

**Maintain pipe temperatures
in demanding industrial and
harsh environments**



Nelson™ Heat Trace Technologies

A complete range of tailored heat trace solutions for the most demanding environments.



Tailored solutions with innovative installation, control and monitoring technologies.



At Emerson, we are committed to finding the most cost-effective solution to your heat trace requirements, regardless of size or scope. Trained on the specialized requirements of mineral insulated cable design, our Nelson™ application and engineering group can design systems utilizing all major product technologies; self-regulating, parallel constant-wattage and series resistance heating products.

Our expertise goes beyond just heat tracing, we can help you incorporate all of your needs into a fully integrated package. From simple material selection to complete plant surveys, we can provide exactly the level of service your project needs and demands. With over 65 years in the industry, we can deliver the most efficient and cost-effective solutions available.





Nelson industrial heat trace products incorporate traditional heat trace design philosophies with innovative installation, control and monitoring technologies.

Unbiased Expertise

If you choose a heat trace system, we will provide the right products that fit your application even if that means recommending an alternative solution. It is our corporate pledge that guides every step in the design, installation, operation, and continued support of your system.

For our customers and partners who prefer to design their own systems, we offer tools to simplify your efforts such as our Nelson Design Suite. Just like our in-house engineering department, this tool provides you with the ability to design with products from all major heating cable technologies.

Create Value

From control panels to termination kits, Emerson can provide a complete system, with optimum reliability, at a very competitive price. Because we manufacture all of our own equipment, we can provide a single integrated product line with sales and support personnel to service clients anywhere in the world. Our Nelson Heat Trace products allow our clients to focus on their business and simplify their lives with a single point of contact, while being offered concept to completion project design and support.

Unique Solutions

We know your application is unique, and your reputation is riding on a system that provides flawless operation and years of reliability. With over 50 years of industry firsts, advances and breakthroughs, we can provide a complete offering of products with global approval to fit your application. Each customer engagement offers us a unique opportunity to prove and improve our existing systems.

Global products with a global reach.



Mineral Insulated Cable

We have pioneered the use of mineral insulated heating cables for industrial applications that require higher temperatures, extended heater life and efficient power output. With one or two heating elements surrounded by magnesium oxide insulation, maximum exposure temperatures of +593°C (+1100°F) are possible.

Self Regulating Cable

Time proven, extremely reliable, field cut-to-length, Nelson self-regulating heating cables are ideal for both freeze protection and process maintenance applications. These heater cables feature multiple power output and voltage ratings.

Connection Systems

Emerson can provide a wide range of connection systems to meet the global installation requirements for Zone and Division locations. Most of our Nelson heating cables are cut-to-length and assembled in the field. These systems require kits for connecting to the power supply, configuring multiple cables and sealing electrical components from the surrounding environment.

It's important to note. Our mission is to make it easy to develop accurate, cost-effective, solutions to your heat tracing requirements. By utilizing our heat trace selection software, we take the guess work out of heat tracing applications. If you need quick and accurate engineering calculations, our Nelson Design Suite Software makes you the expert.



Heat Trace Technology for Any Application

Mineral Insulated Cable



- Wrapped in a corrosion resistant alloy 825 sheath, MI heating cables feature excellent chemical resistance, including immunity from harsh chloride stress corrosion.
- Our unique manufacturing process results in a product that is superior in durability, flexibility, and ease of installation.

Self Regulating Cable

HLT



LT-JT



- Our self-regulating heating cables automatically alter their output in response to temperature changes –an increase in heat as the pipe cools, a decrease in heat as the temperature rises.
- Cables are tested and certified to ensure they operate effectively even in the harshest of environments.
- These self-regulating heating cables are suitable for installation on metallic and non-metallic piping systems, tanks and vessels for freeze protection or process temperature maintenance up to +150°C (+300°F) and exposure temperatures up to +230°C (+450°F).

Integral Connection Kits



Component Connection Kits



Optional External End Termination



- Manufactured using the highest quality materials, these systems are designed to handle the wide temperature ranges and chemical exposures found in today's industrial facilities.
- Pipe mounted and component based connections meet the stringent demands for heat trace applications.



Visit nelsonheaters.com or contact your local Nelson Heat Trace representative to learn more about our Heat Trace technologies.

Simply intelligent heat trace control.



Temperature Control

We can provide the right system for your specific needs, from simple electro-mechanical thermostats to sophisticated electronic control and monitoring systems.

Control Systems

Temperature control and cable monitoring systems are designed to simplify maintenance of electrical heat tracing systems and provide real time verification of operational parameters.

Multi Point Control Systems

Our Nelson Heat Trace multi point control systems provide an economical approach to process control where large concentrations of heater circuits are present. All functional and operational parameters are continuously monitored to ensure system integrity.

Monitoring and Distribution Panels

Stand-alone monitoring systems are available for new installations and are designed to retrofit into existing installations that require additional monitoring capabilities. Control status, supply voltage, current and buss wire continuity can be monitored, alarmed and communicated to plant personnel 24/7.

Comprehensive Product Systems

Ambient Mechanical Thermostat



Explosionproof/Flameproof Mechanical Thermostat



Weatherproof Mechanical Thermostat



- Mechanical thermostats provide a cost effective control option for most heat tracing installations.
- Thermostats are available in a variety of enclosures including NEMA 4, 4X and 7 for use in hazardous and nonhazardous locations.

Control Systems



- Single point and dual point, microprocessor based control systems provide the ultimate in flexibility to remote plant location or small installations requiring a higher level of process control.
- With all the attributes of distributive control systems, these controllers can be seamlessly integrated into larger plant wide monitoring networks.

Multi Point Control Systems



- Multi point control systems provide a compact, tightly integrated, factory assembled/tested solution for high density plant locations.
- Temperature, load current and ground leakage conditions are identified and communicated to plant personnel allowing maintenance to be performed as needed to reduce or eliminate costly down-time.
- Negative trends are noted on a maintenance pending list, while more severe problems are removed from service and alarmed.

Monitoring and Distribution panels



- Standard monitoring and distribution panels are designed to meet the specific demands of electrical heat tracing systems.
- Energy saving control options that monitor actual design conditions can reduce operational costs by up to 70% over conventional control schemes.



Visit nelsonheaters.com or contact your local Nelson Heat Trace representative to learn more about our Heat Trace technologies.

Innovative and reliable heat trace solutions for demanding environments.



Nelson is the cornerstone of Emerson's Electrical and Light business; providing worldwide heat trace solutions that ensure optimum control and cost-efficient operations.

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