



شركة الشرق الأوسط  
*Middle East Co.*



**Where Customer Satisfaction  
is our Top Priority ...**





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## Company Profile

Middle East Company (MEC) was established in 1996. We have managed to build a good reputation for supply of High Quality products at competitive pricing to Egyptian customers over the past years. We also emphasis on the importance of after-sales service and technical support for retaining our existing customer.

We are a supplier for Non-Destructive Testing (NDT) Instruments and tools for the evaluation of Metals, and Welding. We are also specialized in supply of coating inspection instruments for all Metals.

We also supply environmental monitoring and safety instruments like: Portable and Fixed Gas Detection Systems, Sound level Meters, Radiation Detectors, explosion proof cameras and heat stress monitors.

The range of customers that we deal with varies from: petroleum and petrochemical companies, Steel Fabrication companies, Inspection Companies, to Metallurgical Research Centers.

تأسست شركة الشرق الأوسط في عام ١٩٩٦ و استطعنا بناء سمعة طيبة في السوق المحلي عن طريق تقديم اجهزة و معدات ذات جودة عالية و بأسعار تنافسية. كما ساعد على ذلك تركيزنا على تقديم خدمة ما بعد البيع و الدعم الفني للعملاء للمحافظة على علاقة العمل الطيبة.

تقوم الشركة ببيع اجهزة الاختبارات الغير اتلافية للكشف على عيوب اللحامات الخاصة بالمعادن المستخدمة بواسطة مهندسي الجودة و التفتيش الهندسي بالإضافة الى اجهزة الكشف و اختبار الدهانات على المعادن.

كما نقوم بتوريد اجهزة السلامة و الصحة المهنية الخاصة باجهزة قياس الغازات (الثابتة و المحمولة) و اجهزة قياس الصوت (الضوضاء) و اجهزة قياس الاشعة و بالإضافة لأجهزة القياسات البيئية.

نقوم بخدمة عدد من العملاء في مجال البترول و البتروكيماويات و مصانع الحديد و الكيماويات و مكاتب التفتيش الهندسي و بالإضافة الى المعامل البحثية للحديد و الفولاذ.

## Business Associates





# Portable & Fixed Gas Detection Instruments



Crowcon's vision is to protect people and the environment from Gas Hazards. We focus on Gas Detection, understanding current and future market requirements, supplying a wide range of Portable & Fixed Gas Detection Instruments.

## Portables Gas Detectors

Crowcon provide both single gas and multigas monitors for personal monitoring and portable safety applications providing protection against a wide range of industrial gas hazards. Models vary by size and complexity depending on the number and type of gas sensors used, display and certification but it is Crowcon's philosophy that each should be properly suited to its task.



### Clip SGD

Clip Single Gas Detector (SGD) is designed for use in hazardous areas, and is available for hydrogen sulphide, carbon monoxide, or oxygen.

### T4

Portable multigas detector provides effective protection against 4 common gas hazards: carbon monoxide, hydrogen sulphide, flammable gases and oxygen depletion.



### Gas-Pro

Gas-Pro gives the flexibility to detect up to 5 gases with a wide range of toxic and flammable gas types to choose from, in a compact, rugged IP65 & IP67 device capable of withstanding harsh industrial environments and everyday use.

### Triple Plus+

Incorporating IR detection technology the Triple Plus+ IR extends the capability of the Triple Plus family of products allowing extended life detection of hydrocarbons and carbon dioxide. The IR hydrocarbon sensor offers measurement in inert backgrounds at both % LEL and % vol. levels for tank purging and inert atmosphere monitoring.



### Detectives Wireless

Transportable battery powered temporary area monitor for the continuous monitoring of up to four specified gases with independent visual and audible alarms (104dBA).

Detectives Wireless is a module that can replace interconnecting cables for Detectives+.





## Fixed Gas Detection

Crowcon use a variety of measurement, protection and communications technologies to offer a flexible range of products able to measure flammable, toxic and oxygen gases, report their presence and activate alarms or associated equipment.

Utilising the experience gained since their formation in 1970, Crowcon fixed detectors have been proven in many arduous environments, including oil and gas exploration, water treatment, chemical plants and steel mills. They are however also chosen in many other applications where reliability, dependability and lack of false alarms are valued, for example in the automotive and aerospace manufacturing sectors, on scientific and research facilities and in high-utilisation medical, civil or commercial plants.



### Xgard

The Xgard range is a comprehensive selection of fixed point gas detectors that meet the diverse requirements for gas detection in industries throughout the world. This includes many water treatment, oil and gas, power, research facility and manufacturing installations.

### XgardIQ

XgardIQ is an intelligent and versatile gas detector and transmitter compatible with Crowcon's full range of sensor technologies. Available fitted with a variety of flammable, toxic or oxygen gas sensors.

Providing analogue 4-20mA and RS-485 Modbus signals as standard, XgardIQ is optionally available with Alarm and Fault relays and HART communications. The 316 stainless steel are available with three M20 or 1/2"NPT cable entries.



### Flamgard Plus

Flamgard Plus is a Flameproof (Exd) flammable gas detector which uses poison-resistant pellistors to detect explosive levels of hydrocarbons, hydrogen and other flammable gases and vapors, including aviation fuel and leaded petrol vapors.

### Gasmaster

Crowcon Gasmaster is a compact, versatile and powerful gas detection control panel that combines simple operation with an extensive array of input and output functions.

The large multi-lingual display shows gas levels from all detectors simultaneously, and enables system adjustment and testing using buttons on the front panel.

Gasmaster can operate 'stand-alone' or interface with any alarm devices and control systems using a selection of outputs.







## Environmental and Safety Instruments



Arrow-Tech, Inc. manufactures and distributes other radiation-related detection products to meet most other radiological needs including electronic dosimeters, dosimeter readers, survey meters, area monitors and emergency response kits.



### Direct-Reading dosimeters

- Pocket dosimeters are used to provide the wearer with an immediate reading of his or her exposure to x-rays and gamma rays.
- The Direct-Reading Dosimeters are rugged, precision instruments. They are designed to measure and directly read, at any time accumulated dose of gamma and x-ray radiation exposure.

### Survey meters

- The survey meter is the most important resource a radiographer has to determine the presence and intensity of radiation.
- Its digital display shows readings in your choice of CPM, CPS,  $\mu\text{Sv/hr}$ , mR/hr, or in accumulated counts. It has a digital display, a red count light, and a beeper that sounds with each count detected.



## Ex-certified Measuring Instruments



CorDEX are leaders in the innovation and manufacture of instruments used every day in the world's most challenging work environments. All of our instruments are specifically created for safe use in hazardous environments, which make us the authority in Intrinsically Safe Instrumentation.



### Thickness Gauge –ATEX&IECEx Certified UT5000

- UT5000 Intrinsically Safe thickness gauge
- CorDEX CONNECT™ measures metal thickness for Non-Destructive Testing (NDT) and Predictive Maintenance (Pdm) on pipelines and fixed equipment within hazardous locations.

### Compact digital and thermal Camera

- The TOUGHPIX DIGIHERM pocket size digital and thermal imaging camera
- Compact enough to fit into any work pocket but rugged enough to take the hits
- TOUGHPIX DIGITHERM is a go-anywhere camera providing the power and resilience to get the job done. Every time.







# Dye Penetrant and Magnetic Particles Testing Equipment



MR® Chemie GmbH operates all over the world and is a manufacturer of specialized innovative products and devices for surface crack testing.

Microcracks can be detected quickly and precisely using various methods, including Penetrant and Magnetic Particle Testing.

In line with its corporate philosophy of "Providing maximum test-reliability and environmental compatibility for our clients", MR® Chemie is a company with a strong customer-orientation which develops, produces, bottles and delivers everything itself.

## Red / Fluorescent Dye Penetrant Aerosols

With the Penetrant Testing procedure (also known as DP test or dye penetrant inspection) you can quickly determine surface discontinuities on all iron metals and non-iron metals, some plastics and ceramic materials, glass, etc., provided that the discontinuities are open to the surfaces.

The liquid penetrant test method is used in the examination of welding seams, cast pieces, in shipbuilding, automobile and aircraft construction, apparatus and tank construction, etc.

## Black / Fluorescent Magnetic Particles Aerosols

Magnetic particle inspection is suitable for detecting discontinuities (e.g. cracks) in or near the surface of ferromagnetic materials.



Parker Research was the originator of the flexible-leg magnetic inspection yoke and has been manufacturing portable Magnetic Particle Inspection Equipment and accessories for over forty years. Our products are used throughout the world for nearly every conceivable magnetic inspection application.

## Magnetic Yokes

Magnetic yokes are used as part of magnetic testing. It locates surface and subsurface discontinuities in manufactured materials and parts. Works with ferrous metals in the shipyard, aerospace, steel mill, foundry and weldment.

- Hand-held AC/DC Yokes.
- Portable Coils.
- Gauss Meters.
- Powder blowers.



## Pie Gauge

The Pie Gauge is a tool for quickly verifying the direction of magnetic flux on a surface. It is made from eight ferrous segments, braised into a single piece, providing a star pattern of nonferrous discontinuities. Typically used with dry powders for yoke inspection.







# Ultraviolet Testing Lamps & Radiometers



Spectrolite is the global leader in UV-A lights for NDT fluorescent surface inspection. We stay one step ahead of industry trends and technological innovation to ensure you get the most rugged, compliant lamps available today, no matter the NDT application.



## UVISION™ 365 SERIES

The uVision™ 365 Series is Spectrolite's innovative line of compact, broad-beam, handheld NDT lamps.

These lightweight, yet rugged lamps boast an IP65 rating, making them dust-tight and water-resistant. Using a state-of-the-art heat sink, the uVision™ is mechanically cooled without the need for fans. In addition to the three powerful UV-A (365 nm) LEDs, it has a convenient white light LED for illuminating work areas.

Compliant versions have embedded microprocessors to keep lamps within specifications. There are multiple power-source options as well.

## OPTI-LUX™ 365 SERIES

OPTI-LUX™ 365 Series inspection flashlights feature a powerful UV-A (365 nm) LED light source coupled with a rugged anodized lamp body. Lightweight and compact, they reduce user fatigue while providing an extremely uniform beam profile that surpasses those of more expensive lamps. Available in four models to suit your specific NDT needs: high-intensity or standard-intensity versions, each with or without an internal black light filter. All flashlights come with a Certificate of Light Output for both wavelength and output measurements.



## VIVID™ UV-A LED REPLACEMENT BULBS

CONVERT YOUR MERCURY VAPOR HID LAMP TO MODERN LED TECHNOLOGY WITH VIVID™, THE WORLD'S BEST UV-A LED REPLACEMENT BULB FOR FLUORESCENT INSPECTION.

Lasts 10x longer than a mercury vapor bulb. Can also be used in custom lamp fixtures that include enclosures.

## DM-365XA UV RADIOMETER

- Measures UV-A light sources with overall accuracy of  $\pm 5\%$  per NIST standards
- Auto-zeroing, excellent linearity and cosine response, solid-state design, compact, durable, simple operation, battery-level indicator
- Sealed silicone photodiode protects against shock and humidity
- Sensor housing is constructed with series of baffles and unique self-sealing mechanism to eliminate light leakage
- Compact, lightweight and battery operated so measurements can be taken anywhere
- Complies with ASTM specifications for MPI and FPI







# Ultrasonic Testing Instruments and Thickness gages



Dakota Ultrasonics is a manufacturer of high-quality industrial ultrasonic testing equipment for the petrochemical, aerospace, power generation, automotive, and other related industries. If you have any questions, need technical support or have a request for custom items, the Dakota Ultrasonics team is available and eager to assist.



## ZX Thickness Gauge

- The ZX are basic thickness gauge
- Require no special training to operate
- Calibration is done by user depending on material velocity

## DFX-8 Flaw Detector & Thickness Gauge

Ultrasonic Flaw Detectors: for the detection of beneath the surface flaws (i.e. cracks, inclusions, and discontinuities) for welds and metals.

Flaw Detector Features TRIG: Trigonometric display of beam path, depth, surface distance, and curved surface correction.



## CMX Thickness Gauge

- The CMX has all features of the ZX gauges with advanced features.
- Measure material and coating thickness

**SONOTEC** 

SONOTEC was founded in 1991 by two Germany-based physicists, Dr. Santer zur Horst-Meyer and Hans-Joachim Münch. With currently more than 100 employees, today we are a growing technology company established on the market as a provider of specific solutions using ultrasonic measurement technologies. We produce our entire range of self-developed ultrasonic technologies in our own workshops and laboratories, including established solutions in the field of Non Destructive Testing.



## SONOSCREEN ST10

The SONOSCREEN ST10 can be used for all conventional ultrasonic tests such as weld inspections, wall thickness measurements and the detection of discontinuities, which includes invisible cracks, inclusions, voids and other discontinuities in metals, plastics, ceramics and composites.

## SONOSCAN Angle Beam Probes

Sonotec's ergonomically-designed angle beam probes for non-destructive testing (NDT), part of the SONOSCAN probe series, are designed to check for cracks and occlusions in metals. They are used primarily in the metalworking industry for the inspection of weld seams.







# Coating Thickness and Paint Testing Instruments

## ElektroPhysik

Messgeräte für Oberflächentechnik • Surface Testing Instruments

ElektroPhysik founded its reputation on constant development of innovative technologies and products. As a pioneer on the field of non-destructive coating thickness measurement in cooperation with national and international institutes and universities ElektroPhysik realized successfully developments and international standardization of the coating thickness measurement.

### Mini test 725/735/745



Coating thickness gages for measurement of paints and insulating coatings on ferrous and non-ferrous metals.

Small, lightweight and handy coating thickness gauge, it includes sensor for quick and accurate measurement of:

- non-magnetic coatings (paints, synthetic materials, chromium..etc) on steel.
- Insulating coatings (enamel, synthetic materials or varnish) on non-ferrous metal (aluminum, copper, austenitic stainless steel).

### Poro test series

Holiday Detector for testing of insulating coatings on metals and detection of pores or flaws.

The coating control by means of pore testing uses electrical voltage to detect even microscopically small defects ( $> 20\mu\text{m}$ ) in the coating of a surface.

Our application examples range from offshore plants to oil rigs to ships or pipelines that are permanently exposed to the sometimes most adverse environmental conditions. Here is enough a small damage in the coating, so that the base material steel comes into contact with moisture and begins to rust. Thus, the pore test serves to protect against corrosion and thus to avoid consequential damage.



### QuintSonic

The QuintSonic 7 enables measurement of up to 5 coatings in a single operation. Precision coating thickness gauge based on the ultrasonic pulse run-time method.

It is possible also to measure polymer coatings like paints, varnishes and synthetic materials as well as glass, ceramic or metallic coatings on virtually any substrate.

### MiniTest 7400FH

Professional, high-end wall thickness measuring device for non-destructive measurements of up to 24 mm. The devices are suited for thickness measurement of non-magnetic materials such as glass, synthetic materials, stainless steel and composites and even complex component geometries can be measured.







# High-Performance Phased Array UT Instruments



Zetec serves as the leading source for advanced NDT products in ECT and UT technologies. For nearly 50 years the high quality and performance of Zetec products have earned the confidence of leading companies from around the world. From nuclear power generation and oil & gas fields, to aerospace, rail systems and manufacturing lines, our customers choose Zetec for the comprehensive product range and reliability we bring to their critical inspection needs.



## ZETEC TOPAZ16

TOPAZ16 is a 16-channel, Portable Phased Array UT Device for Non-Destructive Testing (NDT) Projects, delivering best in class productivity with unmatched value.

With class leading software capabilities, temperature operating range, 10.4" high resolution multi-touch screen, IPEX connector and proven Zetec quality, TOPAZ16 delivers unmatched value.

Zetec has always had a reputation of a premier products supplier of NDT solutions. TOPAZ16 is our entry into more mainstream inspection markets. It is ideal for the most common applications including: Weld inspections, Corrosion mapping, Encoded or manual inspections, and Complex component inspections and more.

## ZETEC TOPAZ32

TOPAZ32 is a 32-channel, high-performance phased array UT device – a complete solution for your inspections, boosting productivity, reduces job time duration and can lower total cost of ownership.

One of the many key advantages of the new TOPAZ32 is that 2D matrix array probe support is now included. This fully-integrated and simplified approach can reduce the amount of equipment needed to perform an inspection.

With its rugged construction and airtight magnesium and rubber housing, TOPAZ32 is durable enough to handle inspections in even the harshest conditions.



## ZETEC TOPAZ64

Introducing the ultra-intelligent TOPAZ64, a portable 32 or 64 channel Phased Array UT (PAUT) device delivering faster, more reliable inspections. It intelligently combines the power of 32 or 64 active channels for PAUT applications with the industry's most advanced Full Matrix Capture (FMC) and Total Focusing Method (TFM) capabilities.

- Code Compliant 32 or 64 Channel Phased Array UT
- High Resolution Full Matrix Capture (FMC) with up to 64 elements
- Real-Time Total Focusing Method (TFM) up to 1M Data Points per Frame
- Time of Flight Diffraction (TOFD)

As a result, TOPAZ64 offers advanced inspection capabilities that can improve productivity in the inspection process.





## ZETEC NDT PaintBrush



NDT PaintBrush by Zetec. An evolution in the field of corrosion inspection for the detection of wall-thickness reductions due to abrasion or erosion.

Zetec has set a new market benchmark for corrosion mapping with NDT PaintBrush, an extremely agile scanner that can operate on both flat and curved surfaces, providing the confidence of 100% area coverage. Its two encoded wheels that track the position of the scanner in real time allow the operator to visually identify areas that have not been covered. Coupled with the industry-leading TOPAZ ultrasonic instrument family and UltraVision software, NDT PaintBrush is the best solution available for corrosion and wall-thickness mapping.

A strength of NDT PaintBrush is its agility. The scanner is designed with magnetic wheels that stick to a metallic surface for easier use. For non-metallic surfaces, the wheels can be detached and replaced with composite dedicated wheels. The product's intuitive operation makes corrosion mapping simple and quick.

## ZETEC NDT Sweeper

It is a highly versatile manual 2D encoded scanner that is the perfect tool for quick Ultrasonic Testing (UT) examinations. NDT Sweeper can virtually replace multiple specialized scanners as a result of its ability to scan both on flat and curved surfaces. It's ideal for a range of applications including long seam weld inspections and corrosion mapping.

Thanks to its small, lightweight and ergonomic design, NDT Sweeper can easily scan in many difficult to reach areas eliminating the need to deploy an automatic scanner in those situations. Unlike wheel probes, both axes are encoded so there is no need to draw an index line on the specimen when scanning.



## ZETEC ElbowFlex Scanner

The ElbowFlex scanner is the perfect tool for quick, manual ultrasonic inspections of pipe elbows. It is ideal for detecting and measuring different types of flaws including corrosion pitting, mid-wall lamination and can measure remaining wall thickness.

The highly versatile ElbowFlex scanner can scan on both the straight and elbow parts of a pipe. It is designed so that one flexible phased array probe is able to inspect pipes and elbows from 4" NPS (4.5") to flat.

Featuring simple button operation, magnetic wheels and an aqualene membrane, the ElbowFlex scanner is easy to use and saves time while providing 100% coverage confidence.







# High-quality Eddy Current Testing Instruments

## ZETEC MIZ-21C



The MIZ-21C is the most advanced portable Eddy Current testing instrument available in the NDT Market, which also offers surface array capability. Easy-to-use and budget-friendly, the MIZ-21C is ideal for applications in the aerospace, wind, oil & gas, manufacturing, and power generation industries. The unit has an ergonomic design, 8-hour battery life, and intuitive touchscreen that enable you to easily test more areas in less time. When compared with pencil probes, the MIZ-21C shows a 95% reduction in inspection time. Set-up is fast, and operating the unit is facilitated by powerful software and a user-centric design.

The MIZ-21C performs inspections quickly and can replace Liquid Penetrant Testing (PT) and Magnetic Particle Testing (MT) inspections. Through industry-leading innovations in signal quality, Zetec has successfully designed the MIZ-21C to offer 25% better flaw detection. With its added surface array capability, the MIZ-21C Eddy Current Tester delivers the most thorough inspection in its class.

Numerous probes and scanners work with the MIZ-21C and are easy to change in the field or on the factory floor.

The MIZ-21C Eddy Current Tester is available in three models to best fit your inspection requirements. **MIZ-21C-SF, MIZ-21C, MIZ-21C-Array**

## ZETEC MIZ-200 TUBING & SURFACE

The MIZ-200 Eddy Current Testing instrument can handle the most demanding environments with ease. Offered in both tubing and surface array configurations, MIZ-200 is ideal for applications within Balance-of-Plant/Power Generation, Transportation and Oil and Gas markets.

MIZ-200 is a fully portable, battery operated, remote data acquisition unit delivering significant benefits including an industry leading signal to noise ratio to improve probability of detection in industrial environments.

Designed with operator ease of use in mind, the MIZ-200 automatically recognizes the probe type connected to it and configures its internal multiplexor accordingly.



## Surf-X Array Probe

Introducing the Surf-X family of flexible Eddy Current Array (ECA) probes for MIZ-21C and MIZ-200 array instruments. Featuring unique multiple coil sets and proprietary X-PROBE technology, Surf-X array probes can quickly and accurately test a wide range of materials and geometries.

The Surf-X Array Probe can handle a range of inspection applications, from inspecting corrosion or cracking in pipes, pressure vessels, or tanks, to assessing and sizing cracks in raised welds and friction stir welds.

When the Surf-X Array Probe is used along with the Zetec MIZ-21C Handheld Eddy Current Instrument, it's one of the most cost-effective, portable surface array solutions in the market. This solution delivers significant inspection advantages over Liquid Penetrant Testing (PT) and Magnetic Particle Testing (MT)







# Magnetic Flux Leakage (MFL) Tank Floor Scanners



MFE Enterprises manufactures Non-Destructive Testing (NDT) and Magnetic Flux Leakage (MFL) inspection equipment for both storage tank and pipeline applications. Our mission has never changed: We provide educational information to the NDT community about MFL technology and the advantages of deploying our MFL Scanners for FAST and ACCURATE inspection of your plant assets.



## Mark IV Scanner

The Mark IV tank floor scanner offers both manual and mapping modes. The manual setting provides inspectors with a real-time display alongside a C-Scan mapping preview screen. In order to retain consistent results, operators receive immediate feedback while scanning from the new Speed Tracking feature. This feature ensures operators that they are scanning within an optimal speed range. Along with Speed Tracking, the Mark IV tank scanner contains Speed Compensation Software which normalizes the signal response when scanning within the speed tracking range.

### Main Features:

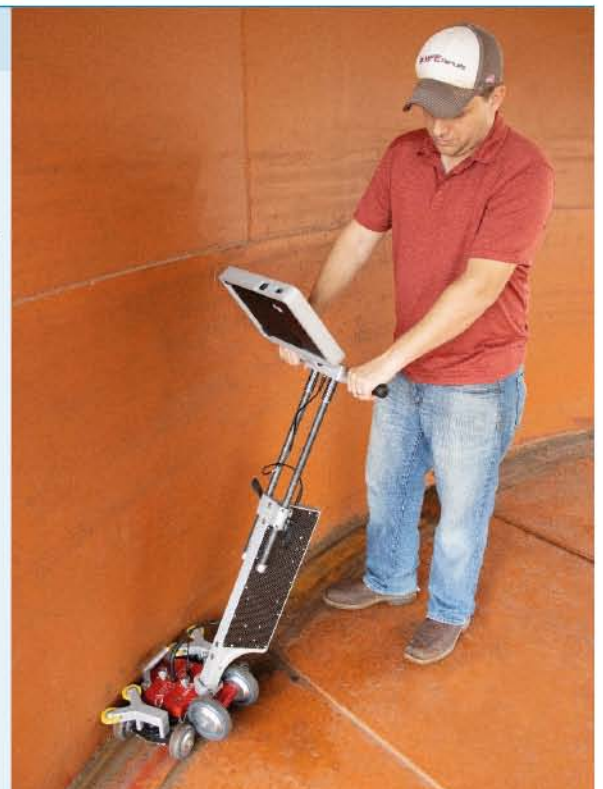
- Manual & Mapping Modes
- Fully Integrated Software
- True Real-Time Display
- Tank Drawing
- Analytical & Reporting Features
- Detachable handle
- Fully Adjustable Handle
- Advanced Mil-Spec Breakaway Cables
- Integrated Electronics
- Hot Swappable Batteries
- 65 lb/30 kg

## MFE EDGE Scanner

The MFE EDGE is the latest tank edge scanner featuring the user-friendly, quick, and efficient software of the Mark 4 Tank Scanner. It has a pivoting handle that allows the scanner to fit tight against the storage tank shell in the critical zone. The MFE EDGE is designed to work alongside the Mark 4 by creating analytical reports that can be imported into the Mark 4 Tank Scanner.

### Main Features:

- Real-Time Display.
- Carbon Fiber Casing.
- Pivoting Handle Assembly.
- User-Friendly Software.
- Hot Swappable Batteries.
- Manual & Mapping Modes.
- Adjustable Handle Assemble.
- Seamless Compatibility W/ MARK IV.
- Disconnect Bridge For Easy Shipping.
- ONLY 61 LBS/ 28 Kg.







# Guided Wave Testing (GWT) Equipment



Guided Ultrasonics Limited (GUL) was established in 1999 and is now the global leader in the provision of guided wave pipe testing equipment, training and services.

Guided Wave Testing (GWT) is a relatively new non-destructive testing (NDT) method, which has been pioneered by GUL since its incorporation and the company has led the way in setting the standard for pipeline inspection and monitoring globally.



## Wavemaker® G4 Mini Full

The latest Wavemaker® G4 Mini offers all of the traditional Wavemaker® features and some new ones in a small (22 x 30 x 13cm) and lightweight (4.5 kg) package.

This fully loaded instrument is capable of working with all of the pipe and tube transduction systems produced by GUL. It is suitable for both the lower frequencies that are used for buried and coated pipes and the higher frequencies that are used with HD rings for support inspection and higher sensitivity to pitting.

With one button press, the instrument can be placed into gPIMS Collector mode to allow a minimally trained operator to collect repeat data from a permanently installed gPIMS sensor.

The instrument contains 16 channels; therefore you will need a pair of channel reducers when joining EFC or HD inflatable rings together to collect data on very large diameter pipes.

## QSR1 - Quantitative Short Range (QSR) Instrument

The QSR1® semi automatically scans predefined sections of straight pipelines for corrosion under pipe supports (CUPS).

The QSR1® can provide a quantitative measure of the average wall, as well as the remaining wall thickness down to half of the nominal wall thickness.

This instrument is suitable for motorized guided wave scanning on predefined sections of straight pipelines, with the added compatibility to operate with GUL's cloud based platform.

QSR1 is lightweight (approx. 9kg). Comes in a robust hard case and can be operated on Battery, up to 12 hours.



## Inflatable Ring

These transducer rings are designed to provide effective inspection capability, particularly for larger diameter pipes. Pneumatic pressure is used to press transducer modules (which are mounted onto this ring) against the pipe wall. These modules are fully interchangeable between inflatable collars of all sizes.

For sizes greater than 24-inch diameter, two smaller inflatable type rings can be linked together as detailed in a specific procedure for joining rings. Non-standard sizes (up to 60 inch) and 8-channel (non-EFC) rings can be produced to special order.





## Guided Wave Testing (GWT) Equipment (Cont.)



### gPIMS

In many situations, the cost of accessing a pipe is much higher than the cost of inspection. This access cost can make repeat inspections with removable rings prohibitively expensive.

The environmentally friendly robust gPIMS range of sensors has been developed to be easily bonded onto the pipe, sealed and then left in place. A cable connects the gPIMS sensor to a connection box that can be located in a convenient, easy to access location.

By performing repeat inspections and comparing the results to previous inspections, operators can monitor for any change in the condition of the pipe. Frequent data collection significantly improves sensitivity and reduces false call rates compared to conventional guided wave testing.

### Solid Ring

The solid transducer rings are typically used for standard screening of pipes with nominal size between 2 and 8 inches in diameter. The rings are attached to the pipe by tightening the two large handles which push the spring loaded transducers onto the pipe to obtain good shear contact.

Standard rings have 2 rows of transducers to transmit torsional wave modes. Customised rings can be specifically produced in other sizes or with 4 rows of transducers to allow for inspection using both longitudinal and torsional guided wave modes.



### Compact Ring

The Compact ring is the latest addition to the GUL guided wave transduction system which has been designed to be lightweight and low profile. This new system has been completely re-engineered to build on everything that has been done before, while reducing weight by 35%, axial width by 30% and radial height clearance to under 38mm.

This is an inspection system designed to tackle a wide range of inspection challenges.

### Low Profile "Slinky"

The ultra low profile ring or "Slinky" was specifically designed to be able to fit around pipes that have a very limited radial clearance, like those commonly found in culverts or pipe racks. Typically less than 25mm of clearance is required to be able to mount these rings.

Due to their design, the low profile rings covers smaller pipe size range than the traditional solid rings. The standard low profile rings are configured for API nominal pipe sizes (within an API 5L tolerance).







## Pulsed Eddy Current Testing (PECT) Equipment



SONOPEC provides the corrosion detection and monitoring cost effective solution via PEC - i.e. Pulsed Eddy Current - for the examination of insulated and corroded components and parts in the on- and off-shore industry and in the energy sector. Corrosion Under Insulation (CUI), Corrosion Under Fireproofing (CUF) and Flow Accelerated Corrosion (FAC) as well as Well Integrity are typical PEC successful applications, solutions and benefits. PEC performance are effective also for semi-contact measurements carried out with dirty, rough, cold and high temperature objects. available through a License Agreement. SONOPEC delivers equipment, training and support.

### PEC – Pulsed Eddy Current

PEC is a non-intrusive electromagnetic technique based on Pulsed Eddy Current which allows detection measurement and monitoring of corrosion in low alloyed carbon steel pipes and vessels through their insulations coatings, paints, and concrete fire-proofing, marine growth. The PEC technology does not require direct contact, cleaning or special preparation of the surface of the object to be examined, therefore no costly and unnecessary insulation removal is required to perform the PEC examination with a considerable cost saving for the client.

PEC is the efficient and cost effective solution for the examination of insulated and corroded components and parts in the on- and off-shore industry and in the energy sector. Corrosion Under Insulation (CUI), Corrosion Under Fireproofing (CUF) and Flow Accelerated Corrosion (FAC) as well as Well Integrity are typical PEC successful applications, solutions and benefits. PEC performance is effective also for semi-contact measurements carried out with dirty, rough, cold and high temperature objects.



## Scanners for Advanced Ultrasonic Testing



Specialists in design and manufacture of ultrasonic nondestructive testing solutions. Phoenix offers range from manual and automated scanners, and transducers for TOFD and phased array inspection.



### Bracelet scanner

The Bracelet scanner has been optimised for testing circumferential welds in small bore pipework with ultrasonic phased array transducers. The design meets the requirements of the application in its size, its simplicity, and its function. This lightweight and low-profile scanner is extremely simple to set up and use for weld testing on pipe sizes from 0.5" to 12"

### MagMan scanner

This manually-operated magnetic wheeled scanner is ideal for weld inspection of pipes using multiple probes including phased array, TOFD and pulse-echo. The MagMan can be configured to inspect pipe welds from 2" OD circumferential and 9" OD longitudinal up to flat on ferromagnetic material.







# Ultrasonic Wall Thickness Scanners

## MFE - HSR Wallcrawler



The MFE – HSR Crawler (High-Speed Raster) is an innovative ultrasonic scanner that addresses the need for an automated raster type unit offering higher performance and durability over an extended range of applications.

The scanner traverses large vessels with obstacles that are problematic for most tank crawlers, yet performs corrosion scanning on pipe down to 2" nominal diameter while requiring no probe adjustments over the range.

The scanner offers high maneuverability via steering with the controller's touch-screen interface or optional extended joystick. A spring-detent suspension allows all four of the large diameter magnetic wheels to maintain contact on uneven surfaces.

High scanning speed is achieved without sacrificing high torque and actuator force, and the specially engineered gears are coupled directly to all four wheels through a compact, sealed enclosure for durability and low maintenance.

Conventional or phased array type transducers can be deployed, and the scanner is offered in extended stroke lengths.

## MFE - HPX Wallcrawler

The MFE – HPX Wall Crawler (High Performance X-Type) is the most capable and rugged magnetic crawler available. With its high maneuverability, highest power density rare earth magnet motors, lightweight at 12.5 lbs and sealed position encoder for B-Scan Buggy (also available), the MFE – HPX Wall Crawler is the fastest method for inspecting remote access areas and a much safer alternative for tank wall and roof inspection.

The HPX Wall Crawler is capable of ultrasonic corrosion inspection for tanks, pipes and vessels. This combination provides a durable yet agile crawler. The HPX is a highly maneuverable system and is capable of traversing difficult obstructions made possible by the high suspension compliance. It is designed with a proprietary direct drive gear set and does not use any belts, chains, set screws, or clamps, which eliminates slippage.

The unit is completely sealed from the environment and has a hard coat anodized exterior to reduce environmental wear on the system. The scanner utilizes rare earth magnet motors with the highest power density available to provide a high-performing crawler. Single and dual element transducers are included in the system to adjust for variable conditions.







## Gamma Radiography Equipment (Exertus Series)



Gammatec NDT Supplies SOC Ltd was established in 1981 as Gammatec Engineering (Pty) Ltd, a company specialising in the manufacturing, marketing, sales and support for and to the Non-Destructive Testing industry.



### EXERTUS DUAL 120

EXERTUS DUAL 120 Projector has the ability to accept Iridium 192 sources or Selenium 75 sources. This projector incorporates design and safety features that make it flexible, compact and lightweight.

It is lighter than the most of its competitors. It incorporates an improved source channel, based on a new Helicoidal Design, which makes maintenance easier allows smoother movement of the Source Assembly inside the device, making it easier for the operator and improving safety

### EXERTUS CIRCA

EXERTUS CIRCA projector range is a new generation of close proximity tungsten shielded gamma radiography projector - it has the ability to accept Selenium 75 sources. These Projectors can be used for either normal radiography methods or for radiography where close proximity work is needed.

Safety is an integral part of the EXERTUS LIGHT Isotope Projector range - a three color signal indicator provides the user with a clear visual guide as to the position of the source at all times.



### Ir-192 Sealed Radioactive Sources

The primary use of Ir-192 sealed source is in gamma radiography.

These Ir-192 capsules, made of stainless steel and containing high purity activated Iridium, are manufactured according to strict ISO classification and each source is welded and tested to comply with Special Form Certification, also fully accredited by the IAEA.



## Industrial X-ray Films



Fujifilm industrial x-ray film feature revolutionary new film technology. The combination of the latest in emulsion making science and computerized manufacturing processes assure consistent batch to batch performance, optimum image quality and compatibility with all NDT chemistries and current brand tank /automatic processing conditions.



### NEW XD Series

New industrial x-ray film developed by FUJIFILM's leading technology brings efficiency and stability to your every day inspection needs. Various film packaging and sizes are available to provide practical solutions to respective testing conditions and components. Both dark room load films (interleaved and non-interleaved) and pre-packaged films that are suitable for daylight conditions are offered.





## X-ray Radiography testing equipment



BALTEAU NDT S.A. is the world first supplier of portable X-Ray generators. More than 14.000 units are used world-wide . With its range of high power or light weight constant potential X-Ray generators, gaz insulated, BALTEAU NDT S.A. became a specialist in manual and automatic systems for radiography.



### BALTOSPOT Series

BALTEAU is known for it's unique, unequalled engineering and manufacturing of portable equipment for about 100 years. Since the introduction of the first gas insulated unit by Balteau in the late 50's, BALTEAU has continuously been upgrading and improving it's series of products.

The range is made of directional and panoramic portable generators, designed mostly for field inspections such as Aeronautics, Shipyard building sites, foundries, power plants, tank reservoirs, pressure vessels, digital applications and much more. Baltospot units can also be used in other various environment like laboratories, training centers, museums or within our shielded cabinet.

### Baltograph Series

The Baltograph series is once again the evidence of the long time expertise of BALTEAU NDT in building reliable, powerful and safe X-ray stationary equipments used in various NDT applications and inspections.

The difference between the Baltograph series and the Baltospot series is that different combinations of tubes are available with the same generator as a complete working unit is made up of several components interconnected together.



## Automatic NDT FILM-Processors



Colenta provide a full range of processor options, including several features, for processing NDT films. Their robust design, build quality and low maintenance requirements make them to an ideal choice for use in this very specialized market.



### INDX-Processors

COLENTA's INDX-processors were developed on base of the MP units, but in order to meet the highest quality requirements for processing of industrial X-ray films, additional features are implemented in the INDX units.

A special NDT-film developer / fixer crossover assy (patent pending) guarantees an absolute even processing all across the film size and running backs and flame pattern free (on both emulsion sides) results, dedicating the INDX units to be used for the most delicate jobs in the NDT X-ray testing.





## Digital Radiography Technology



Dürr NDT is the first company worldwide that has developed a 12.5 micron laser spot scanner that, combined with high resolution phosphor storage IP's, has met all of the stringent requirements of EN 14784, EN 17636 and ASTM E2446.

### HD - CR 35 NDT



Computed radiography or CR uses similar equipment to conventional radiography with the exception that in place of a traditional X-Ray film, an Imaging Plate (IP) made of photostimulable phosphor is used. The IP is housed in a cassette and placed under the part to be examined and an exposure is made with either X or Gamma radiation.

Instead of taking an exposed film into a darkroom for developing in chemical tanks or an automatic film processor, the IP is run through a special laser scanner, or CR scanner, that reads and digitizes the image.

The digital image can then be viewed and enhanced using software that has functions very similar to other conventional digital image-processing software, such as contrast, brightness, filtration and zoom.

TreFoc Technology is the name for our new laser focusing technology, uniquely in systems from DÜRR NDT. With TreFoc the laser beam is adjusted perfectly to give optimal image results and the highest signal - to - noise ratio in any application.



## Online inspection systems for semi-finished metal tube, bars and wire



PRÜFTECHNIK NDT develops practical solutions for testing all types of semi-finished metal tube, bar and wire during production and in final inspection. We supply a wide spectrum of eddy current and flux leakage testing equipment ranging from simple testers to turnkey systems that include design, planning, construction, installation and commissioning.

### Eddycek 610

The diverse range of applications varies from the testing of fine wire of only 0.1 mm in diameter to the testing of tubes with diameters up to 1000 mm (40"). Just a small selection of our major solutions and applications is shown here.

Applications include on-line inspection and testing of:

- Wire and bar for detection of longitudinal cracks and striations with great precision.
- Weld seam such as TIG, Laser, HF and ERW welding. Offer high accuracy method of testing weld seam defects during production.
- Tubes for inspection that they are leak-proof and meets an extensive range of international standards including ASTM, API, BS, JIS, ETTC, ENEL, EN10246 and SEP 1925 / 1917 / 1914.







## Positive Material Identification (XRF & LIBS Analyzers)

**HITACHI**  
Inspire the Next

Specializes in high-tech analysis solutions, designed to meet the tough challenges of a rapidly evolving industrial sector.

Our range of laboratory-based and robust high-performance in-field testing instruments deliver materials and coatings analysis that adds value throughout the production lifecycle, from raw material exploration to incoming inspection, production and quality control to recycling.



### X-MET 8000 Series - XRF Analyzers

The X-MET8000 range of handheld X-ray fluorescence (HHXRF) analyzers delivers the performance needed for rapid alloy grade identification and accurate chemistry of a wide variety of materials (solid and powder metals, polymers, wood, solutions, soil, ores, minerals etc). The X-MET is practical, rugged and easy to use to deliver results you can trust.

- X-ray tube : 40 to 50kV
- X-ray tube filters: Single
- Detector: Large area SDD
- Max. sample temperature : 100°C or 400°C with HERO™ heat resistant window (optional)
- IP54 rating Protection against detector window damage : Optional window shield
- Calibrations : Standard + automatic selection of empirical calibrations (traceable to certified reference materials)
- Integrated camera
- Small-spot collimator (Optional)
- 6-position filter wheel for the optimized analysis of all elements from Mg to U.

### VULCAN Series LIBS Analyzers

The Vulcan is one of the fastest metals analyzers with sturdy construction. Users simply need to squeeze the trigger and a second later the result can be seen. The Vulcan uses the Laser Induced Breakdown (LIBS) technology; therefore the users need not worry about X-rays.

Whether one's business is PMI quality control or scrap sorting, the Vulcan delivers accurate and dependable grade ID every time.

- Grade identification and full chemistry.
- Al and Mg alloys.
- Wi-Fi.
- Stainless steels, tool steels, low alloy steels, Ni alloys Co, Pb, Sn, Cu, Ti, Zn alloys.
- Pre-burn to clean the sample surface.
- IP54 (NEMA 3 equivalent) splash water and dust protected.
- Full day operation with one battery\*.
- MIL-STD-810G compliant.
- Grade library.
- Optional - Built-in camera.







## Remote Visual Inspection (RVI) Systems

Manufacturing Endoscopes since 1980, EFER has an established reputation in the Medical Surgery field and Non-Destructive Testing.



EFER is one of the few companies in the world manufacturing the full endoscopic product line: Video endoscopic probes, cameras, image processing and measurement systems, light sources, Borescopes, Fiberscopes, Micro optical probes...

EFER ENDOSCOPY also designs unique vision systems solving requirements in applications as diverse as nuclear power or steam generation.



### ARGUS & TIVE 900

Portable Video scopes with 3D Stereo measurements.

Dedicated products allow endoscopic implementation, in remote access locations, of measurement procedures, micro-blending, and non-destructive testing.

The videoendoscopes System is composed of an operating unit TIVE 900 associated to interchangeable ARGUS 900 Probes

Features:

- Maximum length 3 m for diameters 4, 5 and 6 mm working channel
- Maximum length 8 m in standard and 15 m in special version for diameters 6 and 8 mm
- Axial and lateral interchangeable tips with direct or stereo viewing
- Motorized orbital tip articulation with auto-speed regulation
- Real time video processor with variable zoom and low speed auto shutter
- Integrated image processing and recording device.
- Distal temperature alarm.
- 8-button keypad to set video functions and remotely manage image processing and recording functions of a TIVE 900 operating unit
- Umbilical connection: TIVE 900 operating unit.



## Miscellaneous Equipment

### NKD-019 - PORTABLE EMAT THICKNESS GAUGE

A convenient, compact, sophisticated and innovative field instrument, the EMAT Wall Thickness gauge NKD - 019E «UltraSonic» can be used to measure the thickness of components, pipes, vessels and other metal objects - easily and precisely.

The gauge enables measurements to be taken at a vast range of surface temperatures, going from -20 to +720 degrees Celsius. As a rule, a plastic coatings, paint or limescale on the surface do not affect the results of measurements.

The unique properties of this gauge are caused by the clever use of the principle of electromagnetic-acoustic transduction (EMAT), allowing ultrasonic waves to be generated and received by metal objects without direct contact or the use of couplant. In fact, the gap between the material being tested and the electromagnetic acoustic transducer in the gauge can be as high as 4mm!







## Miscellaneous Equipment (Cont.)



### Diverse Ferrite meter MF300F+

The Diverse Ferrite meter MF300F+ measures the Ferrite number (FN) of austenitic and duplex stainless steel weld material. It has a probe that is sensitive to ferrite content in a 10 mm area to a depth of approximately 1 mm. The instrument is calibrated using the secondary world standards held at The Welding Institute.

### Rebound (Leeb) Hardness Tester dynaROCK II

The dynaROCK II is a Universal rebound hardness tester with robust metal (aluminum) casing and large memory. It works according to the Leeb rebound hardness test method for metallic materials. It is developed and produced by BAQ GmbH. It also combines easy operation with high precision and reliability.



### UCI Hardness Tester alphaDUR mini

The alphaDUR mini is the small and handy variant of the alphaDUR which has been successfully used in hardness testing since many years. The technology is identical and the accessories are compatible.

The operation of the alphaDUR mini is very easy because all information is shown on the large display. Hardness scale and material can quickly be changed by special keys.

### Vacuum Boxes & VSP Leak Detection Unit

When using VSP-units, the area to be tested (the welding seam or the casting surface) is moistened with a foam-forming inspection material. Then the area is covered with a vacuum box.

The vacuum box is connected to the VSP leak detection unit by a vacuum hose and is evacuated very quickly via a high-powered vacuum pump with a suction power up to 16 m<sup>3</sup>/h

Under the inspection glass of the evacuated vacuum box foam shows up where air flows through continuous discontinuities.



### G.A.L. Gage Welding Gauges

G.A.L. Gage Company manufactures high-quality precision Weld Measuring Gauges for checking Weld Thickness, Butt Welds, Pits, Undercuts, and much more.

Our products range include the 7-Piece Fillet Weld Set, Bridge Cam Gauge and the Adjustable Fillet Weld Gauge; to name but a few.



## Scope of Supply



✈ Portable & Fixed Gas Detection Instruments

✈ Magnetic Flux Leakage Tank Floor Scanners

✈ Radiography Testing Equipment



✈ Computed Radiography Scanners (CR)

✈ Positive Material Identification (PMI)

✈ Guided Wave Testing (GWT) Equipment



✈ Dye Penetrant & Magnetic Particles Testing

✈ Conventional Ultrasonic Testing Equipment

✈ Coating Testing Instruments



✈ Remote Visual Inspection (RVI) Systems

✈ High-Performance Phased Array Instruments

✈ Scanners for Advanced Ultrasonic Testing



✈ Sound Level Meters and Noise Dosimeters

✈ Pulsed Eddy Current Testing Equipment



✈ Ultrasonic Wall Thickness Scanners

✈ Eddy Current Testing Instruments

✈ Ultraviolet Testing Lamps & Radiometers