

YOUR PARTNER IN TEMPERATURE



**HIGH-TEMPERATURE
SENSORS**



High-Temperature Sensors For Extreme Environments

Our high-temperature sensors are designed for precision measurement in the most challenging industrial conditions. Built for reliability, these sensors can withstand the harshest environments, providing consistent, accurate readings across a wide range of applications. Whether it's inside a high-temperature furnace or an industrial boiler, our sensors are engineered to perform when it matters most..

WHY HIGH-TEMPERATURE SENSORS MATTER

Accurate temperature monitoring is critical to maintaining safety, efficiency, and productivity in high-heat environments. Inaccurate readings can lead to costly downtime, safety hazards, and reduced product quality. Our high-temperature sensors are built to deliver reliability and accuracy, helping you avoid these risks

PARTNERING WITH INDUSTRY LEADERS

With over 60 years of experience, we partner with industry leaders across the globe to provide reliable temperature solutions. Our sensors are trusted by professionals in refining, power generation, and other high-temperature industries.





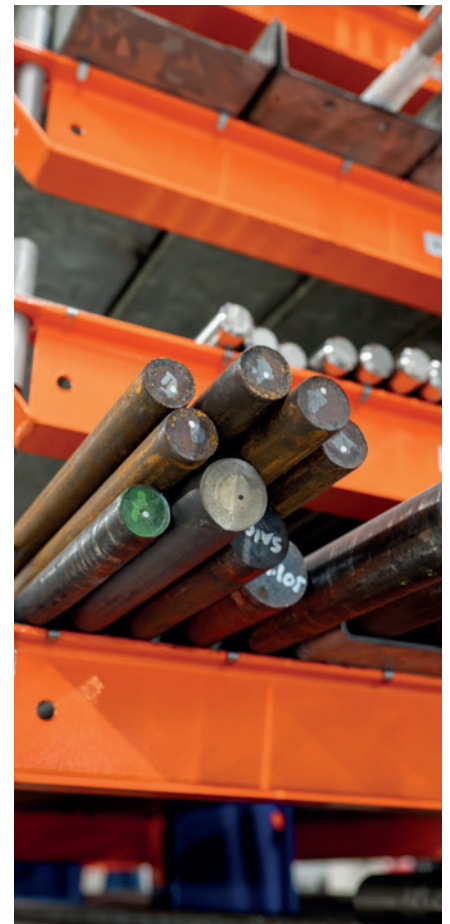
Features And Benefits

FEATURES

- **Durable Construction:** Made from high-grade materials like Inconel and stainless steel to ensure resilience in extreme heat and corrosive conditions.
- **Wide Temperature Range:** Capable of measuring temperatures up to 2,700°C, suitable for high-temperature furnaces, reactors, and refining processes.
- **Customizable Sheath Options:** Available in a variety of sheath materials, tailored to meet specific industrial requirements.
- **Thermal Shock Resistant:** Designed to handle rapid temperature fluctuations without compromising performance.
- **Advanced Calibration:** Sensors are precisely calibrated in our RvA-accredited laboratory, ensuring optimal accuracy and traceability to international standards.

BENEFITS

- **Assured Quality:** Our calibration services are ISO 17025 accredited, providing confidence in the accuracy and reliability of our high-temperature sensors.
- **Enhanced Safety:** Accurate temperature readings help prevent overheating and reduce safety hazards in industrial processes.
- **Reduced Downtime:** Reliable sensors minimize the risk of unexpected failures, ensuring uninterrupted operations.
- **Cost Efficiency:** By providing precise measurements, our sensors help optimize energy usage, reducing overall operational costs.
- **Sustainability:** Our sensors are designed with energy efficiency in mind, helping to reduce emissions and support sustainable industrial practices.





Applications And Customization

APPLICATIONS

Our high-temperature sensors are essential for industries requiring precision in extreme conditions. Typical applications include:

- Fired Process Furnaces: Monitoring temperatures for optimal combustion.
- Refining and Petrochemical: Accurate measurement for distillation columns and reactors.
- Power Generation: Monitoring boilers and turbines to maintain efficiency and safety.
- Glass and Metal Processing: Measuring temperatures in glass kilns and metal forges for process control.

OPTIMAL PERFORMANCE THROUGH CUSTOMIZATION

Every industrial setup is unique, so we offer custom-built high-temperature sensors tailored to your requirements:

- Flexible Design Options: Mineral-insulated cables, protective sheaths, and custom lengths.
- Certification and Compliance: All sensors meet industry standards, including ISO 9001, ATEX, and IECEx certifications. Our calibration lab is accredited to ISO 17025, ensuring traceability and accuracy.

CUSTOMIZATION FOR YOUR NEEDS

Whether you need specific materials to withstand corrosive environments or unique sensor lengths to fit into tight spaces, our customization options ensure that our sensors meet your exact specifications.





Why Choose Us

WHY CHOOSE THERMO ELECTRIC INSTRUMENTATION

Thermo Electric Instrumentation has over 60 years of experience in temperature sensing technology, with a focus on delivering innovative and high-quality solutions. We leverage cutting-edge advancements to create custom temperature sensors that are built to meet and exceed industry demands.

- **Global Expertise:** As a leading specialist in temperature measurement, we serve industries worldwide, including oil and gas, petrochemical, power generation, semiconductor, and aerospace sectors. Our global footprint allows us to provide local support and understand the specific needs of different regions.
- **Certified Excellence:** Our sensors are calibrated in our RvA-accredited laboratory, adhering to ISO 17025 standards. Our quality management system is certified to ISO9001, ensuring consistent quality and precision in all our products.
- **Proven Track Record:** We have successfully executed numerous high-profile projects, including providing custom temperature solutions for major end users, OEMs, and engineering & construction companies. Our expertise in handling complex projects ensures reliability and performance in every sensor we deliver.
- **Customer-Centric Approach:** Our mission is to deliver exceptional value through rapid turnaround times, customized solutions, and flexible support that adapts to the evolving needs of our customers. We are committed to building long-term partnerships and contributing to the success of our customers.

Our team of experts work closely with you to understand your needs and can provide solutions that exceed your expectations.

Commitment To Excellence

With a focus on research and engineering capabilities, we ensure our products offer the highest precision, durability, and reliability, directly addressing the challenges you face. From design to after-sales support, we are dedicated to providing the best temperature measurement technology to optimize your operations.



Manufacturing Facilities

Our production and engineering facilities are centrally located in the Netherlands and manned by our highly skilled employees. This setup is essential for upholding our high standards and best practices in engineering and design. The expertise of our personnel, coupled with state-of-the-art facilities, guarantees the efficient manufacture of Thermo Electric temperature sensors and their consistent high-quality performance in the field.

CALIBRATION FACILITIES

Our laboratory holds ISO17025 accreditation for temperature measurements ranging from $-200\text{ }^{\circ}\text{C}$ to $1,500\text{ }^{\circ}\text{C}$, as well as for evaluating electrical parameters including millivolts (mV), milliamperes (mA), ohms (Ω), and volts (V).



SERVICES

- Wake frequency calculations for Thermowells as per ASME PTC19.3
- Cleaning for oxygen services
- Customized drawings
- Customized Inspection and test plans / procedures

CERTIFICATIONS

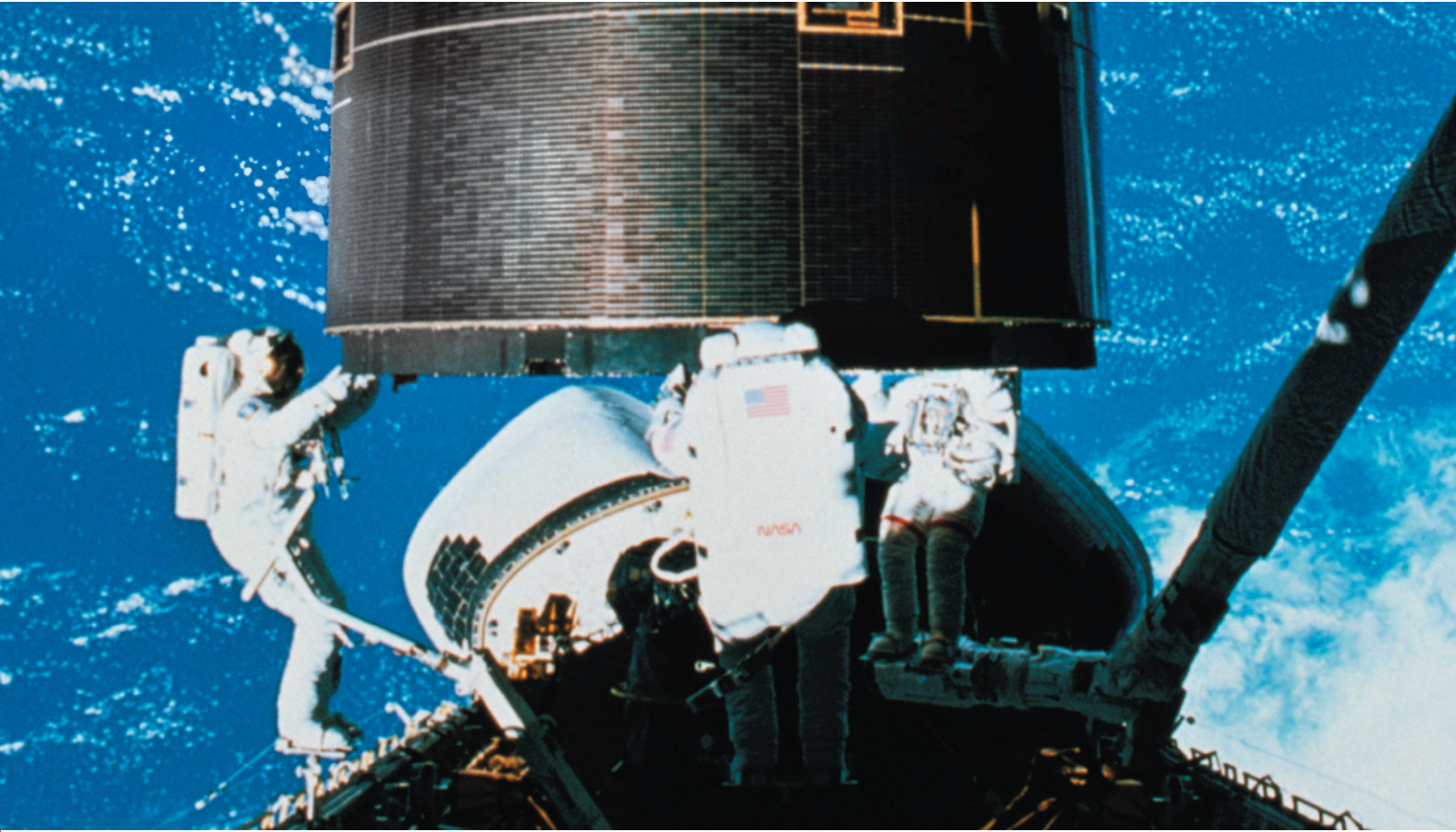
- Material certificate as per EN10204 3.1 or 3.2 and NACE
- Welding procedure specification (WPS) including procedure qualification records (PQR) and Welder performance qualifications (WPQ) as per ASME IX and ISO15614
- Certificate of conformance (EN10204 2.1)
- Certificate of origin

HAZARDOUS AREA CERTIFICATES

	XPS1	XPS2	XPS3	XPS4
IECEX:	Exeb	Exia/b	Exdb	Exec
ATEX:	Exeb	Exia/b	Exdb	Exec
CSA/US:	(A)Exe	(A)Exia/b	(A)Exd	(A)ExnA
KTL:	Exe	Exia	Exd	ExnA
CCOE(PESO):	Exeb	Exia/b	Exdb	
CCC:	Exia	Exdb		

TESTING FACILITIES

- Visual inspection
- Dimensional check
- Pressure testing (up to 1100Bar)
- High pressure testing (up to 5500Bar)
- Dye penetrant examination (DP)
- Radiographic testing (X-ray)
- Ultrasonic testing (US)
- Vacuum testing
- Helium leak testing
- Positive material identification (PMI)
- Batch calibration certificates
- Sensor calibration certificates



Other Products and Services at a Glance

TEMPERATURE SENSORS

- Industrial temperature sensors
- Multiple temperature sensors
- Profiling temperature sensors
- High-pressure temperature sensors
- Resistance temperature detectors
- PT100, PT1000, NTC
- Miniature temperature sensors
- Tubeskin temperature sensors

INSTRUMENTS

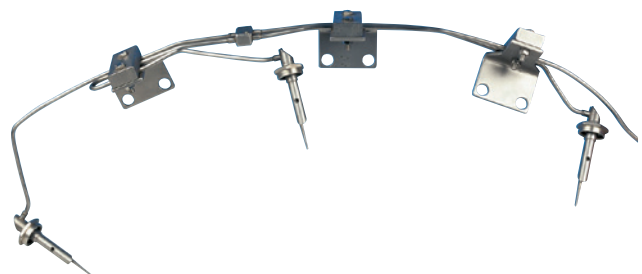
- Optical temperature meters
- Controllers
- Transmitters
- Dry well calibrators

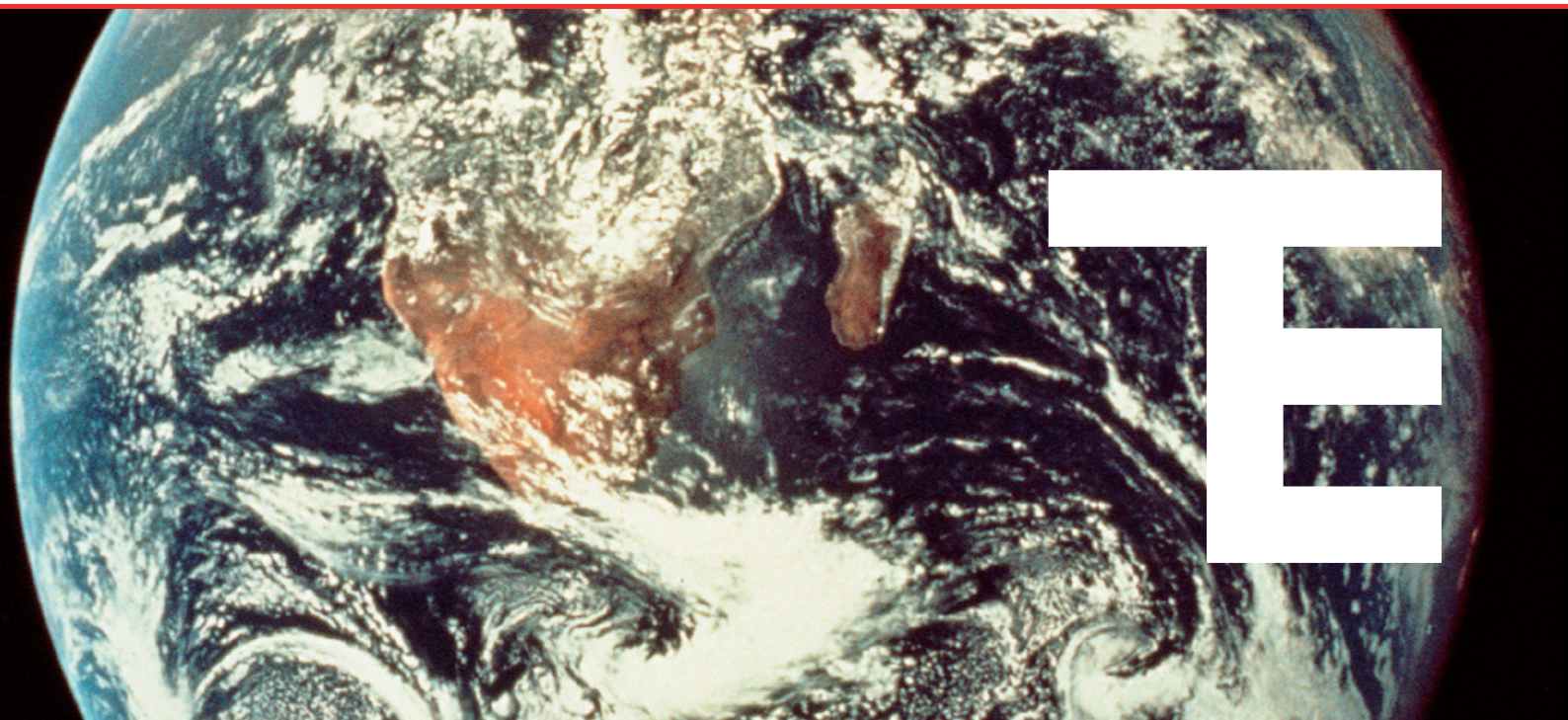
CONNECTORS, PANELS AND WIRES

- Standard thermocouple connectors
- Miniature thermocouple connectors
- Standard thermocouple panels
- Miniature thermocouple panels
- PVC, PTFE, Kapton, Silicon, Glass Fiber

SERVICES - RvA/ILAC ACCREDITED CALIBRATION

- Calibration of temperature sensors
- Repair of instruments





**Your trusted
partner in the
development and
production
of temperature
measurement solutions**

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