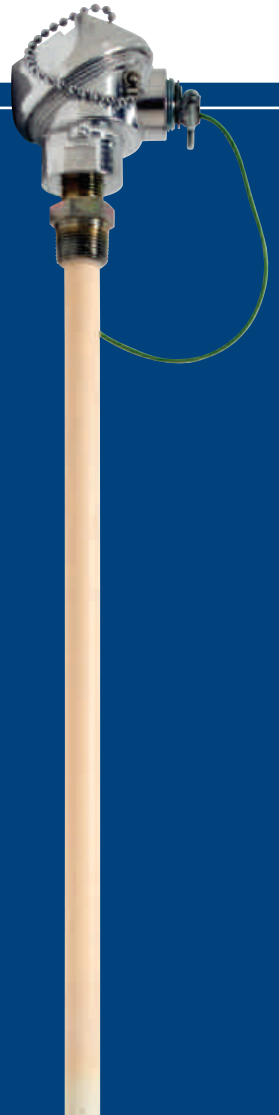
FURNACE PARTS, LLC

INDUSTRIAL THERMOCOUPLES

AND TEMPERATURE SENSORS



FURNACEPARTS
Excellence in Temperature Measurement®

COMMITMENT TO QUALITY

Furnace Parts, LLC is dedicated to excellence in customer satisfaction.

We continually improve our processes and products while striving to be a true value-added supplier for our customers. We maintain a leadership position in quality in all levels of our business through our commitment to service, training and communication with both our customers and our employees.

Exceptional ***QUALITY***
Rapid ***DELIVERY***
Added ***VALUE***

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ABOUT FURNACE PARTS, LLC

Founded in 1974 in Cleveland, Ohio, Furnace Parts, LLC is an industry leader in the manufacture of specialty industrial thermocouples. Our expertise in thermocouple applications spans a vast array of industries, including steel and specialty metal fabrication, oil and gas, heat treating/thermal processing and aerospace, to name a few. We excel in temperature measurement solutions.

Now under new ownership, Furnace Parts continues to set standards in the advancement of industrial temperature sensors. Through our commitment to customer satisfaction, we focus heavily on quality—continually improving our methods to provide the best temperature sensors on the market.

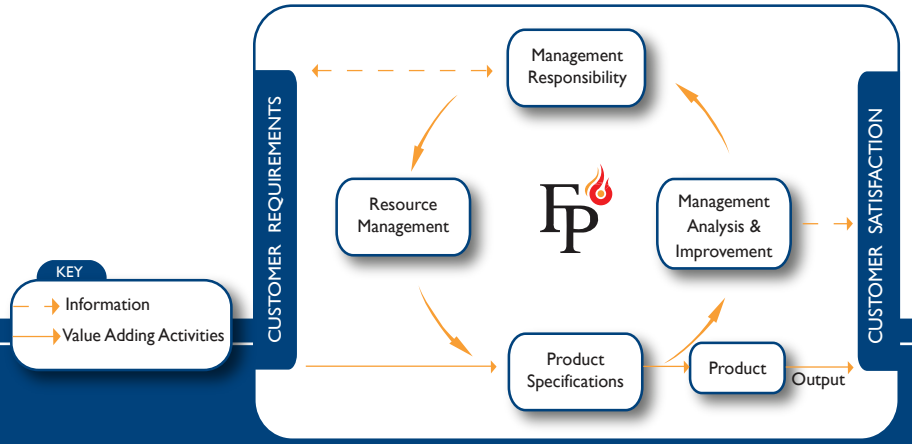
This commitment to quality carries over into all aspects of our business. Furnace Parts has been an ISO 9001-registered company since the year 2000. That same year, our in-house calibration laboratory was one of the first of its kind to receive ISO/IEC 17025 accreditation.

Furnace Parts products and services include:

- Thermocouple and RTD assemblies
- Bare and insulated wire
- NIST traceable calibration services
- Protection tubes and thermowells
- Heads, blocks and connectors
- Control instrumentation
- Alloy fabrications—muffles, retorts, grids, fixturing and boxes

Our Engineered Solutions and Sales and Customer Service Groups are readily available to meet and exceed your needs. We are dedicated to providing our customers with the highest level of service, creative solutions and short product lead times.

Continual Improvement of the Quality Management System



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CALIBRATION LABORATORY

Our in-house Calibration Laboratory provides sensor and instrumentation calibration and repair services for secondary standard and field test potentiometers and calibrators, as well as working standard temperature indicators, controllers and recorders. Our customers can count on our experienced technical and management personnel to provide accurate and reliable service with quick turnaround.

The Furnace Parts, LLC Calibration Laboratory was one of the first of its kind to receive the prestigious ISO/IEC 17025 accreditation. We also certify our products to meet AMS 2750E and BAC 5621K specifications. NIST traceable calibration reports are available based on customer requirements. Our calibration capabilities include thermocouples and temperature instrumentation.

Our calibration capabilities span both thermocouples and instrumentation:

THERMOCOUPLES

- The calibration laboratory has five furnaces and is capable of calibrating the following types of thermocouples: E, J, K, N, T, R, S and B.
- Thermocouples are calibrated by comparison techniques based on ASTM E220, against secondary standard thermocouples. The standard thermocouples are calibrated against a reference standard thermocouple directly traceable to the National Institute of Standards and Technology within a temperature range of -110°F to 2700°F.
- Thermocouples are certified, as specified by contract, to either standard or special limits of error as stated in ASTM E230.
- In addition to meeting the required limits of error for initial calibration, other acceptance criteria—such as sampling, lot size, front to back tolerances, etc.—is based upon AMS 2750 E, unless otherwise specified by contract.

INSTRUMENTATION

The calibration lab has the capability to calibrate the following types of temperature measurement instrumentation:

- Secondary standard Millivolt potentiometers and DMMs
- Secondary standard digital thermocouple calibrators/indicators
- Field test potentiometers and digital thermocouple calibrators/indicators
- 4 to 20 ma loop calibrators
- Acceptance criteria such as expected tolerances, calibration frequency, ranges, etc., are based upon AMS 2750 E, unless otherwise specified by contract
- The minimum test accuracy ratio for any particular calibration within the lab's scope of accreditation is maintained at 4:1

PRODUCTS AND SERVICES

MINERAL INSULATED METAL SHEATHED THERMOCOUPLES (MgO)

These types of thermocouples are perfect for use in demanding applications. Compact, moisture-proof and pressure resistant, MgO thermocouples are ideal for control or load thermocouples or for furnace surveys and system accuracy tests. Available in Types E, J, K, N and T.

HIGH TEMPERATURE THERMOCOUPLES

Types R, S, B and C are available with ceramic, Inconel, Hastelloy and Molybdenum sheaths in standard and custom lengths. Platinum reclamation programs are also available to reduce total thermocouple costs.

CERAMIC INSULATORS

Manufactured in a wide range of diameters, bore sizes and configurations, ceramic insulators are available in alumina, mullite and hafnia.

INSULATED WIRE THERMOCOUPLES

Custom assemblies for a wide variety of environments and applications–from the plastics industry to high-temperature vacuum heat treating. Lengths and assemblies are configured to exact specifications.

CERAMIC PROTECTION TUBES

Available in custom lengths with cemented mounting fittings, ceramic protection tubes are manufactured in alumina, mullite, quartz, recrystallized silicon carbide, Hexalloy® and LT-1 metal ceramic.

METAL PROTECTION TUBES

Protection tubes are offered in Inconel, 300 and 400 series stainless steels, cast iron and carbon steels. Tubes are spun closed with our proprietary process for increased durability and added protection. Stocked in many diameters and bore sizes.

BASE METAL THERMOCOUPLES

Types E, J, K, N and T are available in a variety of wire sizes and configurations. Custom lengths, insulators, heads, plugs, jacks, blocks and flanges are available to meet application requirements.

NOBLE METAL THERMOCOUPLE WIRE

Bare thermocouple wire for use in in-house applications. Multiple calibrations and wire sizes are available to meet various specifications.

RESISTANCE TEMPERATURE DETECTORS (RTD)

RTDs are available in 2, 3 and 4 wire designs, in classes A and B. Standard and high-temperature elements are configured to meet customer requirements.

FURNACEPARTS
Excellence in Temperature Measurement®

FURNACE PARTS ACCESSORIES

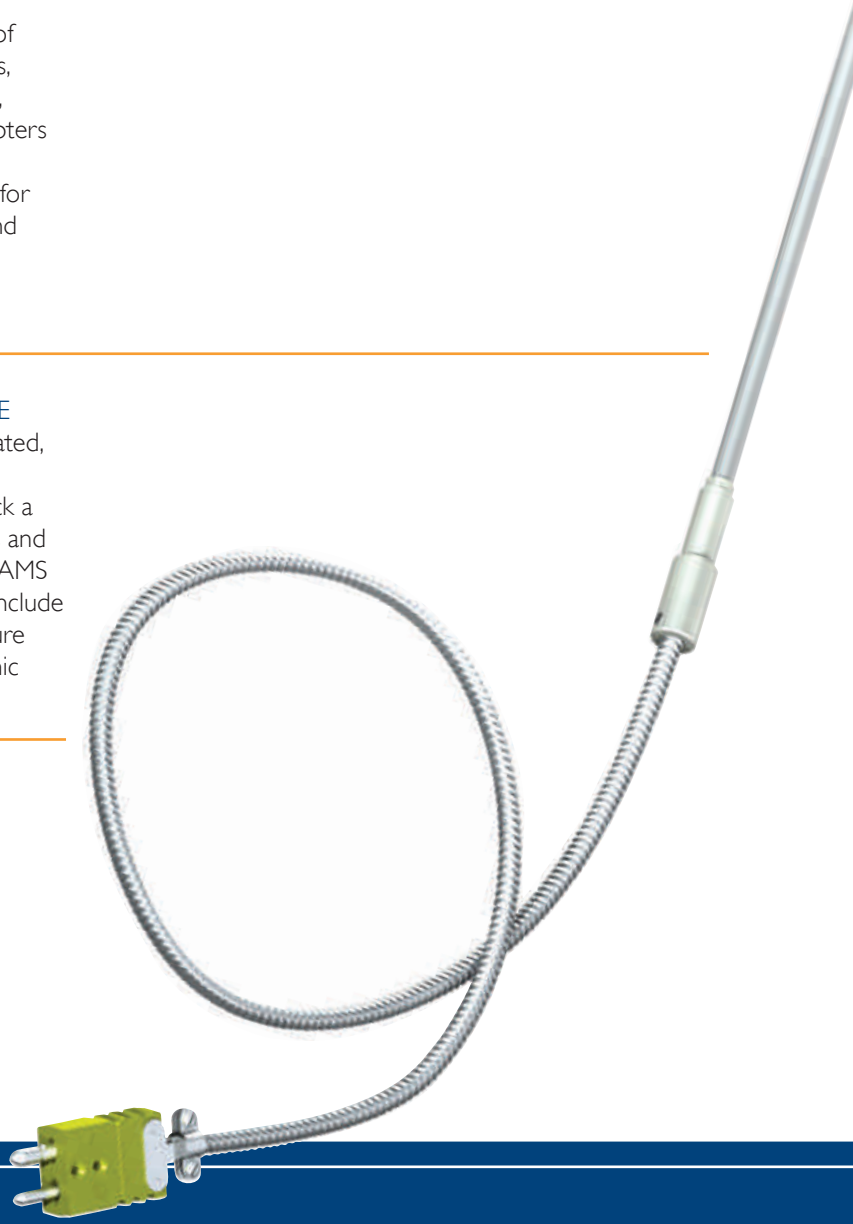
THERMOWELLS
Made from a variety of materials, such as 300 & 400 series stainless, Inconel, Hastelloy and titanium, thermowells are configured to customer specifications.

HARDWARE
We offer a wide variety of hardware and accessories, such as heads and blocks, plugs and jacks, tube adapters and compression fittings. Our hardware is offered for efficiency, convenience and added value.

VACUUM FURNACE THERMOCOUPLES
Types R, S, B and C; these thermocouples are argon backfilled and epoxy sealed, ideal for use in vacuum furnace applications.

THERMOCOUPLE WIRE
Available in bare or insulated, thermocouple grade or extension grade. We stock a wide variety of wire sizes and types, pre-calibrated per AMS 2750 E. Insulation types include fiberglass, high temperature glass, Refrasil® and ceramic fiber, among others.

IMMERSION TIPS
A unique temperature measurement tip with a reusable handle, this product is made for intermittent temperature measurement of non-ferrous molten metals (such as aluminum, brass, copper and other non-ferrous applications).



INDUSTRIES SERVED

- Steel Fabrication
- Industrial Heat Treating/Thermal Processing
- Aerospace
- Aluminum
- Power Generation
- Oil and Gas
- Petro Chemical
- Speciality Metals
- Glass
- Cement
- Military and Defense
- Plastics
- Casting and Forging
- Diesel and Gas Turbine

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Proud member of:

AIST Association for Iron & Steel Technology
IHEA Industrial Heating Equipment Association
MTI Metal Treating Institute