

# Temperature Calibration in Power Generation

## Enhancing Efficiency and Environmental Responsibility in Power Generation

In the dynamic landscape of power generation, precise temperature measurement delivers a strategic advantage. At Isotech, we strive to be a pioneering force in temperature calibration solutions, working behind the scenes to elevate accuracy and efficiency in power plants across the globe. Our cutting-edge products have become integral to the power generation industry, helping plants optimise energy production, reduce emissions, and align with the green energy revolution.

### Empowering Diverse Energy Sources

As the power generation landscape diversifies, our impact expands. Whether it's nuclear, gas, tidal, wind, or solar energy, precise temperature measurement remains crucial. Our adaptable solutions cater to various energy sources, ensuring optimal efficiency across the board. We are dedicated to supporting clean energy aligning with the shift towards sustainable power generation.

### The power of precision

Accurate temperature measurement is paramount in power plants. Our suite of temperature calibration tools, including the acclaimed Dry Block Temperature Calibrators (4000 Series) and the innovative 875 Fluidised Furnace, stand as cornerstones of this industry. These tools ensure that temperature sensors in crucial plant areas, such as boiler control, turbine/generator controls, heat exchangers, cooling water systems, and efficiency monitoring systems, deliver precise readings for optimal operation.

### Fuel Efficiency and Emission Reduction

One of the most significant challenges in power generation is striking the right balance between energy production and environmental responsibility. Isotech plays a pivotal role in achieving this by enabling power plants to accurately measure and control the temperature at which fuel burns. Our solutions contribute to maximising fuel efficiency. This, in turn, results in increased energy output while simultaneously curbing harmful emissions released into the atmosphere. In a world transitioning away from fossil fuels, our solutions are aligned with the broader goal of improving air quality and sustainability.



### Legacy and Innovation

Since 1980, we have continuously evolved to meet the ever-changing demands of the power generation industry. The Thermocouple Reference Units, introduced in its early days, remain a staple in temperature measurement applications. These units enhance cold junction performance in thermocouple-based systems, maintaining accuracy and reliability. Over the years, we continue to maintain a steadfast commitment to this sector, crafting bespoke solutions that adapt to the unique needs of each power plant.

### Real-World Implementation

In the UK, power plants often rely on Isotech solutions to achieve optimal performance. Our portable dry blocks enable accurate on-site calibration of sensors without disrupting the measuring circuit, ensuring precise readings and a comprehensive "loop calibration." For less critical areas utilising thermocouples, our approach involves pre-calibrating replacement sensors in the workshop, adhering to the IEC EN60584 standard. This streamlined approach highlights the dedication to practicality and efficiency in power generation.

The journey from our foundational days to the current prominence in the power generation industry is a testament to our commitment to innovation, precision, and environmental responsibility. As power plants navigate the complex terrain of energy production, Isotech calibration solutions stand as reliable allies, enabling accurate measurements, heightened efficiency, and reduced environmental impact with a focus on enhancing operations and contributing to a greener future.



### Products utilised

Isotech Dry Block Temperature Calibrators (4000 Series: Venus, Gemini, Jupiter, Pegasus, Saturn), 875 Fluidised Furnace, Semi-Standard PRTs, Thermocouples, Thermocouple Reference Units