI from Top Measure is one of the most compact laser tape measures available on the market today. It also happens to be an affordable price also!

Designed for simplicity of operation, the Top Measure Mini has only one button and a rechargeable battery - that's it.

No hassles, without multiple buttons and modes, no fussy battery doors or replacing batteries, just a simple 3-hour charge by USB will provide up to 5000 measurements.

The Mini has a typical measuring accuracy of +/-2mm and a distance range capability of between 5cm up to 40m.

	ХЗ	X4	D510	<b>D</b> 810	S910
	1.0mm	1.0mm	1.0mm	1.0mm	1.0mm
n	up to 120m	up to 150m	up to 200m	up to 200m	up to 300m
	~	<ul> <li></li> </ul>	~	<ul> <li></li> </ul>	~
	<ul> <li>✓</li> </ul>	<ul> <li></li> </ul>	<ul> <li></li> </ul>	<ul> <li></li> </ul>	~
	360°	360°	360°	360°	360°
/	~	<ul> <li></li> </ul>	~	<ul> <li></li> </ul>	~
	4	4	4	5	Graphic
	×	<ul> <li></li> </ul>	<ul> <li></li> </ul>	<ul> <li></li> </ul>	~
6	20 Values	20 Values	30 Values	30 Values	50 Values
	<ul> <li>✓</li> </ul>	<ul> <li></li> </ul>	<ul> <li></li> </ul>	~	~
	×	<ul> <li></li> </ul>	×	×	~
	IP65	IP65	IP65	IP54	IP54
*	2 YEARS*	2 YEARS*	2 YEARS*	2 YEARS*	2 YEARS*







#### MEASURING EQUIPMENT

#### WIDE RANGE OF MEASURING WHEELS FOR ALL FARMING, CONTRACTING AND GENERAL MEASURING



#### **TOP MEASURE TMO6** PRO

Small 16cm diameter measure wheel with brake, handle counter reset and carry bag, suitable for measuring smooth internal and external surfaces.

#### TOP MEASURE **TM12** PRO

Accurate's best selling measuring wheel, 32cm diameter, with brake, handle counter reset and carry bag, suitable for a wide range of measuring applications.

### TOP MEASURE **DM12** DIGITAL

A professional, heavy duty electronic measuring wheel with a 32cm diameter featuring an electronic counter with a digital readout.

### ROTOSURE 500 DELUXE

Small diameter 16cm measure wheel from Rotosure with brake, suitable for measuring smooth internal and external surfaces.



#### ROTOSURE CLASSIQUE CLASSIQUE DELUXE

Popular 32cm diameter measuring wheel from Rotosure with brake, suitable for a wide range of measuring applications. Optional bag.



## PRO

High spec model of the Rotosure Classique Deluxe, the Pro model has the additional feature of a handle counter reset. Optional bag.

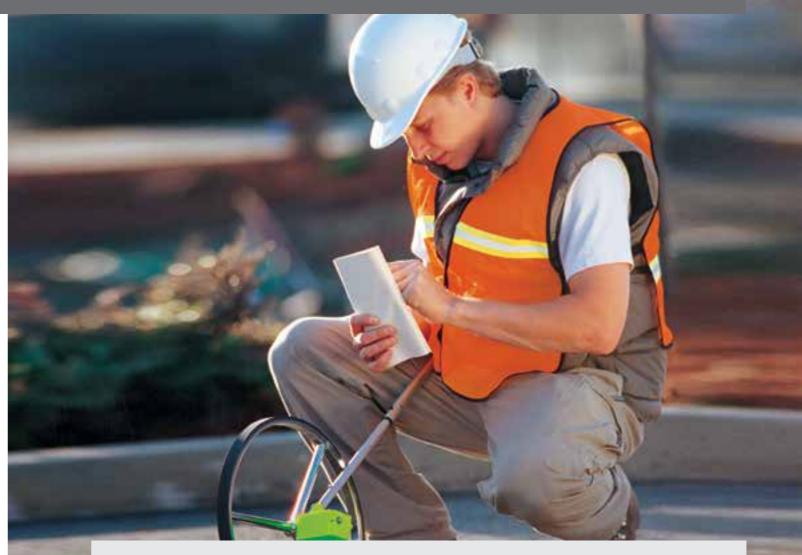


### METERMAN MK60M

Large 48cm diameter wheel ideally suited for farming, irrigation and agricultural use due to its large circumference.



A machine mounted counter wheel featuring dual 10.5cm diameter wheels for measuring fabric and material as they come off a machine roll.



### **SPECIFICATION**

COMPARISON	TM06	TM12	500	DELUXE	PRO	МК60М	DM12
WHEEL DIAMETER	16cm	32cm	16cm	32cm	32cm	48cm	32cm
CIRCUMFERENCE	50cm	1m	50cm	1m	1m	1.5m	1m
MEASUREMENT INCREMENTS	Decimetres, meters	Decimetres, meters	Decimetres, meters	Decimetres, meters	Decimetres, meters	Decimetres, meters	Centimetres, meters
RESETTABLE COUNTER	~	~	~	~	~	~	~
HANDLE RESET COUNTER	~	~	×	×	~	×	~
COUNTER LIMIT	9999m						
TELESCOPIC HANDLE	~	~	~	~	~	~	~
BRAKE	~	~	~	~	~	×	×
KICK STAND	×	~	×	<ul> <li></li> </ul>	<ul> <li></li> </ul>	~	~
WEIGHT	1.06kg	1.86kg	1.1kg	2.25kg	2.4kg	1.65kg	2.04kg
WARRANTY	2 YEARS						

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#### MEASURING WHEELS

Product specifications are subject to change, please confirm at time of purchase.

## SMART TOOL DIGITAL LEVEL

HIGH QUALITY ELECTRONIC SPIRIT LEVEL

The original Smart Tool, today this model still remains the preferred choice for accuracy, reliability and durability. Constructed from aluminium and featuring two built-in acrylic bubble vials, the LCD display is recessed and angled for easy viewing and displays the digital reading in mm/metre, inches/feet, degrees and percentage. A user calibration button allows the operator to check the accuracy of the level.



- Measures Degrees, %, in/ft and mm/m
- Accurate to 1/10 of a Degree
- Recessed LCD
- User Calibration Feature
- Audible Beep for Level and Plumb

AVAILABLE IN 600MM (24") AND 1200MM (48") LENGTHS WITH PADDED BAG



## SMART TOOL PRO DIGITAL LEVEL

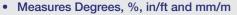
#### WATERPROOF ELECTRONIC SPIRIT LEVEL

Looking for a waterproof electronic spirit level? Based on the original Smart Tool, the GEN3 Pro has all the same features with the addition of a higher IP65 weatherproof construction.

The GEN3 Pro model also includes a auto calibration feature and a backlit LCD for use in low light situations.

Includes a padded level case/bag.





- Accurate to 1/10 of a Degree
- IP65 Weatherproof Design
- Backlit LCD
- Auto Calibration

AVAILABLE IN 600MM (24") AND 1200MM (48") LENGTHS WITH PADDED BAG



**MEASURING EQUIPMENT** 

## SMART TOOL DIGITAL MODULE

#### **COMPACT ELECTRONIC BUILDERS ANGLE SENSOR**

The Builder's Angle Sensor Module measures digitally for all 360 degrees of a complete circle. Installing a deck or stair rail, extending a roof or determining how much an old floor has sagged becomes simpler, faster and more accurate.

Now featuring the latest GEN3 design with IP65 weatherproof construction, auto calibration feature and a backlit LCD for use in low light situations.

Includes a padded level case/bag.

- Measures Degrees, %, in/ft and mm/m
- 170mm compact length
- Measures °, %, in/ft and mm/m
- IP65 Weatherproof Design
- Backlit LCD

## NEDO WINKELTRONIC

#### **ELECTRONIC ANGLE FINDERS**

The Nedo Winkeltronic is a range of German quality, rugged and reliable angle finders, with an accuracy of  $\pm 0.1^{\circ}$  (600mm Pro model). The measured angle can be read on the large easy to read digital LCD display. Two integral spirit levels ensure true horizontal and vertical positioning and the hold function freezes the reading on the display.

The Easy 400 is the base model of the range, designed for simple economical angle measuring. The 600mm Pro model features a larger angle measuring range, precision resolution and a long shank.

- Accuracy of ± 0.1° (Pro 600mm model)
- Hold Function to keep a Measured Value
- Integrated Horizontal and Vertical Level Vials
- Large easy-to-read LCD Display

WEBSITE

#### ELECTRONIC SPIRT LEVELS







#### **MEASURING EQUIPMENT**

**SLOPEMETERS** 

## MECHANICAL **SLOPEMETERS**

#### **MACHINE MOUNTED SLOPE SENSORS**

Since 1943, Slope Meter Inc. in the USA has been producing mechanical slope indicators for heavy machinery. Slope meters are typically mounted on the dash in the operator's view and will give fast, accurate readings for any slope.

The Slope Meter No. 2 NS is the most popular indicator and is used to determine the % of grade, and is calibrated to read from 0-12%. It is designed for motor graders, dozers, asphalt pavers, wheel ditches, tunnelling machines and other equipment where exacting specifications are required.

For SCSI model, the safe driving speed for any curve is quickly and accurately determined, with the 'SCSI' mounted in the engineer's vehicle. The scale reads zero when the vehicle is level, and will show 'tilt' up to 25 degrees on each side. The scale is red beyond +/-10 degrees to denote danger zones.



**ALUMINIUM CASTED RUGGED DESIGN WITH** LARGE NUMERALS FOR EASY VIEWING

+/- O.1° IP65 ACCURACY WATERPROOF	WEBSITE SEARCH SLOPEMETER
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**MEASURING EQUIPMENT** 

**OPEN REEL TAPE MEASURES** 

### **KOMELON & YAMAYO OPEN REEL TAPES**

#### **FIBREGLASS AND NYLON COATED STEEL FAST RETRACTING TAPE MEASURES**

Komelon from Korea and Yamayo from Japan, are leading manufacturers of long open reel tape measures.

Fibreglass tapes are lightweight and durable and can be washed regularly when dirty. They do however have stretch at distance when tensioned.

Nylon Coated steel tapes have minimal stretch so are more accurate. Looking after a nylon steel tape will pro long it's life as the nylon coating prevents rusting.

The Komelon Unigrip Flex series of fibreglass tapes are dual sided with a guad ended riveted hooks. 30m, 50m and 100m lengths.

Yamayo Stilon tapes are a metric single sided tape measure with a dual riveted hook end. 30m, 50m and 100m lengths.



**MEASURING EQUIPMENT** 

## **KOMELON POCKET TAPES**



#### **HIGH ACCURACY POCKET TAPES WITH A RUGGED RUBBER DESIGN**

Komelon's ergonomic and economical closed pocket metric tape measures offer performance, reliability, high quality durable construction and Class II CE accuracy.

Nylon coated steel with rubber protected casing, thumb tape locks, 8m and 15m lengths.

## YAMAYO **DIAMETER TAPES**

#### **SPECIALISED COMPACT DIAMETER TAPES** FOR TREE WIDTH MEASUREMENT

Taking tree diameters is simple with this handy pocket size fibreglass tape. Yamayo Diameter Tapes measure both distance and diameter making them the perfect tool for forestry, tree-felling and environmental research. They are also commonly used to measure the diameter of rain water tanks and pipes.

All Yamayo diameter tapes feature a retractable 12.5mm wide PVC coated fibreglass tape that is durable and long lasting.

Available in 3m and 5m diameter models.

#### POCKET TAPE MEASURES

MODEL SPECS	PE85	MD85	MX82	IR85	LUR30
TAPE LENGTH	8M	8M	8M	8M	30M
TAPE WIDTH	25mm	25mm	32mm	25mm	10mm
MAGNETIC	×	~	~	×	×
CONSTRUCTION	Steel	Steel	Steel	Stainless	Steel



## Forestry Measurement

Advanced field solutions



## HAGLÖF VERTEX **HYPSOMETERS**





### HAGLÖF **VERTEX 5**

Haglöf's best selling instrument the Vertex 5 is the professional foresters' preference for accurate height, distance and horizontal distance measuring. The Vertex can be operated in areas with dense terrain where conventional methods such as measuring tapes, laser instruments are difficult to use.

#### **SPECIFICATION** С

COMPARISON	VERTEX 5	VERTEX VL5	VERTEX LASER GEO
SIZE	80 x 54 x 31mm	93 x 63 x 72mm	93 x 63 x 72mm
WEIGHT	173g (incl. Battery)	243g	243g
BATTERY	1 x 1,5AA Alkaline	Chargeable Li-Ion 3.7V	Chargeable Li-Ion 3.7V
TEMPERATURE	-15° to 45°C	NA	-20° to +45° C
ULTRA SONIC DISTANCE	30m	30m	30m
HEIGHT	0-999m	0-999m	0-999m
RESOLUTION HEIGHT	0,1m	0,1m	0,1m
ANGLES	-90° to 90° Degrees	-55° to 85° Degrees	-90° to 90° Degrees
RESOLUTION ANGLE	0,1°	0,1°	0,1°
RESOLUTION DISTANCE	0.01m	0.01m	0.01m
LASER DISTANCE	NA	46cm-700m	46cm-700m

#### FORESTRY HYPSOMETERS





### HAGLÖF **VERTEX VL5**

An advanced field solution for high accuracy results in height, distance and angle measurements. With an integrated tilt sensor and laser and ultrasound technology, the VL5 offers a variety of method options for any situation and surrounding. The results can be stored, or transferred wirelessly.



All you need in a Rangefinder Hypsometer. With a built-in GPS receiver, the Vertex Laser Geo features long range measurement with high precision laser with integrated tilt - and compass sensors for accurate 3D measurements.

Product specifications are subject to change, please confirm at time of purchase.



#### MEASURING EQUIPMENT

## HAGLÖF **Clinometers**



HAGLÖF

CI

Simple easy to use electronic

clinometer for measuring degrees

or percentage of height change.

Ideal for foresters, geologists, in

construction and building.



HAGLÖF

EC II

EC II Electronic Clinometers feature

single-key functions for distance setup and

height measurement. Measure inclination

and height from any known distance and

present the results electronically.

Q WEBSITE SEARCH



### HAGLÖF **HCH**

The HCH instrument will be ideal when building roads and power lines, for demarcation of forest properties etc. Switch from compass to clinometer with one push of the button.

## NIKON Forestry pro II

#### WIDELY USED IN THE FORESTRY AND CRANE INDUSTRY FOR HEIGHT, INCLINATION AND DISTANCE MEASUREMENT

The Forestry Pro II from Nikon is a popular simple to use laser rangefinder designed for simplicity. It is easy and super fast to obtain the height of a tree, building or structure by simply pointing at the desired measurement point.

For forestry applications, the Forestry Pro II can obtain the tree height even when the top or base of a tree is blocked by branches or bushes, giving the height of a tree using the horizontal distance and angles of both the top and base of the tree.

- 500m Distance Range
- Simple Two Button Operation
- Simple Height of Tree/Structure Calculation
- Slope, Distance and Height Measurement



## 

### HAGLÖF Mantax Blue Calipers

Mantax Blue is a classic diameter caliper available in many graduation options and lengths. Mantax Blue have scale print on both sides and they are rugged and durable with detachable jaws and adjustment keys included. This is a simple, smart, durable and economic choice of diameter caliper!

Mantax Blue calipers are used in a wide variety of applications and many different operation areas such as diameter measuring of trees and timber, log scaling, in fishery industry and wildlife management, in construction and in healthcare industry.

### HAGLÖF Increment Borers

Haglöf Sweden is the world's largest producer of increment borers and come in a great variety of models, lengths, core diameters and sizes.

Haglöf borers have blue handles in grip friendly plastic material and a metallic lock. The borer bits are made from hardened steel with PTFE coating for protection and reduced friction. The extractors are produced in stainless steel with metallic head and special design for easy core extraction of the wood core.

Borer bits, extractors, starters and holsters can be purchased separately.

### FLAGGING **TAPE**

Flagging tape is a universally used convenient marking product for use on construction sites, forestry blocks and surveying projects for identifying highly visible marks and localities.

Available in: Pink, Orange, Yellow, White, Blue, Red and Green (sold in packs of 10 for each colour).

www.accurate.kiwi

#### CALIPERS AND BORERS











Robustness meets data quality in the most intuitive Ground Penetrating Radar or utility location and mapping.



PANASONIC TOUGHBOOK DISPLAYS CARTOGRAPHIC MAP WITH UTILITIES AND GPR PATH

## IDS GEORADAR OPERA DUO 4

#### DUAL ANTENNA 4 WHEEL GROUND PENETRATING RADAR FOR UTILITY LOCATION & MAPPING

Compact and easy to transport and deploy, the Opera Duo has been designed for the field utility inspector, wanting precision, performance and accuracy of underground utility mapping.

The main body of Opera Duo houses a dual frequency antenna as well as all of the electronics and the battery, with just the one external cable going to the acquisition computer.

Paired with the Panasonic CF-20 Toughbook, the Opera Duo immediately locates utilities, simultaneously displaying both deep and shallow buried metallic and non-metallic pipes and cables on the same screen. The results are interpreted in real-time, with easy identification of the exact position of pipes, cables and bedrock. The system tracks the position of the radar and marks targets automatically. All of the acquired data can be exported to CAD and GIS, and reports can be produced directly on site.



#### **KEY FEATURES**

- 2 channel, 250 MHz and 700 MHz large bandwidth precision Dual Antenna
- 381 scans/second scan rate per channel
- Superior Maneuverability from the 4 large wheel design, for better control and a balanced weight
- GPS integration for precision mapping

MULTI FREQUENCY PORTABLE GPR





## OPERA DUO Mounting kit













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Designed, engineered and manufactured in Christchurch, New Zealand, the Opera Duo Utility location mounting system has been designed to specifically fit the 4-wheel Opera Duo GPR from IDS GeoRadar.

Because many of the applications of utility location require the use of BOTH a ground penetrating radar and a precision electro-magnetic cable locator, field use and transport of both systems has always been difficult. Not with Opera Duo Mounting Kit.

The purpose built aluminium framed kit allows integration of a Radiodetection RD series locator and transmitter into the design of the Opera Duo. This allows for the ideal configuration for the use of combined sciences for underground utility locating.

Marking out and need a place to store your paint? No problem. The kit also allows for storage and transport of several 'marking out' spray paint cans and a paint trigger spray applicator. There's even a drink bottle holder included

#### **ABOUT IDS GEORADAR**

Through a continuous commitment to research and development, IDS GeoRadar provides professionals with innovative products using state-of-the-art technologies. Over the years, the company has pioneered radar technologies for civil applications, many seen as breakthrough products in this sector.

IDS was founded in 1980 as part of IDS Ingegneria dei Sistemi, with the headquarters located in Pisa, Italy, with offices in six countries and nearly 500 employees worldwide.

IDS GeoRadar has long been a major player in research into GPR. This dates back to 1991, when, at the request of Telecom Italia, IDS GeoRadar launched the multi-frequency, multi-channel array systems. This innovation enabled the construction of detailed 3D images of large underground areas, dramatically improving utilities detection. Building on this success IDS GeoRadar has become one of the largest global providers of GPR products.

#### GPR – UTILITY LOCATION SOFTWARE

# IDS **uNEXT** GPR SOFTWARE

#### ADVANCED SOFTWARE FOR UTILITY DETECTION AND MAPPING

Developed by IDS, the uNext platform is designed for use with the Opera Duo GPR, utilising data quality and intuitiveness for unparalleled utility location and mapping.

It is available as an optional upgrade to the standard software supplied with the IDS Opera Duo GPR.

The uNext platform offers an all-in-one, utility detection software solution which exploits the most advanced technologies and methodologies in the market.

#### **uNext BASIC FUNCTION**

Seamless interface to IDS GeoRadar and any positioning sensors to provide the best geographical positioning of multiple utility targets.

- Easily integrate with cable locators for cable and pipe positioning. Users can benefit from an integrated view of GPR and EML data.
- Export survey reports including extracted maps and targets directly in the field.
- Transfer the identified targets to CAD or GIS maps for professional SUE / utility mapping.
- Import the cartography of the surveyed area from different sources, and visualise geo-referenced underground asset position in real time.

#### uNext ADVANCED FUNCTIONS

uNext Advanced incorporates the features of the Basic package with the additional functionality of;

- Create more accurate, 3D reconstruction of the underground utility network and merge this information with any existing cartographies.
- Assisted Pipe Tracker detects a pipe or cable and automatically marks the exact position of the utility over the surveyed area.
- Re-process rough radar data to ultimately optimise data processing as well as customise data visualisation with filtering capabilities.





TRANSFER THE IDENTIFIED TARGETS TO CAD OR GIS MAPS FOR PROFESSIONAL SUE / UTILITY MAPPING



CREATE REAL-TIME TOMOGRAPHY FOR 3D RECONSTRUCTION OF THE UNDERGROUND UTILITY NETWORK



ASSISTED PIPE TRACKER DETECTS A PIPE OR CABLE AND AUTOMATICALLY MAPS THE EXACT POSITION

ADVANCED GPR SOFTWARE



### IDS GEORADAR C-THRUE

# REAL TIME ANALYSIS GPR FOR ACCURATE SCANNING OF CONCRETE STRUCTURES

C-Thrue is an all-in-one Ground Penetrating Radar (GPR) for accurate scanning and real time analysis of concrete structures.

Construction and service companies as well as civil and structural engineers can now improve the way they locate rebars, voids, post-tension cables, cavities, conduits, and any other objects buried in the structure before cutting or drilling into the concrete.

C-Thrue is an easy-to-use and robust solution to see through concrete structures and reveal true data that lead to optimal decision-making.

The solution is suited for all construction sites and operations including building renovation, overpasses, monuments, bridges and tunnels surveys, as well as for detailed analysis of the original engineering project and comparison with the as-built structure.



AUGMENTED REALITY FOR 3D DATA VISUALISATION – SEE THRU CONCRETE STRUCTURES AND REVEAL TRUE DATA THAT LEADS TO OPTIMAL DECISION-MAKING.

#### **KEY FEATURES**

- Long range scan depth up to 80cm
- Dual antenna polarisation for the detection of both shallow and deeper levels of rebars;
- Automated data acquisition & analysis
- Virtual Pad built-in, multi-touch display

HANDHELD PRECISION GPR





### RADIODETECTION 7

# Cable Location

Radiodetection, headquarterd in Bristol, United Kingdom, is a world leader in the development and manufacturing of precision cable locators and cabl avoidance tools

**SOLUTIONS FOR A CONNECTED WORLD** 

**GEO & UNDERGROUND** 



# RADIODETECTION **RD8200 SERIES**

#### **BLUETOOTH MULTI ANTENNA GPS ENABLED CABLE AND FAULT UTILITY LOCATOR**

The **RD8200** is Radiodetection's premier advanced precision locator, featuring a unique arrangement of FIVE custom manufactured, precision ground antennas, designed to deliver locate accuracy and repeatability second-to-none

Select from 22 active or passive user frequencies, with the option of programming five additional frequencies to match it to the signals found on your target networks.

The dual Bluetooth connectivity, combines long range iLOC functionality (with the optional TX-10 iLOC transmitter) and low power connectivity to cloud based data solutions.

The **RD8200G** model integrates a GPS module with capability to store all locate parameters below ground, linked to asset location above ground, providing a comprehensive picture of field operations.

An external GPS can also be configured for higher accuracy location results.

#### PRECISION CABLE LOCATORS

FEATURE AND FUNCTION PACKED ADVANCED LOCATOR FOR THE UTILITY LOCATING PROFESSIONAL

#### **KEY FEATURES**

- 22 active and four sonde frequencies with an additional five programmable frequencies
- Swing Warning System, alerts the user by vibration of incorrect locating practice
- Integrated GPS for logging and recording of underground asset location (RD8200G model)









Radiodetection new Precision Locate Android and iOS App: a real-time map tool for utility location mapping.

### RADIODETECTION RD MAP+™

#### **EASY TO USE REAL-TIME MAP AND SHARE TOOL**

Compatible with the RD8200 range of locators, RD Map+ is an Android and iOS compatible App that enables the mapping utility surveys in real-time.

RD Map+ uses Bluetooth connectivity to create the realtime detailed maps, with each utility route and survey point conveniently marked on the screen. RD Map+ can be used to estimate the distance of your position relative to the edge of a pavement, manhole or other suitable reference point.

APWA Industry relevant colours can be used to identify the buried utility, therefore identifying multiple utilities that may be located in near proximity.

Map files (CSV or KML) can then be shared via e-mail or any compatible messaging system. By creating a map in real-time, the operator is able to correct any inaccurate GPS position immediately, whether such inaccuracy is caused by reflecting signals, weather conditions or limited view of the sky. (RD8200G model) Suitable mobile phones can be mounted on the locator using the optional arm and bracket system, which can be easily and quickly attached and removed from any precision locators.



#### **KEY FEATURES**

- For use with RD8200 Bluetooth enabled precision locators
- Industry colour coded utility marking
- Correct inaccurate GPS position data immediately in the field (RD8200G model)
- iOS and Android compatible





# RADIODETECTION RD7200 SERIES

#### MULTI-ANTENNA UTILITY LOCATOR FOR POWER, TELECOMMS, DRAINAGE & CIVIL INDUSTRIES

The RD7200 is the go-to precision locator for the industry specialist tracing power, telecommunications or locating CCTV camera sondes.

Select from 8 active or 4 sonde frequencies to correctly identified buried assets, and with the new 'Guidance Mode' the locate process is completely automated.

The Swing Warning System, with haptic vibrating feedback, warns the user if their swing action is too aggressive, helping eliminate in accuracies of locating.

Working in noisy construction environments? No problem, an upgraded rear facing weatherproof speaker with 5 output settings assists user working in challenging conditions.

With sonde frequencies of 512Hz, 640Hz, 8kHz and 33kHz, most major pipe inspection cameras can be tracked for location, direction and depth in ideal ground conditions.

#### PRECISION LOCATORS

SYSTEM WITH HAPTIC FEEDBACK WARNS USER OF INCORRECT LOCATING PRACTICE

**VIBRATING SWING ALERT** 

#### **KEY FEATURES**

- Swing Warning System, alerts the user by vibration of incorrect locating practice
- 8 active and 4 sonde frequencies with dynamic overload protection
- Measure depth of power cables and CCTV camera sondes using TruDepth<sup>™</sup>





WEBSITE

# RADIODETECTION **RF MARKER**

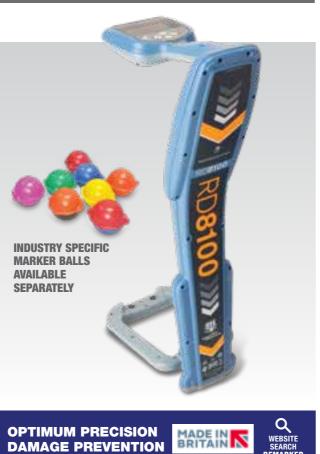
#### **PRECISION LOCATOR WITH RF MARKER ANTENNAE**

All the RD8100 RF marker locators offer both a combined utility and marker locating system.

Based on the RD8100, the RF Marker locator features a fold out antennae specially design to trace and mark industry specific utilities marker balls (fitted with the utility at the time of install or repair). The colour coded marker have specific frequencies, e.g. 101.4 kHz orange balls for Telecomms.

#### **KEY FEATURES**

- Special RF marker fold down antennae
- Simultaneous marker and line locating for rapid utility detection of pipes, cables and RF markers at the same time
- Enhanced self-test of the measurement
- System can be confirmed on-site



**RF MARKER LOCATORS** 

# RADIODETECTION **TXTRANSMITTERS**

#### **MULTI-FUNCTION SIGNAL TRANMSITTERS**

The Tx family of signal transmitters are designed for use with Radiodetection's precision RD7200 adn RD8200 locator range to find and trace cables and pipes.

The Tx range is designed to meet the demands of tracing utilities through today's complex underground infrastructure.

Available in three models, the Tx-5 has 5 Watt max power output with induction capability as well as Fault-Find. The Tx-10 has the highest power capability (10 Watt) with the addition of current direction and Bluetooth on the Tx-10iLoc model..

#### **KEY FEATURES**

- Three models available (Tx-5, Tx-10, Tx-10iLoc)
- Fault-Find and Current Direction (Tx-10iLoc)
- iLOC Bluetooth® link between the RD8200 and transmitter, allows control of the locator power and frequency from up to 450m away



#### THREE TX MODELS TO CHOOSE FROM





### RADIODETECTION CAT & GENNY

#### CABLE AVOIDANCE TOOL FOR UNDERGROUND POWER AND TELECOMMS

The Radiodetection CAT and GENNY4 has become the industry standard pipe and cable avoidance tool in New Zealand and across the world.

The **CAT4** locator can detect live signals that naturally radiate from underground, such as power and telecommunications. It has selection modes for Power, Radio, Avoidance and Genny with Dynamic Overload Protection.

The **Genny4** transmitter is used to "induce" or apply a direct connected signal to the service, which enables the signal to travel down the circuit of a utility the may not be powered or live. When using the transmitter, the approximate depth can also be viewed from the CAT4 in Genny mode.

The Genny4 also has a Signal Boost feature which increases the output signal by up to 10 times allowing you to locate cables with the CAT4 over extra distance and depth.

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#### CABLE AVOIDANCE LOCATORS



#### **KEY FEATURES**

- Avoidance Mode<sup>™</sup> uses Power, Radio and Genny signals simultaneously
- Dynamic Overload Protection equips the CAT4 with the ability to reject electrical interference
- StrikeAlert<sup>™</sup> reduces the risk of hitting a shallow cable





CABLE AVOIDANCE LOCATORS

RADIODETECTION **SUPERCAT 4+** 

#### **CABLE AVOIDANCE TOOL WITH SONDE FREQUENCY TRACKING**

The SuperCAT4+ locator takes all of the features from the extremely popular CAT4+ avoidance tool, and adds a wider selection of passive, active and sonde frequencies. It uses the same design, operation controls and display as the regular CAT4+.

Compared with the CAT4+ however, higher frequencies such as the 131kHz or 65kHz can be used to find well-insulated utilities such as twisted-pair telecom cables or insulated pipe joints. For long range locating of lower resistance cables, such as power lines, lower frequency options are also available.

SuperCAT4+ can also track sondes, commonly used with CCTV pipe inspection cameras, 512Hz, 640Hz and 33kHz can be traced.

Supplied with the T1 Transmitters, both higher and lower signals can be detected when directly connected to services.

#### SuperCAT4+ and T1 are easy to use, utility-specific locating tools with enhanced features for the challenges faced by particular industries.

#### **KEY FEATURES**

CAT4

- · StrikeAlert Warning warns of shallow buried utilities in Power and Active modes
- Trace non-metallic pipes or telecom ducts using sondes
- · Accessories to extend your capabilities



# **GEO & UNDERGROUND**



The faster, more convenient survey system for corrosion control – delivers faster results, simultaneous survey measurements, and integrated GPS positioning.

### RADIODETECTION **PCM**x

#### **PIPELINE INTEGRITY CURRENT MAPPER**

Radiodetection's PCMx system enables corrosion and CPS professionals to evaluate the condition and effectiveness of pipeline coatings, locate faults and holidays, and identify shorts caused by contact to other structures.

PCMx enables pipeline and CPS managers to identify and prioritise preventative maintenance on pipelines, extending asset life by identifying possible sources of corrosion at an early stage. Pipeline depth is recorded alongside current, voltage and GPS data.

The Tx-25 and Tx-150 PCMx specific transmitters are ideal for distribution networks and long-range transmission pipelines.

Removal of the detachable foot leaves a fully-featured RD8100PDLG pipe and cable locator, enabling a precision utility location solution for multiple applications.

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#### **PIPELINE & CORROSION CONTROL**



**TX-25 AND TX-150 TRANSMITTERS** FOR SHORT RANGE AND LONG **RANGE TRANSMISSIONS** 

#### **KEY FEATURES**



- Peak+ guidance arrows for quick location and Null arrows to check for distortion
- Built-in GPS, captures co-ordinates on survey logs • Removable foot leaves a fully-featured, premium RD8100 pipe & cable locator

PIPELINE INTEGRITY





# RADIODETECTION ACCESSORIES

#### FLEXITRACE

The FlexiTrace is a portable reel with a semi-rigid compact diameter yellow rod, that can fit in pipes as small as 12mm. When connected to a Radiodetection transmitter, such as a Genny4, either the end of the rod (white head) or the entire rod itself can be energised with the signal, helping locate the pipe with a cable locator. Available in 50m (standard) or 80m (optional) lengths.



#### **A-FRAME**

Designed for use primarily with the RD8200 precision locator, which features fault finding capability, the A-Frame is used for locating sheath faults on cables, and coating defects on pipelines. It provides direction and magnitude of fault information on the display of the locator.

A Tx-10iLOC transmitter is also required to provide the Fault Find signal to the A-Frame.

Optional bag available.

#### SONDES

Sondes are self-contained transmitters that are used with cable and pipe locators. They are used to locate buried plastic Water Pipes, Gas Pipes and any other non-magnetic utility.

- Standard Sonde (8kHz, 33kHz or 512Hz). Depth up to 5m.
- Super Sonde (33kHz). Depth up to 15m.
- Sewer Sonde (33kHz). Depth up to 8m.
- S18 Small Sonde (33kHz). Depth up to 4m.

#### **CLAMPS**

Radiodetection clamps are available for BOTH Cable Locators and Transmitters. Locator clamps are used to help identify target utilities in congested areas by sensing the signals from individual utilities. Transmitter clamps apply a signal to a specific cable or pipe where direct connection is not possible.

Also available are Current Direction clamps. Common sizes: 4" (100m), 5" (130mm), 8.5" (215mm)





#### **GEOTECHNICAL**

# ACCURATE CABLE **LOCATION TRAINING**

**PROMOTING INDUSTRY PRACTICES COMBINED WITH THE THEORY OF CABLE LOCATION** 

Our courses are designed to give those working with cable locators the knowledge and skills they need to work confidently and safely. Using cable location equipment, we provide you with the theory, the science and the correct industry practice. Our trainers will help you develop the knowledge and skills to operate equipment safely

#### **KEY LEARNING OUTCOMES**

- Intermediate Cable Location System • Demonstrate basic operation, visual inspection and competent handling of the instrument

  - Show awareness of hazards and risks in cable location

#### **COURSE CONTENT**

- and effectively.
  - Passive, Active and Direct **Connection Techniques Correct Grid Survey**



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#### CABLE LOCATION TRAINING COURSES







- Demonstrate knowledge and skills in accordance with industry practice Have suitable foundation knowledge of using an
- Know the requirements under the Health and Safety at Work Act 2015
- · Have an intermediate understanding of the Founding Science
- Health and Safety relevant to
  - Utility Location practitioners
- Hazard Identification
- Visual Inspection
- Theoretical Science
- **Basic Mapping**

- Correct Methodologies
- Product Function Inc: Cross Science Brief
- Current Onsite Practice and Workflow (Field Working Procedure) Inc SOP
- Current Globally recognised local standards



The RD500 traces plastic water pipes over distances up to 150m. It is quick and easy-to-use. Operators can learn to locate and trace using the RD500 in just a few minutes.

WATER PIPE LOCATORS

# RADIODETECTION RD500

#### FOR LOCATING AND TRACING BURIED PLASTIC AND/OR CONCRETE WATER PIPES

The biggest challenge in the water industry is leakage, the costs involved and damage to the environment. The RD500 plastic water pipe locator can help solve this problem. It traces plastic water pipes over distances up to 150m and is quick and easy-to-use. Operators can learn to locate and trace using the RD500 in just a few minutes.

Conventional Pipe and Cable locators trace electromagnetic signals travelling on metal pipes and cables. Those signals don't travel on plastic. The RD500 however generates acoustic signals, which travel down the plastic pipes as vibrations. The locator detects the vibrations: the nearer to the pipe, the louder the vibrations are, and the operator can identify the location of the buried pipe and trace its route.

The RD500 is available in several different packages, depending on water flow intensity, with low, standard and high pressure adapters available.



#### **KEY FEATURES**

- Locate a single pipe under grass or soil for distances up to 150m at depths of 2m
- Can be used in low pressure water supplies such as sprinklers, hoses or domestic supplies
- Multiple kit combinations available





# SCHONSTEDT GA-92XTd

The Schonstedt GA-92XTd, is portable and easy-to-use. With a membrane switch to enhance single-handed control and operation, it remains the locator of choice for all-round use. With one hand, you can detect the magnetic fields of all ferromagnetic objects; property markers, manholes, septic tanks, well casings, valve boxes, cast iron pipes, steel drums up to five metres underground. The XTd follows the Schonstedt tradition of ruggedness and reliability.



### SCHONSTEDT SPOT

Marketed as the 'Next Generation Stick Locator' from Schonstedt, the Spot offers lightweight operation, accuracy, ease-of-use and low cost. The Spot features five levels of sensitivity and is optimised to locate a wide variety of ferrous (steel/iron) objects, ranging from steel manhole covers, through to steel pipe joints and all the way to survey marker pins, up to a depth of five metres.

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**RD500** 

LOCATOR





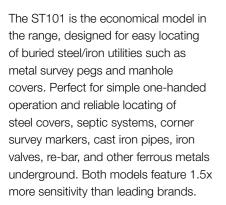
The GA-52Cx Locator is one of the most well known magnetic locators on the market. With only two controls, it is a no-nonsense, reliable magnetic locator that detects the magnetic field of iron and steel objects. Designed for onehand operations, the on/off-sensitivity and volume controls are located on the underside of the cover. This provides easy access, protects the knobs and contributes to their overall ruggedness and dependability.



Schonstedt's premier locator, the Maggie utilises the same pistol-grip design as used by the GA-92XTd. The Maggie combines the best features of the GA-52Cx and GA-92XTd, sensitivity and precision and single-handed operation. The expanding bar graph indicates polarity (positive or negative) and relative signal strength.

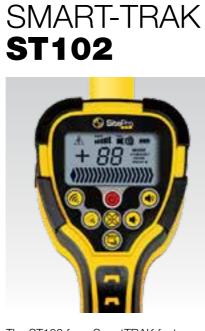
MAGENTIC LOCATORS

# SMART-TRAK **ST101**





Q



The ST102 from SmartTRAK features Smart-Search Technology<sup>™</sup> with different locating modes for more precision locating of buried steel assets and marks. With the four smart modes (Standard, Erase, Smart+, Smart-) the ST102 is the smart choice for locating manholes, steel covers, septic systems, corner survey markers, cast iron pipes, iron valves, re-bar, and other ferrous metals underground.



SPECIFICATION COMPARISON	ST101	ST102	
AUDIO OUTPUT	10hz Frequency Tone, increases with Magnetic Field Strength		
VISUAL OUTPUT	LCD – Numeric 0 – 99, Signal Strength Bar Graph		
GAIN (SENSITIVITY)	6 SETTINGS 6 SETTINGS		
SMART-SEARCH	×	<ul> <li>✓</li> </ul>	
VOLUME	4 SETTINGS	4 SETTINGS	
MODES	STANDARD	STANDARD, ERASE, SMART+, SMART-	
POWER	6x AA Alkaline Batteries – 50 Hours (Intermittent Operation)		
OPERATING TEMP	-25°C TO 60°C		
WEIGHT / LENGTH	1.13kg with batteries / 108.6cm		
ENVIRONMENT	IP54 – Plastic Housing, IP67 – Sensor Tube		
INCLUDES	Carrying case, batteries and operator manual		
	Product specifications	are subject to change, please confirm at time of purchase	

# **Pipe Inspection** & Scanning

From high definition manhole scanning technology through to CCTV mainline and pushrod domestic pipe inspection, CUES and Pearpoint sewer, stormwater and manhole camera systems are used for municipal, industrial, manufacturing, petrochemical and residential applications.

CUES

S P i D E R

SPiDER collects millions of three-dimensional (3D) points during each manhole scan that provides engineering and survey quality information on manhole geometry and condition.

### CUES SPider

#### **REVOLUTIONARY, PORTABLE, 3D, WIRELESS** MANHOLE SCANNING TECHNOLOGY

SPiDER is a state of the art 3D manhole scanning system that provides renderings of manhole geometry to give three dimensional visualisation.

The device is simply lowered via a tripod into a manhole, with the cameras scanning 1mm accurate data points which provides a 190 degree field-of-view live video stream, to determine the results.

With the camera programming controlled wirelessly from a tablet, the scanned data results can be imported into a wide range of 3D viewer software programmes.

With its military design, SPiDER is aimed at municipalities and professional infrastructure contractors, where the data can be used for structural assessment, pre and postrehabilitation analysis, hydrological surveys, as well as general condition assessment. SPiDER weighs just 14kg so is highly portable.



#### **KEY FEATURES**

- 3 Dimensional ellipsoid scanning with live video
   190 degree FOV
- Data accuracy: 1 5mm
- File Format: 3D MPEG Video, Point Cloud, Surface Model, CAD Model, Virtual Model

3D WIRELESS SCANNING



# 

# CUES DUC

#### HIGH RESOLUTION, SIDE-SCANNING STORMWATER & MANHOLE CAMERA

The CUES Digital Universal Camera (DUC) is a high resolution digital CCTV side-scanning camera designed for rapid and detailed condition assessment of wastewater and stormwater systems, to identify critical infrastructure and conditioning assessment. The system can be deployed from both portable and vehicle-mounted systems, providing a versatile solution for CCTV pipeline inspection needs.

#### **KEY FEATURES**

- 3.1 mega-pixel high resolution camera produces unparalleled detailed images
- High output strobe lighting system
- Deploy from both portable and vehicle-mounted systems
- Expanded flat view for additional detail

# CUES QZ3

#### **1080P PORTABLE POLE CAMERA**

The CUES QZ3 is a lightweight, portable, full HD video inspection system that can be operated by one person.

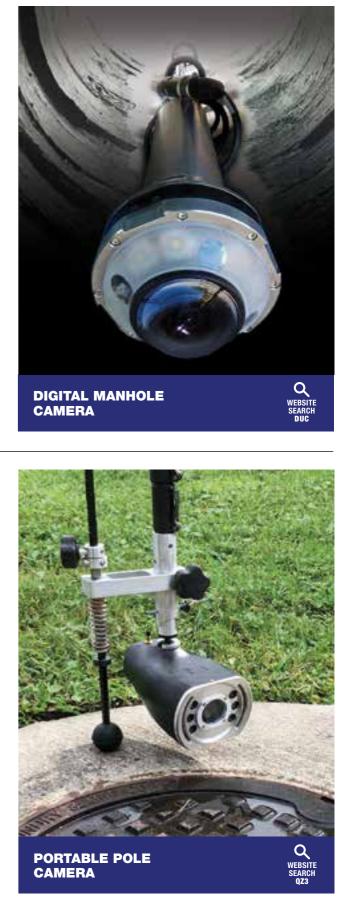
Perform swift inspections and surveys of manholes, pipelines, wet wells, sewer treatment plants, steam generators, tanks, vessels, and other areas that are difficult to reach. The QZ3 can also be used to locate lateral services or to identify a blockage at a manhole, access port, or other entry point without entering the line or structure.

Optional tripod available.

#### **KEY FEATURES**

- 1080p Video Camera
- Zoom: 360x (30x Optical, 12x Digital)
- Carbon Fibre Telescoping 7m Pole
- Six LEDs illuminated in pairs (short, medium, long range)

#### MANHOLE SCANNING



# PEARPOINT\*\*\* Mainline CCTV Crawler System

Comprehensive. Convenient. Connected. Portable video inspection for commercial drainage, water and plumbing networks.

#### NEED TO KNOW THE COMPLIANCE AND Guidelines for Pipe inspection CCTV in NZ?

The New Zealand Gravity Pipe Inspection Manual outlines the scope of works required by industry along with the evolution of the changing requirements of the New Zealand water industry. **GEO & UNDERGROUND** 



# PEARPOINT **P550C**

# MOTORIZED CRAWLER CCTV PIPE INSPECTION WITH PAN/TILT

The Pearpoint Flexitrax P550c system is a portable and modular crawler system designed for surveying pipe networks 100mm and above. A bespoke modular system, with options for three cameras, two crawlers and two cradles, pipes up to 1.5m diameter can be surveyed efficiently and productively.

Choose from either a manual drum/power supply set up or the vehicle mounted automatic drum.

The latest generation P550c controller features on-board WiFi, with a 12.1", 1280x800 pixel, high definition display for crisp, sharp images and 128Gb internal memory storage, with on-site reporting. WinCAN compatible.

#### **KEY FEATURES**

- Highly configurable motorised crawler system
- Manual or automatic drum options
- P550c controller operation or optional Pendant controller
- Onboard WiFi with Dropbox function for reports
- WinCAN compatible

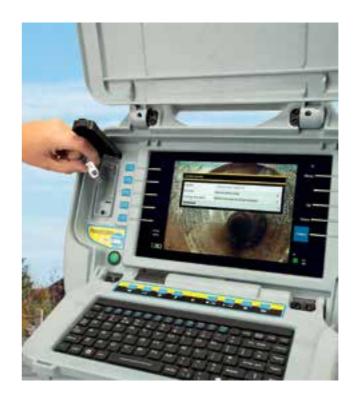
#### MAINLINE PIPELINE INSPECTION



# PEARPOINT **\*\*** Pushrod CCTV Inspection

Intuitive. Integrated. Industrial. Portable video inspection for domestic and commercial stormwater and sewer networks.





# PEARPOINT **P540C**

#### **PUSHROD CCTV PIPE INSPECTION**

Welcome to a connected world.

For pipe inspection from 50mm to 150mm, the heart of the new Flexiprobe P540c system, is the powerful and intuitive P540 Controller. Utilising an intuitive user interface and a high definition 10.1" TFT display, the P540 features a full alpha/numeric keyboard, with short cut and hot keys for the main operations.

The high capacity internal battery pairs with 128Gb of memory and on-board WiFi connectivity for flexible reporting and communication.

Choose from three different reels (P541 Plumbers, P542, P543), with varying degrees of rod flexibility and two cameras (1" and 2" self-levelling).

#### **KEY FEATURES**

- Full alpha/numeric keyboard controller with 10.1" TFT crisp display
- USB, HDMI, WiFi, Analog video connectivity
- High capacity internal Li-ion battery
- Choose from two camera sizes and three reels

#### LATERAL & DOMESTIC PIPE NSPECTION



PROFESSIONAL PIPE INSPECTION

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WEBSITE

MADE IN BRITAIN OVARRO CONNECTING TECHNOLOGIES

# Leak Detection

New Zealand, much like the rest of the world, is currently experiencing significant infrastructure failure and condition loss. None more so than the water infrastructure network. Water loss is one of the key issues faced globally, and in a time where climate change and water as a resource is a key focus, Ovarro is connecting technology with water management.



# OVARRO Mikron3 Mini

#### **BASIC ACOUSTIC LEAK LISTENING SYSTEM**

The Mikron Mini is a simple to use leak listening system with very high acoustic sensitivity. For direct leak listening at available water fittings and use as a ground microphone.

Designed for economical cost and ease-of-use, the Mikron Mini is a low cost albeit industry trusted performer for audible detection of leaks in water networks. Noises that are created through water leakage can be detected by listening at valves, hydrants or any available fitting on the water pipe.

#### **KEY FEATURES**

- Minimal training required
- Alkaline battery for easy field replacement
- Cost-effective
- Lightweight, rugged, flexible
- IP53 Protection

# OVARRO MIKRON3 JUNIOR

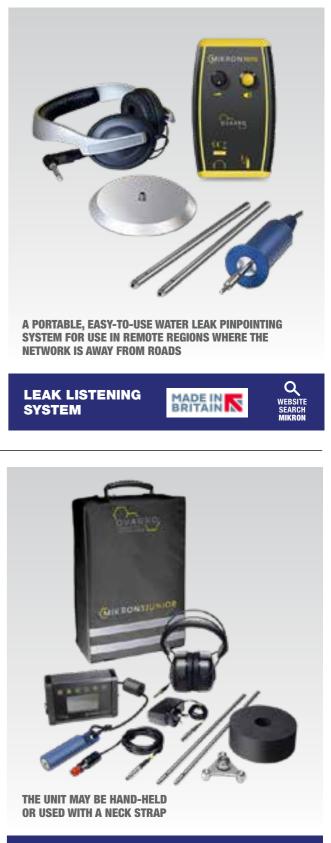
#### **ECONOMICAL ACOUSTIC LEAK LISTENING SYSTEM**

The Mikron3 Junior is an entry-level water leak pinpointing system. It is perfect for identifying leaks in remote environments, where it is able to detect leaks in a wide range of conditions and situations. The Mikron3 Junior processor unit displays the minimum noise level; this is the background noise level without transient noises such as road traffic. The bar graph display shows the position of maximum leak noise whilst adjustable filters allow for minimising background noise.

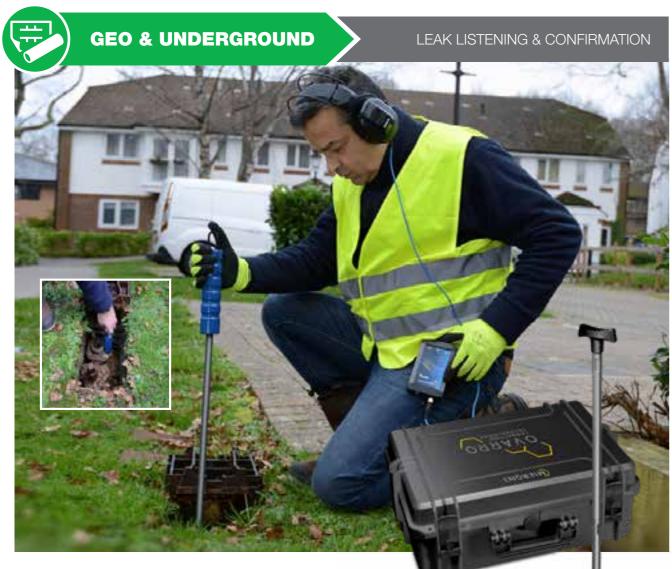
#### **KEY FEATURES**

- Ability to home in on noise to confirm leaks
- Multiple leak detection methods
- Dynamic listening control protects hearing
- Foam cover and sensor cable reduces airborne noise









# OVARRO Mikron3

#### PROFESSIONAL ACOUSTIC LEAK LISTENING SYSTEM

The professional Mikron3 is designed for optimum leak pinpointing and confirmation and is one of the best water leak detection devices available in the market. With high sensitivity sensors and wireless sensor communications, the device allows users to detect leaks easily and effectively.

Designed and manufactured in the United Kingdom, its combination of advanced ultrasonic sensors with low-noise processing electronics gives excellent acoustic performance.

The Mikron3 provides high acoustic quality leak noise listening by direct pipe contact or on the ground surface. It features extensive filter selection and a graphic minimum noise level display options.

There is a choice of three available display processors: the simple and effective Mini, the Pro with more functionality and a greater display or the PrimeTouch larger display touch screen processor.

### **KEY FEATURES**

- Wireless communications
- Multiple leak detection methods
- In-case battery charging
- Dynamic listening and control protects hearing
- Variable frequency display







# OVARRO EUREKA 3

#### CORRELATING NOISE LOGGING AND MICROPHONE FOR LEAK LOCATION AND CONFIRMATION

The Eureka3 system pinpoints leaks accurately so that fewer holes need to be dug, minimising disruption to the network. The system can correlate noise signals and find leaks even before pipe details have been entered.

The leak noise logger and correlator provides rapid notification of leaks in your network, allowing for issues to be fixed even before customers are aware.

The Eureka3 is a system of correlating noise loggers and a ground microphone for optimum leak location and confirmation.

Rugged, portable and easy-to-use, the Eureka3 is built to a high specification and can be operated for long periods between servicing. Its portability means many leaks can be found per man per hour. With its touchscreen processor PrimeTouch it correlates noise signals from its two loggers and confirms the leak with its ground microphone.

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#### LOCAL LEAK MONITORING





PINPOINT LEAK NOISE LOCALLY ON SITE USING ADVANCED CORRELATION OF ACOUSTIC SIGNALS.

#### **KEY FEATURES**

- Touch-screen operation
- Can be purchased with optional GPS built-in
- Rugged, portable and easy-to-use
- Digital online and offline correlation
- Battery charging from mains or vehicle

REMOTE LEAK MONITORING





# OVARRO ENIGMA 3M

#### ADVANCED CORRELATING ACOUSTIC LEAK LOGGER FOR PINPOINTING LEAKS REMOTELY IN METAL PIPES

The Enigma3m remote correlating noise loggers utilise 3G / GPRS communications to provide remote location of leaks in water distribution networks. The logger is deployed in underground chambers as part of a network of loggers, either permanently or 'lift and shift', and requiring no costly above ground technology.

The data can be sent to a server where it provides leak alarms and also enables the user an opportunity to listen to the noise thus helping to confirm it is a leak noise. Furthermore, correlation can be performed from many loggers to accurately locate leak positions.

An underground antenna transmits the acoustic signals from the logger coupled to the pipe below ground. Being underground means no planning permission is needed to install transmitters or repeaters, and vulnerable hardware is protected from damage or theft.

The Enigma3m is supported by the Ovarro data platform, PrimeWeb. This provides a database, analysis and online viewing facility for remote leaks in the network, as well as for flow and pressure. It is accessible on any desktop or laptop and displays live and historical data. Indicating accurate leak positions, together with 'street view' visualisation of the leak position, helps leakage teams manage their networks.

#### **ENIGMA3HYQ**

Enigma3hyQ is a variant of the Enigma3m advanced multi-point noise correlation system. Using 3G or 2G communications and sophisticated correlation analytics these loggers pinpoint leaks remotely on pipes of any material or diameter and over long distances.

- Highly sensitive hydrophone sensor
- Cover the whole network regardless of pipe diameter
- Long distance between fittings means fewer loggers deployed, so reducing cost

#### **KEY FEATURES**

- Advanced accelerometer sensor
- Fewer loggers deployed per km of network
- Pinpoints quiet, difficult-to-find leaks
- Data enables water companies to meet regulatory targets



THE ENIGMA3M IS SUPPORTED BY THE OVARRO DATA PLATFORM, PRIMEWEB.



# GEO & UNDERGROUND

# OVARRO Enigma kit

#### **ADVANCED MULTIPOINT CORRELATION SYSTEM**

An advanced multipoint correlation system for locating leaks in buried pipes. The Enigma is a multipoint 'Lift and Shift' system of correlating leak noise loggers that are designed to be used as a temporary or semi-permanent water network survey tool.

Also available as a highly sensitive EnigmahyQ variant that has been further optimised for leak location in large diameter pipes and over longer distances.

#### **KEY FEATURES**

- Finds and records leaks at night
- Advanced logging and correlating
- Three sound samples
- Five year operating life standard programme
- Powerful 24 bit data processing and analysis

# OVARRO Phocus 3M

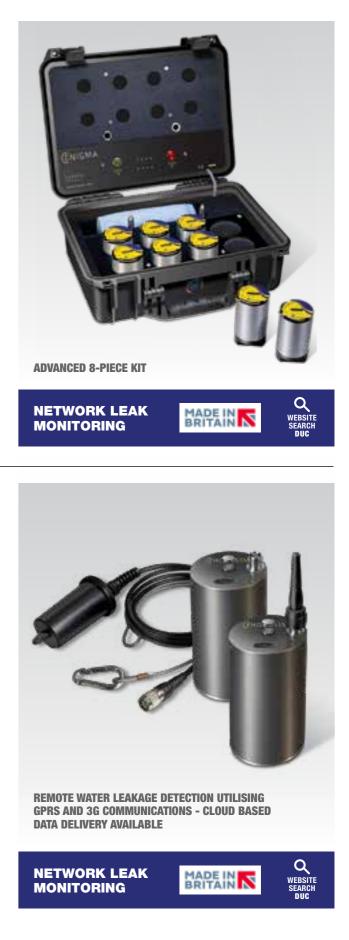
#### **REMOTE WATER LEAKAGE DETECTION**

The Phocus3M leak noise logger enables leak monitoring across large water networks. Combines specialist leak noise detection and versatile communications technology to create a fixed network of loggers to monitor leakage in your water network, complete with market-leading antenna technology that reduces Opex by limiting downtime. The logger samples pipeline noise at one-second intervals during each of three sample epochs during the night when background acoustic noise is lowest.

#### **KEY FEATURES**

- PrimeWeb interprets the acoustic leakage data
- Flexible deployment
- Modem for remote communications
- Advanced antenna
- Reduces manpower

#### NETWORK LEAK MONITORING



**99** 



TROTEC

AT WORK.

#### PINPOINT LOCATION OF GROUNDED LEAKS IN NON-CONDUCTING SEALING SYSTEMS

The PD200 is a professional impulse current measuring system designed to detect leaks in non-conductive sealing construction systems.

It is ideally suitable for leak detection on balconies, pond liners/swimming pools or flat roofs.

On top of the housing there are clearly visible signal lamps - one standard impulse signal (green) and one short-circuit signal (red), including an integrated tone generator. The tone and lamps are easily audible and visible and the durable design is robust and splash-proof.

With the PD200 the operator can carry out tightness tests and leak detections of various insulated flat commercial roofs, sheet systems, geotechnical applications such as landfill or tunnel construction and the construction of water storage, swimming ponds or retention reservoirs.

#### **KEY FEATURES**

- Non-conductive leak inspection
- Simple and intuitive impulse receiver with visual and audible indicators
- Robust, splash-proof design
- Total weight with standard accessories: 8.5 kg

NON-CONDUCTIVE LEAK TESTING



# **Soil Testing**

Almost every civil and landscaping soil compaction, strength and geotechnical engineering application requires compliance to NZS:4402 standards. For base course road construction, civil engineering, drainage re-course/re-in-statement, Accurate's range of Clegg Impact Testers, Vane Penetrometers and Shear Strength testers enable you to attain the correct values to meet each application.



www.accurate.kiwi



# CLEGG 883 Professional

#### ADVANCED BASE COURSE ROADING AND DRAINAGE IMPACT TESTER

One of the most commonly used Impact Testers in New Zealand, the Clegg Professional is designed for determining compaction levels of materials (primarily roading and drainage metals), throughout the civil engineering project. The most common uses for the Clegg are;

- Roading base course gap metal compaction
- Drainage re-course/re-in-statement
- Sub-concrete floor construction.

The Clegg Professional tester measures the deceleration of a hammer free-falling onto the surface. Values are shown on the top of the 883 backlit digital display, with the readings of Impact Value (IV) and also shows the number of times that the hammer has been dropped displayed. After four drops, the inferred %CBR is calculated from the drops and displayed.

Bluetooth and GPS models optionally available.



OPTIONAL BLUETOOTH AND GPS MODELS OF THE CLEGG 883 PROFESSIONAL ALSO AVAILABLE.

# BLUETOOTH®

#### **KEY FEATURES**

- Displays both IV (Impact Value) and inferred %CBR
- Number of drops indicated
- Removable water resistant 883 display with backlighting and top LCD readout

GEOTECHNICAL COMPACTION TESTING





# CLEGG 882 BASIC

# ECONOMY BASE COURSE ROADING AND DRAINAGE IMPACT TESTER

Clegg Impact Testers are used for determining compaction levels of materials (primarily roading and drainage metals), reinstatement and subfloor compaction.

The Clegg Basic tester is the economy model of the 4.5kg range. Compared with the Professional, the basic model has a different display that requires two handed operation (values are shown on the side of the 882 display, is not backlit and features a lower level of weather protection).

#### **KEY FEATURES**

- Displays both IV (Impact Value) and inferred %CBR
- Removable 882 display with side LCD readout
- Two handed operation

### CLEGG TURF

#### **SPORTS TURF COMPACTION TESTER**

This model Clegg hammer (**2.25kg**) is designed for compaction testing of football, cricket, equestrian and rugby surfaces. The readings will help provide good prediction of ball bounce for cricket surfaces and football pitches. One of the key reasons for using a Turf Clegg is to determine and monitor variations in soil compaction uniformity of a sports surface.

For golf, a **0.5kg** model is available that consists of a two hammer probes that operate independently.

#### **KEY FEATURES**

- Specially designed for sports turf compaction testing
- Determine and monitor bounce properties and consistency
- 0.5kg model designed for golf courses

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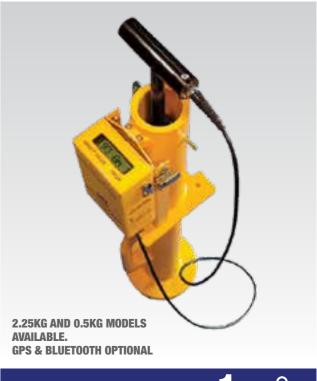
#### CLEGG IMPACT TESTERS



#### GEOTECHINCAL COMPACTION TESTING







SOIL & TURF COMPACTION TESTING



# SCALA PENETROMETER

#### **VANE PENETROMETER COMPACTION TESTER**

A regularly used compacting testing tool by many of New Zealand's soil engineers, the Scala Penetrometer is used to determine the penetration resistance of a soil. The Scala is manufactured in accordance with NZS 4402 Test 6.5.2: 1988 and is an extremely useful tool for profiling soil strength at depth.

The components are all zinc plated and are available individually or as a complete kit packed in a heavy duty canvas carry bag with optional additional 1.0m extensions and adaptors available.

#### **KEY FEATURES**

 Meets the compliance of NZS 4402: 1988 Test 6.5.2 Determination of the penetration resistance of a soil - Hand method using a dynamic cone penetrometers



PENETRATE **DEEPER WITH 1M** EXTENSION RODS

SOIL COMPACTION



### SCALA ACCESSORIES

#### **EXTENSIONS & ADAPTORS**

All the components that make up the Scala Penetrometer are available as accessories.

The most popular are the graduate extension rods, which a joined by a rod adapter. Each extension is 1m in length, and requires an adapter to connect to the "next extension".

If several extensions are used, the Scala Extractor below is recommended to remove the Scala.

#### SCALA EXTRACTOR

The Scala Extractor aids in the removal of Scala Penetrometer rods in the ground.

This easy-to-use extractor slides up and down the extensions being removed without the need to be put over the top of the rod.

It is highly recommended when using multiple extension rods on the Scala. Also available with removal disk to remove auger rods.



**GEO & UNDERGROUND** 

# GEOVANE SHEAR TESTER

#### SOIL SHEAR STRENGTH TESTERS

Shear vanes determine field measurement of the shear strength of cohesive soils.

Supplied with a 19mm vane blade, the Geovane measures soil shear strength from 0-200 kPa. An optional 33mm vane blade can measure from 0-40kPa. Screw the vane blade into the base of the Geovane, push the blade into the soil. Simply rotate the Geovane at a rate of 1 revolution per min, and take a reading off the face when the soil fails.

#### **KEY FEATURES**

- · Related Standards/Documents: BS1377 Part 9, NZGS Guideline for Hand Held Shear Vane Test
- 19mm vane blade standard, optional 33mm vane blade available

**GEO & UNDERGROUND** 

# SOIL **AUGER KIT 50MM**

#### **SOIL SAMPLING AND ANALYSIS**

The soil hand auger is used to gather soil samples from depth, or to create access in the ground, either for further testing or for pole/pile driving.

The kit can be assembled in a matter of seconds and the product's design enables the operator to remove a sample from the auger head for analysis away from the site.

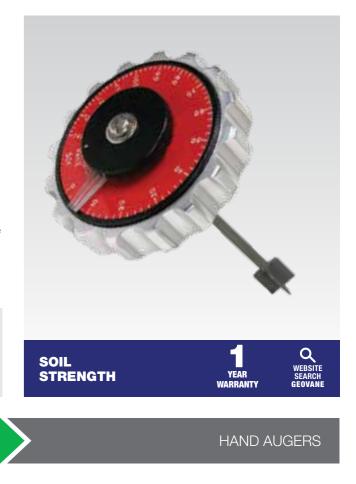
The Soil Auger Kit is designed for taking soil samples at depths up to five metres (using optional extensions).

75mm and 100mm auger heads available.

#### **KIT FEATURES**

- Standard Kit includes 1x 50mm auger head, T-bar handle assembly, 1 metre rod
- Canvas bag displayed here is OPTIONAL









### 105

Olympus is the leader in the ultrasonic determination of thickness and dry film coatings. Many commercial and industrial companies and consultants throughout New Zealand rely on the performance and reliability that Olympus has become reknown for.

OLYMPUS

COATING 00012

ENTER

Non Destructive

**Testing NDT** 

# NON DESTRUCTIVE TESTING

### OLYMPUS 27MG

# PROFESSIONAL DIGITAL THICKNESS GAUGE WITH DUAL TRANSDUCER

The 27MG from Olympus is a professional ultrasonic thickness gauge, designed for maintenance engineers and inspectors that need to monitor wall thickness in metal pipes, tanks, beams and structural supports.

Despite its compact size, the 27MG has many innovative measurement features utilising the same technologies that are available on our more advanced thickness gauges. The durable, rugged 27MG is battery-operated and features a large, backlit LCD with easy-to-read numerals, and an intuitive colour-coded keypad with direct access to many key features.

27MG smart features and capabilities include:

- 0.50 mm to 635 mm thickness range
- Automatic Probe Recognition
- Auto Zero Compensation
- Hi-Low Alarm settings
- Min./Max. thickness capture mode (20x per second)

The 27MG is compatible with Olympus' complete line of easy interchangeable dual element transducers that vary in frequencies, diameters, and temperature capabilities to deal with virtually every application. See chart over page.

# **OLYMPUS**

OLYMPUS IS AN INTERNATIONAL COMPANY OPERATING IN INDUSTRIAL, MEDICAL AND CONSUMER MARKETS, SPECIALISING IN OPTICS, ELECTRONICS AND PRECISION ENGINEERING.



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#### ULTRASONIC THICKNESS GAUGES





#### WHY CHOOSE OLYMPUS?

Olympus has an industry-leading portfolio of innovative test, measurement, and imaging instruments. Leading edge testing technologies include remote visual inspection, microscopy, ultrasound, phased array), eddy current, eddy current array, X-ray fluorescence and optical metrology. Our products include ultrasonic flaw detectors and thickness gauges, videoscopes, borescopes, microscopes, in-line and advanced nondestructive testing systems, XRF and XRD analysers, interferometers, and a large selection of scanners, probes, software programmes, and instrument accessories.

Our goal is to supply reliable, economical systems globally that enhance safety, security, quality and productivity for customers and that contribute to society. We are committed to pursuing the development of new technologies, products, and services that offer the best solutions to customers' needs. Our commitment to designing quality products is linked to our customers' responsibility to comply with industry standards and regulations.

# OLYMPUS 45MG

#### HIGH PENETRATION THICKNESS & CORROSION GAUGE WITH DATA LOGGING

Despite its compact size, the 27MG has many innovative measurement features utilizing the same technologies that are available on our more advanced thickness gauges. The durable, rugged 27MG is battery-operated and features a large, backlit LCD with easy-to-read numerals, and an intuitive colour-coded keypad with direct access to many key features.

27MG smart features and capabilities include:

- 0.50 mm to 635 mm thickness range
- Automatic Probe Recognition
- Auto Zero compensation
- Gain Adjust
- Differential mode
- Hi-Low Alarm settings
- Min./Max. thickness capture mode (20x per second)

# OLYMPUS TRANSDUCERS

TRANSDUCER	ITEM #	FREQ. (MHz)	CONNECTOR	TIP DIA. mm	RANGE STEEL mm	TEMP RANGE °C	CABLE
D7910	U8454038	5.0	90°	12.7	1.00 to 254	0 to 50	Potted
D790	U8450002	5.0	Straight	11.0	1.00 to 500	-20 to 500	Potted
D790-SM	U8450009	5.0	Straight	11.0	1.00 to 500	-20 to 500	LCMD-316-5B3
D790-RL	U8450007	5.0	90°	11.0	1.00 to 500	-20 to 500	LCLD-316-5G3
D790-SL	U8450008	5.0	Straight	11.0	1.00 to 500	-20 to 500	LCLD-316-5H
D791	U8450010	5.0	90°	11.0	1.00 to 500	-20 to 500	Potted
D791-RM	U8450011	5.0	90°	11.0	1.00 to 500	-20 to 400	LCMD-316-5C
D7912	Q4530005	10.0	Straight	7.5	0.50 to 25	0 to 50	Potted
D7913	Q4530006	10.0	90°	7.5	0.50 to 25	0 to 50	Potted
D794	U8450014	5.0	Straight	7.2	0.75 to 50	0 to 50	Potted
D797	U8450016	2.0	90°	22.9	3.80 to 635	-20 to 400	Potted
D797-SM	U8450017	2.0	Straight	22.9	3.80 to 635	-20 to 400	LCMD-316-5D
D7226	U8454013	7.5	90°	8.9	0.71 to 50	-20 to 150	Potted
D798-LF	U8450019	7.5	90°	8.9	0.71 to 50	-20 to 150	Potted
D798	U8450018	7.5	90°	7.2	0.71 to 50	-20 to 150	Potted
D798-SM	U8450020	7.5	Straight	7.2	0.71 to 50	-20 to 150	LCMD-316-5J
D799	U8450021	5.0	90°	11.0	1.00 to 500	-20 to 150	Potted
MTD7054	U8620225	5.0	90°	5.1	1.00 to 19	0 to 50	LCPD-78-5

Product specifications are subject to change, please confirm at time of purchase.



2 YEAR

WEBSITE

0.5-635mm

THICKNESS RANGE

# OLYMPUS 38DL PLUS

#### ADVANCED SINGLE & DUAL ELEMENT THICKNESS & CORROSION METER

Despite its compact size, the 27MG has many innovative measurement features utilizing the same technologies that are available on our more advanced thickness gauges. The durable, rugged 27MG is battery-operated and features a large, backlit LCD with easy-to-read numerals, and an intuitive colour-coded keypad with direct access to many key features.

**NON DESTRUCTIVE TESTING** 

27MG smart features and capabilities include:

- 0.50 mm to 635 mm thickness range
- Automatic Probe Recognition
- Auto Zero compensation
- Gain Adjust
- Differential mode
- Hi-Low Alarm settings
- Min./Max. thickness capture mode (20x per second)

# OLYMPUS GAGEVIEW

#### PC INTERFACE SOFTWARE PROGRAMME FOR DOCUMENTATION AND DATA TRANSFER

The GageView Interface Program is included with the Data Logger option for either the 45MG or 38DL Plus.

This Windows-based application collects, creates, prints, and manages data from the gauge. GageView Interface capabilities include:

- Create datasets and surveys
- Store data editing
- View dataset and survey files and setup values
- Download/upload thickness surveys
- Export surveys to spreadsheets and other programs
- Collecting snapshot screens
- Print Thickness, Setup Statistics and Grid Reports
- Download/upload single element transducer setup files
- Software updating



0.5-635mm THICKNESS RANGE







WINDOWS-BASED APPLICATION





# OLYMPUS SCANNERS

#### OLYMPUS WELD INSPECTION SCANNERS

Accurate has a wide range of scanners to address fabrication or maintenance weld inspections needs. We have solutions for small pipes up to flat plates with the capacity to hold multiple probes for complete weld volume coverage.

Whether you choose a motorised or manual option, Olympus' wide range of phased array scanners offer versatility, dependability, and repeatability.



#### OLYMPUS CORROSION INSPECTION SCANNERS

Corrosion mapping is a highly demanding application that requires the capability to precisely encode a probes position in up to two axes.

Corrosion scanners can be mounted on pipes and flat surfaces and are easy to use for fast detection of defects from manufacturing-induced lamination to in-service wall thickness reduction.

The Olympus models include semiautomated and Dual Linear Array (DLA) phased array corrosion systems through to fully automated, steerable motorised 2-axis scanners capable of performing corrosion mapping in remote locations.



#### OLYMPUS AEROSPACE INSPECTION SCANNERS

Inspecting large areas with fast C-scan acquisition is a critical feature for the aerospace industry. Olympus' range of professional scanners with suction cups are well suited to holding onto composite type surfaces, so you can perform mapping with up to two precise encoded axes.

Models include the RollerFORM, a phased array wheel probe, the GLIDER scanner, a two-axis encoding scanner for manual inspection of slightly curved or flat composite surfaces and the VersaMOUSe scanner, designed for linear encoded scans with a phased array probe.







#### BASIC DRY FILM ELCOMETER WITH REMOVABLE PROBE FOR COATING THICKNESS OF METALS

Compared with the lower cost BB20 unit, the BB30 features a removal probe and an angled display. The removable probe allows the sensor to be placed away from the meter. It utilisies the same dual ferrous and non-ferrous sensor to measure the thickness of metallic coatings as the BB20 albeit with a greater depth capability of up to 2mm (2000 microns).

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#### PAINT THICKNESS TESTING

The BB20 and BB30 paint thickness meters from Trotec are the ideal quick assessment tool for you to quickly determine the dry coating thickness of paints over metallic surfaces.

The dual sensor uses magnetic induction for steel (ferrous) metals and eddy current for aluminium (no ferrous) metals.



#### BASIC DRY FILM ELCOMETER FOR COATING THICKNESS OF METALS

The BB20 is a simple low cost paint/coating thickness meter. The dual ferrous and non-ferrous sensor enables the user to measure the thickness of metal coatings like paint and varnishes, galvenising and enamel on iron or non iron metals like aluminium. The measuring range of the BB20 is up to 1.25mm (1250 microns) with a typical accuracy of 3%. NON DESTRUCTIVE TESTING

# JAMES INSTRUMENTS V-METER MK IV

THE MOST ADVANCED ULTRA-SONIC TEST SYSTEM FOR ACCURATELY IDENTIFYING BASIC CHARACTERISTICS OF COARSE GRAINED MATERIALS SUCH AS CONCRETE, WOOD, MASONRY, CERAMIC, GRAPHITE AND MORE!

Advanced ultrasonic pulse velocity meter designed to determine the structural integrity of concrete, wood, ceramic and other coarse grained construction materials.

Using the ultrasonic sensors, cracks, voids and honeycombs can be detected up to a depth of 75mm, which can all lead to structural weakness.

Ultrasonic testing can be applied to new and old structures, slabs, columns, walls, fire damaged areas, hydroelectric structures, pipe, prefab and pre-stressed beams, cylinders and other concrete forms. A wide range of transducers are available.



# JAMES INSTRUMENTS **VUCON**

#### THE VUCON IMPACT ECHO SYSTEM IS FOR MEASURING THE THICKNESS AND QUALITY OF CONCRETE

The impact-echo method is based on the use of impact generated stress waves that propagate through the material and are reflected by both the materials external surfaces and internal flaws. This method can be used to make accurate non-destructive measurements of thickness in concrete slabs and plates, and to locate internal flaws such as honey-combing, debonding and delaminations.

It can measure thickness, locate cracks, voids and other defects in masonry structures where mortar bonds the masonry together. The impact-echo method is not affected by the presence of steel reinforcing bars.

Conforming to ASTM C-1383 it is ideal for bridges, decks, retaining walls, roads and runways.







# JAMES INSTRUMENTS **REBARSCOPE**

#### **ADVANCED AUTOMATIC DEPTH & SIZE COVER METER**

The Rebarscope® from James Instruments is an advanced rebar locating system, using electo magnetic eddy current technology.

The Rebarscope, enables the user to not only locate reinforcement bars but also determine rebar depth and the rebar size. Is also capable of locating non ferrous metals: such as copper, aluminium, some stainless steels, wire, and more. The optional Scan Cart logs distance data as well as the location of rebar.

# JAMES INSTRUMENTS MINI R-METER

#### **PROFESSIONAL CONCRETE REBAR LOCATOR**

The Mini R-Meter is an industry professional accurate rebar and cover meter, for finding and determinig the depth of rebar in concrete.

From James Instruments, a world leader in NDT testing equipment, the Mini-R allows the user to select the size diameter of the rebar, then the instrument will automatically correlate the rebar cover. The exact position and orientation of rebar can be measured and rebar-free areas can be identified for drilling, grinding, resurfacing, or insertion of new machinery mountings.

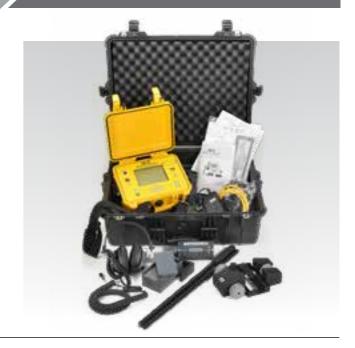
#### **RELATED PRODUCT** CONCRETE SCANNING GPR

**GEORADAR** C-THRUE

AN EASY-TO-USE AND ROBUST SOLUTION TO SEE THROUGH CONCRETE STRUCTURES AND REVEAL REAL-TIME DATA THAT LEADS TO OPTIMAL DECISION-MAKING.



#### REBAR COVER METERS





### SINGLE HANDHELD SENSOR FOR REBAR DEPTH DETERMINATION UP TO 200MM

NON DESTRUCTIVE TESTING

# JAMES INSTRUMENTS WM-250

#### MANUAL REBOUND 'SCHMIDT TYPE' HAMMER

The WM-250 from James Instruments is a manual rebound hammer, used for the quick determination field testing of the compressive strength of cured concrete structures, primarily floors and vertical surfaces.

This easy-to-use instrument provides a quick and simple test for obtaining an immediate indication of concrete strength in various parts of a structure.

It will also provide the indices of hardness and compressive strength for other construction materials. The unit can be used on plaster and mortar as well to verify consistency. The Test Hammer is also used on brittle rock cores where a larger impact will damage the specimen. It is typically used for thin concrete specimens (between 50mm (2") and 100mm (4") thick) such as sidewalks, bridgedecks and some driveways.

Rebound hammers are easy to record the mean rebound number. It conforms to ASTM C-805 and other international standards.

#### **SPECIFICATIONS**

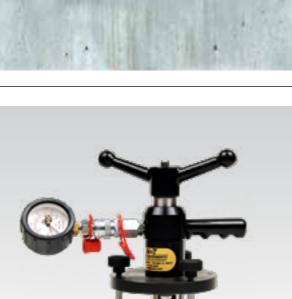
- Weight: 0.9kg
- Size: 267mm with plunger retracted
- Impact Energy: 2.2Nm
- Includes Carrying Case

# JAMES INSTRUMENTS JAMES BOND TESTER MK III

### FOR TESTING TENSILE STRENGTH OF OVERLAYS, AND OVERLAYMENTS

The James Bond Tester<sup>™</sup> MK III or pull off adhesion test measures the bond strength or tensile strength of concrete, asphalt, tile, concrete repair, or other overlay material by the direct tension or pull off method.

Features an adjustable alignment plate with built-in leveling facility for both vertical and horizontal pulls.









### MECMESIN DIGITAL SHOTCRETE PENETROMETER 1000N / DELUXE

**NON DESTRUCTIVE TESTING** 

#### THE BEST TOOL FOR SHOTCRETE TESTING

The Shotcrete Penetrometer is a complete portable system for testing the compressive strength of the initial curing stage of young sprayed concrete to BS EN 14488-2 (Method A).

It provides accurate readings of the forces required to penetrate sprayed (shotcrete) or poured concrete. These resistive force readings are then used to convert to a compressive strength value. This accuracy—beyond the requirements of the standard—and portability make it ideal for on-site testing.

The deluxe version has a conversion factor entry to convert measurements to KPa and it has a password protect lockable keypad.

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#### SHOTCRETE PENETROMETERS



# Technical Safety Equipment

REFILHTER

9

Gas Detection, Confined Space Entry, Height Safety and Intrinsically Safe Equipment

Keeping the worker safe is more than just PPE. There is also keeping the equipment and system in optimum working order. Accurate's portfolio of technical sensing, monitoring, height safety and inspection equipment is second to none throughout New Zealand, all supported and serviced in house.



# **Portable Gas** Detection

Industry leading portable single and multi-gas detection systems from MSA Safety, GfG Instrumentation and Gas Clip Technologies, with remote monitoring, live data, subscription support and certification all available from Accurate.

Single and multi-gas detectors also available for short-term and long-term rental.



MSA DETECTORS ARE THE 1ST CHOICE IN MANY OF NZ'S INDUSTRIES INCLUDING **UTILITY, OIL & GAS. TOUGH & FUNCTIONAL THEY FEATURE UNSURPASSED DURABILITY, ERGONOMIC DESIGN AND HIGH-CONTRAST DISPLAYS.** 

# MSA **ALTAIR 4XR**



#### A CLASS LEADING MULTI-GAS DETECTOR THAT **MEASURES UP TO 4-GASES WITH INDUSTRY** WARRANTIES UP TO 5 YEARS.

The ALTAIR 4XR Gas Detector is the toughest 4-gas monitor on the market with the ability to survive a 7.5m drop test onto concrete. With glove-friendly buttons and a highcontrast display, the Altair 4XR is easy to operate in any work environment, even low-light conditions.

Outfitted with rapid-response MSA XCell® sensors, the 4XR features double the industry average of expected life, designed for an average life of more than four years. An end-of-sensor-life indicator gives advanced warning to user, eliminating service outages. The sensors' electronics are miniaturised and placed inside the sensor providing superior stability, accuracy, repeatability and fast response.

GASES: Combustible, O2, H2S, CO, NO2, SO2

#### **KEY FEATURES**

- Rapid-response sensors XCell Sensors
- Real-time Bluetooth Connectivity
- MotionAlert<sup>™</sup> man-down alarms
- Live gas readings
- 4-5 Year Long-Life Sensors

# safetyio

#### LIVE SITE/PERSON MONITORING

- Real-time awareness of gas exposures and readings
- Online notifications of device concerns, man-down alarms and panic button presses
- Live employee location and movement with street and satellite view. See page XX.

#### Google Play

ALTAIR APP

- Configure instruments remotely, without a PC
- and compliance awareness







**AVAILABLE IN CHARCOAL** & GLOW-IN-THE-DARK



**OPTIONAL GALAXY GX2 BUMP TEST. CALIBRATION** AND CHARGING SYSTEM. SEE PAGE XX

#### **MotionAlert<sup>™</sup>** MAN DOWN ALARM

(UP TO) YEAR





Bluetooth connectivity allows: • Receive gas detection readings, alarms and man-down alerts • Email calibration, sampling, event reports and incident



Trusted by many of New Zealand's leading industries.

- XCell Sensors are two times faster than industry average
- Double the industry average of expected life of 4-5 years
- End-of-sensor-life indicator gives advanced warning to user

# MSA **ALTAIR 5X**

#### **ADVANCED MULTI-GAS DETECTOR WITH** SIX-GAS, PID AND VOC CAPABILITY

The ALTAIR 5X is an advanced portable detector that is capable of measuring up to 6-gases simultaneously, as well as VOC detection from the integrated PID sensor.

Designed for use in heavy industry markets, the 5X features large buttons for easy use; the molded housing also protects the detector from drops up to 3m. The exclusive MotionAlert<sup>™</sup> feature lets others know if a user has become immobile, and the InstantAlert<sup>™</sup> activates a manual alarm if a potentially hazardous situation has arisen.

Driven by advanced MSA XCell<sup>®</sup> Sensor Technology, the detector delivers faster response time, better stability, accuracy, and cost savings over the life of the instrument.

The ALTAIR 5X offers Bluetooth wireless technology that can be used with Android devices and the MSA Connect App to manage instrument data and setup. Also allows you to share status details with Safety io Grid Live Monitor service.

GASES: Combustible, O2, H2S, CO, NO2, SO2, CO2, CL2, CLO2, NH3, NO, HCN, PH3, PID

#### **KEY FEATURES**

- Rapid-response sensors XCell Sensors
- Real-time Bluetooth Connectivity
- MotionAlert<sup>™</sup> man-down alarms
- · Live gas readings
- 4-5 Year Long-life Sensors

### DETECTING VOCS WITH PID – HOW IT WORKS.

Manufacturers use PID sensors to detector VOC (volatile organic compounds). A PID (photoionisation detector) uses an ultraviolet (UV) light source to break down VOCs in the air into positive and negative ions. The PID then detects or measures the charge of the ionized gas, with the charge being a function of the concentration of VOCs in the air.

**AVAILABLE IN PID AND IR** MODELS ALTERN FOR M

**OPTIONAL BUMP TEST, CALIBRATION AND** CHARGING SYSTEM. SEE PAGE XX

MotionAlert <sup>TM</sup> Man-down alarm	<b>3</b> (UP TO) YEAR WARRANTY	Q WEBSITE SEARCH ALTAIR 5	
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When compared with regular Pellistor gas sensors, the infrared technology used by MSA Safety in their XCell Sensors, offer excellent long-term stability and eliminates the need for frequent calibrations. To minimise false readings, MSA IR sensors do not use a mirror (which can double path lengths and lead to condensation). To overcome this the lamp and detector and placed in line.



#### SAFETY EQUIPMENT

# MSA **ALTAIR**

#### SMART NETWORK CONNECTED LONG-LIFE **MULTI-GAS DETECTOR.**

The future of portable gas detection for site compliance. The io360 area monitor gas detector has been designed by MSA to quickly deploy a detection device for local or remote monitoring.

Connecting your ALTAIR io360 to Safety io Grid gives you the power to remotely manage and monitor your fleet of detectors, capture data, and take action to create safer sites.

Monitor along a fence line, confined space or any high risk area where a gas hazard might occur. When the ALTAIR io360 detects a hazard, all alarms and evacuations are displayed on-site to your workers and to the person overseeing the network. The io360 is pre-configured ready to go, straight out of the box, with all the hallmarks made famous by MSA Safety with their ALTAIR range.

#### ULTRA-LONG BATTERY LIFE

Four-gas detection with a catalytic bead sensor, compact portability, and 60-days of battery life - no compromises.

WATERPROOF RUGGED DESIGN

IP68 for spray, dust, and submersion, 3m drop-tested.

XCELL SENSORS

Rapid response best in class sensor technology.

GASES: 02, CO, H2S



#### CONNECTED MULTI-GAS DETECTORS



# MSA Altair 2X

#### **HI-PERFORMANCE SINGLE OR DUAL GAS DETECTOR**

Available in single or dual gas configuration, the ALTAIR 2X gas detector from MSA is the first portable gas detector to introduce revolutionary Xcell pulse technology. Based on proven science and advanced patented sensor capabilities, the detector delivers the world's first stand-alone bump tests to be performed without the need for calibration gas.

GASES: CO, H2S, CL2, NH3, SO2, NO2, 2XT: CO/H2S, CO/NO2, H2S/SO2

#### **KEY FEATURES**

- Single (2X or 2XP) or dual (2XT) gas detection
- Four-year expected instrument and sensor life
- Fastest sensor response times, lowest calibration gas flow rate on the market
- Three-year instrument warranty (Two years on Cl2, NH3 models)



INTRINSICALLY-SAFE DESIGN, CERTIFIED DUST AND WATER-TIGHT IP67 CONSTRUCTION.

ALTAIR 2X ALTAIR 2XT ALTAIR 2XP SINGLE GAS TWO-TOX GAS DETECTOR W/STAND DETECTOR DETECTOR W/STAND UP TO ALONE BUMP TEST WARR
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# MSA Altair pro

#### SINGLE GAS SENSOR PORTABLE DETECTOR

The ALTAIR PRO is a single-gas detector available with a wide range of features, including simple intuitive operation, small rugged design (IP67 water and dustproof), and dependable technology that is there when needed.

The Pro is a perfect example of how technology can combine user flexibility and functional simplicity. True single-button operation provides the user with a clear path to any function.

#### **KEY FEATURES**

- Accurately measures the gas concentration or percent oxygen
- Adjustable alarm set points are offered for LOW, HIGH, TWA and STEL
- One-button operation
- Event-logging and data-logging



IT IS AVAILABLE FOR THE DETECTION OF EITHER OXYGEN (02) OR HYDROGEN CYANIDE (HCN).



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# MSA Galaxy GX2

The MSA GALAXY GX2 is an easy-to-use automated test stand which offers high performance as either a standalone unit or a mutli setup integrated portable detector management system.

The GX2 is compatible with the following gas detectors of the ALTAIR range;

- ALTAIR 4X/4XRALTAIR 5X/5XR
- safetyio
- ALTAIR PRO
  ALTAIR 2X, 2XT, 2XP

The GX2 is designed to undertake charging, bump testing and calibration (using calibration gas) of the portable Altair gas detectors.

GX2 also integrates with MSA's **Safety io** Grid Fleet Manager Service. This provides active safety management for gas exposure including email alerts, direct data input, live filtering, test and exposure queries, collecting and printing of reports.

For short-term or long-term project management of construction, general industry, oil and gas or plant maintenance site safety, the GX2 system from MSA has everything covered.



#### BUMP GAS & TEST STATIONS



#### **KEY FEATURES**

- Simultaneous test up to 10 test stands via a single cylinder of test gas
- Safety io provides proactive management, dashboard overview and total record-keeping
- At-a-glance indicators include low calibration gas volume, expiration warnings and test status
- Colour touchscreen for easy setup and viewing
- Extremely simple to use; testing starts automatically without touching a single button
- GALAXY GX2 System is optimised for use with MSA's XCell<sup>®</sup> Sensors; provides up to 50% cost of ownership reduction

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# MSA SAFETY iO **GRID LINE MONITOR**

#### LIVE GRID GAS DETECTION MONITORING AND FLEET MANAGEMENT

Transform your outdated, manual resource reliant, gas detection programme into a live connected safety platform.

Gas detection is a key part of your safety programme and a wise investment. However, many admit that there are frustrations, because their gas detectors or long-term contracts don't deliver on their promised value or support.

A manual database, record keeping and monitoring system is reliant on capturing information on the status of workers or the equipment, after an event. Often a gas detector will be discovered as faulty or needing service.

MSA Safety io enables you to confidently protect your co-workers with LIVE real-time safety alerts, reports and insights. The status of your gas detectors is also recorded.

With Safety iO you can focus on overall person and site safety, not just the status of your detectors.

- Grid Fleet Manager allows the user to assess their MSA fleet status - all from your browser.
- Grid Live Monitor keeps you in the know with what's going on - live, so you can take action immediately.

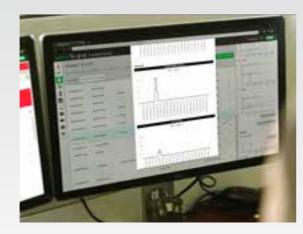
Focus on safety, not just compliance or detectors.

#### **GRID FLEET** MANAGER

Assess, address and share your MSA fleet status - all from your browser

- Incident and compliance awareness and reports
- Detector and test equipment management
- Secure web-based setup and access
- IT-free maintenance
- Works with MSA detectors and GALAXY GX2 test banks

LIVE GAS MONITORING



# safetyio

**GRID LIVE MONITOR INDICATING CONNECTED WORKERS, CURRENT READINGS, THEIR LOCATION AND STATUS** 

#### GRID LIVE MONITOR

Know what's going on – and take action – when seconds count

- Real-time worker health and safety notifications
- Works with ALTAIR 4XR, 5X and io360 detectors
- Secure web-based setup and access
- IT-free maintenance
- Incident and compliance awareness, management and reports



SAFETY EQUIPMENT



# CALIBRATION AND BUMP TEST **GAS MIXES**

Accurate offer multiple quality test gas mixtures for a variety of industrial and commercial industry applications. Suitable for Bump Testing and Calibration of gas detectors. Precision gravimetrically mixed gases for non reactive single, reactive single and reactive quad gas mixes.

#### FOR A FULL RANGE OF AVAILABLE GAS MIXTURES, VISIT WWW.SAFETY.KIWI



### GAS BOTTLE REGULATORS

Trigger, Fixed and Demand Flow regulators available in stainless steel, aluminium, and nickel plated brass. Suitable for use with a range of various sized aluminium gas cylinders. See our website for exact regulator/gas bottle compatibility.



#### CALIBRATION GAS & REGULATORS

#### **NON-REACTIVE SINGLE GAS MIX 105L**

Disposable aluminium alloy cylinders supplied with nonreactive single gas, pressurised to 1200 psi, for demand flow regulators. Two year life from date of manufacture.

#### **POPULAR GASES**

- 20.9% Zero Air
- 100% Nitrogen (N2)
- 2.5% Vol Methane (CH4)
- 2.5% Carbon Dioxide (C02) in Nitrogen (N2)
- 0.6% Propane (C3H8) in air
- 100PPM Isobutylene (C4H8) in air

#### **REACTIVE SINGLE GAS MIX**

44L and 116L aluminium alloy cylinders supplied with reactive single gas.

#### **POPULAR GASES**

- 44L 10PPM Sulfur Dioxide (SO2) in air
- 44L 10PPM Hydrogen Cyanide (HCN) in air
- 44L 30PPM Hydrogen Chloride (HCL) in air
- 116L 25PPM Ammonia (NH3) in air
- 116L 40PPM Hydrogen Sulfide (H2S) in air

#### **REACTIVE MULTI GAS MIX**

Gravimetrically mixed multi gas cylinders for MSA, Gas Clip, GfG, BW and Dräger portable gas detectors.

#### **POPULAR MIXES**

- 34L 15% Oxygen (O2), 60PPM Carbon Monoxide (CO), 20PPM Hydrogen Sulfide (H2S), 1.45% Methane (CH4)
- 44L 15% Oxygen (O2), 60PPM Carbon Monoxide (CO), 20PPM Hydrogen Sulfide (H2S), 29% Methane (CH4)
- 44L 18% Oxygen (O2), 100PPM Carbon Monoxide (CO), 25PPM Hydrogen Sulfide (H2S), 50% LEL

# GFG INSTRUMENTATION **G888**

#### **POLYTECTOR DETECTOR FOR DETECTION OF 1-7 GASES WITH OPTIONAL RADIO MODULE**

The Microtector III G888 from GfG is one of the smallest and lightest 7-portable gas measurement devices with a radio module available. Depending on the sensor equipment, the device will warn against risks caused by toxic poisoning as well as flammable gases and vapours, including depletion and excess of oxygen.

#### EASY OPERATION

The G888 is immediately ready for operation as soon as it is switched on. The main functions - peak display, LED lamp, alarm reset, display zoom and rotating display are each controlled with a simple keystroke. It is possible to conveniently navigate the G888 with three buttons in the user menu, in order to change the device settings or to read the data logger.

#### MAN DOWN ALARM

The G888 is equipped with a man down alarm. The time interval when the alarm is triggered can be individually set and password-protected, for the situation. Thus, in critical cases no time is being lost while initiating rescue measures.

#### GfG LINK

The GfG-Link is a safe link between devices with the panel indicating all linked devices with their current status. Depending on the type, up to ten devices can be linked with a GfG-Link. Rapid identification of the device as well as the current measurement data will be displayed on the screen with an operation in the field of up to 300m.

#### GASES

- Catalytic sensors for combustible gases
- Electrochemical sensors for O2, H2S, CO, NO2, SO2, CL2, NH3, NO, HCL, HCN, PH3, ETO, SiH4, H2, CLO2
- Infra-Red sensors for CO2, CH4 & Hydrocarbons

#### **KEY FEATURES**

- Gas detector for 1 up to 7 Gases
- CO2 and CH4 detection via IR
- Man-Down Alarm
- Data logging for measured gas and activated alarms up to 500 hours
- · Lifetime warranty on case and electronics
- Manufactured in Germany





#### **1-7 GAS** DETECTION

Q WEBSITE SEARCH

#### CO2 AND CH4 INFRARED DETECTION

Unlike conventional multi-gas detectors, the G888 can detect carbon dioxide (CO2) and hydrocarbons (such as methane and propane) simultaneously, via IR. Optionally, the infrared sensor can be pressure compensated, for use in big pressure fluctuations (e.g. in the mining sector). Sensor poisoning can be excluded by using IR technology. The IR sensor also has the added advantage that it is not damaged even at highest gas concentrations.



### GFG INSTRUMENTATION **G999**

#### **POLYTECTOR DETECTOR FOR DETECTION OF 1-7 GASES WITH INTEGRATED PUMP**

The G999 is based on the G888 (left) with the additional feature of an integrated electrical suction pump.

This works differently to the diffusion sensing of the G888. The pump enables users to pre-test the environment before entry, to determine the gas levels. If safe entry has been determined, the user, once they have entered the space, can then switch off the pump and the meter will revert to the conventional diffusion sensing whilst in the confined space, without the annoyance of the pump continually operating.

The GfG999 is capable of connecting to the GfG-Link for rapid identification of connected devices as well as the current measurement data.

GASES: Sames as G888 plus PID sensor.

#### **KEY FEATURES**

- · Switchable on the fly between diffusion to sampling pump modes
- Integrated pump for pre-entry sampling
- CO2 and CH4 detection via IR sensor
- Man-Down Alarm
- · Data logging for measured gas and activated alarms up to 500 hours
- · Lifetime warranty on case and electronics
- Manufactured in Germany
- PID Sensor Option



#### WHO IS GFG?

GfG (Gesellschaft für Gerätebau) was founded in 1961 in Germany, by Rolf Huebner, after a contract was secured with the Dortmund mining authority to produce the portable gas warning device "Methanprüfer K95" - the first electronic gas detector to be successfully used in the arduous environments found in coal mining. Since then, GFG has positioned itself as a leading specialist for gas detection and gas warning technology in the market. The knowledge of GfG's specialists means that detection solutions are possible for a wide range of industries and markets, including some of the most difficult applications. GfG's range of instrumentation covers portable gas detection, fixed gas systems and water measuring systems.



# GasDetection Technologies

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# GAS CLIP TECHNOLOGIES MGC SIMPLE

#### **TWO YEAR BATTERY LIFE FOUR-GAS DETECTOR**

Gas detection has been made 'simple' by Gas Clip Technologies. The MGC Simple is a site compliant calibrated 4-gas portable detector that never needs charging – ever!

Just turn it on and have worry-free assurance of protection against toxic gases 24/7 for up to two full years. Reliably test for hydrogen sulfide (H2S), carbon monoxide (CO), oxygen (O2) and combustible gases (LEL) with this simple-to-use and simple-to-maintain detector.

#### LOW POWER USAGE IS THE KEY!

Gas Clip Technologies' continued refinement of advanced low-power photometric infrared technology for combustible gas measurement helps make gas detection simpler and safer than ever.

Assembled in the USA, the MGC Simple will work in oxygen enriched and oxygen deficient environments, with continuous one second data logging while the LEL sensor is immune to H2S and silicone poison.

#### **KEY FEATURES**

- No charging required
- Low cost compliant portable 4-gas detector
- Ergonomic, simple one button operation
- Compatible with MGC Simple Dock or MGC Simple Wall Mount Dock
- LEL sensor is immune to H2S and silicone poison



MGC SIMPLE PLUS MODEL NOW AVAILABLE WITH AN EXTENDED 3-YEAR RUNTIME!





AP Ratings indicate how well an item is protected against DUST and WATER. The first number references dust, the 2nd - water.

- Highest IP scale rating against fine dust (6)
- Submersible rating against water ingress (8)



What's the secret of the MGC's extended battery life?

MGC employ the use of low-power photo-metric technology for the detection of the gases. It has been refined further in the SIMPLE and SIMPLE PLUS for even longer battery performance.



Both the SIMPLE and SIMPLE PLUS models feature continuous 1 second data logging. When used with the MGC Simple

Dock, the GCT Manager software can assess the individual event logs from the meter, including time, date, calibration and bump data.



SAFETY EQUIPMENT

# GAS CLIP TECHNOLOGIES MGC INFRARED

#### LONG 60-DAY BATTERY LIFE, FOUR-GAS DETECTOR

Always forgetting to charge your gas detector? The MGC IR features the longest battery life of any portable gas detector. It can go a full two months without a charge, even without ever having to be turned off. Shut down the detector nightly and the battery can last up to four months!

#### PUMP VERSION AVAILABLE

With the PUMP version, the operator can attach a connecting hose to the detector and the MGC Pump will then detect a sample for where the hose is placed (e.g. inside a manhole) before the operator enters that space.

#### **KEY FEATURES**

- Economical compliant portable 4-gas detector
- Bump/Calibration reminders
- Docking capability with MGC Dock
- PUMP version detects gases via a hose connection before entry to the space

# GAS CLIP TECHNOLOGIES MGC PELLISTOR

#### **30-HOUR BATTERY LIFE, 4-GAS DETECTOR**

The MGC Pellistor is an economical 4-gas portable detector, ideal for simple safety compliance in the workplace. This detector also eliminates the need to frequently calibrate. It can go six months without being calibrated.

#### PUMP VERSION AVAILABLE

With the PUMP version, the operator can attach a connecting hose to the detector and the MGC Pump will then detect a sample for where the hose is placed (e.g. inside a manhole) before the operator enters that space.

#### **KEY FEATURES**

- Economical compliant portable 4-gas detector
- Bump/Calibration reminders
- Docking capability with MGC Dock
- PUMP version detects gases via a hose connection before entry to the space

www.accurate.kiwi



### MULTI-GAS DETECTORS

# GAS CLIP TECHNOLOGIES SGC

#### **ECONOMICAL SINGLE GAS DETECTOR**

Whether it's the hottest environment or the coldest, the Single Gas Clip is designed and tested to provide worker safety in the harshest working conditions.

With simple one button operation, the SGC features unmatched sensor reliability for the detection of hydrogen sulfide H2S, carbon monoxide CO, or oxygen O2, with adjustable alarm set points, real-time gas reading capability, two-way IR communication for event downloads and bump testing capability.

#### **KEY FEATURES**

- Adjustable alarm set points
- 0.1 ppm resolution for H2S sensor and display
- Programmable unique 6-digit detector identification
- Docking capability with SGC Dock



THE SGC FEATURES A SINGLE GAS SENSOR. Choose the type of gas you need to detect.



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# GAS CLIP TECHNOLOGIES SGC PLUS

#### **ECONOMICAL SINGLE GAS DETECTOR**

Compared with the standard SGC model above, the SGC PLUS features a 'Hibernate' mode, which allows users to place the meter in a rested state when not in use.

This makes the SGC PLUS an ideal single gas detector for rental markets and seasonal contractors. When the job is finished, synchronise the instrument with the IR Link or the SGC Dock and put the detector in a rested state. When required again, simply press the power button to reactivate the detector.

#### **KEY FEATURES**

- Hibernate mode puts detector into a rest state
   when not in use
- One button re-activation mode
- Adjustable alarm set points
- Docking capability with SGC Dock

THE SGC PLUS FEATURES A SINGLE GAS SENSOR. CHOOSE THE TYPE OF GAS YOU NEED TO DETECT.



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SAFETY EQUIPMENT

# GAS CLIP TECHNOLOGIES DOCKING STATIONS

#### **MGC DOCK**

Simple to operate, the MGC Dock is an all-in-one standalone docking station designed for regular bump testing or calibrating of up to four MGC detectors, simultaneously. Logs are stored on a USB flash drive which can easily be transferred to a computer for analysis of the data results.

Models available to suit: SGC, Simple, IR, IR Pump and Pellistor.

#### MGC WM DOCK WALL MOUNT

Gas Clip Technologies offers a wall mount solution for our MGC Dock. Instead of being housed in a case, the WM Mount option provides a slim cabinet type case that can be easily mounted on a wall.

This option is a perfect fit for facilities or office environments, where the gas monitors can be easily charged, tested and kept in one location.





#### DOCKING TEST STATIONS



#### **ABOUT GAS CLIP TECHNOLOGIES**

Based in Texas, USA, Gas Clip Technologies is founded on returning safety, simplicity, reliability, and customer satisfaction to the gas detection business.

Their focus from the beginning has been on one thing, designing and manufacturing simple-to-use portable gas detectors that save precious time, resources and lives.

Over the years, Gas Clip Technologies has pioneered and perfected the development of advanced infrared LEL sensor technology for portable gas detection.

This low-power LED photometric infrared technology for LEL detection of hydrocarbon gases has not only reduced detector maintenance, downtime and expenses, but it has also made daily charging of portable multi-gas detectors a thing of the past.

This technology can be found in each of their multi-gas detectors which enables them to run continuously for days, months or even years at a time.

# SENSIT **HXG SERIES**

#### **COMBUSTIBLE GAS LEAK DETECTORS**

The SENSIT HXG-2d and HXG-3 are handheld instruments for detecting and finding natural, methane or propane gas leaks.

The HXG-2d incorporates a semi-conductor sensor to measure combustible gases in PPM and auto ranges to percent LEL, when concentrations exceed 990 PPM.

The HXG-3 shows (LEL) and PPM readings simultaneously for accurate gas leak detection and gas analysis. Audible and visual alarms warn of hazardous conditions. Data Save allows you to save data during any gas leak investigation.

#### **KEY FEATURES**

- Direct PPM or LEL Readout
- Adjustable Tick-Dial Leak Detection
- Long-life, Low-Cost combustible sensor
- Infrared Data Downloading (HXG-3)
- Simultaneous LEL and PPM display (HXG-3)





# SENSIT **GOLD G2**

#### **COMBO COMBUSTIBLE/MULTI GAS DETECTOR**

The SENSIT GOLD is a portable gas leak detector and multigas confined space monitor, all in the one instrument. The Gold is ideal for determining gas leaks, pinpointing the leak, gas pipeline purging and basic confined space applications.

As an investigative tool, the Sensit Gold is designed to find the source of combustible gas leaks fast. Up to 4-gases can be displayed including PPM, LEL, VOL.

GASES: Combustible, O2, CO, H2S, HCN

#### **KEY FEATURES**

- Can determine both combustible and multi gases
- · Bright visible easy to read backlit display
- "Tick" Dial Leak Locating
- Data Logging and Internal Memory
- Audible and Visual Alarms





# SENSIT **TRAK-IT IIIA**

#### **COMBUSTIBLE GAS INDICATOR**

Made in the USA, the TRAK-IT® Illa from Sensit is the most durable and user-friendly combustible gas indicator (CGI) available.

This multi-function instrument is designed for pinpointing underground gas leaks, pipeline gas purging, and confined space applications. Can be configured for combustible gas readings in PPM, LEL and/or percent volume, plus oxygen and a variety of toxic sensors.

#### GASES: Combustible, O2, CO, H2S, HCN

#### **KEY FEATURES**

- Built-in Natural Gas & Propane Calibration
- Internal Two-Speed High-Volume Pump
- Internal Memory & Infrared Data Download
- LED Warning Lights
- Large Bright Graphic Display

# TROTEC **BG SERIES**

#### **COMBUSTIBLE GAS LEAK DETECTORS**

The TROTEC BG30 and BG40 handheld instruments are combustible gas sensors with built-in alarm thresholds, commonly used for the detection of gas leaks on compact pipelines, fittings, gas cartridges or LPG containers.

Both meters detect natural gas, methane, ethane, propane, butane, acetone, alcohol, ammonia, petrol, LPG, turbine fuel, hydrogen sulphide, industrial solvents, paint thinners and other combustible gases.

#### **KEY FEATURES**

- · Quick and easy detection of gas leaks
- · Visual and acoustic alarm signal
- Variable sensitivity control
- Large backlit LCD display (BG40)
- LEL and PPM display (BG40)

#### GAS DETECTION CONTROLLERS





LEAKS

# CO2 METER **SAN-11**

#### **PORTABLE CO2 DETECTOR**

The SAN-11 is a personal 5% CO2 monitor with integrated Data Logger. Designed for people working in enclosed areas where carbon dioxide buildup may cause personal harm.

Features data logging capabilities where the data log files can be downloaded as a csv/xls file and are then displayed using the optional GasLab Software. Popular industries where CO2 build-up is a concern for personal safety include wine production, craft breweries, food and restaurant production.

#### **KEY FEATURES**

- Audible, visual strobe light and vibrating alarms
- Man-down alarm leverages accelerometer technology
- Rechargeable Li-Ion battery, 12+hrs per charge
- Large LCD displays CO2, Temperature & RH%
- · Rugged design with protective rubber enclosure



SENSOR ACCURACY ±200PPM ±10% READING VALUE

SINGLE GAS	CO2 CARBON DIOXIDE	Q WEBSITE SEARCH SAN-11
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# TROTEC **BQ16**

#### HCHO (CH2O) / VOC DETECTOR

The BQ16 is used to determine Formaldehyde (HCHO) and Volatile Organic Compounds (VOC) concentrations for air quality assessments. Both gases are deemed as dangerous substance groups within indoor air exposure.

Easy-to-use, the BQ16 can measure these concentrations simultaneously to ensure that the room air pollution is harmless. Minor concentrations of as low as 0.01 ppm are determined.

#### **KEY FEATURES**

- Measures HCHO and VOC simutaneously
- · Determination of measured values in ppm or mg/m<sup>3</sup>
- · Detects even minor concentrations as low as 0.01 ppm or 0.01 mg/m<sup>3</sup>
- MAX, MIN and HOLD function







# **Fixed Gas and Flame Detection**

Fixed Gas Detection and monitoring is critical in many of New Zealand's key infrastructure environments, providing continuous, area and personnel protection 24 hours a day. Fixed Gas detection systems are designed to alert workers of potential danger, whether this be poisoning by toxic gases, asphyxiation due to lack of oxygen or explosion caused by combustible gases.

### OXYGEN

### 0-25%

# MSA Ultima® X5000

#### DUAL SENSOR CAPABLE BLUETOOTH ENABLED FIXED GAS MONITOR

The ULTIMA® X5000 Gas Monitor is the future of gas detection for oxygen, toxic and combustible gas detection.

The X5000 utilises MSA's advanced longlife XCell® gas sensors with TruCal® technology, with life expectancy typically double that of the industry average sensor life. TruCal technology actively monitors the sensor integrity and compensates for environmental factors that cause traditional electrochemical sensors to drift. An industry first, Diffusion Supervision warns if a sensor inlet becomes blocked and is unable to detect gases.

The gas transmitter's advanced, OLED display is easy to read and the unique touch-screen interface makes it simple to navigate. The gas monitor employs green, yellow and red LEDs to signal normal, fault and alarm conditions.

GASES: Combustible, O2, H2S, CO, CO2, CL2, NH3, SO2, H2, NO2, NO, HCL

#### **KEY FEATURES**

- Longlife XCell Sensors, self checks 4x per day
- TruCal\* actively monitors the sensor integrity
- OLED display, bright LED's for extreme visibility
- Dual sensor capability doubles the sensing power with half of the footprint of a single gas transmitter
- Bluetooth connectivity with X/S Connect App provides real-time information to your mobile



X/S CONNECT APP INTERFACES THE ULTIMA X5000 VIA BLUETOOTH WITH A SMART PHONE OR TABLET



# TruCal<sup>®</sup>

#### AEC SENSOR CHECKING

Using patented pulse check technology and proprietary Adaptive Environmental Compensation (AEC), all TruCal XCell sensors verify operation by actively adjusting the sensor output for changes in sensitivity.



Diffusion supervision actively monitors the sensor inlet for obstructions. If an obstruction is detected, the sensor will go into a fault mode to alert users and the control room that it is not seeing gas due to an obstruction.

# SafeSwap®

SMART & SAFE SENSOR CHANGE

- Patented SafeSwap technology, allows users to change or replace XCell sensors without powering down the instrument
- SwapDelay enables users a 2-minute window to change sensors without triggering fault.



SAFETY EQUIPMENT

# MSA Prima X®

#### VERSATILE FLAMEPROOF OR INTRINSICALLY SAFE FIXED GAS TRANSMITTER

Indoors or outdoors, the PrimaX Gas Transmitter from MSA Safety provides dependable, accurate gas detection.

#### PrimaX I

The PrimaX I features an antistatic, reinforced nylon enclosure, available as a general purpose version or intrinsically safe version, for the detection of toxic gases or oxygen. With easily replaced plug-in sensors, the large LCD screen attaches to a mounting plate for easy installation, while the built-in keypad makes for quick, simple calibration.

#### PrimaX P

The PrimaX P is a "flameproof" transmitter housed in a powder-coated aluminium enclosure, that will protect it in extremely dangerous conditions, with three LED status indicators for up-to-the-second reporting.

GASES: Combustible, O2, CO, H2S, SO2, NO2, CL2, NH3, NO,HCN, NCL, H2

#### **KEY FEATURES**

- Detachable back plate for installation/mounting
- 4-20 mA output signal and optional HART digital communication
- Plug-in sensors and easy installation
- Large LCD screen
- Optional configurable Alarm and Fult relays (PrimaX P)

# MSA Prima X® ir

#### IR DUALSOURCE LEL COMBUSTIBLE GAS TRANSMITTER

Offers LEL (Lower Explosive Limit) combustible gas detection through a patented PrimaX Gas Transmitter IR dual source design. A redundant IR source provides reliability and uninterrupted monitoring should a source failure occur. Furthermore, the possibility of obscurations due to rain, fog, dirt, dust, and other environmental conditions is minimised due to dual source design.

#### FIXED GAS DETECTORS



PRIMAX I GENERAL PURPOSE DETECTOR



**PRIMAX P FLAMEPROOF ALUMINIUM HOUSED DETECTOR** 







# MSA Chillgard 5000

#### INDUSTRIAL AMMONIA AND REFRIGERANT LEAK MONITORING

#### CHILLGARD AMMONIA

The Chillgard 5000 Ammonia Monitor accurately detects ammonia gas leaks as low as 10 ppm for early notification, keeping your plant safe.

The Photoacoustic Infrared (PIR) technology provides a more accurate measurement, notifies leaks faster and the longlife sensors are not affected by temperature and humidity variations, which helps minimise drift.

#### CHILLGARD REFRIGERANT LEAKS

Designed for the building and HVAC markets, the Chillgard 5000 Refrigerant Leak Monitor provides the earliest level of detection of costly refrigerant gas leaks in mechanical equipment rooms. Sampling system with patented photoacoustic infrared (PIR) technology detects leaks as low as 1 part per million (ppm).

The Intuitive, touchscreen user interface makes it easy to operate. Select up to six refrigerants to monitor out of the field selectable refrigerant library.

#### CHILLGARD REMOTE DISPLAY

The Chillgard 5000 Remote Display provides gas monitor information before room entry where potentially hazardous gas levels may exist. This unit is easily installed adjacent to entry ways or walls outside of the monitored area.

Workers can easily be alerted by the audible alarm and read the monitor status to know the alarm conditions inside the room prior to entry. The Remote Display provides an additional level of hazardous gas detection and communication.





Q WEBSITE SEARCH FIXED HCFC NH<sub>3</sub> GAS DETECTION HYDROFLUOROCARBONS AMMONIA

#### **KEY FEATURES**

- Accurate 1 ppm detection (Refrigerant model)
- 7" (178 mm) color touch screen
- Patented PIR photacoustic infrared technology
- Long life sensors
- Dedicated calibration port for up to 16 points
- BACnet and Modbus Digital Communications



# MSA Chillgard VRF

#### **VARIABLE REFRIGERANT FLOW LEAK MONITORING**

With a low 25ppm minimum detection, the Chillgard VRF Refrigerant Leak Detector is the first industry detector for Variable Refrigerant Flow Systems (VRF) with integrated BACnet capability. Therefore, it can be directly connected with any Building Management Systems (BMS).

MSA applies its proven photoacoustic infrared sensing technology featuring long sensor life which provides a stable zero baseline and minimises cross-sensitivities.

#### **KEY FEATURES**

- Low-level detection at 25 ppm min. detection
- Capable of operating within wide temperature and humidity ranges
- Low maintenance—no moving parts and stable PIR sensor technology

# MSA Chillgard NH3

#### **ECONOMICAL AMMONIA MONITORING**

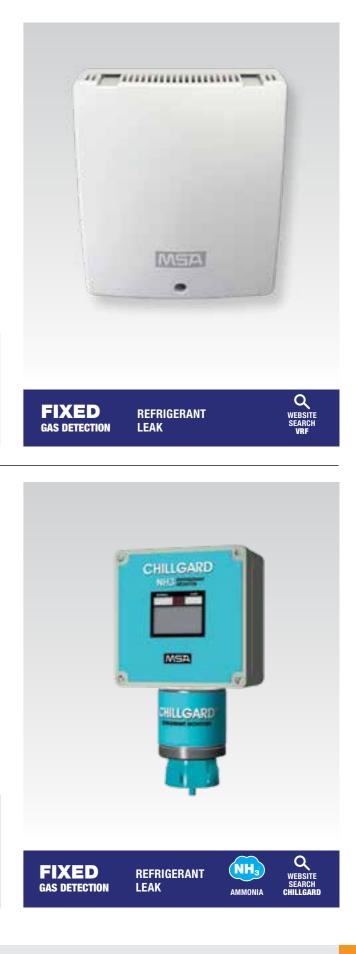
The economical Chillgard NH3 monitor utilises reliable, electrochemical sensing technology to detect parts-permillion (ppm) levels of ammonia. It provides fast, reliable detection of measuring ammonia, and is capable of measuirng a 10 ppm leak, with full-range scale of 0-1000 ppm, down to -40°C.

The World-class design and engineering offer a single board design for ultimate reliability and serviceability in an economical package.

#### **KEY FEATURES**

- Accurate 1 ppm detection (Refrigerant model)
- 7" (178 mm) color touch screen
- Patented PAIR photacoustic infrared technology
- Long life sensors
- Dedicated calibration port for up to 16 points

#### FIXED GAS DETECTORS





# MSA Chemgard

#### **PHOTOACOUSTIC INFRARED GAS MONITOR**

The Chemgard iR Gas Monitor series are highly sensitive instruments available in many output ranges including;

0-10 ppm, 0-100 ppm, 0-1000 ppm, 0-1% by volume, 0-10% by volume, 0-100% by volume and 0-100% LEL. With three different enclosure styles, the Chemgard is convenient to mount whilst the unit can also be expanded to monitor up to eight locations.

The easy-to-read display shows gas concentrations and three levels of alarms.

#### **KEY FEATURES**

- Remote monitor detects traces of hydrocarbons, solvents, alcohols, CO2, CO and toxics
- Three different styles provides mounting options
- Unit can expand to monitor up to eight locations with three levels of alarms



MSA T**G5000** 

#### WASTEWATER BLUETOOTH FIXED GAS MONITOR

The TG5000 Gas Monitor is an effective and economical solution to detecting combustible and toxic gases, as well as oxygen deficiency/enrichment, in wastewater, commercial and light industrial applications. The monitor helps personnel to work safely in these environments offering a variety of sensor and configuration options. The OLED display has been designed for extreme visibility, even at distance.

GASES: Combustible, O2, H2S, CO, CO2, CL2, NH3, SO2, H2, NO2, NO, HCL

#### **KEY FEATURES**

- XCell TruCal gas sensors for H2S and CO monitoring
- OLED with bright status LEDs for extreme visibility
- Available as single or dual gas monitoring unit





# 

# MSA Observer® i

#### **ULTRASONIC GAS LEAK DETECTOR**

Ideal for use in complex, outdoor pipeline systems, the Observer<sup>®</sup> i from MSA instantly detects pressurised gas leaks utilising an omni-direction acoustic detector with gassonic ultrasonic technology.

The Observer i works even when traditional methods of gas detection are unsuitable or dependent on ventilation. The Artificial Neural Network (ANN) technology can distinguish between real gas leaks and false alarm sources.

#### **KEY FEATURES**

- Distinguishes real gas leak noise from background noise, suppressing false alarm s
- Detects gas leaks from 2 BAR (29 psi) pressure for rapid detection of small leaks
- Patented Senssonic<sup>™</sup> self-test

# MSA Senscient elds

#### **TOXIC & FLAMMABLE OPEN PATH GAS DETECTOR**

The Senscient ELDS laser-based open path gas detector is available for a wide range of toxic and flammable gases.

The 'SimuGas' self-testing eliminates employees entering hazardous areas for gas checks. Nuisance false alarms are virtually eliminated with its breakthrough Harmonic Fingerprint processing.

GASES: Combustible, H2S, H2S/CH4, CH4, C2H4, NH3, CO2, HCI, HF

#### **KEY FEATURES**

- Gas-specific Harmonic Fingerprint detection
   eliminates false alarms
- SimuGas automated function checks are recorded daily
- ELDS lasers work in fog, rain, and snow

#### GAS LEAK DETECTION



# MSA FL500-H2

#### **UV/INFRARED FLAME DETECTOR FOR H2 FIRES**

The FL500-H2 is an Ultraviolet / Infrared Flame Detector designed specifically to detect hydrogen (H2) fires. The FL500-H2 monitors for radiation emitted by a hydrogen flame in both the ultraviolet (UV) and infrared (IR) spectral ranges.

This UV/IR combination provides a fast response time and increased false alarm immunity against sources of radiation for reliable protection. It is designed to withstand temperature extremes, operating in between -55°C to +85°C environments.

#### **KEY FEATURES**

- Wide field of detection view of 130°.
- Continuous Optical Path Monitoring performs self-check to ensure the optical path is clear
- FL500 UV/IR detects: heptane, methane, methanol, propane, ethane and butane



# MSA Fl4000h

#### MULTI-SPECTRUM (MSIR) FLAME DETECTOR

The FL4000H is an advanced multi-spectrum infrared flame detector that provides superior false alarm immunity with the widest field of view. It detects typical fires such as alcohol, n-heptane, gasoline, jet fuels and hydrocarbons.

The FL4000H can also see through dense smoke produced by diesel, rubber, plastics and lube oil fires. The multispectral optical IR sensing array reliably detects actual flames and the eliminates the vast majority of false alarms.

#### **KEY FEATURES**

- Multi-Spectrum Infrared (MSIR) detector range (70+ m) and field of view of 100° @ 30m
- Event logging records time, date and event
- Neural Network Technology provides superior false alarm immunity



# SAFETY EQUIPMENT

# MSA Hazardwatch

#### **MODULAR FIRE AND GAS DETECTION SYSTEM**

An innovative, modular system that combines highly reliable programmable logic controller (PLC) technology with advanced gas and flame field devices.

It is highly scalable, making it suitable for small systems to large plant-wide applications. Offering intelligence, flexibility and reliability, the HazardWatch System's controller hardware configuration and software meets NFPA 72 compliance and the 10.4" touchscreen provides user-friendly graphical interface and supports plot plans.

#### **KEY FEATURES**

- FM certified fire network allows for multiple HazardWatch systems to be networked together
- Touchscreen interface (10.4") provides graphical interface and supports plot plans
- Field wiring topology is simple and reliable

# MSA Gasgard XL

#### **1-TO-8 CHANNEL GAS CONTROLLER**

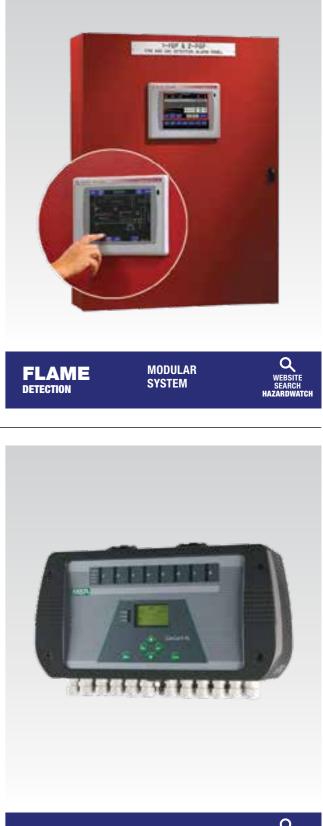
Monitor up to eight remote gas sensors with the highly accurate wall-mounted GasGard XL Controller. The controller's large, multi-language LCD display provides real-time readings, offers full-system diagnosis and shows intuitive icons.

Housed in durable, fire-retardant ABS plastic, the controller is suitable for a variety of chemical, industrial and waste water environments. The sensor also features a buzzer that sounds up to 85 dB.

#### **KEY FEATURES**

- Monitors up to eight remote gas sensors
- Large multi-language LCD display provides real-time gas readings and full-system diagnosis
- Convenient upload system allows for event log transfer via Ethernet or USB

#### FLAME DETECTION









## MSA Suprematouch

#### **CONFIGURABLE FIRE/GAS DETECTION SYSTEM**

The SUPREMATouch is compact, modular configurable fire and gas safety detection system used with a wide range of detectors for combustible gas, toxic gas and oxygen deficiency.

The heart of the system is the SUPREMATouch controller, featuring a large colour touchscreen display with a titlebased menu structure to optimise intuitive operation.

This is a custom product. Please consult us for configuration details.

#### **KEY FEATURES**

- Compact, modular design
- Connects up to 252 devices
- Digital CAN-bus technology provides reliable
   internal communication
- Intuitive system configuration with expand-ability





FIRE & GAS



## MSA SMC Sentry It

#### **NETWORK-ENABLED GAS DETECTION SYSTEM**

The SMC Sentry IT Controller is a powerful networkenabled hazardous gas detection system that operates up to 32 detectors and interfaces with devices over Modbus RTU, 4-20 mA, Sentry PSG Bus, and conventional dry contact.

The SMC Sentry is compatible with all SMC IT products, legacy Sentry products, and third party sensors and devices and the backup battery provides the desired stand-by power in the event of a power outage.

#### **KEY FEATURES**

- GlobalCal<sup>™</sup> calibrate all connected sensors at the same time
- Touch-Panel easily operate and configure
- Intelligent data USB Flash Drive quickly configure and upgrade new software



#### **POWERFUL GAS DETECTION SYSTEM CONTROLLER.**





## MSA SMC Classic Sentry

#### MICROPROCESSOR GAS CONTROLLER

The SMC Sentry Classic Controller is an 8-channel gas detection system for monitoring combustible gas, oxygen deficiency, and toxic gases.

The Classic is a microprocessor-based system that includes management of gas sensors, alarm relays, user interface via front panel display, printer output, Modbus digital communication, alarm indicators, and relay outputs.

Diagnostics - performs routine checks of operating parameters and alerts user if a condition requires attention

#### **KEY FEATURES**

- Sensor Scan Display continuously view current sensor gas exposure readings
- Diagnostics performs routine checks of operating parameters and alerts user if a condition requires attention

## MSA SMC Sentry insite

#### WEB BASED GAS CONTROLLER SOFTWARE

The SMC Sentry InSite is an intuitive web-based monitoring application that provides users with the ability to locally and remotely access their facility's fire and gas safety system online.

Local or Remote Access allows the program to be run locally within a facility or securely extended to SMC Cloud for visibility anytime, anywhere. InSite provides full monitoring of a SMC Sentry IT Controller and all connected detectors.

#### **KEY FEATURES**

- Web-based Application securely access SMC Sentry InSite through your PC, tablet, or smartphone
- Maintain statuses of all connected devices from one comprehensive web page

#### GAS CONTROLLERS & SOFTWARE









WEB-BASED APPLICATION FOR MANAGING FIRE AND GAS SAFETY IN FACILITIES.





# **Confined Space Entry** and Height Safety

From Tripods and Descent Winches to Davit's and **Recovery Devices and Fal** Arrestors, our extensive range of confined space entry and height safety equipment includes harnesses, lanyards, and roofing kits from world brands IKAR leadi and

**DID YOU KNOW?** 

Accurate Instruments (NZ) Ltd is one of the only official manufacturer approved service agent for IKAR and MSA confined space entry equipment in New Zealand.



#### IKAR HRA **RETACTABLE FALL ARREST BLOCK WITH BUILT-IN TWO-WAY RECOVERY MECHANISM**

The IKAR HRA is Accurate's No.1 selling Fall Arrest Block. This Type 3 device with rescue lifting and lowering facility, is equipped with a recovery mechanism operated by a device mounted handle.

After an arrested fall, or if the user becomes incapacitated at the bottom of a shaft, the recovery mechanism can easily be engaged by a second person to raise or lower the person to a place of safety.

Available in 12m, 18m, 24m, 33m, 42m, 65m lengths

#### **KEY FEATURES**

- Rugged Aluminium housing, with a galvanised steel cable lifeline
- Release pin and two-way winding handle, to engage rescue/recovery mode
- Dyneema ropes available for the HRA as an optional replacement of the stainless rope

www.accurate.kiwi





**RECOVERY WINCH** 

## **IKAR PLW**

#### **HEAVY DUTY PERSONNEL WORK/RECOVERY WINCH**

The PLW from IKAR is a heavy duty safety winch suitable for lifting AND lowering up to two entrants into and out of a confined space, shaft or tank. The PLW is also suitable for lifting and lowering materials up to 300kgs into or out of confined spaces.

The PLW is designed to be attached to either Ikar DB-A2, DB-A3 Tripod or ASS Davit Cantilever Arms.

Requires an Ikar mounting bracket and pulley when being added to an existing lkar tripod.

#### **KEY FEATURES**

- Wire Rope length 30 meters
- Working Load Limit 300kg
- VA Stainless Steel Cable 6.0mm diameter
- Double Action Snap Hook with load indicator attachment points



Q SAFETY WEBSITE **IKAR PLW BLOCKS** 

ARE BACKUP UP **BY FULL FACTORY APPROVED IN-HOUSE** SERVICING

DAVIT NOT INCLUDED IN **PLW STANDARD DELIVERY** 

## **BS EN 360:2002** RETRACTABLE TYPE FALL ARRESTORS

IKAR HWB and HWPS retractable type fall arresters are manufactured and tested in accordance with EN360:2002.

The IKAR retractable type fall arresters function in a similar way to a car seat belt. A re-coiling polyamide webbing with a dyneema core lifeline (depending on the model) in light tension, allowing it to respond immediately in the event of a fall, without a slack lifeline.

If the extraction speed of the lifeline exceeds 0.5m/ second, one of the catches which activate the brake system will lock into place as a result of centrifugal forces in the rotating drum.





## MSA PERSONAL **RESCUE DEVICE**

MSA has revolutionised the rescue process with the development of the Latchways PRD – an integrated harness system allowing self-rescue. The lightweight, unobtrusive rescue device is contained in a small 'backpack' attached to a full body harness and is designed to be used in conjunction with a fall protection system or anchor point.

In the event of a fall the PRD harness suspends the user and then allows a gentle controlled descent. The device features a 20m spool of Aramid rope which is released at a controlled rate through an integral braking mechanism.

#### **KEY FEATURES**

- Self-activated, significantly reduces rescue time
- Descent Height: 20 m
- User Weight: 59–140 kg
- Clear rescue plan
- Improves user safety





**IKAR TRIPODS ARE MADE IN GERMANY, FROM 45** YEARS OF COLLECTIVE KNOWLEDGE IN THE USE OF PERSONAL CONFINED SPACE RESCUE EQUIPMENT IN **MULTIPLE INDUSTRIAL APPLICATIONS** 

## **IKAR** DB-A2

#### **GENERAL PURPOSE ALUMINIUM CONFINED** SPACE ENTRY TRIPOD

The IKAR DB-A2 was specially developed for rapid setup in conjunction with the HRA rescue device (up to 42 metres) or the PLW personal load winch. The DB-A2 has high functional stability with a maximum load-carrying capacity of two persons.

The individually adjustable legs with foldable rubber feet are advantageous as they can be used on uneven ground.

Pulleys, brackets, carabiners and recover devices/winches are not included as standard.



CONFINED SPACE TRIPODS

## **IKAR DB-A3**

#### **HEAVY DUTY ALUMINIUM CONFINED SPACE ENTRY** TRIPOD WITH WIDE SETUP STANCE

The IKAR DB-A3 is a heavy-duty, aluminium tripod which has been specially developed for a quick setup over varying diameter entry points.

For different sized manholes, tank entry or tunnel access, the DB-A3 (compared with the DB-A2 model above) has more setup positions including a wider diameter stance placement for the tripod legs, even on uneven ground.

The DB-A3 is fully compatible with the HRA rescue device (up to 42 metres) OR the PLW personal load winch and is capable of being disassembled within minutes after an application. For rapid rescuing, the hoisting facility can be operated by just one person.

The DB-A3 also has the added functionality of having integral pulleys in the head of the tripod, at the top of each lea.

Brackets, carabiners and recover devices/winches are not included as standard.



SAFETY EQUIPMENT

# **IKAR**



IKAR TRIPOD KITS ARE DESIGNED TO TAKE THE GUESS WORK OUT OF CHOOSING WHICH TRIPOD/WINCH BUNDLE IS BEST SUITED TO YOUR APPLICATION. EACH TRIPOD BUNDLE KIT FEATURES A IKAR IK G 2 BR TWO-POINT CONFINED SPACE HARNESS WITH RESCUE FACILITY (NOT SHOWN), PULLEY AND CARABINER.

## **IKAR DB-A2/HRA BUNDLE**

This kit, is designed for confined space entry by using an HRA Fall Arrest inertia device. The HRA Fall Arrest block is a retractable type fall arrester, with built in two-way rescue/ recovery mechanism. It is designed for **RECOVERY** of a person, NOT lowering.

For lowering and lifting, see the PLW bundle (right).

The HRA complete tripod assembly comprises of the followina:

- DB-A2 Aluminium Tripod
- Type 3, HRA Rescue Device (choose either 12m, 18m, 24m drop lengths)
- HRA Mounting Bracket
- Pulley and Carabiner
- IK G 2 BR Confined Space Harness

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#### **TRIPOD & DAVIT BUNDLE KITS**

## IKAR **DB-A2/PLW BUNDLE**

This kit, is designed for confined space entry by lowering adn lifting using a PLW personal load winch. The PLW is suitable for LIFTING and LOWERING up to two entrants or materials up to 300kgs into or out of confined spaces. Features an automatic brake.

The PLW complete tripod assembly comprises of the following:

- DB-A2 Aluminium Tripod
- PLW Load Winch (300kg load limit)
- PLW Mounting Bracket
- Pulley and Carabiner
- IK G 2 BR Confined Space Harness

### IKAR FALL ARREST DAVIT ARM HOISTS

The lkar Davit range is an alternative system for confined space application. The Davit range is rated for fall protection and rescue of up to three persons at any time. It is compatible and complements the HRA range and PLW30 winch.

The davit arm itself is mobile - it can be released from the sleeve very quickly and used at another location. The davit arm is designed in such a way that a load winch can be mounted additionally to the height safety device. Especially developed for stationary use in safety and rescue cases for two persons as well as for lifting and lowering loads.

- Removable extension arm, adjustable height
- Variable fastenings via ground sleeve, wall sleeve and mobile sleeve
- V4A stainless steel design





#### **RESCUE DAVIT WITH PERMANENT ARM**

Constructed from high quality V4A stainless steel, with a 50° arm pivot angle. It features a fixed permanent arm, developed for stationary use in safety and rescue cases for two persons, as well as for lifting and lowering loads.

It is designed for use in conjunction with the HRA rescue device or the PLW personal load winch. Either 2x HRA rescue devices can be used on the ASS-1 or 1x HRA device and 1x PLW load winch.

#### **KEY FEATURES**

- V4A Stainless Steel heavy duty construction
- 1035mm reach and 2276mm height capability
- Suitable for two recovery devices/load winches
- Approved to EN795/Class B Standards
- Weighs 29 kg



## 

## IKAR AASS-3

#### **RESCUE DAVIT WITH REMOVEABLE ARM**

The IKAR ASS-3 is a removable arm Davit, constructed from high quality V4A stainless steel, with two arm pivot angles of 10° and 27°. As is the case with ASS-1 model above, the ASS-3 has been developed for stationary use in safety and rescue cases for two persons, as well as for lifting and lowering loads, where an HRA rescue device or the PLW personal load winch can be used. Either 2x HRA rescue devices can be used on the ASS-3 or 1x HRA device and 1x PLW load winch.

#### **KEY FEATURES**

- V4A Stainless Steel heavy duty construction
- Two pivot points with max 1233mm reach and 2018mm height capability
- Suitable for two recovery devices/load winches
- Weighs 42 kg

## IKAR AASS-4

#### EXTRA HEIGHT DAVIT WITH REMOVABLE ARM

The ASS-4 is an extra large height capacity removable arm Davit with two arm pivot angles of 10° and 27°. With a maximin height capacity of 3231mm and reach of 1238mm, it is designed for applications where extra height (or clearance) is required without sacrificing reach or angle.

Like the ASS-1 and ASS-3 either 2x HRA rescue devices can be used on the ASS-4 or 1x HRA device and 1x PLW load winch.

#### **KEY FEATURES**

- Extra height capacity removable davit arm with Two pivot points and with max 1238mm reach and 3231mm height capability
- Suitable for two recovery devices/load winches
- Weighs 65 kg

#### DAVITS AND CANTILEVER ARMS





HARNESSES

## IKAR FULL BODY **HARNESS IK G2BR**

#### FALL RESTRAINT AND FALL ARREST WITH THE **ADDITIONAL FEATURE OF AN OVERHEAD RESCUE ATTACHMENT FOR CONFINED SPACE APPLICATION.**

IKAR IKG2BR Fall Arrest and Rescue Harness with front and rear D rings. Crafted from 45mm polyester webbing, with plated steel fittings. Fall restraint and fall arrest with the additional feature of an overhead rescue attachment for confined space application.

Quick release buckles on chest strap and leg loops. Adjustment on leg loops, chest strap and shoulder straps, shoulder adjustment via sprung-loaded floating bar buckles.

#### **KEY FEATURES**

- Adjustment on shoulder straps via sprung loaded floating bar buckles
- Available in a "Big Boy" size
- Made from 45mm Polyester Webbing
- Nominal load: 136 kg



The RaceFORM buckle allows for a close comfortable full body harness fit - eliminating the need for a bulky chest strap. Pull-down adjustment allows for guick and easy adjustment.



# MSA **V-FIT SAFETY HARNESS**

Shoulder padding responds to your movement to conform to your body, eliminating pressure points and chafing. Athletic cut that contours to the body and allows for increased upper torso mobility.



be attached to this point when used in the vertical application, provided that the lifeline is attached from directly above.

ATTACHMENT





SAFETY EQUIPMENT

Exclusive design reduces need for harness adjustment throughout the day, allowing for more comfort and freedom of movement. Contoured padding adjusts to shape of your shoulder to minimise fatigue.

## MSA GRAVITY **MINER'S HARNESS AND BELT**

#### **DESIGNED SPECIFICALLY FOR THE MINING INDUSTRY**

The Gravity® Miners Harness and Belt range has been designed specifically for the mining industry. Harsh environmental conditions and unique hazards demand working at heights fall protection and utility belts that are durable, long lasting and multi-functional.

This premium designed range is constructed using stainless steel buckles and adjusters ensuring longer product life in corrosive environments.

The equipment belt provides an ergonomic solution for storage of Self Rescuer, such as MSA's SSR 30/100 or SavOx and even your I.D. Tags!

Available in three configurations in small, medium and large sizes

#### HARNESSES



#### MSA **V-FORM ROOFERS** KIT

Roof Workers Kit with V-FORM harness with 15m Kernmantle rope, anchor sling, karabiners and backpack carry bag.



HARNESSES

## MSA **GRAVITY HARNESS**

#### **ROPE ACCESS, RESCUE, TELECOMMUNICATIONS, OIL** AND GAS, WIND ENERGY AND GENERAL INDUSTRY

The Gravity Suspension Harness is designed to offer superior comfort, safety and quality to users who work at heights suspended.

Strategically positioned ventral attachment distributes the load between the waist belt and leg loops during suspension

The breathable waist pad is constructed from a multi-layered padding which dissipates pressure from the webbing to reduce fatigue when working for long periods of time.

#### **KEY FEATURES**

- · Eight adjustment points for perfect sizing and fit
- Tool loops with internal rigid supports to make connection of tools easier
- · Fall arrest rated Sternal and Back D-ring
- · Carabiner with 3,600lb (16kN) gate strength



## MSA GRAVITY SERIES





MSA WORKMAN PREMIER

Workman Harness with 15m or 30m Kernmantle Rope (longer lengths available). Anchor Sling (1.5m in Premier Kit), Screw Gate Carabiner (x2), Backpack Carry Bag.

#### MSA WORKMAN GRAVITY

The lightest harness in our range, making it an excellent choice for all day wear. Frontal attachment D-ring allows for effective connection during descent or ladder climbing.



#### MSA WORKMAN UTILITY

Unique floating shoulder, leg & sub pelvic straps gives the user a versatile and comfortable fitting harness. Fall arrest rated frontal attachment points linked to a floating rear strap.



SAFETY EQUIPMENT



The MSA V-SERIES harness line is now available! Introducing the V-FLEX™, V-FIT™, and V-FORM™. Because the safest fall protection harness is the one you'll actually want to wear, each V-SERIES harness includes unique features to deliver exceptional comfort - so you can focus on your work, not your harness. Exclusive racing-style buckle allows for a close, comfortable-fitting harness - eliminating the need for bulky chest straps or cumbersome buckles.



- Pre-assembled for swift rescue
- · Easy to use, low maintenance design
- Load carrying capacity: 1 person / SWL 200Kg
- Low unit weight
- Ideal for lifting in and out of confined spaces
- Complete with handled rope grab, lanyard and bag
- 3:1 Mechanical advantage
- Available in 15, 20 and 30 metre drop lengths

#### HARNESS KITS





- The R-ALF Pulley has an over-speed brake built-in so that the Pulley will lock on and hold when a fall occurs.
- Easy to use, low maintenance design
- load carrying capacity: 1 Person / S.W.L. 200Kg
- Low unit weight
- Ideal for lifting in and out of confined spaces
- Complete with handled rope grab, lanyard and bag
- Available in 15, 20 and 30 metre drop lengths

## IKAR Has series

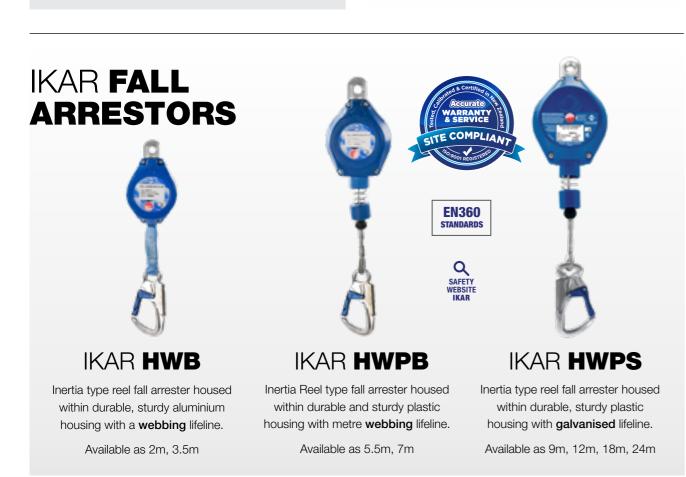
Fall arrest block / inertia reel / retractable type fall arrester with auto controlled descent. EN360 and EN341 aluminium housing with a galvanised steel cable lifeline. Fixed handle anchor attachment point. Aluminium double action hook on end of lifeline to EN362.

After an arrested fall, or if the user becomes incapacitated at the bottom of a shaft, the recovery mechanism can easily be engaged by a second person to raise or lower the person to a place of safety.

Available in 9m, 18m and 30m.

#### **KEY FEATURES**

- Aluminium housing with a galvanised steel cable lifeline
- Dimensions (mm): 455x160x120
- Carabiner hook (mm): 185
- Swivel eye anchorage attachment point





SAFETY EQUIPMENT



#### MSA GRAVITY DYNA-LINE

The Gravity<sup>®</sup> Dyna-Line<sup>™</sup> Rope Temporary Horizontal Lifeline allows for two workers in fall arrest, includes 60 ft. of Dyna-Line 12 strand rope, and the exclusive bypass shuttles allow two workers to pass each other and remain tied-off.

## MSA Temporary Webbing Horizontal Lifeline

THIS TEMPORARY HORIZONTAL LIFELINE IS AN EASILY DEPLOYABLE, LIGHTWEIGHT 20M HORIZONTAL LIFELINE

The 35mm heavy duty webbing is tensioned by a ratchet device and allows shorter distances to be spanned as required. Rated for two people.

AS/NZS 1891.2:2001

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#### HORIZONTAL LIFELINES





Designed for easy installation and removal, the Gravity<sup>®</sup> Sure-Line<sup>®</sup> is a temporary cable horizontal lifeline system created for a wide range of applications. Rated for two people (272 kg) Complies with AS/NZS 1891.2:200.



ANCHOR POINTS



#### MSA POLE **STRAPS**

Ideal for workers on a pole or structure needing restrained fall arrest positioning. Heavy duty 44mm polyester webbing and protective outer sheath. Certified to AS/NZS 1891.5: 2020

#### MILLER FIX **WORKMAN FP STRYDER**

Integral load indicator shows if the Stryder has been subject to a fall. Mounting can be overhead or at workers foot level. Adjustable to suit beams sizes. 182kg working capacity and rated to 22.2kN. Complies with AS/NZS 1891.4:2009

#### BALLANTYNE **T-BAR ANCHOR**

Ballantyne Roof Anchors provide a safe secure anchorage point for metal roofing tasks. The T-Bar roof anchor allows the end user to perform tasks with both fall arrest and travel restraint - instead of costly scaffold or edge protection.





Anchorage Chocker Sling provides a durable point for lanyards or lifelines. Sewn into an endless loop that can be hitched to an anchorage point using various configurations. Heat and burn resistant. Slings available in 1.5m and 2.0m. Straps available in 1.0m, 1.5mt and 2.0m.



The Beam Trolley is a moveable anchorage connector designed to support either personnel or material. Trolley consists of a carriage with four wheels containing anti-friction bearings that are connected to aluminum housings and to a steel cross bar.

#### MSA VERTICAL **BEAM CLAMP**

Designed for use on both vertical and horizontal i-beams to create a fixed anchor point. Unlike traditional vertical rail sliders that will rest at the lowest position, the Vertical Beam Anchor can be fixed at any height to support reduced free fall and lower fall clearance requirements.



SAFETY EQUIPMENT



#### SECURE ANCHOR CORRUGATOR **ANCHORS**

Surface mounted stainless steel roof anchor to suit corrugated iron roof sheeting with a minimum base metal thickness (BMT) of 0.42mm. The anchor installs with a cordless drill in as little as three minutes. Two models available the Corrugator™ 180 or 360.

The Tether Plates (Claw) are available in two sizes - 280mm and 500mm and act as a diversion point when using a restraint lanyard and also eliminates the pendulum effect (swing during fall). Can be used as a standalone anchor point on metal roof sheeting.



#### MSA CONCRETE **ANCHORS**

Removable concrete anchors can be quickly installed and easily removed into various locations on an elevated level concrete surface. Durable stainless steel and aluminium. Anchorage Connector Extension features a 3,600 lb rated snaphook on one end and a 3" O-ring on the other.

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#### ANCHOR POINTS









Provides a permanent anchorage point, bolts to beams or columns. Large hook with strap is a temporary, overhead anchorage connector. Complies with AS/NZS 1891.4:2009.



#### MSA **D-RING ANCHOR**

Bolt D-ring with Hole Anchorage Connector is a permanent anchor connector designed for coupling a single fall arrest system to an anchorage such as beams or girders. Complies with AS/NZS 1891.4:2009









**Accurate** www.safety.kiwi



#### IKAR **IKV13 STEEL EQUAL D** SCREWGATE

EN362 Load bearing capacity: 25kN Opening gate: 17mm Supplied with captivating pin Weight: 0.15 Kg



EN362 Load bearing capacity: 35kN Opening gate: 28mm Supplied with a captivating pin Approx. Weight - 0.25 Kg

#### IKAR **IKV04 STAINLESS STEEL SCREWED OVAL LINK**

EN362 Load bearing capacity: 41kN Opening gate: 10mm (IKV04) Available in small and long Opening gate: 16.5mm (IKGBOVL) Weight: 0.05Kg



## **IKV42 ALUMINIUM**

Load bearing capacity: 25kN Opening gate: 55mm Supplied with captivating pin Weight: 0.36 Kg

# **Climate & Inspection**

From moisture meters to commercial dehumidifiers, infrared cameras to anemometers, Accurate can meet your climate, moisture and temperature measurement, inspection and drying needs.

## TROTEC AT WORK

TROTEC

THE SAFE WORKING LOADS IN BOTH TENSION AND SHEAR MEASUREMENTS CAN BE STATED IN KN (KILONEWTONS). 1 KN EQUALS APPROX **100 KILOGRAMS OF LOAD.** 



#### IKAR IKV01 **STAINLESS SCREWED TRIANGULAR LINK**

EN362 Load bearing capacity: 31kN Opening gate: 8.5mm Weight: 0.05KG



#### IKV03 **ALUMINIUM SNAP HOOK**

IKAR

EN362 Load bearing capacity: 22kN Opening gate: 60mm Weight: 0.45 Kg



#### **TWIST LOCK** EN362

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Over the past 20 years, Accurate has been the go-to-choice for moisture meters for the building industry in New Zealand. From house inspection, leaky homes, insurance and flood assessment through to new building, timber manufacturing , pre-lining test and council assessment, Accurate's professional range of meters from Protimeter, Trotec and Gann are industry recognised and widely utilised.



# TROTEC **T660**

#### CAPACITANCE NON-INVASIVE MOISTURE METER FOR LEAKY HOMES & WEATHERTIGHTNESS

The T660 from Trotec is one of the most commonly used non-destructive moisture meters in NZ, trusted by industry building inspection professionals as well as home owners, insurance assessors and real estate agents.

The T660 is ideal for locating moisture in walls of homes, buildings and apartments, concrete, gib board, timber etc.

#### Why is the T660 so popular?

Because it is senstive to locating and tracking moisture and it's easy-to-use. Simply hold the T660 against the surface and the unit will scan up to 40mm from the surface contact point. Where moisture is located, the readings are displayed simply on the large LCD display.

The T660 features a user settable alarm which will alert the user to high readings. For hard to view and reach positions, the "hold" function can be used to lock the reading on the LCD screen.

#### **T610 MICROWAVE MODEL**

Used primarily by building surveyors and weather tightness experts, the Trotec T610 differs to the T660 model above by using an advanced microwave sensor system to determine the presence and likelihood of moisture.

With a measuring range of up to 300mm, it is suitable for locating moisture problems in solid construction buildings and floors, where the material thickness is greater than 100mm (i.e. concrete). *Recommended for use in conjunction with the T660.* 

#### **KEY FEATURES**

- Quick and simple non-destructive determination
   of moisture up to 40mm from surface
- Large easy to read LCD display
- Capacitive touchscreen control panel
- Moisture alarm warning for high moisture levels
- Hold, Min, Max and Average values
- Microwave T610 model for solid construction moisture determination up to 300mm deep

#### NON-INVASIVE MOISTURE METERS







# TROTEC **BM31WP**



#### SMARTPHONE APP BASED WIRELESS NON-INVASIVE MOISTURE METER

The Trotec BM31WP is a non-invasive moisture sensor for determining moisture up to 40mm deep, that connects via Bluetooth to Trotec's MultiMeasure APP for smartphones and tablets.

Using the MultiMeasure Mobile APP, individual, min, max and average values can be displayed and a graphic moisture distribution matrix representation, linked to a photo, can be created, saved and sent.

#### **KEY FEATURES**

- Bluetooth enabled non-invasive moisture sensor
- MultiMeaure APP software for smartphones
   and tablets
- Moisture distribution matrix
- Hold, logging and alarm functions



#### CAPACITANCE METER



## GANN BL Compact B2

#### CAPACITANCE NON-INVASIVE MOISTURE METER FOR WEATHERTIGHTNESS & CONCRETE

The Hydromette BL Compact B2 from Gann is a professional quality non-invasive hand-held moisture meter for fast and accurate determination of moisture in homes, buildings and concrete.

Featuring seven different correction codes including concrete, screen and plaster, the BL Compact B2 is well suited to not only locating moisture in homes and building materials, but also concrete, when the desired measurement is wt.%.

#### **KEY FEATURES**

- Rapid non-invasive moisture determination
   with hold function
- Scan up to 40-60mm from the surface
- Audible moisture exceedance alarm
- Concrete moisture content measurement (wt.%)





## PROTIMETER AQUANT

#### CAPACITANCE NON-INVASIVE MOISTURE METER FOR WEATHERTIGHTNESS & BOATS

The Protimeter Aquant is a simple capacitance noninvasive scanning moisture meter. It is ideal for locating and determining moisture problems in boats, homes and building materials such as timber/wood, gib board etc.

Simply hold the meter against the wall or surface and the unit will scan, typically up to 19mm from the surface. Where moisture is located, the readings are displayed as digits on the LCD, increase significantly.

#### **KEY FEATURES**

- Locate moisture up to 19mm below the surface
- Colour changing LED visual indicator of moisture levels
- Audible tone increases when moisture located
- Hold reading feature

## PROTIMETER REACHMASTER PRO

#### WIRELESS NON-INVASIVE MOISTURE SENSOR

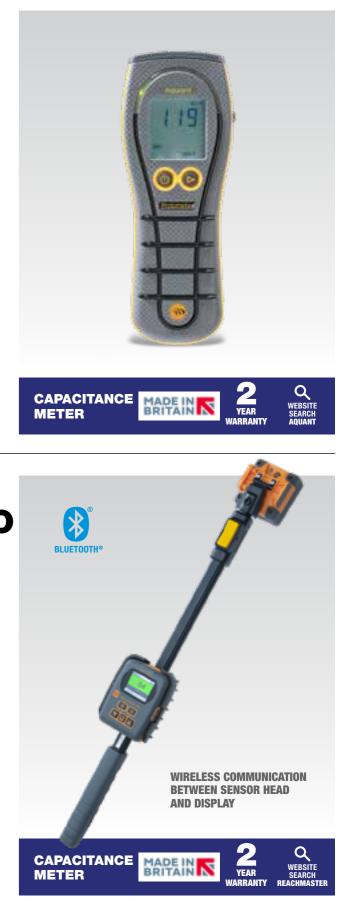
The ReachMaster Pro is a wireless non-invasive moisture meter featuring a telescopic handle that adjusts from 70cm to 114cm. It is ideal for determining moisture in buildings where access may be difficult, such as entrance ways, multi-story apartments and outside under decks.

Using wireless technology, the moisture sensor connects to the end of the adjustable handle, whilst the display sits conveniently beside your hand displaying the reading.

#### **KEY FEATURES**

- Wireless connectivity between sensor and display
- Telescopic adjustable handle extends to 114cm
   Colour and ad display with we have it
- Colour coded display with red, yellow and green zones for dry, damp, wet moisture values
- Audible alarm setting for high moisture levels

#### NON-INVASIVE MOISTURE METERS



## PROTIMETER SURVEYMASTER

#### **DUAL MODE NON-INVASIVE & PIN MOISTURE METER**

The Surveymaster is a popular dual mode moisture meter with both invasive pin resistance measuring of wood and capacitance non-invasive scanning operation. It is ideal for locating and establishing potential moisture in homes and buildings then measuring the moisture content using the pin mode. A reference function allows a benchmark reading to be saved, and the readings will identify either higher or lower.

#### **KEY FEATURES**

- Two Modes pin resistance and non-invasive capacitance modes
- · LED light scale provides the user with DRY (green), RISK (amber) and WET (red) values
- Reference function for benchmarking dry values

**CLIMATE & INSPECTION** 

## PROTIMETER **DIGITAL MINI**

#### **PROFESSIONAL RESISTANCE PIN MOISTURE** METER FOR TIMBER

The Protimeter Digital Mini is a simple to use resistance pin type moisture meter, designed to be used by timber/wood manufacturers, council inspectors, builders and constructors to determine the estimated percent of moisture in the wood material. The Mini is supplied with a wood calibration chart, allows the user to correct the timber reading for the right type of wood being measured (i.e. Radiata Pine).

#### **KEY FEATURES**

- · LED light scale provides the user with DRY (green), RISK (amber) and WET (red) values
- Calibration table supplied for moisture corrections
- Optional sliding hammer probe with 60mm pins for timber framing moisture measurement



METER









## TROTEC **T510**

#### **PROFESSIONAL RESISTANCE PIN MOISTURE METER FOR TIMBER**

The T510 is a high quality, high accuracy resistance pin type wood moisture meter designed to be used by timber manufacturers, builders and constructors to determine the percentage of moisture in the wood material.

Featuring a built-in wood species menu and temperature correction, the T510 will automatically correct the reading of moisture content to that of the selected species. (e.g. Radiata Pine)

#### **KEY FEATURES**

- 0 100 WME% measurement range
- Large scratch resistant high-contrast colour **OLED** display
- Built-in Wood Species Corrections
- Built-in Temperature Correction

## TROTEC **T510K**

#### **PROFESSIONAL TIMBER FRAMING MOISTURE METER KIT FOR BUILDING & CONSTRUCTION**

The popular choice, and Accurate's No.1 selling wood moisture meter, the T510K is used for measuring the moisture content in timber framing before lining.

This is the type of system used by councils and inspectors for accurately determining the moisture content in the framing. The kit includes a sliding hammer probe with 60mm "insulated" probes, supplied in a lined-hard case with all components.

#### **KEY FEATURES**

- Kit features Sliding Hammer Probe with Teflon insulated 60mm pins
- Built-in wood species corrections
- Built-in temperature correction
- · Supplied in lined-hard case

WEBSITE

YEAR

TIMBER PIN TYPE MOISTURE METERS

#### TIMBER PIN TYPE MOISTURE METERS





#### **SUPPLIED AS A KIT INCLUDING** THE SLIDING HAMMER PROBE





## TROTEC BM22WP

#### **SMARTPHONE APP BASED WIRELESS PIN MOISTURE METER**

The Trotec BM22WP is a pin type invasive moisture sensor for determining moisture % readings of timber and firewood or soft building materials such as gypsum, plaster or screed. It connects via Bluetooth to Trotec's MultiMeasure APP for smartphones and tablets.

Using the MultiMeasure App, individual, min, max and average values can be displayed and a graphic distribution matrix representation, linked to a photo, can be created.

#### **KEY FEATURES**

- · Bluetooth enabled pin type moisture sensor
- MultiMeaure APP software for smartphones and tablets
- Moisture distribution matrix
- · Suitable for wood and soft building materials



YEAR

## **NON-INVASIVE VS INVASIVE PIN MOISTURE METERS**

#### **DID YOU KNOW MOISTURE METERS DON'T ACTUALLY MEASURE MOISTURE?**

Most non-invasive moisture meters, both low cost and professional, use the capacitance method for determining moisture. The relationship between the stored energy, determined by the method, and the presence of water results in significant changes to the di-electric constant. This method is quick, simple and non-destructive however it is subject to several factors that can lead to 'false positives'.

When there are several different materials and/or metal in the 'scanning' range of the meter, results can be skewed.

If confirmation of results or an actual true measurement of moisture content, is required, this is when a pin-type moisture meter is used. Using the theory of resistance, pin meters make solid contact with the material being measured (invasive), and different resistance values can be established against wood grain densities and temperature, to relatively accurately determine moisture % readings.



**PIN METER** 

# **CLIMATE & INSPECTION**

## GANN **BL COMPACT S**

#### **PROFESSIONAL RESISTANCE PIN MOISTURE METER FOR TIMBER**

The BL Compact S is a professional German made wood moisture meter, designed for ease of use for determining moisture in different kinds of hard and soft woods.

Unique for its price point, the BL Compact S features a built-in two-stage wood type correction with a supplied wood type chart to identify which code to choose. The Compact S will also determine the ambient temperature of the wood in case a correction is required to be applied.

#### **KEY FEATURES**

- · Economically priced for a high quality/high accuracy professional pin-type moisture meter
- · Rapid fast measurement time
- Two-step correction of wood species
- Ambient Temperature determination

## GANN **BL H 40**

#### **PROFESSIONAL TIMBER FRAMING MOISTURE METER KIT FOR BUILDING & CONSTRUCTION**

The BL H 40 is used for measuring the moisture content in timber framing before lining. This is the type of system used by councils and inspectors for accurately determining the moisture content in the framing.

The kit includes a sliding hammer probe with 60mm 'insulated' probes, supplied in a lined-hard case. The pins are driven into the timber or the Gib lining by the hammer action, typically going into the timber at a depth of 20-30mm.

#### **KEY FEATURES**

- Built-in 7-level wood species correction
- · Rapid fast measurement time
- · 60mm Teflon insulated pins on the hammer electrode reduce the effect that timber treatments have on moisture meter readings







# TROTEC BUILDING INSPECTION KIT

#### PROFESSIONAL BUILDING INSPECTION KIT FOR NON-INVASIVE AND TIMBER MOISTURE MEASUREMENT

The Trotec Building Inspection Kit features Accurate's two best selling moisture meters, the T660 non-invasive moisture meter and the T510K pin-type timber meter, housed together in one handy convenient case.

#### **ACCURACY AND PERFORMANCE**

Both meters provide some of the most accurate determination and measurement of moisture available on the market in New Zealand.

Using the capacitance method for determining moisture in buildings, the T660 is renown for tracking and finding moisture where other meters don't or cannot. With builtin exotic wood species corrections, the T510, with its programmable temperature compensation, can accurately determine the moisture content of timber.

When used with the sliding hammer electrode, supplied in the kit, the T510 can enable invasive moisture measurements at both near surface and depth. The insulated shafts of the pins on the sliding hammer probe help reduce the effect of timber treatment and preservative when taking moisture readings of wood.

#### **NON-INVASIVE VERSUS PINS**

The T660, using the capacitance method, is a quick way to determine whether or not moisture may be present within a building structure. The technology however cannot accurately measure the actual moisture content, due to several factors. This is common across all capacitance type non-invasive moisture meters.

This is where the T510 comes in. The T510 uses the resistance contact method to measure the actual moisture % content. Simply find the moisture using the T660 and measure it with the T510!

#### **KEY FEATURES**

- One kit for both non-invasive and invasive pin type moisture determination and measuring
- Fast moisture tracking and locating
- Precision timber/wood moisture content (%WME)
- Kit includes sliding hammer electrode with 60mm pins (insulated shafts)



CONNECTING CABLES

**AND 60MM PINS** 



MULTI-FUNCTION MOISTURE METERS & KITS



ALL COMPONENTS OF THE TROTEC BUILDING INSPECTION KIT FIT INSIDE A LINED-HARD CARRY CASE





## TROTEC T3000 KIT

#### ADVANCED PROFESSIONAL MULTI-FUNCTION MOISTURE, HUMIDITY, TEMPERATURE AND AIRFLOW METER

The T3000 is an advanced data logging component moisture and climate system, for the professional inspector or building surveyor who seeks the highest accuracy, features and performance.

The T3000 can determine and measure;

- Building Moisture
- Wood Moisture
- Air and Surface Temperature
- Relative and Absolute Humidity
- Dew Point
- Air Flow
- Trace Gas (H2)

The comprehensive range of sensors, electrodes and accessories for the T3000 makes it the ideal meter for full climate and moisture investigation, measuring and recording, especially for building diagnostics.

Simply change the sensor and your T3000 becomes exactly the special measuring device you currently need. No further settings are required on the device. The intelligent technology of the T3000 automatically recognises the connected sensor.

More than twenty different sensors and probes are available for the T3000 to measure.

#### **INTEGRATED GRAPHIC GRID FUNCTION**

The integrated graphic grid measurement function of the T3000 allows visualisation and assessment of moisture distribution: Simply define the matrix to be evaluated directly at the measuring device and the configured grid will be shown on the display. All measured data is automatically saved in the T3000 in the correct sequence, colour coding the measurement results.

#### **KEY FEATURES**

- Multimeasure moisture and climate measurement from the one instrument
- Built-in colour interactive moisture grid and data logging
- Wood species menu and temperature correction
- · Vast array of available probes and sensors

#### MULTI-FUNCTION MOISTURE METERS & KITS



SAMPLE SENSOR AND PROBE OPTIONS.



INTEGRATED MOISTURE RASTA GRAPHIC GRID COLOUR CODES THE MOISTURE CONTENT







# TROTEC APP SENSOR KIT

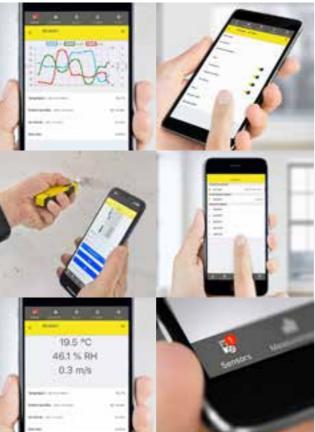
#### SMARTPHONE APP BASED WIRELESS MEASUREMENT KIT FOR MOISTURE, TEMPERATURE, AIRFLOW AND SOUND

The Trotec appSensor Kit features a range of modern Bluetooth enabled climate, emission and moisture sensors that connect to the MultiMeasure Mobile app on a smartphone (iOS or Android).

The APP Sensor kit can determine and measure;

- Building Moisture
- Wood Moisture
- Air and Surface Temperature
- Relative and Absolute Humidity
- Dew Point, Mixing Ratio and Wet Bulb
- Air Flow
- Sound Level

Combined with the free app MultiMeasure Mobile all appSensors are automatically identified by the app and can be connected quickly and easily using wireless technology.







MultiMeasure Mobile allows the results not only in live realtime on your device, the data can be saved in a customer management function, with all of the measured data assigned to projects and clients. The built-in report function further facilitates a quick on-site documentation as well as enabling exporting of the results.

The appSensors can be stored in a versatile soft zip pouch or a lined-hard case.

#### **KEY FEATURES**

- Wireless Bluetooth sensors for moisture, temperature, humidity, airflow & noise measuring
- Use more than one appSensors at once
- Customer management and reporting function
   with export feature
- Link photos to measurement results



# PROTIMETER **MMS2**

## MULTI-FUNCTION MOISTURE, HUMIDITY AND TEMPERATURE METER FOR FLOORING

The MMS2 is the number one flooring moisture meter used in New Zealand, for determining the moisture content of concrete prior to floor coverings being applied.

Moisture measurement of concrete floors in New Zealand require concrete floors to have a relative humidity level of no more than 75% before floor coverings can be installed.

The MMS2 utilises the hygrometric method for determining moisture vapour within the concrete structure. Either a surface box mount or a drill and plug test is used for moisture testing as set out in the NZS/AS 1884:2013 standard.

The MMS2 can determine and measure;

- Building Moisture (scanning non-invasive)
- Wood Moisture (pin invasive)
- Air and Surface Temperature
- Relative and Absolute Humidity
- Dew Point
- Psychrometric Calculations

With the added functionality of a capacitance non-invasive scanning sensor and resistance probes, the MMS2 is ideal for locating and measuring moisture in timber and buildings, with a built-in wood menu and temperature compensation.

A set of 127mm insulated deep wall probes enable moisture readings to be taken at depth into a wall or structure when pre-drilled.

An optional heavy duty hammer electrode is also available for the MMS2, with 100mm hardened probes.

#### **MMS2 FLOORING KIT**

The Protimeter MMS2 Flooring kit is a specialised kit that has been developed to perform in-situ moisture measurement of concrete floors (drill method using sleeves) using special adjustable length sleeves.

The kit includes everything needed to perform concrete flooring moisture testing in line with local and international standards including 20 adjustable sleeves, five reusable hygrometric sensors with extension, drill bits and brush, collar and humidity test block, all housed in a lined-hard transport case.



#### FLOORING MOISTURE METERS





MMS2 FLOORING KIT INCLUDES THE MMS2 METER PLUS ALL THE ACCESSORIES REQUIRED TO PERFORM MOISTURE TESTING OF CONCRETE FLOORS

#### **KEY FEATURES**

- Industry standard for testing moisture in concrete floors in New Zealand
- 4-1 meter including non-invasive & pin moisture measurement, humidity and IR temperature
- Built-in wood species menu selection
- Data Logging

## PROTIMETER **HYGROMASTER2**

#### HAND-HELD PROFESSIONAL THERMO-HYGROMETER

The Hygromaster2 is a high-quality precision hand-held hygrometer, commonly used for flood damage restoration, building climate and air quality surveys, concrete moisture measurement and HVAC applications.

Simple to use with a functional colour display, features include infrared non-contact surface temperature measurement, psychrometric calculations, data logging and replaceable humidity and temperature sensors.

#### **KEY FEATURES**

- Precision high-accuracy replaceable hygrometer sensor
- Fast temperature and humidity response
- Infrared surface temperature measurement
- Data Logging

**CLIMATE & INSPECTION** 



A WIDE RANGE OF ACCESSORIES AND HARD CARRY CASES ARE AVAILABLE



#### HANDHELD HYGROMETERS



#### **PRECISION HAND-HELD THERMO-HYGROMETERS**

The **T210** and **T260** from Trotec are high precision, made in Germany, professional handheld thermo-hyrgorneters, designed for high accuracy determination and measurement of air temperature and relative humidity.

The large clear 2-line LCD is easy read, with the measurements displayed as large numerals. The **T260** has the added functionality of an IR temperature sensor.

#### **KEY FEATURES**

- · Precision quality capacitive humidity sensor
- Large colour LCD, clearly viewable in direct sunlight
- Infrared surface temperature measurement (T260 model)



# **CLIMATE & INSPECTION**

## TROTEC BC21WP



#### **SMARTPHONE APP BASED WIRELESS** HAND-HELD THERMO-HYGROMETER

Ideal for HVAC use, the Trotec BC21WP is a thermohygrometric sensor for determining air temperature, dew point, relative and absolute humidity.

It connects via Bluetooth to Trotec's MultiMeasure APP for smartphones and tablets. Using the App, individual, min, max and average values can be displayed and using the logging function, chart representation of the measurement data is capable along with report generation.

#### **KEY FEATURES**

- · Bluetooth enabled hygrometric sensor with MultiMeaure APP software for smartphones and tablets
- Wireless control and display of data via app
- · Hold, logging and alarm functions



The BC21 is a low cost multi-function thermo-hygrometer from Trotec, measuring air temperature, relative humidity, wet bulb and dew point.

The BC21 is the ideal meter for determining multiple climate measurements for mainly domestic DIY use or non-critical commercial use. Maximum and minimum temperature or humidity values are displayed on the backlit LCD screen.



#### HANDHELD HYGROMETERS



**HUMIDITY METER** 



YEAR WARRANT

The BC06 is a basic compact DIY handheld thermohygrometer capable of measuring air temperature and relative humidity.

The BC06 is ideal for the simple temperature and humidity measurement of home or office environments, basements, wine and storage cellars or hobby rooms. The LCD is illuminated for easy viewing ion low light conditions.

HANDHELD HYGROMETERS

## TROTEC **TC100**

#### THERMAL HEAT STRESS CLIMATE METER

The TC100 is a multifunctional device used for climate environmental air and humidity checks and quick determination of the WBGT index (wet-bulb globe temperature), for the assessment of thermally stressed workplaces. Other than for the WBGT, the TC100 can also be used to determine the heat index (humidex), which describes the combined effect of humidity, temperature and radiant heat on the human body.

#### **KEY FEATURES**

- WBGT index thermal stress indicator
- Fast response time
- Data hold, MAX/MIN and alarm function
- · Data memory for 99 measured values
- Humidex determination

# Q WEBSITE SEARCH

### **CLIMATE & INSPECTION**

DATA LOGGING HYGROMETERS

HEAT STRESS

METER

YEAR



#### **BASIC ECONOMY DATA LOGGER FOR AIR TEMPERATURE AND RELATIVE HUMIDITY**

The BL30 is a low cost easy to operate two-channel climate data logger, capable of recording air temperature and relative humidity values.

The BL30 is programmable to record at different time intervals, with values displayed in real-time on the large LCD display. Supplied with wall mount and USB cable.

#### **KEY FEATURES**

- · Autonomous long-term recording of climate data
- Storage for 32,000 measured values
- Alarm function
- Real-time display of minimum/maximum values
- USB interface for measuring data transfer







## TROTEC **DL200 SERIES**

#### **PROFESSIONAL LAN CAPABLE TEMPERATURE AND HUMIDITY DATA LOGGERS**

Made in Germany from the highest precision components, the DL200 data loggers simultaneously record air temperature, dew point and relative, as well as, absolute humidity. This makes the DL200H suited for monitoring the environment in buildings, museums or storerooms and for controlling climate-sensitive processes during industrial production.

With five models available, all DL loggers are multichannel which record current, minimum, maximum or average values. Each of these four values represents a measurement channel. In total, 20 of these measurement channels can be freely selected for logging and three for display in real-time on the LCD.

Storage for up to 3,200,000 measured values is available while a universal measuring network can operate in realtime due to the DL200's LAN capability.



#### **KEY FEATURES**

- Storage for up to 3,200,000 measured values
- Precision German manufactured loggers
- Simultaneous recording of up to 20 channels
- LAN capable
- Chose from five models









YEAR





The **BZ05** is a desktop or wall mountable thermohygrometer that can measure air temperature and relative humidity quickly and reliably and display the readings together with the time and date in large, easy-to-read values.

The BZ05 also features a unique and convenient "feel-good" comfort indication. This indicator assesses the air temperature and humidity to determine the comfort factor of the current environmental conditions. At a quick glance, it is easy to determine the room climate and ensure that levels are comfortable and conductive for a healthy working environment.

- · Simultaneous display of room temperature, humidity and time or date
- Alarm function
- Free-standing or wall mount

## TROTEC **BZ06**

The BZ06 thermohygrometer is a4-1 combination modern design desktop weather trend and indoor climate data meter, displaying temperature, humidity, time and date, with an integrated alarm function.

The weather trend signals an imminent weather change with graphical weather forecasts. With one glance you can see what's in store for you outside: based on the humidity values, the BZ06 provides a forecast.

The large LCD display indicates via four weather symbols, whether it will be sunny, slightly cloudy, cloudy or rainy. The BZ06 has a large easy-to-view transparent LCD.

- Graphical weather forecast
- Large LCD display
- Four soft-touch buttons
- Alarm mode with snooze
- 1.5V AAA battery included

## TROTEC **BZ07**

Ideal for the office desk or bedside table, the **BZ07** desktop thermohygrometer shows all the relevant climate values one needs to determine for an optimal indoor or work climate.

In addition to the indoor temperature and the relative humidity, there is also a feel-good indicator with three different climate levels, as well as the weather trend indicator.

The easy-to-read display also shows the day of the week, date, time and an alarm clock (with a snooze function). The weather trend bar graph indicator of the BZ07 tracks the temperature changes of the past 12 hours.

- · Weather trend indicator
- Large numerical LED display
- Alarm with snooze function
- Temperature change over the previous 12 hours



## TROTEC **BF06**

#### **BASIC ECONOMICAL HANDHELD LUX METER**

This compact low cost luxmeter enables indoor and outdoor light calculations. Due to the integrated spectral filter, infrared radiation is reliably filtered so that only the relevant light spectrum is captured.

The BF06 is suitable for photometry at work or at home, exhibition stand construction, horticulture or film/photo sets. The BF06's detector meets the requirements of the ISO accepted international commission on illumination (CIE).

#### **KEY FEATURES**

- Measurement of illuminance & incidence of light
- Large, clearly legible LED display
- · Sensor controlled display lighting in low light
- Light Range 0 to 40,000 lux
- Measuring Rate 2.5- times per second

#### **CLIMATE & INSPECTION**

TROTEC **BW10** 

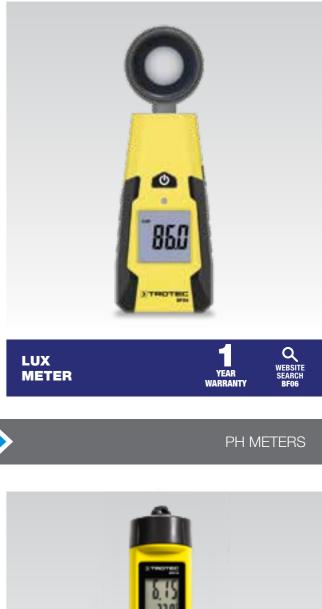
#### **ECONOMICAL HANDHELD PH METER**

The BW10 is an economical pH meter suitable for testing the acidity of liquids for quality control in the food and beverage industry or for aquariums and swimming pools. The device is equipped with a three-point calibration, which can be carried out using the pH buffer as well as automatic temperature compensation, which permits a quick determination of the pH value over varying temperatures between 0 and 50°C.

#### **KEY FEATURES**

- The two-line display showing both pH value and water temperature at the same time
- Automatic temperature compensation
- Three-point factory calibration
- Auto calibration for pH 4.01/7.00/10.01







METER

YEAR WARRANT

# Anemometers

Professional hot wire and vane anemometers for the precise determination of air velocity, air temperature and volumetric airflow.



## TROTEC **TA300**

#### **PROFESSIONAL HOT-WIRE ANEMOMETER**

The Trotec TA300 is a hot-wire anemometer used primarily for measuring volumetric airflow. Ideally suited for the HVAC industry for measurements in ducts or vents and air conditioning systems, the hand-held probe from the TA300 can be extended to a length of one metre.

The combination of a precision hot-wire sensor and a fast microprocessor ensures quick and precise measuring results for each application. An optional calibration certificate is available for the TA300.

#### **KEY FEATURES**

- Functions: Air speed, air volume, air temperature
- Illuminated dual indication LCD display
- Extendable sensor probe to 1m
- Optional calibration certificate available
- TA400 model available with pitot tube

## TROTEC **BA30WP**



#### **SMARTPHONE APP BASED WIRELESS HOT-WIRE ANEMOMETER**

The appSensor BA30 WP is a Bluetooth hot-wire anemometer permitting measurements of air velocity, volumetric flow, air temperature and relative humidity when used in combination with the MultiMeasure Mobile app.

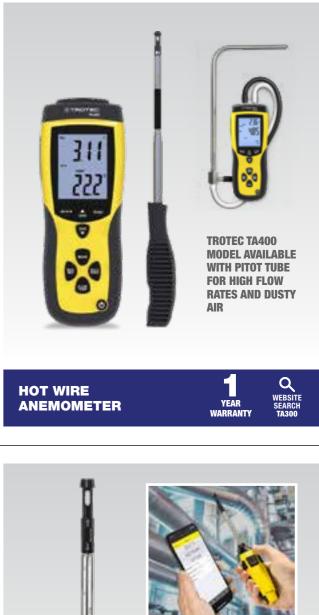
Is ideally suited for performance measurements on home domestic appliances as well as commercial air conditioning and ventilation systems. The Multimeasure APP allows real-time measurement recording, photo backgrounds and exporting of results.

#### **KEY FEATURES**

- Precise measuring using hot-wire sensor
- Wireless connectivity to MultiMeasure APP
- Create a measurement with results, background photos and export csv function
- Hold, logging and alarm functions



#### HOT-WIRE ANEMOMETERS





**ANEMOMETER** 

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YEAR WARRANTY

## TROTEC **BA16**

#### **ADJUSTABLE NOOSE-TYPE VANE ANEMOMETER**

Functional and extremely popular, the BA16 is a handheld vane anemometer with adjustable 40cm gooseneck designed for measuring cubic airflow volumes, airspeed and air temperature.

It is ideal for HVAC, air conditioning, exhaust, fan and ventilation measurements.

Fast to measure, the large clear LCD has a backlit display which shows the real-time measurement along with maximum, minimum and hold modes.

#### **KEY FEATURES**

- · Quick and easy measurement of air velocity, air temperature and cubic air volume flow (CMM)
- Maximum or minimum values and hold function
- Semi-rigid 40cm gooseneck probe length
- Smooth precise vane sensor



#### VANE ANEMOMETER



## TROTEC **BA06**

#### **ECONOMICAL VANE ANEMOMETER**

The BA06 is a small compact handheld anemometer designed for the simple measurement of airspeed.

Need to measure wind speed for safe operation of cranes, working at heights, gondolas, chairlifts, rooftop operations or platforms - the BA06 is the ideal one handed pocket anemometer, small enough to not interfere when you are working in a comprised space. The BA06 can also display maximum or average values on the backlit LCD display which features a low light sensor.

#### **KEY FEATURES**

- Quick and easy airspeed measurement of wind, air or gases in m/s, ft/min, km/h, mph, knots
- Displays maximum and average value
- · Sensor controlled backlight for LCD in low light









## TROTEC **BA16WP**



#### **SMARTPHONE APP BASED WIRELESS VANE ANEMOMETER**

The BA16WP is a Bluetooth vane anemometer sensor for determining air speed, relative humidity and air temperature.

It connects to Trotec's MultiMeasure APP for smartphones and tablets. Using the App, individual, minimum, maximum and average values can be displayed and using the logging function, the measurement data is capable of report generation.

#### **KEY FEATURES**

- Rugged precision vane anemometer sensor
- Wireless connectivity to MultiMeasure APP
- Create a measurement with results, background photos and export csv function
- LED Bluetooth connection indicator







#### **DIFFERENTIAL PRESSURE ANEMOMETER**

The BV15 WP is a differential pressure measuring sensor that connects to Trotec's MultiMeasure APP for smartphones and tablets.

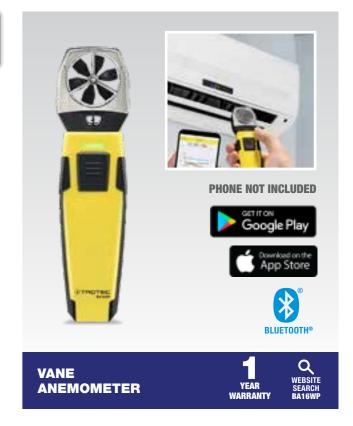
The compact sensor can detect differential pressure measurement changes in filter, HVAC or ventilation systems and with the aid of an optional pitot tube, the air speed and air volume of air or non-combustible gases can be determined.

#### **KEY FEATURES**

- · Differential pressure sensor with optional pitot tube
- Wireless connectivity to MultiMeasure APP
- · Create a measurement with results, background photos and export csv function



#### VANE ANEMOMETERS



#### PRESSURE ANEMOMETERS



# Thermal Imaging

Infrared Thermal Imaging is one of the key non-contact technologies utilised to determine fault, condition and assessment of equipment, plant and infrastructure and Fluke is one of the most recognised brands in the world.

## FLUKE

**CLIMATE & INSPECTION** 

## FLUKE

Headquartered in Everett, Seattle, USA, since its foundation in 1948, Fluke has helped define and grow technology in an increasing number of electrical, diagnostic, inspection and electro-mechanical industries and markets, worldwide.

- Fluke's comprehensive line of hand-held test tools, including thermal imaging cameras, are being used by a growing number of service technicians, plant engineers, building and infrastructure consultants and installation and maintenance technicians. These tools provide the ability to troubleshoot complex
- new systems and detect problems quickly
- Fluke tools help professionals achieve outstanding performance by delivering the accuracy, reliability, toughness, safety, usability and value for which Fluke tools are famous.

## FLUKE PTi120

#### **COMPACT POCKET IR CAMERA**

The Fluke PTi120 pocket Thermal Camera, is one of the most compact infrared cameras available, and is seen as the first line of defence for easy troubleshooting.

Infrared inspections are right in your pocket for quick temperature scans of electrical equipment, machinery and other assets, all displayed on a 3.5" LCD touchscreen with IR-Fusion™ to blend visible light images with an infrared image to more easily locate problems. For non-precision simple infrared imaging, the PTi120 is the tool you need.

#### **KEY FEATURES**

- 120x90 infrared resolution (10,800 pixels)
- 3.5" LCD touchscreen display
- -20°C to +400°C measurement range
- WIR-Fusion<sup>™</sup> visual and infrared image blending

#### BASIC INFRARED CAMERA







COMPATIBLE WITH THE FLUKE CONNECT® APP FOR IOS AND ANDROID











COMPATIBLE WITH THE FLUKE CONNECT® APP

## FLUKE TiS+ Series

#### **CONVENTIONAL ECONOMY THERMAL CAMERAS**

The Fluke TiS+ range of hand-held thermal cameras are designed for the electrical, maintenance and building engineer who is required to use an infrared camera day-in, day-out, on the job. With a range of resolutions from 120x90 pixels up to 384x288 pixels, low thermal sensitivities and wide temperature range, there is a TiS+ model to suit almost all everyday thermal imaging applications.

#### **KEY FEATURES**

- Continuous touchscreen IR-Fusion<sup>™</sup>
- Optimal IR resolutions up to 384x288 pixelsAutomatically organise and file thermal images
- with Fluke Connect<sup>™</sup> Asset Tagging

  Choose from five economically priced models

#### PROFESSIONAL INFRARED CAMERA



SPECIFICATION COMPARISON	TIS20+	TIS55+	TIS60+	TIS75+
SPATIAL RESOLUTION	7.6 mRad	1.91 mRad	1.86 mRad	1.91 mRad
DETECTOR RESOLUTION	10,800 pixels (120x90)	49,152 pixels (256x192)	76,800 pixels (320x240)	110,592 pixels (384x288)
THERMAL SENSITIVITY	60mK (0.06°C)	40mK (0.04°C)	45mK (0.045°C)	40mK (0.04°C)
TEMPERATURE RANGE	-20°C to +150°C	-20°C to +550°C	-20°C to +400°C	-20°C to +550°C

Product specifications are subject to change, please confirm at time of purchase.





## FLUKE Ti series

#### **PROFESSIONAL HAND-HELD THERMAL CAMERAS**

For predictive and preventive maintenance, electrical inspections, commercial and industrial mechanical systems IR cameras from Fluke are tried, tested and employed industry wide. With interchangeable smart lenses, LaserSharp auto-focussing, Super Resolution and radiometric video recording, you'll get it right everytime with a Ti Series camera.

SPECIFICATION			
COMPARISON	Ti300+	Ti401 PRO	Ti480 PRO
SPATIAL RESOLUTION	1.85 mRad	0.93 mRad	0.93 mRad
DETECTOR RESOLUTION	76,800 pixels (320x240)	307,200 pixels (640x480)	307,200 pixels (640x480)
THERMAL SENSITIVITY	75mK (0.075°C)	75mK (0.075°C)	50mK (0.05°C)
TEMPERATURE RANGE	-20°C to +650°C	-20°C to +650°C	-20°C to +1000°C
	Dr	oduct specifications are subject to chang	e please confirm at time of purchase

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OPTIONAL SMART INFRARED TELEPHOTO LENS AVAILABLE

#### **KEY FEATURES**

- SuperResolution combines images to create a 1280x960 image (Ti480 PRO)
- IR-Fusion® technology PIP and full screen
- LaserSharp® Auto Focus
- Wide temperature range -20°C up to +1000°C

#### PERFORMANCE INFRARED CAMERA







## FLUKE **TIX SERIES**

#### **HIGH PERFORMANCE PRECISION THERMAL CAMERAS**

When the best performance, functionality and precision results are needed, the TiX expert series from Fluke is the answer. With 240° rotating articulation, this lets you adjust the camera to minimize glare outside and the large 5.7" touchscreen delivers a premium in-field viewing experience. In focus images are easier to capture with LaserSharp Autofocus and 2x digital zoom.



FLUKE **COMPATIBLE WITH FLUKE** CONNECT **CONNECT® SOFTWARE** 



**OPTIONAL SMART INFRARED TELEPHOTO LENS AVAILABLE** 

#### **KEY FEATURES**

- SuperResolution combines images to create a 1280x960 image (TiX580)
- Real-time temperature graphs
- Radiometric video recording with Auto capture image sequence
- Remote display through Fluke Connect

PRECISION **INFRARED CAMERA** 



SPECIFICATION		
COMPARISON	TIX501	<b>TIX5</b> 80
SPATIAL RESOLUTION	0.93 mRad	0.93 mRad
DETECTOR RESOLUTION	307,200 pixels (640x480)	307,200 pixels (640x480)
THERMAL SENSITIVITY	75mK (0.075°C)	50mK (0.05°C)
TEMPERATURE RANGE	-20°C to +650°C	-20°C to +1000°C

Product specifications are subject to change, please confirm at time of purchase.

#### **CLIMATE & INSPECTION**



## MSA **EVOLUTION 6000**

#### **FIREFIGHTING THERMAL IMAGING CAMERA**

The MSA Evolution 6000 is a specialised intrinsically safe thermal imaging infrared camera used to aid and improve fire ground safety, locating and to assist in safe site decision making.

The Evolution 6000 is the one of the most advanced and rugged thermal imaging cameras ever built for use in the firefighting industry.

Enhanced features include best-in-class image quality, lightweight construction, laser pointer and range finder, compass, integrated video and picture capture and an integrated wireless video transmission system.

This NFPA 1801-compliant model provides the industry's best mix of features to support the thermal imaging needs of every fire department, rescue team, or HazMat crew.

Operation includes NFPA Basic Mode and additional features in NFPA Plus Mode.

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#### FIREFIGHTING INFRARED CAMERAS

**OPTIONAL TRUCK MOUNTING KIT** 



#### **KEY FEATURES**

- 320 x 240 resolution (76,800 pixels)
- Integrated picture/video capture
- Video transmitter for remote monitoring
- 2x/4x zoom for a closer look
- Measure -40°C to +600°C

NFPA 1801 **FIREFIGHTING CAMERA** 





## FLUKE VT04A

#### **INTUITIVE THERMAL IR LASER PYROMETER**

The Fluke VT04A is a unique infrared laser thermometer. It features a built-in thermal IR sensor that not only provides the surface temperature, but also a thermal image - all in one! It is designed to help you see it all.

You can see issues in context by blending the infrared heat map with a visual image. Images can be viewed and edited in the basic Smartview® software.

#### **KEY FEATURES**

- Built-in thermal IR sensor with near and far modes that automatically aligns visual and thermal lenses
- PyroBlend® Plus optics for IR and visual imaging
- Temperature measuring range -10°C to +250°C
- Field of view 28° x 28°



COMBINATION IR AND THERMAL IMAGING PYROMETER

#### THERMAL LASER PYROMETER 2 VEAR WARRANTY VT04A

#### CLIMATE & INSPECTION

#### INFRARED LASER PYROMETERS

## FLUKE 62 max

#### SINGLE LASER INFRARED THERMOMETER

The Fluke 62 MAX is a suitable compact infrared laser pyrometer aimed at the electrical assessment markets.

It delivers the reliability and accuracy that Fluke testers are renown for. Just point, shoot, and read the temperature of many types of equipment. Ideal for getting accurate readings from transformers, motors, pumps, panels, breakers, compressors, duct, steam lines, valves, and vents.

#### **KEY FEATURES**

- High and low alarms for rapid detection
- Displays Min/Max/Avg/Difference between two measurements
- Temperature measuring range -30°C to +500°C
- Optical resolution 10:1



IDEAL FOR COMMERCIAL AND DOMESTIC ELECTRICAL ASSESSMENT

CONVENTIONAL INFRARED PYROMETER



CLIMATE & INSPECTION



## TROTEC INFRARED LASER PYROMETERS PROFESSIONAL INFRARED LASER THERMOMETERS

Trotec's range of infrared laser thermometers have been designed for quick, simple precision surface non contact temperature measuring.

Trotec's home and domestic BP range (BP17, BP21) are well suited for the DIY, hobbyist and home owner. Economical in cost, fast and quick to measure, they are well suited for pizza ovens, heating and ventilation equipment or any quick temperature needed around the home.

Trotec's higher specified TP series (TP7, TP10) are well featured and equipped for commercial and industrial use.

SPECIFICATION					
COMPARISON	BP17	BP21	ТР7	TP10	
TEMPERATURE RANGE	-50 °C to + 380 °C	-35 °C to + 800 °C	-50 °C to + 1000 °C	-50 °C to + 1850 °C	
OPTICAL RESOLUTION	10:1	12:1	40:1	75:1	
SPOT MEASURING SIZE (MIN)	12.7mm@ 0.127m	12.5mm@ 0.150m	12mm@0.480m	12mm@0.480m	
IR LASER SPOTS	Single	Dual	Dual	Dual	
TYPE K CONTACT TEMP	No	No	No	Yes	
LCD INDICATORS	Visual green, amber, red	Monochrome LCD	Visual green, amber, red	Visual green, amber, red	
ADJUSTABLE EMISSIVITY	colour No	Yes 0.10 to 1.0	Yes 0.10 to 1.0	colour Yes 0.10 to 1.0	



MODELS SHOWN (L-R) BP17, BP21, TP7, TP10

Features include higher temperaturing measuring capability, multipoint technology, smaller precision measuring points, adjustable emissivity and type K compatible thermocouple connection (TP10).



PERFORMANCE INFRARED THERMOMETERS

Product specifications are subject to change, please confirm at time of purchase.

# TROTEC BP25

#### **DEW POINT INFRARED THERMOMETER**

The BP25 is the infrared thermometer you need if you need to determine surface temperature of solid objects AS WELL AS the Dew Point temperature. It features a built-in hygrometric sensor which enables the measurement of air temperature, air humidity and dew point temperature, all from the one instrument.

This makes the BP25 ideal for HVAC and air quality measurements, painting, plastering and coating application, heating systems, road resurfacing and asphalting.

#### **KEY FEATURES**

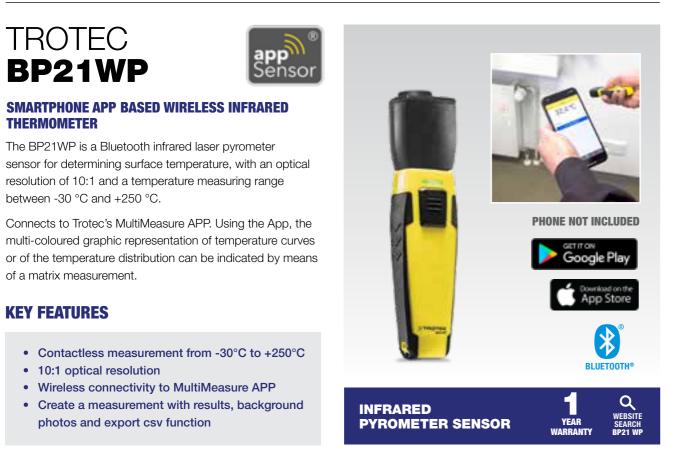
- 4-1 instrument for surface temperature, dew point temp, air temperature, relative humidity
- Non-contact surface temperature measurement via infrared from -50°C to +260°C
- LCD red, amber, green visual alarm



VISUAL LCD ALARM INDICATION

DEW POINT INFRARED PYROMETER







## TROTEC BP5F

#### **COMBINATION INFRARED/PROBE FOOD THERMOMETER**

The BP5F is a infrared PLUS probe thermometer designed for the the food and beverage industry. It can quickly and reliably measure temperatures hygienically and safely between -40°C to +280°C (200°C contact probe) with values presented on an easy to read backlit display.

The BP5F uses the internationally accepted HACCP standard (Hazard Analysis and Critical Control Points) for ensuring food safety, with LED alarm indicators for too hot or too cold.

#### **KEY FEATURES**

- Infrared and insertion thermometer in one combination device
- Measurements from -40°C to +200°C, or up to +280°C contact-free when using infrared
- LED hot and cold safety alert indicators

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YEAR WARRANTY WEBSITE

#### FOOD & BEVERAGE PYROMETER

FOOD & BEVERAG

BP5F FEATURES BOTH CONTACT AND NON-CONTACT TEMPERATURE MEASUREMENT LOW COST BP2F MODEL ALSO AVAILABLE

85

## TROTEC BT20

#### **INSERTION THERMOMETER**

The long, slim, stainless steel measuring tip and the wide measuring range from -40°C to +250°C make the BT20 a practical insertion thermometer ideal for a variety of measuring applications including hot water temperature, in laboratories, penetrable solids and for hobby enthusiasts.

The easy to clean plastic casing is also equipped with a rubberised soft-touch protective sheath, which provides a secure grip in all situations.

#### **KEY FEATURES**

- Quick and easy temperature measurements of liquids and penetrable solids
- Maximum or minimum value and hold function
- Soft-touch rubber protective cover
- Stainless steel measuring tip



DIGITAL THERMOMETER



# TROTEC **BT22WP**

## app Sensor

#### SMARTPHONE APP BASED WIRELESS INSERTION THERMOMETER

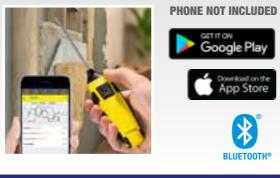
The BT22WP is a Bluetooth insertion/digital sensor for determining temperature, with an optical resolution of 10:1 and a wide temperature measuring range.

It connects to Trotec's MultiMeasure APP for smartphones and tablets. High-quality sensors and numerous measuring functions make the BT22WP the ideal climate measuring device for household, hobby or workshop.

#### **KEY FEATURES**

- Quick and easy temperature measurements of liquids and penetrable solids
- Wireless connectivity to MultiMeasure APP
- Create a measurement with results, background photos and export csv function

COMING SOON EST. NOVEMBER 2021



#### DIGITAL THERMOMETER SENSOR



## CLIMATE & INSPECTION

The VSC206 industrial videoscope provides razor-sharp videos and digital images in a mobile, user-friendly cost effective system.

# TROTEC VSC206

## 2M ARTICULATED CONTROLLABLE VIDEO AND IMAGING BORESCOPE

The VSC206 is a professional automated borescope featuring high-quality video and image capture and 4-way articulated camera head adjustment for 90° viewing angle.

The 2-metre probe is flexible and the articulated camera head can be steplessly controlled via the joystick. With its titanium-coated camera head, the VSC206 enables perfect panoramic views of the inspection area.

Its multi-ply construction of stainless steel wire mesh and PU on a flexible steel spiral ensures maximum range of motion with simultaneously high torsional strength of the push probe.

Six white LEDs with variable brightness control and 40,000 LUX ensure sharp, detailed images that can be shown on the large VGA display of the VSC206 and saved for documentation purposes, either as video or individual image on an SD 8GB memory card.

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#### AUTOMATED VIDEOSCOPES





- 4-way articulated controllable camera head with step less joystick control
- IP67 rated Titanium coated stainless steel camera
- 350,000 pixels CMOS sensor
- 3.5" TFT VGA LCD display

INDUSTRIAL VIDEOSCOPE





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TROTEC

AUTOMATED VIDEOSCOPES

With the VSC3008 professional industrial videoscope, photos and videos can optionally be transmitted in real time via a wireless connection to your mobile device serving as a second live screen.

TUNGSTEN WIRE MESH ARTICULATED CAMERA HEAD ENSURING MAXIMUM RANGE OF MOTION

# TROTEC VSC3008

#### 3M ARTICULATED CONTROLLABLE VIDEO AND IMAGING BORESCOPE

The VSC3008 is a professional automated borescope with a wide VGA 4.3" display, featuring high-quality video and image capture and 4 way articulated camera head adjustment for 130° viewing angle.

With the VSC3008 photos and videos can optionally also be transmitted in real time via a wireless connection to your mobile device serving as second live screen.

The 3-metre probe is flexible and the articulated camera head can be steplessly controlled via the joystick. With its titanium-coated camera head, the VSC3008 enables perfect panoramic views of the inspection area.

Six white LEDs with variable brightness control and 50,000 LUX ensure sharp, detailed images that can be shown on the large wide VGA display of the VSC3006 and saved for documentation purposes, either as video or individual image on an SD 32GB memory card.

#### **KEY FEATURES**

- 4-way articulated controllable camera head with step less joystick control
- IP67 rated Titanium coated stainless steel camera
- 440,000 pixels CMOS sensor
- 4.3" TFT Wide VGA LCD display

INDUSTRIAL VIDEOSCOPE





**CLIMATE & INSPECTION** 



# TROTEC BO26

Designed for capturing and recording images and video, the BO26 is a cost effective recordable videoscope allowing inspection AND recording of condition monitoring inside machinery, building cavities and in confined spaces. The semi-flexible gooseneck probe is 1-metre in length with optional extensions, 9mm and 6mm camera probes also available.

CLIMATE & INSPECTION

# TROTEC BO21

#### HAND-HELD INSPECTION CAMERA

The BO21 is a multipurpose non-recordable inspection camera for rapid endoscopic visual inspections in hard-toview areas. The flexible gooseneck probe features a IP67 watertight camera with adjustable lighting.

The quad-LED illumination enables optimally illuminated inspection images in most situations, that are displayed on the colour display on the LCD monitor.

#### **KEY FEATURES**

- Probe: Ø 17mm / Length 1,000mm
- Focus area: 50 150 mm
- Field of view: 68°
- Display: 2.4 inch LCD (480 x 234 pixels)
- Optional extensions available



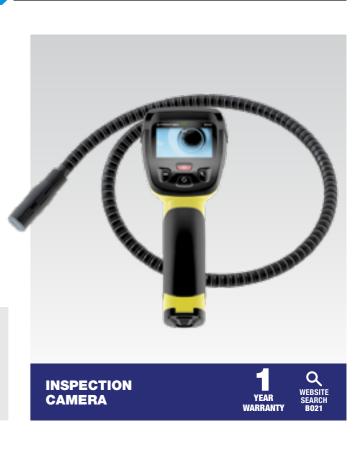
#### RECORDABLE VIDEOSCOPES



## TROTEC BO22

The BO22 is a compact solution for visually inspecting poorly accessible areas, with the option to take photos or videos for documentation purposes. The bendable, semi-rigid gooseneck 1m probe can be inserted into small diameter openings. The light provided by six LEDs is dimmable in four stages and illuminates the surroundings, providing good quality inspection images – even in water.

#### INSPECTION CAMERAS



# Dehumidification, Ventilation & Heating

TROTIC

Trotec is one of Europe's largest manufacturer's and suppliers of commercial and industrial climate control, drying, ventilating and heating systems.

> TROTEC AT WORK.

**CLIMATE & INSPECTION** 



## TROTEC **TTK-S SERIES**

#### **COMMERCIAL CONDENSATE BUILDING** DEHUMIDIFIERS

Built and designed for commercial drying of new construction building, timber framing and water damage cleaning and restoration, the portable, commercial dehumidifiers of the TTK-S series are the perfect drying dehumidifiers.

With high drying capacities, even in low temperatures, choose from four models, with options for water bucket collection, drain-away or condensate pump operation.

SPECIFICATION COMPARISON	TTK1258
MAX DRYING CAPACITY	32L / 24hrs
ROOM SIZE DRYING	150m <sup>3</sup>
AIRFLOW MAX.	250m <sup>3</sup> / hour
WEIGHT / HEIGHT	26kg / 609mm

#### CONDENSATE DEHUMIDIFIERS

#### **KEY FEATURES**

- High dehumidification even at low temperatures
- Portable transportation with adjustable handle
- User adjustable hygrostat for drying control
- Bucket, drainaway and optional condensate pump operation
- Manufactured in Europe

#### COMMERCIAL DEHUMIDIFIER

ÊÜ





TTK355S	TTK655S
70L / 24hrs	150L / 24hrs
450m <sup>3</sup>	750m³
1000m <sup>3</sup> / hour	1000m <sup>3</sup> / hour
39kg / 720mm	55kg / 810mm
	70L / 24hrs 450m <sup>3</sup> 1000m <sup>3</sup> / hour

Product specifications are subject to change, please confirm at time of purchase.



## TROTEC **TTR COMPACT**

#### **COMPACT PORTABLE DESICCANT DEHUMIDIFIERS**

Made in Germany the TTR Compact range of absorption desiccant dehumidifiers are lightweight in design yet powerful in performance. For drying below 0 °C or above 30 °C, the TTR dehumidifiers are designed for ducted installation either inside a room (exhausting wet air outside) or outside a room (ducting dry air into a room.

The TTR are well suited for climate control of hygienic rooms, food and materials production.

#### **KEY FEATURES**

- · Wide temperature range of climate control operation, down to below 0 °C
- Continuously regulatable Air flow rate
- Bisorp-Mono or Trisorp-Dual drying operation (TTR400D/500D)
- Optional filters, filter boxes and connecting ventilation grade ducting available

ABSORPTION DEHUMIDIFIER	YEAR WARRANTY	Q WEBSITE SEARCH TTR	
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SPECIFICATION					
COMPARISON	TTR200	TTR300	TTR400	TTR400D	TTR500D
MAX. DRYING CAPACITY	8.4kg / 24hrs	16.8kg/ 24hrs	28.8kg/ 24hrs	38.4kg / 24hrs	53kg / 24hrs
BISORP-MONO/TRISORP-DUAL	BISORP-MONO	BISORP-MONO	BISORP-MONO	TRISORP-DUAL	TRISORP-DUAL
DRY AIRFLOW MAX.	120m <sup>3</sup> / hour	200m <sup>3</sup> / hour	450m <sup>3</sup> / hour	450m <sup>3</sup> / hour	550m <sup>3</sup> / hour
EXTERNAL COMPRESSION	50Pa	100Pa	150Pa	200Pa	150Pa

Product specifications are subject to change, please confirm at time of purchase.





## TROTEC **TTR SERIES**

#### LARGE STATIONARY INDUSTRIAL DEHUMIDIFIERS

For large drying and climate control of industrial and commercial workplaces, hotels, apartments and businesses, as well as marine, port and vessel use, the TTR large industrial series of desiccant dryers provide the required high dehumidification levels even at very low dew points. With its stainless steel housing and an electrical control box in a IP53 design, the corrosion-resistant TTR even withstand adverse operational environments outside and in coastal/marine applications.

Compared with the smaller compact yellow TTR units, with drying capacities of 8 - 53L per 24hrs, the stainless steel industrial TTR dryers feature large capacity drying of between 86 and 492 kg/24hrs.

For simple ongoing maintenance, the drying cassette and replacement filters are easily changeable.

The internal heat recycling process as well as the high level of performance of the sorption rotors, the TTR series are among the most economical dehumidifiers of their type.

#### ABSORPTION DESICCANT DEHUMIDIFIERS

#### **MODEL RANGE**

- TTR800: Max Dehumidification (kg/24h) 86.4
- TTR1400: Max Dehumidification (kg/24h) 177.6
- TTR2000: Max Dehumidification (kg/24h) 259.2
- TTR2800: Max Dehumidification (kg/24h) 376.8
- TTR3700: Max Dehumidification (kg/24h) 492

#### **KEY FEATURES**

- Robust and durable stainless steel housing
- Configurable air direction reversal
- Trisorp Duoventic air volume regulation
- High dry air flow rate even with in low dew points
- · Simple cassette and filter replacement



203

TURBO FANS

The professional high-performance solution for construction and restoration work.

CAN BE PUT INTO OPERATION IN THREE POSITIONS: HORIZONTAL, INCLINED BY 45° AND VERTICAL

## TROTEC TFV SERIES

#### **EFFICIENT HIGH CAPACITY TURBO FANS**

The Trotec TFV square series redefine the term turbo fan. While standard fans for hollow spaces are, for the most part, identical in every respect, the professional turbo fans of our TFV square series come with unparalleled features.

The distinctive cuboid design in practice offers compelling advantages. The space requirements for storage and transport are much reduced – seeing as all the devices can be stacked a number of times upon one another.

Each TFV square turbo fan accommodates a double-flow radial fan with an extra large shaft and an especially formed air exhaust duct, generating a broad near-ground air current over wet flooring, screeds or bottom timber frames. The room air is optimally distributed which perceptibly reduces the drying time.

The design of the TFV square fans also enable 3 stage positioning for horizontal, 45 degree tilt or vertical blowing applications.

#### **MODEL RANGE**

- TFV10: Air volume Level Max. [m<sup>3</sup>/h]: 380
- TFV20: Air volume Level Max. [m<sup>3</sup>/h]: 1,185
- TFV30: Air volume Level Max. [m<sup>3</sup>/h]: 2,200

#### **KEY FEATURES**

- Double-flow radial fan with extra-large shaft
- Operating hours counter
- Robust yet light construction
- High energy efficiency
- Can be stacked to save space when stored

COMMERCIAL DRYING FANS



## TROTEC TFV-S SERIES

#### **ECONOMICAL HIGH CAPACITY TURBO FANS**

Trotec's TFV-S series are ideal aids for a wide variety of drying and ventilating applications including carpet drying, flood restoration, cavity and wall drying walls or to speed up the drying of screed and entire buildings.

**CLIMATE & INSPECTION** 

Due to their specially formed air exhaust duct, the turbo fans produce a wide air current near the ground above wet flooring or screeds. The room air is optimally distributed which perceptibly reduces drying time.

The combination of performance, robust, compact construction, high application flexibility and excellent valuefor-money ratio makes the turbo fans of the TFV-S series the perfect universal equipment for any business offering restoration, cleaning or building maintenance services.

The stackable TFV 30S comes with three variable power stages, so the air volume can always be optimally adjusted to the different requirements of the object.



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Versatile turbo blowers – ideal for drying carpets and hollows or to assist in the water damage restoration.



WHETHER AT 0°, 45° OR 90° FANS CAN BE USED IN THREE DIFFERENT ANGLES POSITIONS

#### **MODEL RANGE**

- TFV 10S: Air volume Level Max. [m<sup>3</sup>/h]: 355
- TFV 30S: Air volume Level Max. [m<sup>3</sup>/h]: 2,250

#### **KEY FEATURES**

- Robust polyethylene housing
- Double-flow radial fans with extra large shaft
- Three fan stages (TFV 30S)
- Stackable (TFV 30S)
- Optional 3 way hose splitter adapter (TFV 30S)

COMMERCIAL DRYING FANS





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AXIAL FANS

High performance 200mm, 300mm, 450mm and 560mm axial direct fans.

## TROTEC **TTV SERIES** HIGH-PERFORMANCE AXIAL FANS

Whether to speed up construction drying, for dust collection or the ventilation on construction sites, in confined spaces such as manholes and tanks or storage spaces – the TTV Series is a smart ventilation solution for all users looking for a optimised high-performance air changes or air movement.

The combination of a range powerful axial fans and a wide selection of hose connections, ducting and dust bags to connect to the TTV makes a versatile solution for ventilation. The TTV series has been especially designed for the toughest practical requirements in harsh surroundings, even for the stresses and strains resulting from continuous operation.

Choose from the fixed design economical TTV1500 (8"), TTV3000 (12") or TTV4500S fans for direct ducted operation. The TTV4500, 4500HP and 7000 models have the added functionality of tilt adjustment, and a range of hose splitters to separate and direct specific airflow direction.

#### **MODEL RANGE**

- TTV1500S: Air Flow Rate Max. [m<sup>3</sup>/h]: 1050
- TTV3000: Air Flow Rate Max. [m<sup>3</sup>/h]: 3000
- TTV4500: Air Flow Rate Max. [m3/h]: 5300
- TTV4500HP: Air Flow Rate Max. [m<sup>3</sup>/h]: 4500
- TTV4500S: Air Flow Rate Max. [m<sup>3</sup>/h]: 5000
- TTV7000: Air Flow Rate Max. [m<sup>3</sup>/h]: 8500

#### **KEY FEATURES**

- 200mm up to 560mm model fans
- Extremely robust for continuous operation
- Fixed or tilt adjustable models
- Variable hose adapters splitters for TTV4500, 4500HP and 7000 models
- Ventilation grade ducting available

#### INDUSTRIAL AXIAL FANS



# CLIMATE & INSPECTION

# TROTEC TTW2500S

#### **HIGH CAPACITY PORTABLE AIR CIRCULATOR**

Whether for odour venting in agriculture and production, marquee ventilation, auxiliary air circulation in warehouses or temporary assistance in cooling or heating systems – there are many standard ventilation tasks, where a high capacity air mover is called for.

The framed, tilt-adjustable TTW25000S large wind machine features a two stage fan, with a maximum air movement of 27,000 m3/h.

#### **KEY FEATURES**

- Air circulation capacity of up to 27,600 m3/h
- Portable wheel frame design with adjustable inclination angle of the air flow direction
- Flexible change of location
- 44kg tare weight

**CLIMATE & INSPECTION** 

## VENTURI ASI SERIES

#### **PNEUMATIC AIR BLOWERS**

Venturi Pneumatic Air blowers work by speeding the flow of air, by constricting it in a cone shape tube. In the restricted space, the air must increase its velocity in turn reducing its pressure and producing a partial vacuum. As the air escapes, the pressure increases. With no moving parts, Venturi blowers are ideal for ventilating hazardous areas, where dangerous vapours must be removed before entry or occupation.

#### **KEY FEATURES**

- Operates on compressed air or steam
- · No moving parts
- Galvanised steel horn (replaceable)
- Steel handle design
- Large models available up to 8000 cfm capacity



#### WIND MACHINES





#### VENTURI FANS



#### INDUSTRIAL PNEUMATIC BLOWER





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#### 3 PHASE ELECTRIC HEATERS





Electric heating is one of the driest sources available so if moisture is an issue, this method will dry faster and control humidity better.

TROTEC TEH SERIES

#### **COMMERCIAL 3 PHASE ELECTRIC HEATING**

If you are looking for the ideal dry/odour free mobile heating solution for large industrial sites, warehouses and agriculture or for heating unventilated rooms with condensation-free warmth, Trotec's German design and manufactured TEH series are the ideal solution.

For use indoors, no inlet or outlet openings are needed, because no oxygen is used in the heating process of the TEH series.

The power source for heating is 3-phase electric power. The condensation-free heating air from the TEH electric heaters are perfect for heating non-ventilated rooms or for commercial buildings and operations.

The stackable TEH electric heaters also feature a hose adapter outlet with optional high temperature grade ducting, which can either direct heat up to 7 meters away or duct heat into another room via a vent inlet.

#### **MODEL RANGE**

GRADE DUCTING AVAILABLE

OPTIONAL TEMPERATURE

- TEH70: Max Heating Capacity: 12kW 32amp
- TEH100: Max Heating Capacity: 18kW 32amp

#### **KEY FEATURES**

- Flow-optimised chassis for a focused current of non-turbulent, warm dry odour free air
- Hose connections / temperature grade ducting
- Double-walled metallic heat resistant housing model
- Thermo overload protection

#### 3-PHASE ELECTRIC PORTABLE HEATING



CLIMATE & INSPECTION

The integrated fuel tank makes the high-performance direct oil heater fan IDE-D Series our best recommendation for use on construction sites

## TROTEC IDE-D SERIES

#### **HIGH-PERFORMANCE DIRECT DIESEL HEATING**

The direct DIESEL heaters of the IDE series are optimally suited for outdoor/ventilated areas e.g. for heating construction sites, new building drying and agricultural areas.

As opposed to in-direct diesel heaters, the IDE-D emit 100% of the heat they produce.

To use, simply fill the tank reservoir with diesel, plug into 240V mains power and press the start button. The IDE will ignite the spark, engage the fan and start producing heat.

A thermo overload sensor protects the IDE-D models from over heating, and will cut operation in instances where the machine becomes too hot.

The integrated fan, with capacities of up to 1100 m/3 (IDE60D) help distribute the heating evenly. In addition to the integrated thermostat, an external thermostat is optionally available as accessory for remote temperature control.





#### **MODEL RANGE**

- IDE30D (30kW): Air volume Max. [m<sup>3</sup>/h]: 720
- IDE50D (50kW): Air volume Max. [m<sup>3</sup>/h]: 750
- IDE60D (60kW): Air volume Max. [m<sup>3</sup>/h]: 1,100

#### **KEY FEATURES**

- Integrated fuel tank with filling level indication
- Overheating thermal protection and cutoff
- Integrated thermostat, with optional remote thermostat availability
- Electronic flame trap
- Three economically efficient models available

DIRECT DIESEL PORTABLE HEATING





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# Cable Location Training

**PROMOTING INDUSTRY PRACTICES COMBINED WITH THE THEORY OF CABLE LOCATION** 

Our courses are designed to give those working with cable locators the knowledge and skills they need to work confidently and safely. Using cable location equipment, we provide you with the theory, the science and the correct industry practice. Our trainers will help you develop the knowledge and skills to operate equipment safely and effectively.

#### KEY LEARNING OUTCOMES

- Demonstrate knowledge and skills in accordance with industry practice
- Have suitable foundation knowledge of using an Intermediate Cable Location System
- Demonstrate basic operation, visual inspection and competent handling of the instrument
- Know the requirements under the Health and Safety at Work Act 2015
- Show awareness of hazards and risks in cable location
- Have an intermediate understanding of the Founding Science

#### **COURSE CONTENT**

- Health and Safety relevant to Utility Location practitioners
- Hazard IdentificationVisual Inspection
- Theoretical Science
- Passive, Active and Direct
  Connection Techniques
- Correct Grid SurveyBasic Mapping

- Correct Methodologies
- Product Function Inc: Cross Science Brief
- Current On-site Practice and Workflow (Field Working Procedure) Inc SOP
- Current Globally recognised local standards

#### **COMING SOON**

# 

## Land & Aerial Surveying

GNSS, GPS and GIS systems, UAV systems, mechanical, reflectorless and robotic total stations and theodolites, toughbook and tablet computing data loggers and fieldbooks, extensive range of survey accessories, mounts, prisms and poles.

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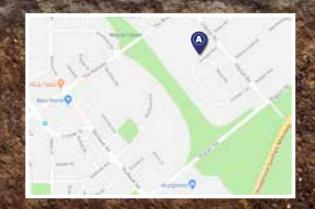
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