

UniqueTech Industrial Control
Driving Performance with Precision Instrumentation

UniqueTech Industrial Control is an engineering solutions provider for the process & manufacturing industry. A place where engineering excellence meets industry-leading solutions tailored to the unique needs of the process and manufacturing sector. With our deep understanding of industry challenges and unparalleled technical expertise, we are your trusted partner in achieving operational excellence.

At Unique Tech Industrial Control (UTIC), we pride ourselves on being more than just a supplier. We are your strategic partner in success with a diverse range of products including industrial instrumentation, valves, calibrators and more. We offer a comprehensive portfolio to meet all your needs. Whether you're seeking reliable measurement devices or robust control solutions, we have you covered. As a trusted partner in the industry, we specialize in delivering cutting-edge products and comprehensive services to enhance the performance, efficiency and reliability of your operations.

In addition to our extensive product offerings, we also provide top-notch services to support your operations. From precise calibration services to rigorous hydraulic testing, our team of experts ensures that your equipment and systems perform at optimal levels. With a commitment to quality and accuracy, we help you maintain compliance, mitigate risks, and optimize productivity.

Our **VISION** is "to empower the process and manufacturing industry with tailor-made engineering solutions that optimize efficiency, enhance productivity and foster sustainable growth"

Tailored Solutions

Innovative Approach

Engineering Excellence

Our **MISSION** is "to be the leading engineering partner for industries seeking the tailored solutions to calibration and instrumentation challenges, setting new excellence standards"

Our Core Values



Integrity



Innovation



Customer-Centric Focus



Collaborative Partnership

Our Work Domains



Calibration & Hydraulic Testing



Flow Instrumentation



Temperature Instrumentation



Pressure Instrumentation



Level Instrumentation



Calibrators



Mechanical Valves

Why We Are UNIQUE From Others

At UTIC, we stand out from the competition due to our distinctive approach and unparalleled expertise in solving measurement and calibration-related challenges. While we may not boast of well-known brands, we offer something far more valuable – advanced engineering skills coupled with innovative solutions tailored to meet the unique needs of our clients.



CALIBRATION SERVICES

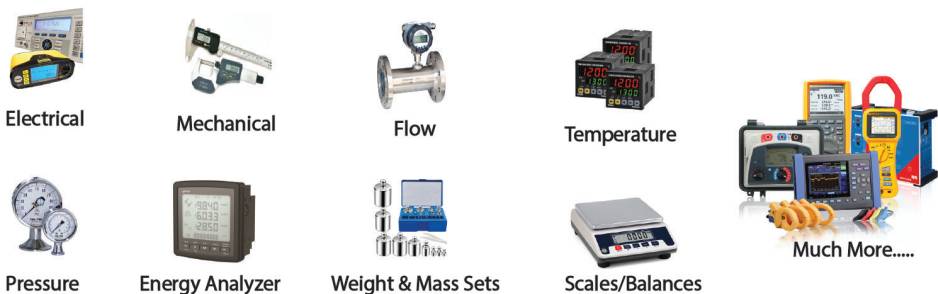
Our calibration services are designed to verify and adjust the accuracy of a wide range of measurement instruments, ensuring that they perform within specified tolerances. With state-of-the-art equipment and meticulous attention to detail, our team of skilled technicians calibrates instruments such as temperature sensors, pressure gauges, flow meters and more. Whether you require calibration for compliance with industry standards, quality assurance or precision measurement, we have the expertise to meet your needs.

Our **In-Lab Calibration** services provide controlled environment where we meticulously verify and adjust your instruments to meet highest standards of accuracy. Whether you require calibration for temperature sensors, pressure gauges, flow meters, or other critical instrumentation, our in-lab facilities provide the ideal setting for precise and reliable calibration.

For clients who require minimal disruption to their operations, our **Onsite Calibration** services offer a convenient solution. Using portable calibration equipment and adhering to strict protocols, we conduct onsite calibrations with the same level of precision and accuracy as our in-lab services.



Our Calibration Range



Electrical

Mechanical

Flow

Temperature

Pressure

Energy Analyzer

Weight & Mass Sets

Scales/Balances

Much More.....

Associated Services

- VALIDATION
- INSPECTION
- DATA LOGGING
- TEMPERATURE MAPPING

HYDRAULIC TESTING SERVICES

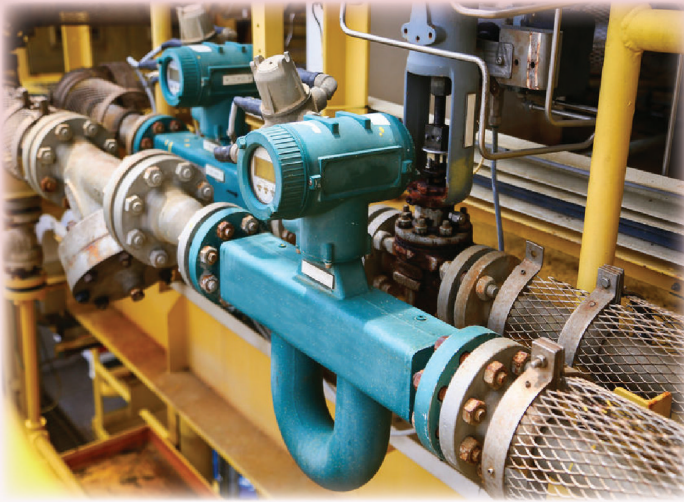
Our hydraulic testing services offer a comprehensive evaluation of hydraulic systems underpinning your critical processes. Employing cutting-edge testing methodologies and equipment, we delve deep into the intricacies of your hydraulic infrastructure.

Our assessments encompass exhaustive array of parameters, including the pressure profiles, flow characteristics and structural integrity. From hydraulic cylinders driving essential machinery to intricate valve networks regulating fluid dynamics, our meticulous testing protocols identify vulnerabilities and ensure the robustness of your hydraulic systems.



Pressure Testing
Leak Testing

Performance Testing
Durability Testing



Accurate flow measurement is essential for tasks such as monitoring fluid consumption, determining process efficiency, detecting leaks or blockages and controlling flow rates to maintain safe operating conditions. Various flow measurement technologies and techniques are employed to accommodate the diverse requirements of different applications, including liquids, gases and steam with varying flow rates, pressures and temperatures.

Factors influencing the selection of flow measurement technologies include the type of fluid being measured, the flow regime (e.g. laminar or turbulent), the required accuracy and precision, the operating environment (e.g. temperature, pressure and presence of corrosive or abrasive substances) and considerations such as cost, ease of installation and maintenance requirements.

Modern flow measurement systems leverage advanced sensor technologies, signal processing algorithms and communication protocols to provide real-time data monitoring, remote access and integration with control and automation systems. These capabilities enable industries to enhance process efficiency, minimize waste, improve safety standards and meet regulatory requirements, contributing to overall operational excellence and sustainability.



Electromagnetic Flow Meters

Measure flow by detecting the voltage generated as conductive fluids pass through a magnetic field. They offer high accuracy, wide turndown ratios and are suitable for measuring the flow of conductive liquids with minimal pressure loss and no moving parts.



Ultrasonic Flow Meters

Utilize ultrasonic waves to measure flow velocity, offering non-intrusive installation, high accuracy and versatility for various fluids including liquids and gases. They are suitable for a wide range of pipe sizes and materials, with options for clamp-on and inline configurations.



Differential Pressure (DP) Flow Meters

Measure flow rate by creating a pressure drop across a constriction in the flow path. It offers simplicity, reliability and compatibility with a wide range of fluids and operating conditions, with options like orifice plates, venturi tubes and flow nozzles.



Coriolis Flow Meters

Measure flow based on the Coriolis effect, where fluids passing through vibrating tubes cause a phase shift. They offer high accuracy, direct mass flow measurement and immunity to fluid properties and operating conditions variations. They are good for a wide range of applications.



Turbine Flow Meters

Measure flow rate by counting the revolutions of a rotor in the fluid stream. They offer high accuracy, wide turndown ratios and are suitable for measuring the flow of clean, low-viscosity liquids and gases in various industries, with options for inline and insertion configurations.



Vortex Shedding Flow Meters

Measure flow rate by detecting the vortices shed from a bluff body in the flow stream. They offer high accuracy, wide turndown ratios and are suitable for measuring the flow of liquids, gases and steam in various industrial applications, with options for insertion and inline configurations.



Thermal Mass Flow Meters

Measure flow rate based on the heat transfer from a heated sensor to the flowing fluid. They also offer wide turndown ratios and are suitable for measuring the flow of gases in various applications, with options for inline and insertion configurations.



Variable Area Flow Meters (Rotameters)

Measure flow rate by observing the position of a float or piston in a conically shaped tube. Offer simplicity, low cost and is suitable for measuring the flow of liquids and gases in various applications. Provide options for inline and panel-mounted configurations.



Flow Transmitters

Convert flow measurements into standardized electrical signals (4-20 mA) for integration with control systems, offering remote monitoring and automation capabilities.



Flow Switches

Detect the presence or absence of flow in pipelines or systems, triggering alarms or control actions when predefined flow thresholds are exceeded or not met.

Industrial temperature measurement is essential for ensuring product quality, process efficiency and safety across a wide range of industries. It involves quantifying the thermal energy of materials, equipment and environments to monitor and control various processes, including manufacturing, food processing, HVAC systems, automotive, aerospace, and pharmaceutical production. Accurate temperature measurement enables industries to optimize the production parameters, detect anomalies or deviations, prevent equipment failure and comply with regulatory standards.



Temperature measurement technologies encompass a diverse range of sensors, probes & instruments tailored to different applications and environments. From the traditional thermocouples & resistance temperature detectors (RTDs) to modern infrared thermometers and thermal imaging cameras, industries have access to a variety of options to suit their specific needs and requirements.



Thermocouples

Most widely used temperature sensors in industrial measurements. They cover a wide temperature range (-200°C to over 2300°C). Their fast response times and suitability for harsh environments make them widely used in industrial processes.



Resistance Temperature Detectors (RTDs)

They typically cover a smaller temperature range as compared to thermocouple. They are ideal for precise temperature measurements in moderate temperature ranges and applications requiring long-term reliability.



PT100

This is a type of RTD. They are specifically considered because they utilize a platinum (Pt) sensing element with a resistance of 100 ohms at 0°C. This standardized resistance value makes PT100 sensors highly predictable and repeatable.



Temperature Controllers

Regulate temperature and activate heating or cooling devices to maintain desired temperature levels. They feature PID control algorithms for precise temperature regulation and often include programmable settings for versatility in various applications.



Temperature Gauges

Provide visual indication of temperature through analog or digital displays, offering a direct readout of values. They come in various types, including gas-actuated, bimetallic and digital gauges, each with specific features and suitability for different ranges and environments.



Temperature Transmitters

Convert temperature signals from sensors into standardized electrical signals for easy integration with control systems. Offer high accuracy, stability and noise immunity. They typically housed in compact enclosures for convenient installation on control panels.



Non-contact Temperature Sensors

Utilize various principles such as IR, laser or acoustic to measure temperature without physical contact with the object, offering fast response times, high accuracy and suitability for remote or hazardous environments.



Temperature Calibrators

Verify and calibrate temperature measurement devices, featuring the high accuracy, stability and ease of use, with options for portable handheld units or benchtop models for laboratory calibration.



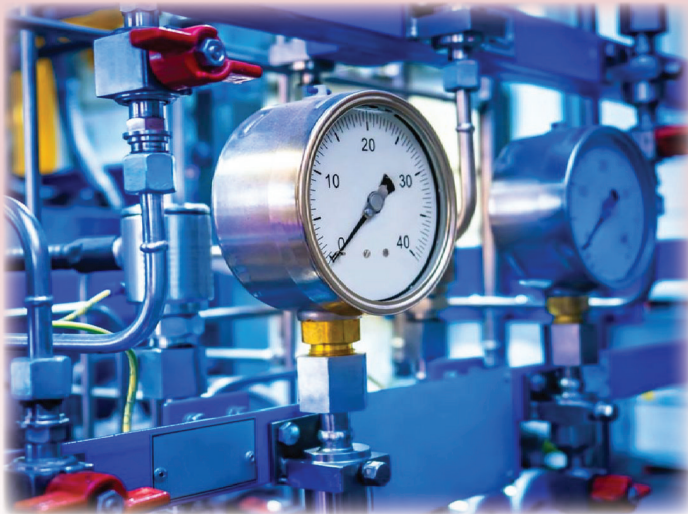
Temperature Baths

Provide precise temperature control for calibrating temperature sensors and instruments, providing uniform heating or cooling, stability and compatibility with various temperature ranges and immersion depths.



Temperature Data Loggers

Record temperature data over time, offering portability, flexibility and high storage capacity with options for wireless connectivity, multiple sensor inputs and software for analysis and reporting.



Pressure measurement involves quantifying the force exerted by a fluid on a surface and is utilized in applications ranging from HVAC systems and water management to oil and gas production and manufacturing processes. Industrial pressure measurement is crucial for monitoring and controlling processes in various industries, ensuring operational safety, efficiency and product quality. Accurate pressure measurement facilitates the optimization of processes, detection of leaks or anomalies and compliance with regulatory standards.

With advancements in sensor technology and digitalization, industrial pressure measurement systems are becoming increasingly sophisticated, incorporating features such as remote monitoring, wireless connectivity, real-time data analysis, predictive maintenance capabilities and integration with control and automation systems. These advancements empower industries to achieve higher levels of efficiency, productivity and operational excellence while meeting strict regulatory standards and quality assurance requirements.



Pressure Controllers

Instruments that regulate pressure by adjusting valve openings or pump speeds based on feedback from pressure sensors, ensuring precise control and optimization of process parameters. They offer good automation capabilities and compatibility with closed-loop control systems for maintaining desired pressure levels.



Differential Pressure Sensors

Measure the difference in pressure between two points, offering precise measurement of flow, level or pressure difference across filters, valves, orifices and other flow control devices, with options for various sensing principles and configurations.



Pressure Transmitters

Devices that convert pressure signals into standardized electrical outputs (4-20 mA) for integration with control systems, offering remote monitoring and automation capabilities. They are also compatible with harsh environments, ensuring reliable and efficient pressure measurement in industrial applications.



Pressure Calibrators

Verify and adjust the accuracy of pressure measurement instruments, ensuring reliable and traceable pressure readings in industrial applications. Their high precision, ease of use and compatibility with various pressure ranges and measurement standards make them essential for maintaining process integrity and compliance.



Magnetic Pressure Sensors

Measure pressure by detecting changes in magnetic field strength or position, offering high accuracy, reliability and immunity to electromagnetic interference in automotive, marine and industrial applications.



MEMS Pressure Sensors

Utilizes micromachining technology to fabricate miniature sensing elements, offering high sensitivity, low power consumption and integration with electronics for compact and cost-effective pressure measurement solutions in consumer electronics, automotive and medical devices.



Optical Pressure Sensors

Measure pressure using optical principles such as interferometry or fiber Bragg gratings, offering high sensitivity, immunity to electromagnetic interference and compatibility with harsh environments and high temperatures, suitable for aerospace, oil and gas and medical applications.



Pressure Switches

Instruments that actuate electrical contacts based on pressure thresholds, enabling control actions or alarms in response to changing pressure conditions. It offers simplicity, reliability and suitability for pressure-based automation or safety interlocks in industrial processes.



Pressure Regulators

Devices that maintain a constant pressure by adjusting valve openings or relieving excess pressure in fluid systems, ensuring safe and efficient operation. It is compatible with different pressure ranges and fluid types, essential for maintaining process integrity and equipment protection.



Pressure Gauges

Instruments used to measure the pressure of fluids or gases in industrial processes, providing visual indication through mechanical dials or digital displays. They provide compatibility with a wide range of pressure ranges and fluid types, essential for real-time pressure monitoring in industrial processes.

Industrial level measurement is essential for monitoring and controlling the levels of liquids, solids and granular materials in various industrial processes. It ensures accurate inventory management, process optimization and compliance with safety and environmental regulations. Level measurement systems are employed in industries such as chemical processing, food & beverage, water treatment, pharmaceuticals and oil & gas, providing critical data for decision-making and process automation. Various factors influence the selection of level measurement technologies e.g. type of material being measured, physical and chemical properties of the material, the operating environment (temperature, pressure and presence of corrosive or abrasive substances) and the required accuracy, reliability and response time.



With advancements in sensor technology, communication protocols and digital signal processing, modern level measurement systems offer enhanced capabilities for remote monitoring, data logging and integration with control and automation systems, enabling industries to achieve higher levels of productivity, efficiency and safety.



Level Sensors

Employ various principles like capacitance or ultrasonic to measure liquid or solid levels, offering versatility, reliability, and compatibility with different materials and environmental conditions, essential for continuous or point level monitoring in industrial processes.



Ultrasonic Level Sensors

Utilizes ultrasonic waves to measure the distance between the sensor and the material surface. Offer non-contact measurement, high accuracy and suitability for a wide range of materials and environmental conditions in industries.



Radar Level Sensors

Emits microwave pulses and measure the time taken for the signal to reflect off the material surface, offering accurate and reliable level measurement in challenging conditions such as high temperatures, pressures, and dust or vapor atmospheres.



Capacitive Level Sensors

Measure the change in capacitance between electrodes and the material to determine the level, offering high sensitivity, versatility, and compatibility with various materials, making them suitable for applications in tanks, bins and hoppers.



Level Switches

Detect level changes and trigger alarms or control actions, providing suitability for point level detection in tanks, silos or hoppers, essential for preventing overflowing or emptying of vessels and ensuring process safety.



Level Controllers

Regulate liquid levels by adjusting valves or pumps based on feedback from level sensors. Ensuring precise control, automation capabilities and the compatibility with closed-loop control systems for maintaining desired levels in industrial processes.



Level Indicators

Provide visual or audible indication of liquid levels, offering simplicity, durability and compatibility with a wide range of fluids and tank sizes, necessary for real-time monitoring of liquid levels in industrial applications.



Level Calibrators

Verify and calibrate level measurement devices, ensuring accurate and reliable level readings, offering high precision, ease of use and compatibility with various level measurement technologies. Which are essential for maintaining process integrity and compliance.



Level Transmitters

Utilize technologies such as ultrasonic or radar to measure liquid or solid levels, offering non-contact measurement, high accuracy and compatibility with various materials and tank geometries, essential for continuous level monitoring in industrial applications.



Level Gauges

Provide visual indication of liquid levels through transparent tubes or sight glasses. Provide simplicity, durability and compatibility with a wide range of fluids and tank sizes, essential for real-time level monitoring in industrial tanks or vessels.

CALIBRATORS



Multifunction Calibrators

Source and measure multiple types of electrical signals, such as voltage, current, resistance and frequency. They are versatile tools used for calibrating a wide range of instruments and sensors in one device, making them highly efficient for maintenance and calibration tasks. Their versatility and comprehensive functionality make them indispensable in various industrial settings.



Process Calibrators

Specifically designed for calibrating process instruments such as transmitters, thermocouples and RTDs. They typically include functions for pressure, temperature and electrical signal calibration, ensuring accurate readings and maintaining process integrity. These calibrators are essential for maintaining accuracy and reliability of critical process measurements in industrial environments.



Flow Calibrators

Verify and adjust the accuracy of flow meters and other flow measurement devices. They ensure that the flow rate readings are precise by comparing the device's output against a known standard. These calibrators are essential in applications where accurate flow measurement is critical, such as in water treatment, chemical processing and HVAC systems.



Temperature Calibrators

Verify and adjust accuracy of temperature measurement devices. They generate precise temperature conditions and compare the readings of the device under test to ensure accurate measurement. These are essential in industries where maintaining precise temperature control is critical, such as in pharmaceuticals, food processing, and HVAC systems.



Pressure Calibrators

Designed to test and calibrate pressure measurement instruments. They generate known pressure values and compare them with the readings of the device under test to ensure accuracy. Pressure calibrators are vital for maintaining the reliability and safety of systems that depend on precise pressure measurements, including those in the oil and gas, manufacturing and aerospace industries.



Level Calibrators

Verify and calibrate level measurement devices, ensuring accurate and reliable level readings, offering high precision, ease of use and compatibility with various level measurement technologies. Which are essential for maintaining process integrity and compliance.

MECHANICAL VALVES



Ball Valves

Use a spherical disc to control the flow of fluid. The valve is open when the ball's hole is aligned with the flow, and closed when the ball is rotated to block the flow. They offer reliable sealing, quick shut-off capabilities and are durable, making them suitable for high-pressure and high-flow applications.



Butterfly Valves

They use a rotating disc to regulate the flow of fluid. When the valve is closed, the disc blocks the flow; when open, the disc is rotated to allow flow. They are compact, lightweight and ideal for applications requiring low-pressure drops and quick operation, especially in large-diameter pipelines.



Control Valves

Automatically regulate the flow or pressure of fluids to maintain desired operating conditions in a process system. They are actuated by control signals to adjust the flow rate, pressure, or level of a fluid. Control valves are essential for maintaining process efficiency, safety and product quality in various industrial applications.



Gate Valves

These are primarily used for on/off control of fluid flow. They operate by lifting a gate out of the path of the fluid. When fully open, gate valves provide minimal flow resistance, making them suitable for applications where the valve remains either fully open or fully closed for long periods.



Globe Valves

They are designed to regulate flow in a pipeline by adjusting the position of a movable plug or disc against a stationary ring seat. They provide good throttling capabilities, making them ideal for applications requiring precise flow control. Globe valves are commonly used in systems where flow needs to be adjusted frequently.

OUR CLIENTS

At Unique Tech Industrial Control (UTIC), we take pride in serving a diverse range of clients across various industries. Our commitment to excellence and innovation has earned us the trust and loyalty of numerous organizations. Here are some sectors we proudly serve:

Process Industries: Chemical, Food & Beverage, Pharmaceuticals, Pulp & Paper, Textiles, Petrochemicals

Manufacturing Industries: Automotive, Electronics, Consumer Goods, Medical Devices, Machinery and Equipment

We are dedicated to forging long-term partnerships by delivering tailored engineering solutions that meet the unique needs of each client. Our extensive experience and expertise enable us to provide exceptional service and support, helping our clients achieve their goals and drive success.

Here are just a few of the valued clients we have had the privilege to work with:



We invite you to join our growing list of satisfied clients and experience the UTIC difference. Contact us today to learn how we can support your business with our comprehensive range of industrial instrumentation and calibration services.

