

TVC

WHEN ACCURACY MATTERS

Design, Manufacture, Calibration & Supply



WWW.TVCALX.CO.UK

About Us

Quality is our priority.

TVC is a technology and service company that has been providing safety-critical solutions to the welding and non-destructive testing industry sectors around the globe since 1995.

Global leader in data logging solutions and inspection equipment.

We design, develop, and manufacture first-rate monitoring systems that help our customers improve their operations. TVC is driven by the efficiency and reliability of our products and services, as well as our excellent customer support and delivery.

No matter how demanding your needs are, we have the expertise to meet them.

Our strengths are your success.

- Our company directors are experts in the welding and NDT equipment industry, with over forty years of combined experience.
- We design and manufacture customised and one-off inspection equipment, as well as Industry 4.0 compliant weld monitoring and data logging systems.
- Our products are specifically designed to operate in the most demanding conditions.
- We offer first-class calibration and repair services for all types of NDT equipment.
- TVC are accredited to ISO 17025:2017 for electrical verification of ultrasonic flaw detection, ultrasonic thickness measurement, and weld monitoring and welding inspection equipment, in our laboratory or at your premises.
- We have a comprehensive inventory of NDT equipment available for both short-term and long-term rental.



Weld Monitoring

TVC is a leading provider of weld monitoring solutions. We offer a variety of products to meet your specific needs and budget. Our products are designed to help you improve the quality, productivity, and safety of your welding operations.

Seamless Digital Exchange

Our next generation of weld monitoring and data logging systems combine the latest software advances to facilitate the seamless digital exchange of welding data at all levels for IoT and Industry 4.0 compliance. With wireless capabilities for network connectivity and TVC wireless sensors and remote assistance, it doesn't matter where in the world you are.



Cloud-base Database

When networked to the TVC Edge Server, systems can be used with the TVC WeldGlobe cloud-based database software, allowing remote logging and display of:

- Production welding
- Procedure qualification
- Welder qualification
- Document storage

Specialist Software

TVC has several specialist software packages available. All our Pulse Reporting software includes real-time pulse energy calculation and display in accordance with:

- ASME IX (2015)
- EEMUA Publication 158 (Third Edition)
- PD ISO/TR 18491:2015

We create bespoke programmes to suit your needs so contact us with any special requirements.



Welding Applications

Our monitoring systems are TIG High Frequency protected and are for use with:

- MMA applications
- MIG applications
- TIG (AC/DC) applications
- Subarc applications
- Fluxcore applications
- Manual, Semi-Automatic, Fully Automatic, and Robotic welding systems

Durable and Flexible

Durable, hardworking, and designed to withstand demanding conditions, TVC weld monitors and data logging systems are equally at home monitoring welding procedures, qualifying welders, or in a laboratory setting for precision welding of fine components and exotic materials. For ultimate flexibility, all options can be retrofitted.





ALX III SERIES

The ALX III Series is available in three configurations: Portable, Workstation, and RS. All units are supplied as a single channel system as standard. The Portable and Workstation systems can be upgraded to monitor up to four channels simultaneously, while the RS system can monitor up to two channels.

The system is fully programmable from root to cap. It includes our in-house designed specialist reporting software, TVC ArcLog, which can be used to integrate data into MS Excel reports. Other specialist software packages are available, including Pulse Welding, Clad Weld Overlay, and Pipeline.

The auxiliary inputs on the ALX III Series weld monitoring system provide a variety of options for customising the system to meet the specific needs of the customer.

The ALX III Series weld monitoring system can monitor voltage and current as standard. It can also be configured to monitor wire feed speed, gas flow, travel speed, type 'K' contact temperature, purge oxygen level, laser depth, multi-channel temperature, and wireless transducers and sensors connectivity.

Some of the options available include:

- Purge oxygen level
- Wireless wire feed
- Wireless traverse measurement
- Weld depth
- RFID card user login/identification
- Bar code scanners for consumable identification



The system uses non-intrusive probes to monitor weld parameters without contacting the weld. This helps to protect the weld from contamination and damage.

The ALX III Series weld monitoring system is a valuable tool for improving the quality, productivity, and safety of welding operations. It can help to:

- Improve weld quality by monitoring weld parameters and providing feedback to the welder.
- Increase productivity by reducing the number of weld defects and the amount of time spent on rework.
- Reduce costs by reducing the amount of scrap metal and the need for expensive repairs.
- Improve safety by monitoring weld parameters and providing warnings of potential hazards.



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MINI ARC LOGGER 4.0

The MAL 4.0 is a single-channel weld monitoring system that uses non-intrusive probes to monitor voltage and current. It also calculates energy and includes automatic head input.

The optional pulse reporting software makes it easy to monitor and report complex welding pulses.

Options include:

- Purge oxygen level
- Weld depth
- Wireless connectivity
- Wireless transducers and sensors
- Type 'K' contact temperature

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MONARC 4.0

With non-intrusive probes and able to monitor one channel, the MonArc 4.0 can monitor voltage, current, heat input, and perform energy calculations.

Options include:

- Wire feed speed
- Remote assistance
- Wireless networking connectivity



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WIRELESS CONNECTIVITY

NETWORKING

Our monitoring and data logging systems can be connected to the TVC Edge Server and the cloud-based TVC WeldGlobe database software. This allows for remote monitoring and viewing of welding data, as well as storage of welding procedure specifications (WPS) and production data. Options are available for production welding, procedure qualification, and document storage.



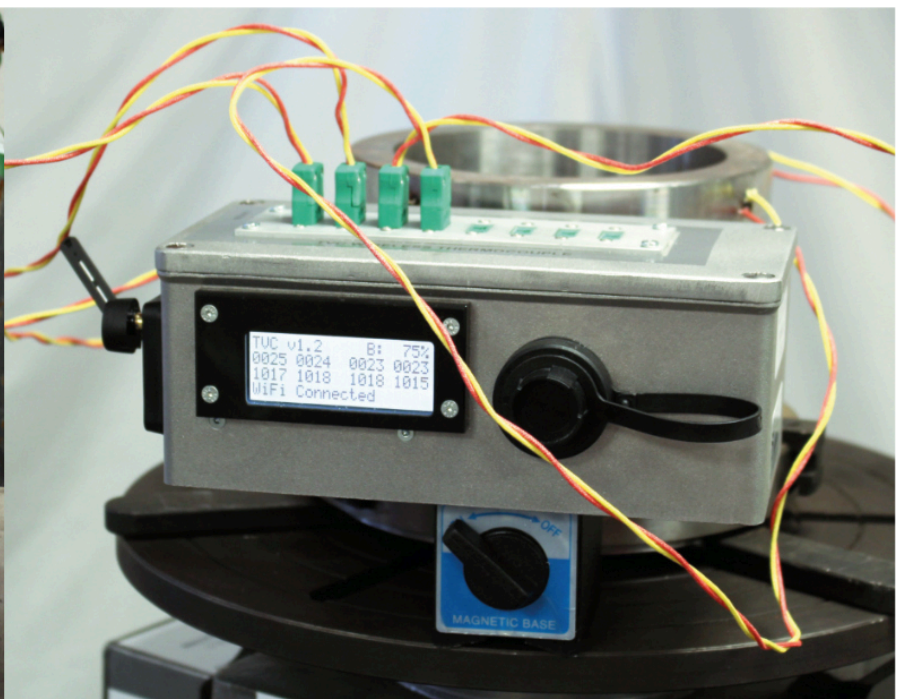
WIRELESS CONNECTIVITY

SENSORS AND TRANSDUCERS

Wireless transducers are available for the ALX III Series and MAL 4.0 weld monitoring systems. These transducers can measure a variety of parameters, including temperature, wire feed speed, travel speed, angle and position, gas flow, and weld height. The data collected by these transducers can be used to improve the quality and consistency of welds.



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WIREFEED METER 2

The WFM2 monitor can be used to set and track the rate at which consumable electrodes are fed into automated welding processes. This helps to ensure that a consistent welding current is produced for a given wire size and feed rate.

The WFM2 monitor is a valuable tool for automated welding processes. It can help to ensure that welds are produced consistently and to the required quality standards.



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TRAVEL SPEED METER

The TSM can be used to set and record travel speed rates for automated welding processes before production begins. This helps to ensure that welding times are consistent and can be used to cost the welding process, identifying areas where improvements can be made.

The TSM is a valuable instrument for automated welding processes. It can help to ensure that welds are produced consistently and to the required quality standards, helping to improve the efficiency of the welding process.



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DEGAUSS 600

The Degauss 600 can be used to demagnetise steel pipes and plates before welding. It uses a declining and polarity switched demagnetising current to reduce magnetism in the parts to be welded, which eliminates the effects of arc blow.

We offer an optional remote control and a long demagnetising cable for difficult-to-reach areas, complex geometries, multiple steel section thicknesses, and large, complicated fabrications.



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Gas Monitoring

Our gas monitoring equipment can help you improve the safety and efficiency of your welding operations by providing real-time feedback on the welding process. This can help you identify and correct any problems early on, which can save time and money.

Accurate Gas Flow Measurement

TVC gas monitoring equipment can be used to accurately measure gas flow rates. This can help you ensure that your welding procedures are being followed correctly and that you are not wasting gas, preventing defects, and improving the quality of your welds.



Analysis of Gas Composition

Our gas analysis equipment can be used to measure the levels of moisture, oxygen, helium, nitrogen, and carbon dioxide in a gas mixture. Welders can ensure that the gas mixture they are using is correct for the specific welding application, which can help to reduce the risk of welding failures and produce high-quality welds.

Dual Sensor Technology for Purging

By using optical and zirconia sensors, our gas purge systems provide high-resolution, repeatable readings. Our sensors are non-depleting, which means they last longer than chemical cells and save money over the lifetime of the system. This makes our systems a cost-effective solution for purging gases in a variety of applications.



Colour-coded Visual Screens and Alarms

Our analysis and purge systems provide clear and concise indications of alarm status through a variety of features, including colour screens, indicators, optional alarm beacons, and user-programmable alarm limits. These features work together to help you identify and address any potential problems before they cause disruption to your operations, helping you to improve safety, reduce downtime, and save money.

Automatic Flow Control

The three-stage flow controller is a fully automated gas purging system that controls purge gas flow according to oxygen levels. This makes it easy to program and use and eliminates the need for manual intervention, which ensures that purging is done quickly, accurately, and efficiently, saving time, and improving safety.



Cost-saving Benefits

By using our equipment, you can reduce gas wastage and save money. Our equipment is a reliable and cost-effective way to improve your gas usage.



NOZZLE FLOW METER 3

The NFM3 can measure all shielding gases and gas mixtures, including custom mixtures. It can help to reduce shielding gas wastage by ensuring that the welding torch's nozzle has an accurate gas flow rate. A fixed inlet or extension can be used to reach the nozzle on robots and automated machines. Peak gas flow is displayed for gas consumption analysis. The NFM3 Advanced model comes with data logging capability to store data for later analysis.



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GAS FLOW METER 2

The GFM2 can be used to measure the flow rate of all shielding gases and gas mixtures, including custom mixtures. It can be used at the torch nozzle or inline downstream of the regulator. The unit provides more accurate readings than traditional pea shooter indicators, which can help to ensure that the correct amount of shielding gas is being used. This can improve weld quality and reduce costs. The data logging function stores data for later analysis which can be used to improve welding processes.



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GAS QUALITY METER

The GQM is a gas quality meter that can be used to measure the flow rate of shielding gases at the gas outlet. It can also measure the moisture and oxygen content of the gas, as well as the concentration of helium, nitrogen, and carbon dioxide. Additional sensors can be added to the GQM to measure other gases. This can help to ensure that the correct amount of shielding gas is being used, which can improve weld quality and reduce costs.



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GAS FLOW METER 2 ANALYSIS

The Gas Flow Meter Analysis model is an upgraded version of the GFM2. It provides all the features of the GFM2, but it also measures and records carbon dioxide and oxygen levels in sample gases. Additionally, it has a colour-coded display that changes from red to green when the flow rate reaches an acceptable level. This makes it easier for users to quickly and easily identify when the gas flow is within the desired range.



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BASIC PURGE MONITOR

The Basic Purge Monitor is a simple, affordable purge monitor that uses optical sensors to measure oxygen levels in inert purge gases. It can accurately detect oxygen levels down to 100ppm, and its optical sensor is more durable than chemical cells and will last several years. The BPM also has an internal sampling pump to ensure fast, accurate, and repeatable oxygen readings. It can help to reduce oxygen contamination in the weld zone, increase productivity, reduce costs, and improve safety.



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HANDHELD PURGE MONITOR

The Handheld Purge Monitor is used to measure oxygen levels in purge gases. It is available in two models, the HPM-01 and the HPM-02. The HPM-01 is a basic model that can measure oxygen levels up to 100ppm, while the HPM-02 is a more advanced model that can measure oxygen levels down to 1ppm.

Both models feature a colour-coded display that changes from red to green when the oxygen level is within the desired range. The HPM also features onboard data logging of oxygen levels. Either model can be equipped with optional carbon dioxide measurement, which allows the meter to display, measure, and log oxygen and carbon dioxide levels.

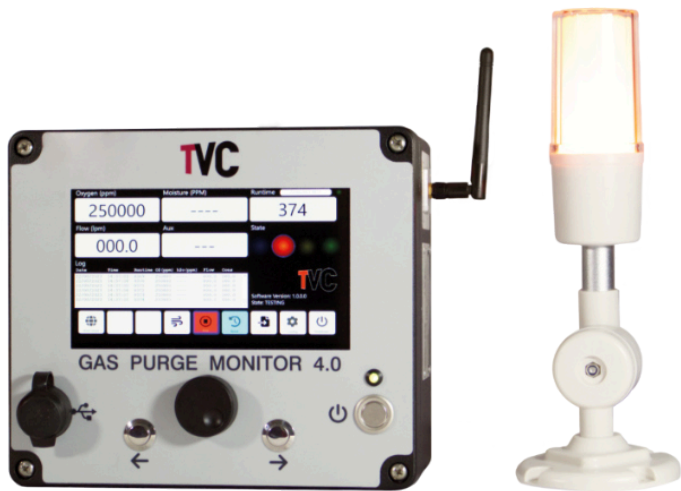


Additionally, a remote flow control box can be connected to the output of the HPM, which allows for automated purging of any inert welding gas. Control of purge gas flow ensures quick, accurate, and efficient purging, which can improve the quality of welds, reduce the risk of weld failures, and save money.



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GAS PURGE MONITOR

The Gas Purge Monitor is a compact and robust system that measures oxygen levels while purging. It is used in welding gas purging applications to record oxygen levels and operation times at predetermined intervals. The display changes colour based on the user's set upper and lower oxygen levels, providing operators with a convenient visual indication of when welding can begin.

An optional inline hygrometer sensor can be used to measure the moisture content in purge gas. Additional features include:

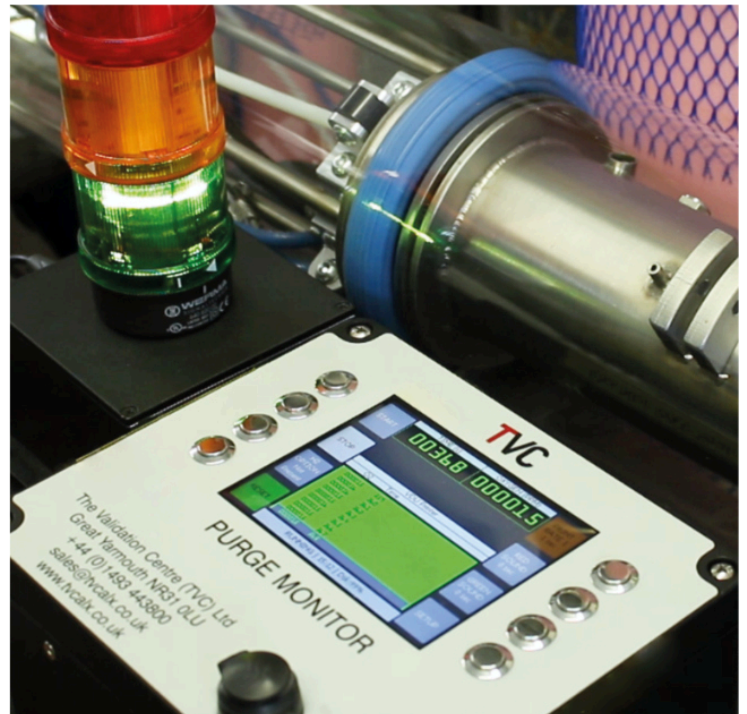
- External warning beacon outputs
- Proportional outputs
- Changeover relay contacts for clients' own warning systems

Coloured indicators and user-programmable alarm limits provide clear indications of alarm status.

The TVC Gas Purge Automatic Flow Control System is an easily programmable, three-stage flow controller that corresponds to the Gas Purge Monitor alarm levels and traffic light alarm beacon. It offers full automation for all gas purging activities. By controlling purge gas flow according to oxygen levels, this system enables quick, accurate, and efficient purging. Additionally, cost savings can be achieved by ensuring only the optimum gas amounts are used for the purging process.



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NDT Solutions

TVC is a leading provider of NDT solutions, and we design and manufacture a range of products to meet the needs of our customers. Our products are used in a variety of industries, including aerospace, automotive, defence, energy, and marine.

Corrosion Detection without Excavation

Our compact and rugged system can detect corrosion in planted steel lighting columns without the need for costly excavations. It can be used through ordinary access doors, which makes inspection more efficient and cost-effective.



Subsea Magnetic Particle Inspection

We manufacture a variety of subsea MPI systems that can non-destructively detect defects in materials using magnetism, ultraviolet light, and white light. Our systems are ideally suited for shallow water or splash zone applications.

Bespoke Laser Camera Inspection Systems

If you are looking for a laser camera inspection system that can be customised to meet your specific needs, we have the perfect solution. There are a wide range of options available, and we are confident that we can find a system that meets your requirements.



Options include including deployment vehicles for both straight and bent pipe and inspection for critical root welds. Our systems can also offer 360-degree root inspection ensuring the entire root weld is inspected for defects, automatic defect recognition, and bevel profile and ovality measurement to ensure that the pipe is within specifications.



Internal Pipe Cladding Measurement

Our system can be used to inspect metallic protective linings that are high-resistance, non-magnetic, or weakly-magnetic on carbon steel and low alloy steel substrates. Accurate, non-destructive results help to ensure the safety and reliability of the lining.

Combined Ultraviolet and White Light Measurement

Our hand-held UV and white light meter is designed for use in several NDT applications. It is portable, easy to use, reliable and accurate, making it a valuable tool for any NDT professional.



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COLCHEK2

The ColcheK2 is a non-destructive testing system designed to detect corrosion in planted steel lighting columns. It is a compact and rugged system that is easy to transport and deploy. The small search head probe can be inserted into the column through an ordinary access door, which allows corrosion to be detected without the need for excavation. The optional ultrasonic range finding system can be used to accurately determine the depth and significance of any defects that are found.

The ColcheK2 is valuable for asset owners and managers who need to ensure the structural integrity of their lighting columns. The system can help to identify and repair corrosion before it causes a failure, which can save time, money, and inconvenience.



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DINSEARCH 6.00

The Dinsearch 6.00 is a hand-held device that measures the thickness of metallic protective linings inside steel pipes. It is designed to be used on carbon steel and low alloy steel substrates, and can be used in straight pipes and bends, as well as on the lining of tanks and pressure vessels.

Using an eddy current technique to measure the thickness of the lining, it has two probes: a single spot-check probe and a wheel probe. The wheel probe provides a continuous reading of the cladding thickness, while the spot-check probe can be used to measure the thickness at specific points.

It can help to identify damaged linings before they cause a failure, which can avoid costly and disruptive repairs, ensuring the integrity of lined steel pipes.



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ULTRAVIOLET LIGHT METER

The Ultraviolet Light Meter is a handheld device that measures with a large, easy-to-read display in a rugged, portable design.

Measuring UV and white light levels accurately in NDT applications is essential for detecting defects. The UVL can help prevent failures and save time and money.



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SYSTEM 3 AND SYSTEM 12

The System 3 MPI subsea unit is a field-proven, subsea magnetic particle inspection system that offers total topside control. It was developed by TVC and is manufactured under exclusive license from ASAMS Limited.

The unit has three modes of magnetisation available: AC, DC, and HWDC. It also has in-built safety features, including earth leakage trips and surface isolation transformer. These features give the operator a clear view of the inspection area, flexibility to choose the most appropriate magnetisation method, and peace of mind when using the system in demanding conditions.

The System 12 MPI subsea unit is a compact, battery-powered MPI unit that offers powerful performance and based on the field-proven System 3.

Ideal for use in shallow water or splash zone applications, it is compact and lightweight, making it easy to transport and deploy. It is also battery-powered, so there is no need for an umbilical connection to the surface. This makes it ideal for use in areas where umbilical connections are not possible or practical.

The high-intensity UV lamp provides excellent contrast for detecting defects. It also has a powerful magnetic yoke that can create a strong magnetic field. This allows the unit to detect even small defects in materials.

The System 12 is a versatile and reliable tool that can be used to inspect a wide range of subsea structures and pipelines. It is ideal for use in demanding environments. The system is also easy to use and maintain, making it a cost-effective solution for subsea MPI.



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UPRS MKII

The UPRS MkII is a diver-deployed underwater inspection unit that can be used to confirm underwater parameters using UV light, white light, and magnetism. It has a full-colour OLED display, an internal rechargeable battery, and a rugged waterproof housing that is pressure tested to 600 feet of water depth. The internal data logger records the date, time, and measurement value of each parameter. It is a versatile, reliable, and cost-effective solution that can be used in demanding environments.



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CALSIS LASER CAMERA

TVC designs and manufactures customised laser, video, and eddy current inspection systems for pipe internals. These systems are tailored to the specific needs of each client and can include a variety of features, such as:

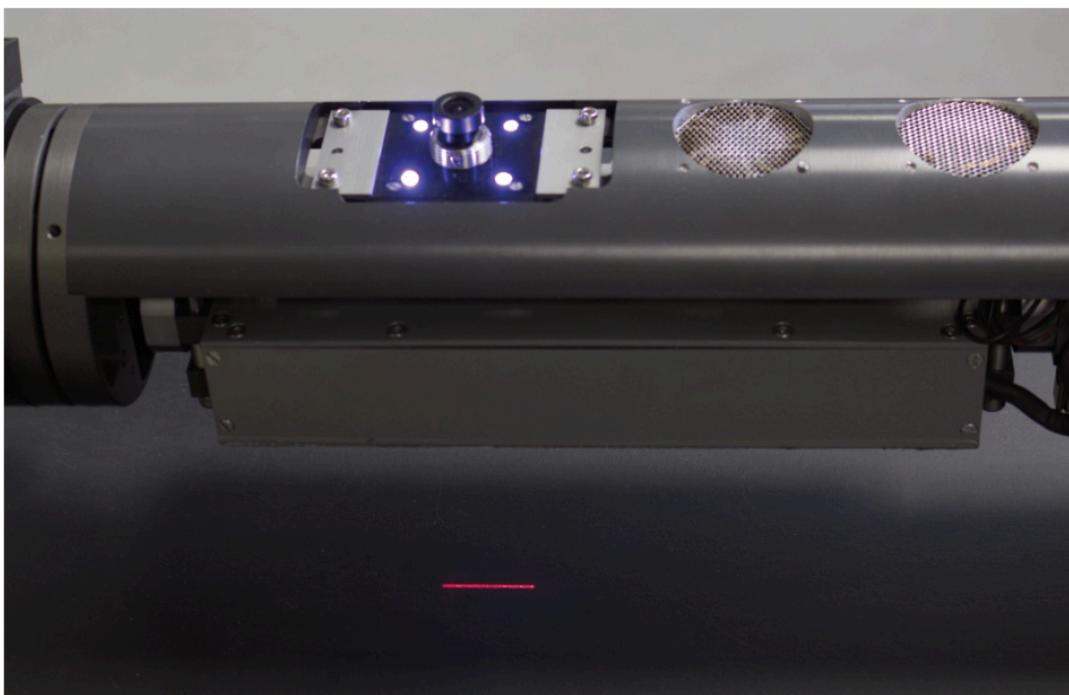
- Remote visual inspection using full HD cameras
- Deployment vehicles for both straight and bent pipes
- Full HD wireless video
- Inspection systems for pipe internals
- Visual and laser inspection of root welds
- Remote wireless systems

- Automated laser control for 360-degree root inspection
- Automatic defect recognition
- Laser systems to measure bevel profile and ovality
- Analysis software
- Laser scanning and measurement of external girth welds
- Laser measurement of cap profiles

TVC's inspection systems are used by a variety of industries, including oil and gas. They are tailored to the specific needs of each client, so you can be sure that you are getting the system that is right for you and can help to identify potential defects that could lead to failures.



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Calibration Laboratory

TVC is a leading provider of calibration services for NDT and welding inspection equipment. We offer a wide range of services to meet your needs, and our team is committed to providing you with the highest quality service.

UKAS Accredited Calibration Laboratory

TVC is a UKAS ISO 17025 accredited calibration laboratory for ultrasonic flaw detection, ultrasonic thickness measurement, weld monitoring, and welding inspection equipment. Our accreditation assures our customers of the accuracy and reliability of our services.



ISO 9001 Quality Management System

Our ISO 9001-certified quality management system ensures that our NDT services meet the highest standards. This demonstrates our commitment to providing high-quality services and helps us improve our efficiency, productivity, and customer satisfaction.

International and UK Standard Calibrations

We use equipment that is traceable to National Physical Laboratory (NPL), UK, so you can be confident that your measurements are accurate and reliable. This is important because it ensures that your products and services meet the required standards.



Onsite and Offsite Services

We can provide our UKAS and traceable calibration services at our calibration laboratory in the UK or at our customers sites, making us flexible to meet your needs.

Fast Turnaround

We understand that every customer has different needs, so we offer a variety of calibration services to choose from. Our calibration services are tailored to meet your specific requirements, and we offer a variety of turnaround times to fit your schedule including standard, premium, and fast track turnaround.



NDT Equipment Supply

We can source everything you need to perform NDT on a variety of materials and components. TVC has a wide selection of equipment and consumables from leading brands and manufacturers which makes us a great place to find quality products at competitive prices.

Equipment Rental

We offer a variety of rental options for businesses of all sizes, including TVC-brand weld monitoring data loggers and laser camera inspection systems. Whether you need equipment for a short-term project or a long-term need, we have the solution for you.



UKAS Accredited Calibration Laboratory

If you are looking for a reliable and trustworthy provider of calibration services, you can be confident that TVC can meet your needs. We have a proven track record and a team of experienced and qualified technicians who can calibrate your equipment to the highest standards.

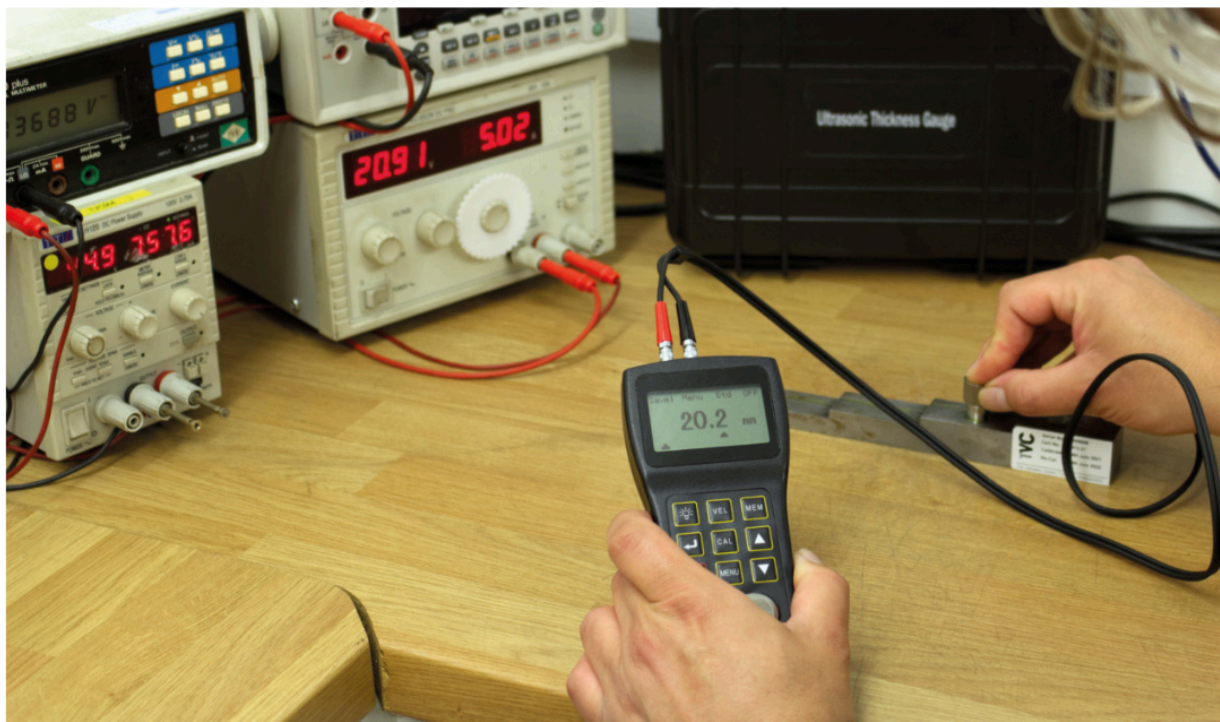
TVC's calibration laboratory is ISO 9001 certified, which means that we are committed to providing high-quality services that meet the needs of our customers. We offer a wide range of calibration services for NDT equipment, and our calibrations are carried out to UK and international standards using equipment traceable to the National Physical Laboratory (NPL), UK.

TVC is a UKAS-accredited laboratory that provides a wide range of non-destructive testing (NDT) services, including ultrasonic flaw detection, ultrasonic thickness measuring, weld monitoring, and weld inspection equipment. UKAS accreditation is the highest level of accreditation available for NDT laboratories. It means that TVC meets the highest standards for quality and competence. We offer on-site and off-site services, so you can benefit from our expertise regardless of your location.

TVC offers a wide range of calibration services for NDT equipment, including standard, premium, and fast track services. We can meet your calibration needs no matter what your budget or timeline.



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Equipment Rental and Supply

TVC is a leading supplier of NDT equipment and consumables. We are an approved supplier for Chemetall and Johnson & Allen and we offer a wide range of products to meet the needs of businesses of all sizes, including:

- Ultrasonic flaw detectors
- Thickness meters
- Probes and probe leads
- Test blocks
- Standard and high-temperature couplant
- MPI paints and cleaners
- Yokes
- Magnets
- Settlement flasks
- Testing strips
- And much more!

A comprehensive range of NDT equipment is available for short-term and long-term hire, including many TVC-branded monitoring and NDT equipment.

We have an experienced team who can help you choose the right equipment and consumables. If you are looking for a reliable NDT supplier, you can be confident that TVC can meet your needs.

TVC

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