



INDUSTRIAL PROCESS HEATING SOLUTIONS PRODUCTS AND ACCESSORIES

Volume 1 - Europe/Eastern Hemisphere



OUR MISSION



Provide safe, reliable and innovative mission critical industrial process heating solutions that create value for our customers.

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**THE UNDISPUTED LEADER IN EXPERTISE
AND REPUTATION, LEVERAGING A
MIX OF INNOVATION AND PERSONAL
SERVICE TO REVOLUTIONIZE THE
PROCESS HEATING INDUSTRY.**

FROM EXPLORATION TO END USERS, THERMON HAS A SOLUTION THAT IS RIGHT FOR YOU.

Thermon provides highly engineered thermal solutions for various industries, including:

- Chemical/Petrochemical
- Upstream Gas
- Midstream Gas
- Downstream Gas
- Upstream Oil
- Midstream Oil
- Downstream Oil/Refining
- Power
- Rail and Transit
- Food and Beverage
- Commercial
- Semiconductors
- Data Centers
- Renewables
- Pharmaceutical and BioTechnology
- Maritime/Shipbuilding
- Mining
- ...and More

THERMON'S SOLUTIONS

HEAT TRACING

Electric Heat Tracing
Tubing Bundles
Steam Tracing and Tank/Hopper Heating
Controls and Monitoring

TRANSPORTATION

Rail & Transit Heating Solutions

HEATING SYSTEMS

Cata-Dyne™ -
Explosion Proof Gas Catalytic Heaters
Ruffneck™ -
Heaters for the Harshest Environments
Norseman™ -
Electric Explosion-Proof Heaters
Caloritech™ -
Engineered Electric Heat

UPSTREAM SECTOR

- 1 – ONSHORE OIL AND GAS PRODUCTION
- 2 – BITUMEN PRODUCTION AND PROCESSING
- 3 – COAL-BED METHANE
- 4 – OFFSHORE OIL AND GAS PRODUCTION

MIDSTREAM SECTOR

- 5 – LNG LIQUIFICATION
- 6 – LNG RECEIVING TERMINAL
- 7 – LNG STORAGE
- 8 – FUEL STORAGE
- 9 – TRANSMISSION PIPELINE

DOWNSTREAM SECTOR

- 10 – HYDRO TREATING
- 11 – ALKYLATION PLANT
- 12 – COKING UNIT
- 13 – CONTINUOUS CATALYTIC REFORMING
- 14 – SULFUR RECOVERY
- 15 – CRUDE OIL DISTILLATION
- 16 – FLUID CATALYTIC CRACKING
- 17 – HYDROGEN PLANT
- 18 – HYDRO CRACKING

CHEMICAL

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- 20 – FERTILIZER PLANT
- 21 – PHARMACEUTICAL
- 22 – FOOD PROCESSING

POWER GENERATION

- 23 – COMBINED CYCLE POWER
- 24 – NUCLEAR POWER
- 25 – CONCENTRATED SOLAR POWER
- 26 – WIND POWER

RAIL AND TRANSIT

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PROCESS INDUSTRIES SERVED



Through our global network, Thermon provides highly engineered thermal solutions.

Thermon is the leading single-source provider of industrial process heating, delivering comprehensive, engineered solutions for complex projects, including hazardous area applications.

Since 1954, we've led the industry in designing a full spectrum of custom services that address every essential process heating requirement, from beginning to end.



ELECTRIC HEATING

- Heat Trace
- Immersion Heaters
- Process Heaters
- Environmental - Air & Space Heaters
- Tubing Bundles
- Controls and Monitoring
- System Accessories
- Tank Heating
- Thermostats
- Band, Strip & Tubular Heaters
- Boilers & Calorifiers



PROCESS HEATING SOLUTIONS

Thermon's solutions provide complete heating and flow assurance in the industrial and hazardous area applications.



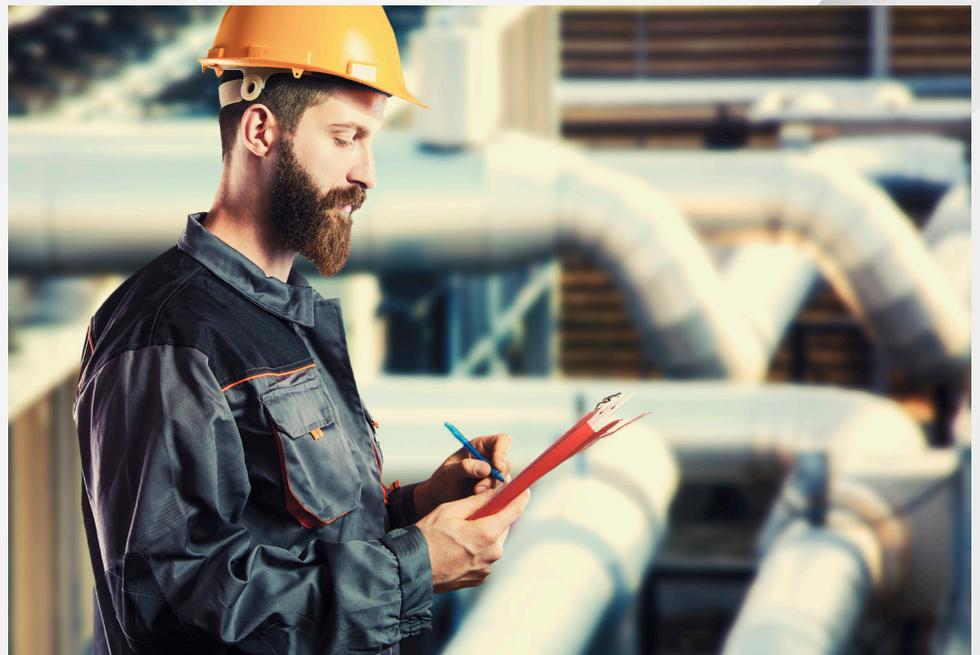
SPECIALTY PRODUCTS

- Transportation
- Engineered Products
- Control Panels
- CEMS & Analytical Systems
- Filtration Systems
- Temporary Power Systems*
- Commercial



STEAM HEATING

- Steam Trace
- Tank Heating
- Steam Heated Bundles
- Steam Supply & Return
- Heat Transfer Compounds
- Steam Trace Accessories
- Environmental - Air & Space Heaters



GAS HEATING

- Enclosure Heaters
- Explosion Proof Gas Catalytic Heaters
- Gas Fired Blowers
- Gas Heating Accessories

*Available in North America only

HEAT TRACING

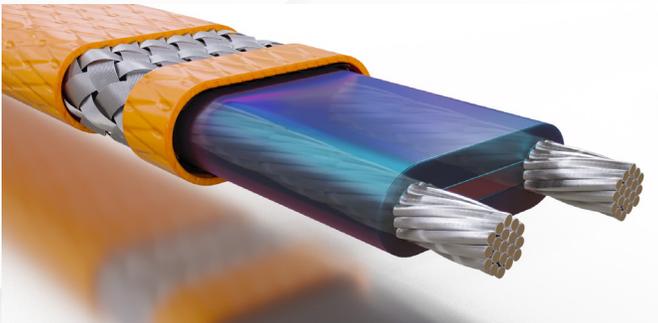
ELECTRIC HEAT TRACING

SELF-REGULATING HEAT TRACING



BSX™

- Freeze Protection and Temperature Maintenance to 65°C (150°F)
- Maximum Exposure Temperature: 85°C (185°F)
- Available Watt Densities: 10, 16, 26, 33 W/m @ 10°C (3, 5, 8 & 10 W/ft @ 50°F)
- Available Voltages: 110–120 or 208–277 V
- Available With Fluoropolymer Overjacket (FOJ)



HTSX™

- Freeze Protection and Temperature Maintenance up to 150°C (302°F)
- Maximum Exposure Temperature up to 250°C (482°F)
- Withstands Temperatures Associated With Steam Purging
- Available Watt Densities: 10, 20, 30, 33, 39, 49, 66 W/m @ 10°C (3, 6, 9, 10, 12, 15, & 20 W/ft @ 50°F)
- Available Voltages: 110–120, 208–277 or 380–480 V



VSX™-HT

- Freeze Protection and Temperature Maintenance up to 200°C (392°F)
- Maximum Exposure Temperature: 250°C (482°F)
- Withstands Temperatures Associated with Steam Purging
- Available Watt Densities: 16, 33, 49, 66 W/m @ 10°C (5, 10, 15, & 20 W/ft @ 50°F)



USX™

- Freeze Protection and Temperature Maintenance to 240°C (464°F)
- Maximum Exposure Temperature: 250°C (482°F)
- Withstands Temperatures Associated With Steam Purging
- Available Watt Densities: 10, 20, 30, 39, 49, 66 W/m @ 10°C (3, 6, 9, 12, 15, & 20 W/ft @ 50°F)
- Available Voltages: 110–120 or 208–277 V

FEATURES:

- Semiconductive Self-Regulating Heating Matrix
- Cut-to-Length Parallel Circuitry
- Nickel-Plated Copper Bus Wires
- Metallic Braid for Grounding Purposes
- Polyolefin or Fluoropolymer Overjacket
- Unique Monolithic Co-Extrusion Processing of HTSX, VSX-HT, and USX for Optimal Performance
- Worldwide Approvals

POWER-LIMITING HEAT TRACING

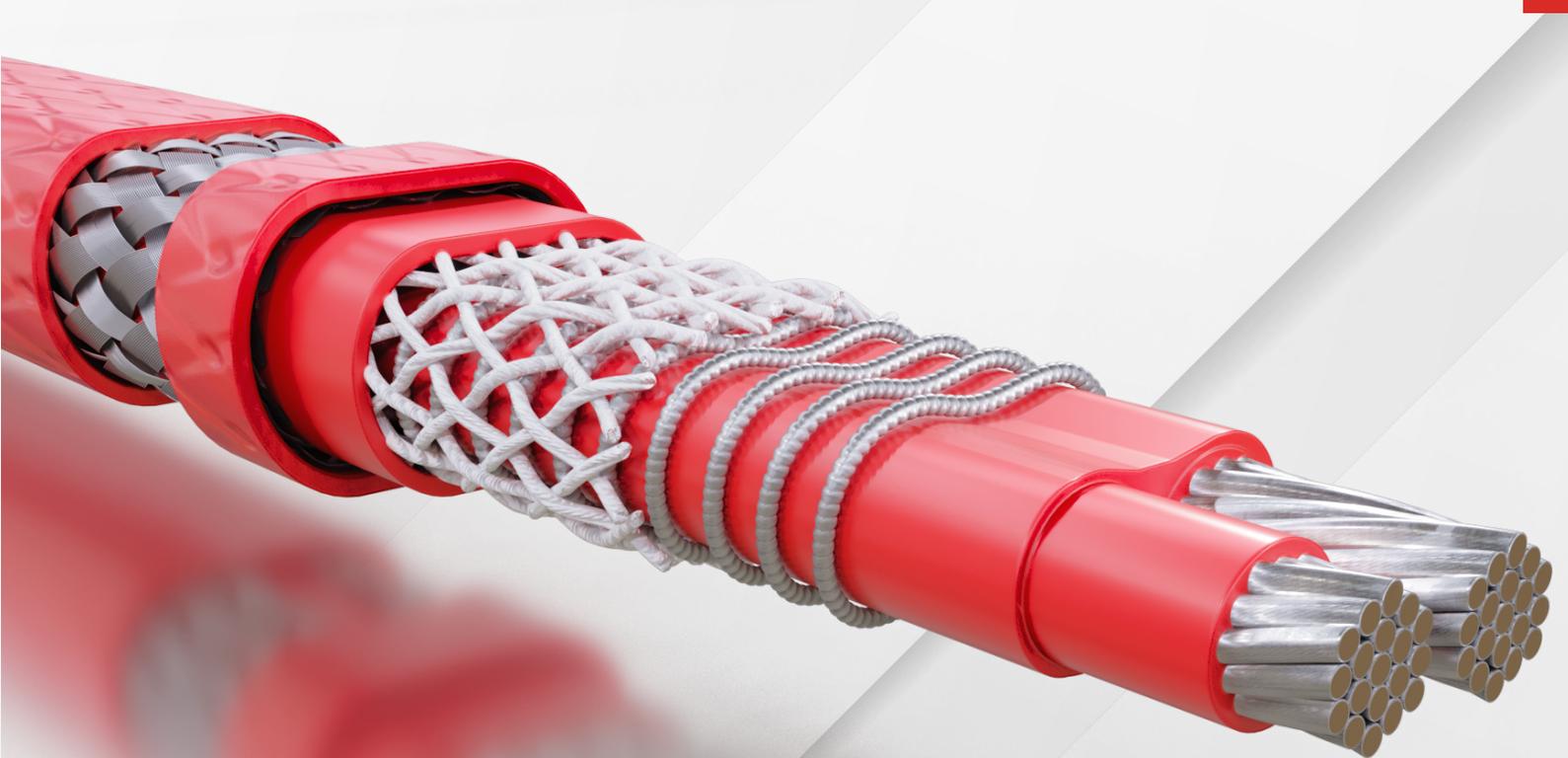
HPT™

- Freeze Protection and Temperature Maintenance up to 210°C (410°F)
- Maximum Exposure Temperature: 260°C (500°F)
- Available Watt Densities: 16, 33, 49, 66 W/m @ 10°C (5, 10, 15 & 20 W/ft @ 50°F)
- Available Voltages * : 120, 240, and 480 V Nominal

* Additional voltages are available; contact Thermon

FEATURES:

- PTC Coiled Resistive Alloy Heating Element
- Cut-to-Length Parallel Circuitry
- Nickel-Plated Copper Bus Wires
- Metallic Braid for Grounding Purposes
- Fluoropolymer Overjacket
- Worldwide Approvals



HEAT TRACING ELECTRIC HEAT TRACING

PARALLEL CONSTANT WATT HEAT TRACING

FP™

- Freeze Protection and Temperature Maintenance to 65°C (150°F) and Foundation Heating
- Maximum Exposure Temperature: 204°C (400°F)
- Available Watt Densities: 8, 16, 33 W/m @ 10°C (2.5, 5 & 10 W/ft 50°F)
- Available Voltages: 120, 240, 480 and 575 V

FEATURES:

- Nichrome Heating Element
- Cut-to-Length Parallel Circuitry
- 12 AWG Copper Bus Wires
- Metallic Braid for Grounding Purposes
- Fluoropolymer Overjacket
- Worldwide Approvals



SERIES RESISTANCE MINERAL INSULATED HEAT TRACING

MIQ™

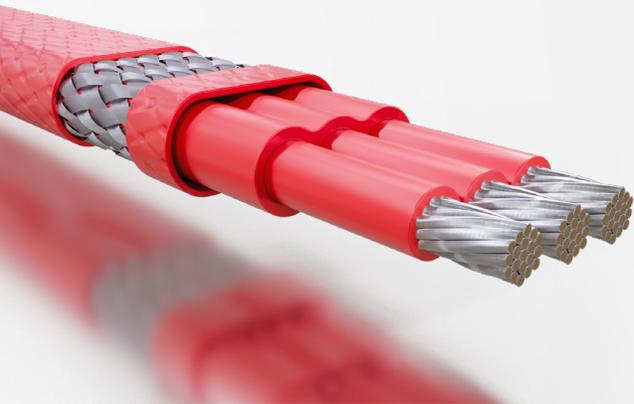
- Freeze Protection and Temperature Maintenance to 500°C (932°F)
- Maximum Exposure Temperature: 600°C (1,112°F)
- Available Watt Densities: Designs up to 262 W/m (80 W/ft)
- Available Voltages: Rated up to 600 V

FEATURES:

- High Temperature Magnesium Oxide Dielectric
- Seamless Alloy 825 Sheath
- Worldwide Approvals



POLYMER INSULATED SERIES RESISTANCE HEAT TRACING

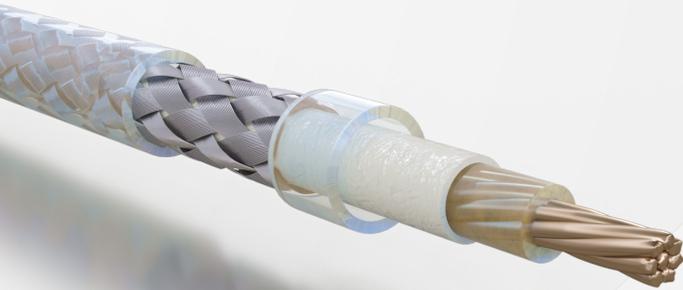


TEK™ & HTEK™

- Freeze Protection and Temperature Maintenance up to 204°C (400°F)
- Maximum Exposure Temperature up to 260°C (500°F)
- Available Watt Densities: Designs up to 65 W/m (20 W/ft)
- Available Voltages: Rated up to 600 V

FEATURES:

- Circuit Lengths up to 3660 m (12,000 ft)
- Metallic Braid for Grounding Purposes
- Fluoropolymer Overjacket
- Available with 2 or 3 conductors
- Worldwide Approvals



TESH™

- Long Line Freeze Protection and Temperature Maintenance
- Maximum Exposure Temperature: 260°C (500°F)
- Available Watt Densities: Designs up to 25 W/m
- Available Voltages: Rated up to 750 Vac
- ATEX approved for use in hazardous areas
- Meets 7J impact resistance

SKIN EFFECT HEATING SYSTEMS



ThermTrac™

- Freeze Protection and Temperature Maintenance to 200°C (392°F)
- Maximum Exposure Temperature: 260°C (500°F)
- Power Outputs: up to 165 W/m (50 W/ft)
- Operating Voltages: up to 5 kV

FEATURES:

- Circuit Lengths up to 24 Kilometers (15 Miles)
- Nickel-Plated Copper Bus Wires
- Rugged Heat Tube to Generate Heat
- Available Scuff Jacket
- Worldwide Approvals

HEAT TRACING COMMERCIAL HEATING PRODUCTS

Thermon offers a complete range of heat tracing products and services for the commercial construction market. Whether freeze protecting pipes, melting snow or ice on roofs and outdoor surfaces, protecting freezer floors or maintaining temperatures on hot water supply lines, Thermon has your commercial heating solution.

Piping Freeze Protection and Freezer Floor Frost Heave Prevention Applications

DLX™ Self-Regulating Heat Tracing

DLX protects small and medium diameter pipes from rupture and leakage caused by freezing conditions in light industrial and commercial applications. Parallel circuitry allows DLX to be cut to suit any length required in the field. Flexible materials and small cross-section provide an excellent bending radius for wrapping around complex geometries. The heat output of DLX varies along the length of the traced equipment or surface, providing the optimal heating for colder or warmer spots. As the temperature drops, heat output increases. Conversely, when the temperature increases, heat output decreases. DLX self-regulates to prevent overheating, even when overlapped. Trace heaters are CE marked for ordinary (non-classified) areas.

Built with proven and proprietary compounding, extrusion, and cross-linking technology, DLX allows for continuous operation and extended life expectancy.

- Self-regulating heat output
- Rugged and reliable
- Easy to design
- Easy to install
- Excellent for use on metallic and nonmetallic piping
- Available Watt Densities: 9, 18 W/m at 10°C (3, 5 W/ft @ 50°F)
- Nominal Supply Voltage: 230 V



FLX™ Self-Regulating Heat Tracing

While an insulated pipe can withstand cold temperatures longer than an uninsulated pipe, eventually the contents of the pipe will cool to the temperature of the surrounding environment. FLX™ is designed to provide freeze protection of metallic and nonmetallic pipes, tanks and equipment by replacing the heat lost through the thermal insulation into the air.

When run in conduit in the substrate, provide frost heave protection by maintaining the ground temperature above freezing. FLX varies heat output to compensate for the surrounding conditions. This self-regulating feature occurs along the entire length of a heat tracing circuit to ensure each point receives the required amount of heat while conserving energy.



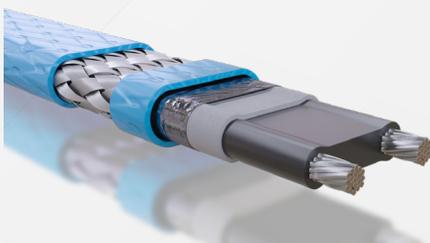
- Self-regulating heat output
- Rugged and reliable
- Easy to design
- Easy to install
- Excellent for use on metallic and nonmetallic piping
- Available Watt Densities: 10, 16, 26, 33 W/m @ 10°C (3, 5, 8 & 10 W/ft @ 50°F)
- Available Voltages: 110–120 or 208–277 V

Hot Water Temperature Maintenance Applications

HLX™ Self-Regulating Heat Tracing

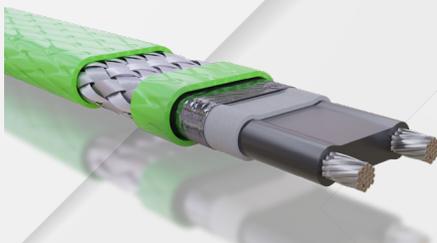
Thermon's HLX maintains hot water at desired nominal temperatures without the need for costly recirculation systems. Energy savings can be realized due to elimination of recirculated water that requires continuous reheating.

- Reliable, self-regulating performance
- Saves water and energy
- Simplified design and installation
- Hot water temperatures are maintained without the need for thermostats
- Certified to meet IEC Low Smoke and Zero Halogen standards



HLX-45-2

- Nominal Maintain Temperature: 50°C (122°F)
- Nominal Voltage: 230 V



HLX-55-2

- Nominal Maintain Temperature: 55°C (122°F)
- Nominal Voltage: 230 V



HLX-60-2

- Nominal Maintain Temperature: 60°C (140°F)
- Nominal Voltage: 230 V

HEAT TRACING COMMERCIAL HEATING PRODUCTS

Snow and Ice Melting Applications

SnoTrace™ RGS™ Self-Regulating Heat Tracing

Avoid the possibility of property damage and ensure a safe environment with Thermon's RGS self-regulating electric heat tracing. Designed and approved specifically for roof and gutter applications, RGS withstands direct exposure to harsh environmental conditions.

- Self-regulating performance means increased power output when needed, when snow or ice is present, and decreased power output when exposed to dry air
- Simple installation using ordinary hand tools, roof fasteners and hangers for gutters and downspouts



SnoTrace™ KSR™ Self-Regulating Heat Tracing

Self-regulating heat tracing has become the industry standard for snow and ice melting systems. Thermon's KSR is high performance heat tracing with cut-to-length parallel circuitry, easily adapted to variations in design found at the job site. KSR is specifically designed for direct burial in concrete and can even withstand the higher temperatures found with asphalt installations.

- Flexible and simple to design for stairs and complex layouts
- Durable construction designed for long-term operation



SnoTrac™ System for Surface Snow and Ice Melting

Based on skin effect heating technology, SnoTrac systems utilize a rugged, thick-walled ferromagnetic “heat tube” to melt snow and ice. This heat tube, embedded directly in concrete or asphalt, utilizes a custom designed SnoTrac conductor to safely deliver energy into the system. A truly unique feature of SnoTrac systems are their ability to provide snow melting to extremely large areas with a minimal number of circuits.

- Over 186 m² (2,000 ft²) can be protected from a single power point
- Lower energy costs than hydronic systems



LINK™ Self-Regulating Quick Connector for Commercial Heat Trace

Transfer the warmth to commercial piping, roofing, walkways and other applications with Thermon's LINK Quick Connector. The LINK provides a quick splice, power connection and end seal for Thermon commercial heat trace, including FLX™, DLX™, BSX™ (for OrdLoc only) and RGS™ cables.

Features:

- Utilising IDC technology, LINK can rapidly connect to Thermon heat trace
- No special tools, RTV tubes or heat guns required
- Contains an optional over-insulation clip-in mounting bracket for installation flexibility
- Options to connect to power wiring using a metal conduit fitting or flexible power cord.
- Designed, tested and CE marked
- Rated for 100-277 Vac
- -20°C (4°F) minimum installation temperature
- IP65 & NEMA 4X rated enclosure



HEAT TRACING INSTRUMENT TUBING BUNDLES

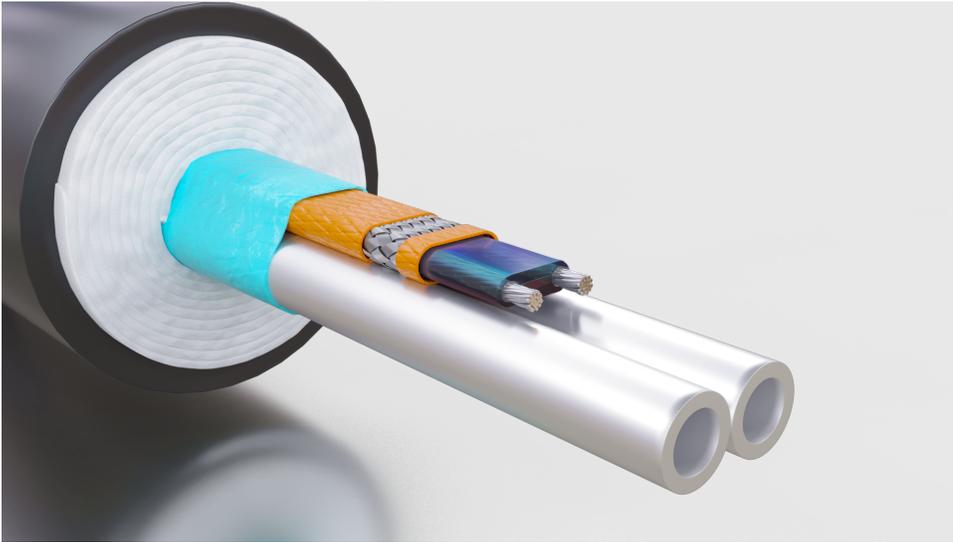
ELECTRICALLY HEATED INSTRUMENT TUBING FOR FREEZE PROTECTION AND TEMPERATURE MAINTENANCE

TubeTrace® Type SE/ME

Approved for hazardous (classified) locations, including options for Zone 1 or Class I, Division 1.

TubeTrace with HTSX™ Self-Regulating Heat Trace

- Use where temperature exposure to steam purge is expected
- Tube Temperature Range: 5°C to 150°C (40°F to 302°F)
- Maximum Exposure Temperature¹: 250°C (482°F)

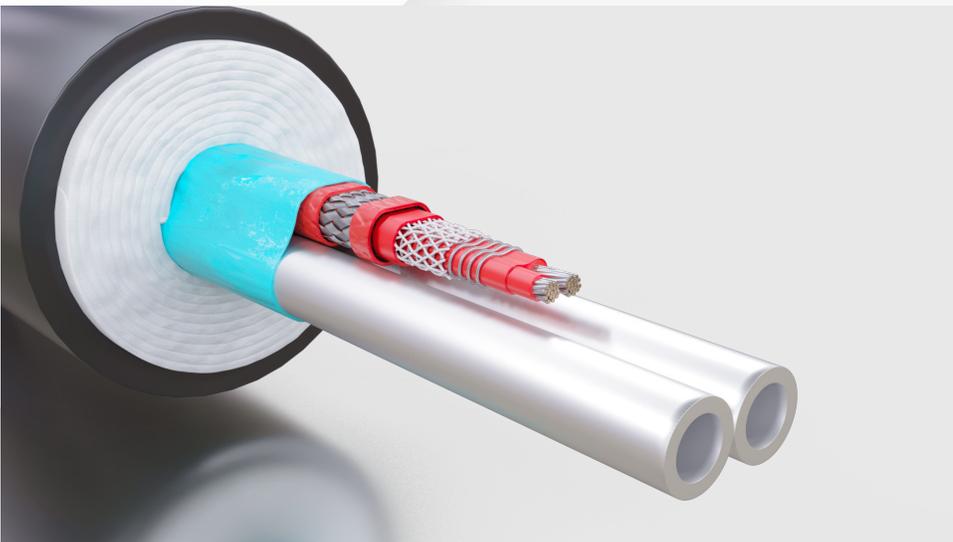


TubeTrace with VSX-HT™ Self-Regulating Heat Trace

- Use where high temperature exposure is a consideration.
- Tube Temperature Range: 5°C to 200°C (40°F to 392°F)
- Maximum Exposure Temperature¹: 250°C (482°F)

TubeTrace with HPT™ Power-Limiting Heat Trace

- A “cut-to-length” heat tracing for higher temperature maintenance. Also used for freeze protection where high temperature exposure is a factor. HPT represents the best choice for maintaining temperatures up to 204°C (400°F) that can be “cut-to-length” in the field.
- Tube Temperature Range: 5°C to 204°C (40°F to 400°F)
- Maximum Exposure Temperature¹: 260°C (500°F)



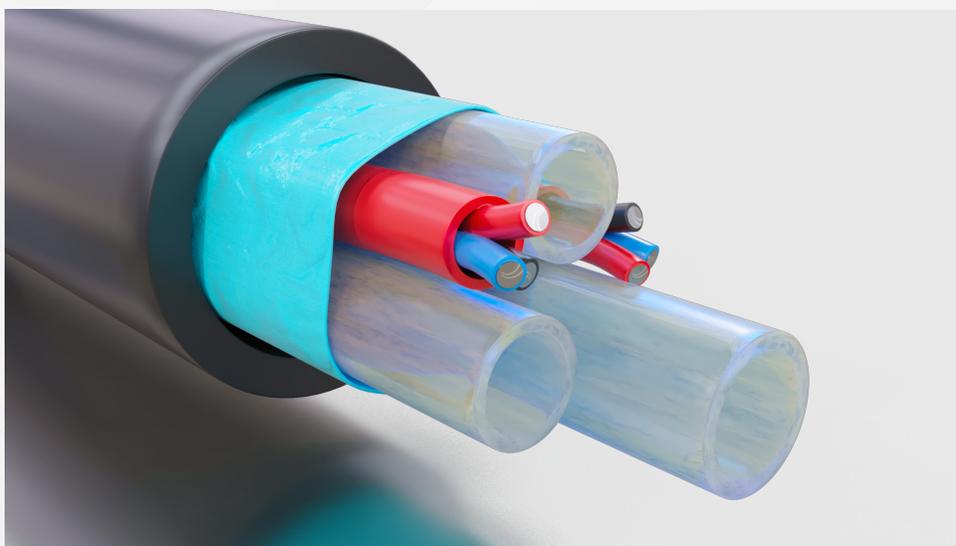
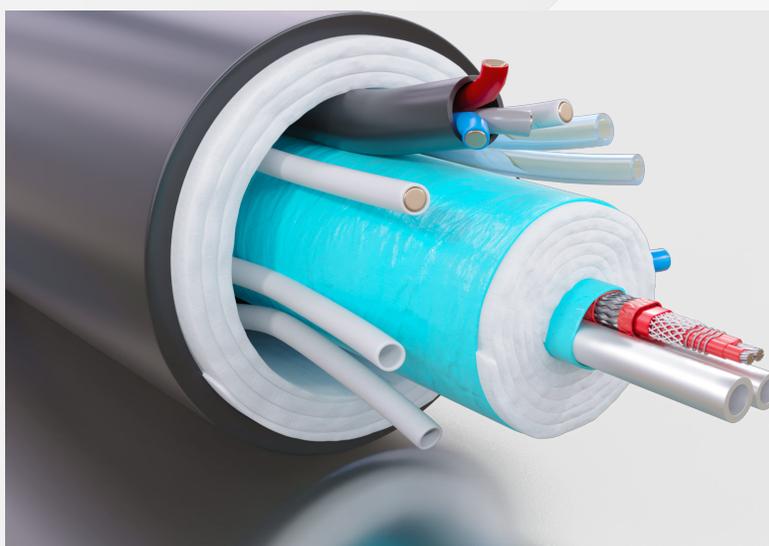
TubeTrace with BSX™ Self-Regulating Heat Trace

- Use for water freeze protection and low temperature maintenance.
- Tube Temperature Range: 5°C to 65°C (40°F to 150°F)
- Maximum Exposure Temperature¹: 85°C (185°F)

CUSTOM CEMS AND ANALYZER BUNDLES

Many analyzer applications have specialty tubing requirements, all of which Thermon can provide within our instrument tubing bundles. Examples of tube materials and finishes available include:

- Fluoropolymer tubing, 316 and 304 stainless, welded or seamless, Monel, Titanium, Inconel 825, and Alloy 20.
- Optional Electropolished (EP), Chemical Passivation (CP), and performance coatings such as SilcoNert2000 are also available on stainless steel tubing.
- Multiple tube materials can be provided in a common bundle.



“NI” Non-Insulated (and Non-Heated) Bundle and Other TubeTrace Options Can Include:

- Auxiliary Conductors
- Unheated Tubes
- Factory Installed Temperature Sensor(s)
- Special Markings And Identification As Required

Notes:

1. Reflects maximum exposure temperature of heater.
- Monel and Inconel are trademarks of Special Metals Corporation, Inc. Trade name of SilcoTek™, formerly a division of Restek Performance Coatings. SilcoNert™ 1000 replaces Silcosteel®. SilcoNert™ 2000 replaces Sulfinert®/Siltek®.

HEAT TRACING

INSTRUMENT TUBING BUNDLES

ELECTRICALLY HEATED INSTRUMENT TUBING FOR FREEZE PROTECTION OF HIGH TEMPERATURE STEAM LINES

Isolated “cut-to-length” heat trace for high temperature exposure, suitable for ambient sensing control.

TubeTrace® Type SEI/MEI - HT

- Maintain: 5°C (40°F)
- Continuous Exposure: 399°C (750°F)

TubeTrace® Type SEI/MEI - HTX

- Maintain: 5°C (40°F)
- Continuous Exposure: 593°C (1100°F)

TubeTrace® Type SEI/MEI - HTX2

- Maintain: 5°C (40°F)
- Intermittent Exposure: 593°C (1100°F)



STEAM OR FLUID HEATED INSTRUMENT TUBING FOR FREEZE PROTECTION AND TEMPERATURE MAINTENANCE



Steam or Fluid “Light Traced” (SI/MI)

- For freeze protection and lower temperature maintenance. The tracer tube is isolated from the process tube(s), so process tube temperatures will be significantly lower than the tracer tube temperature.
- Tube Temperature Range: 5°C to 121°C (40°F to 250°F)
- Maximum Exposure: 205°C (400°F) *



Steam or Fluid “Heavy Traced” (SP/MP)

- For freeze protection and process maintenance. The tracer tube is in direct contact with the process tube(s), so process tube temperatures will be very close to the tracer tube temperature.
- Standard Tracer Temperature Range: 5°C to 205°C (40°F to 400°F)
- Maximum Exposure: 205°C (400°F) *

* Higher tube temperatures are possible with XINS-extra installation, HT and HTX type designs.

HEAT TRACING

HEAT TRANSFER COMPOUND

HEAT TRANSFER COMPOUNDS TO MAINTAIN HIGH TEMPERATURES

“Thermonized” With Thermon Heat Transfer Compounds

- Consistent Heat Transfer Properties
- Less Than 20% of Cost for Steam Jacketing

HT Compounds for Piping, Valves & Irregular Surfaces

(Maximum temperature ratings shown)

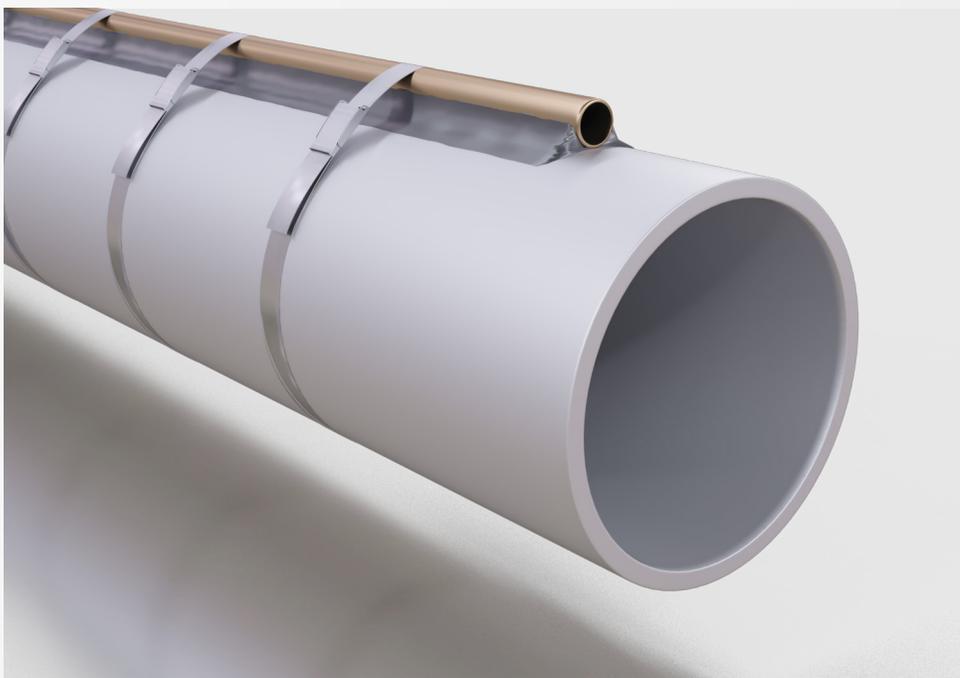
- T-3: 454°C (850°F)
- T-85: 232°C (450°F)
- T-99: 1204°C (2,200°F)



Heat Transfer Compound T-3: 454°C (850°F)

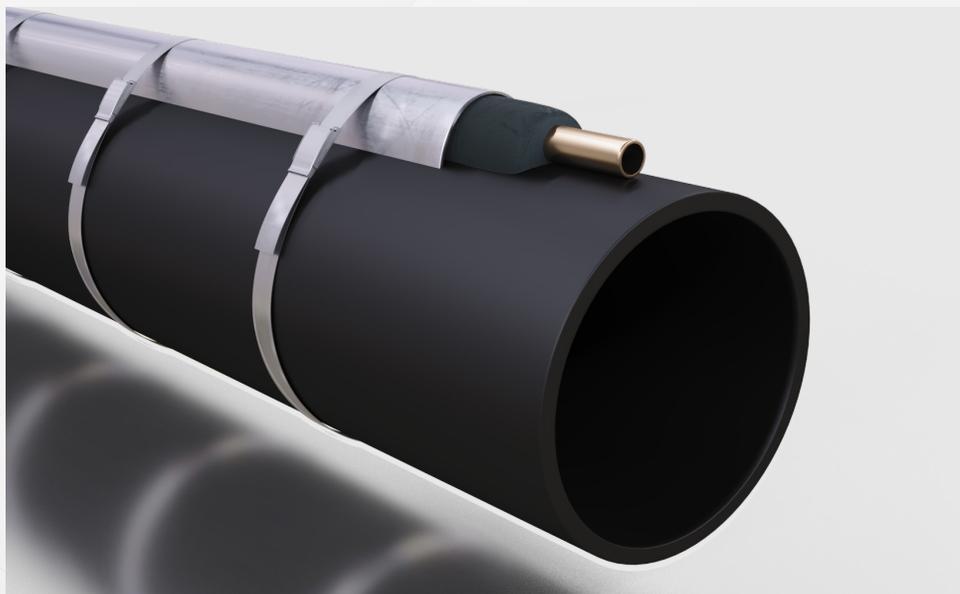
T-3 heat transfer compound now has higher temperature ratings than ever before while still creating an efficient thermal bond between a steam or electric heater and process pipes or equipment. A single “Thermonized™” steam tracer utilizing Thermon’s heat transfer compound is more cost effective than a contoured clamp-on jacket and has the equivalent performance of three to five bare tracers.

The new and improved T-3 now boasts maximum exposure temperature ratings of 454°C (850°F). To minimize waste and speed installation, use Thermon’s ChannelTrace™ system featuring TFK channels. The ChannelTrace system provides protection prior to installation of thermal insulation and eliminates special curing procedure for the new and improved T-3 heat transfer compound.



Heat Transfer Compound T-85: 232°C (450°F)

- Low to medium temperature compound for use in moist and corrosive environments
- Nonsoluble in water - no special curing required
- Available in 300 ml (101.1 oz) cartridges or 4 liters (1.06 gal) pails
- Maximum exposure temperature 232°C (450°F)
- Minimum exposure temperature -196°C (-320°F)



SnapTrace® Preformed Extrusions For Straight Piping

- Available in 1.22 m (4 ft) lengths
- Significantly Reduces Installation Time
- No Surface Preparation Required
- Use With Up to 232°C (450°F) Fluid/Steam

HEAT TRACING

ISOLATED STEAM TRACERS FOR LOWER MAINTAIN TEMPERATURES

SafeTrace™ Provides Increased Safety

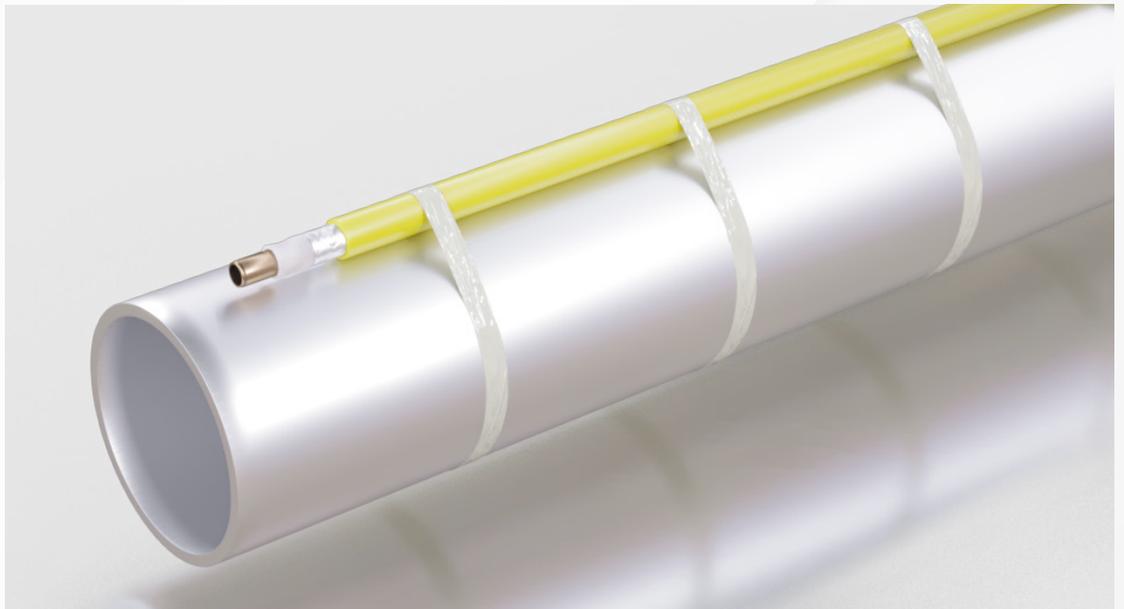
- SafeTrace Tracers Comply With Tests for Skin Exposure (per ASTM Std C-1005/1057)
- Safety Yellow Jacket Alerts Plant Personnel to Potentially Dangerous Conditions

SafeTrace™ Provides Predictable Heat Transfer

- Permits Winterization for Any Size Pipe
- Eliminates Hot/Cold Spots Associated With Bare Tubing and Spacer Blocks
- Suitable for Temperature-Sensitive Processes

Medium Maintain Temperatures

- **SafeTrace™ BTS:** 38°C to 121°C (100°F to 250°F)
- **SafeTrace™ SLS-IT** 24°C to 93°C (75°F to 200°F)
- **SafeTrace™ DLS-IT** 5°C to 54°C (40°F to 130°F)



STEAM SUPPLY/CONDENSATE RETURN LINES



ThermoTube® Pre-Insulated Tubing

- Ideally Suited to Transport Liquids, Gases or Refrigerants
- Non-hygroscopic Glass Fiber Insulation for Efficiency
- Protective Outer Jacket Resists Weather and Moisture
- ThermoTube Can be Installed in Cable Trays, Angles, Channels, Struts and on I-Beams
- All Tubing Types Available
- Continuous Temperature Range: Service to 205°C (400°F) *
- ThermoTube ratings to 593°C (1100°F) also available *

* Higher tube temperatures are possible with XINS-extra insulation HT and HTX type designs. For steam heated instrument tubing, see Instrument Tubing Bundles.

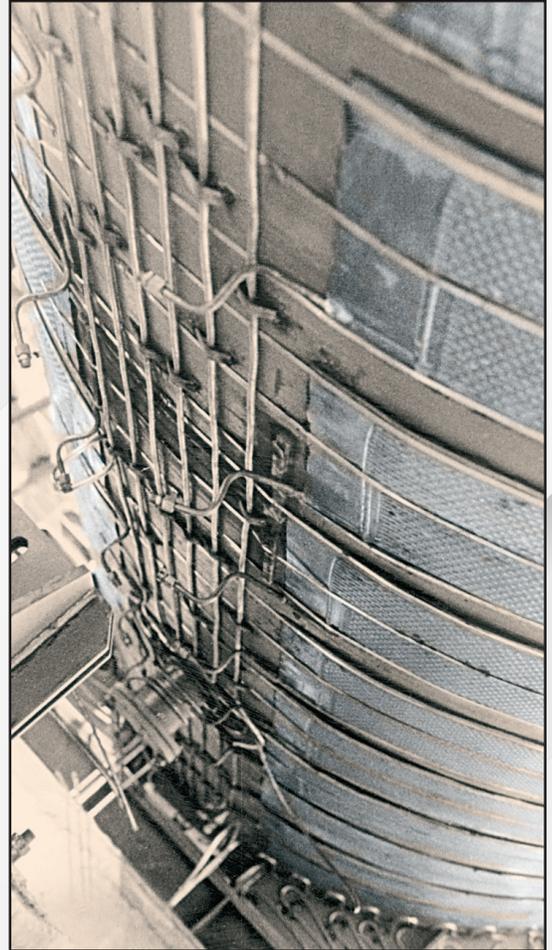
HEAT TRACING

STEAM TRACING AND TANK/HOPPER HEATING

TANK AND VESSEL HEATING

HeatSheet® Tank and Vessel Heating Units

- Provides Predictable and Reliable Heating (or Cooling)
- Factory-Applied Non-Hardening Heat Transfer Compound Ensures Maximum Heat Transfer
- Waffle Pattern Permits Multiple Flow Paths for Heating and Cooling Media
- Provides 2 to 3 Times the Heat Transfer of Plate-Type Coils
- No Risk of Cross-Contamination with Process
- Lightweight Stainless Steel Construction for Easy Installation
- Stainless Steel Inlet and Outlet Tubing Provided from Factory



HOPPER AND CHUTE HEATING

HT Module Hopper Heater

- Fluoropolymer Insulated High Temperature 16 AWG Lead Wires (with stress relief at connection)
- Parallel Circuit High Temperature Alloy Heating Element
- Temperature-Rated Insulation (directs energy towards surface to be heated)
- Aluminized Steel Protective Enclosure and Cover
- Temperature Maintenance up to 427°C (800°F)
- Maximum Exposure Temperature: 538°C (1000°F)
- Maximum Watt Density: 4,650 W/m² (3 W/in²)
- Supply Voltages: 120–600 V



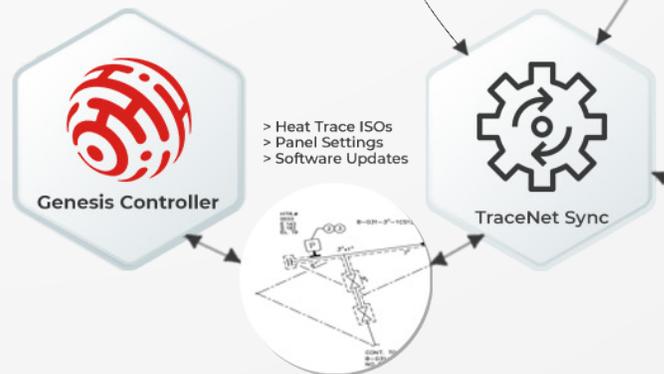
HEAT TRACING TECHNOLOGY AND SOFTWARE SOLUTIONS

Project and Document Management

- Revision control and repository for customer document exchange
- Electronic submission and approval with workflow automation
- Identifies who must take next action, and bottlenecks
- Generates and manages RFIs (including attachments)
- Customer dashboard and reporting

Genesis Controller

- Smart and connected controllers that put Thermon's expertise at your fingertips
- Displays heat trace ISO drawings and historical data for rapid troubleshooting
- Configured directly from the design database by TraceNet Sync without manual data entry or errors
- High-tech and intuitive user interface based on familiar touch technology
- Fully connected via Industrial Internet of Things (IIOT) networking to the control room or any network location
- Easy updates with new software features and customer value with the click of a button



TraceNet Sync

- Design drawings and panel settings are digitally packaged for panel commissioning
- Settings and drawings are pulled directly from project design database
- Services team quickly and easily installs the package
- Reduces time at panel, eliminating chances for errors
- Ensures operational as-built panels match the design drawings and settings



Cloud D



Industry leading solution to your heat tracing challenge

Quoting and Estimating

- Offers an optimal project quote that meets specifications
- Thermon team often has experience with your specs which speeds response and accuracy
- Software automation reduces need for estimation
- Leverages heat trace design calculations for quoting



Data Intake

- Thermon is FLEXIBLE and can receive data in many forms
- Direct digital outputs from the plant model (Navisworks/PCF/IDF) are preferred and most efficient, accurate, and cost effective
- Changes are expected—revision changes are quickly identified.

CompuTrace Power Management (CPM)

- Optimally assigns loads to panels, power phases, and substations
- Balances panel loads and phase loads
- Shortest distance calculations from heater to panel and panel to substation.
- Automatically generate panel schedules and layout drawings
- Synced via database in real-time with heat trace designers

VisiTrace 3D

- Designers work in imported 3D piping model
- Visually and optimally select pipe for trace heating
- Automatically creates heat trace isometric drawings
- Bills-of-materials added automatically from CompuTrace
- A Thermon expert designer can create an ISO in minutes

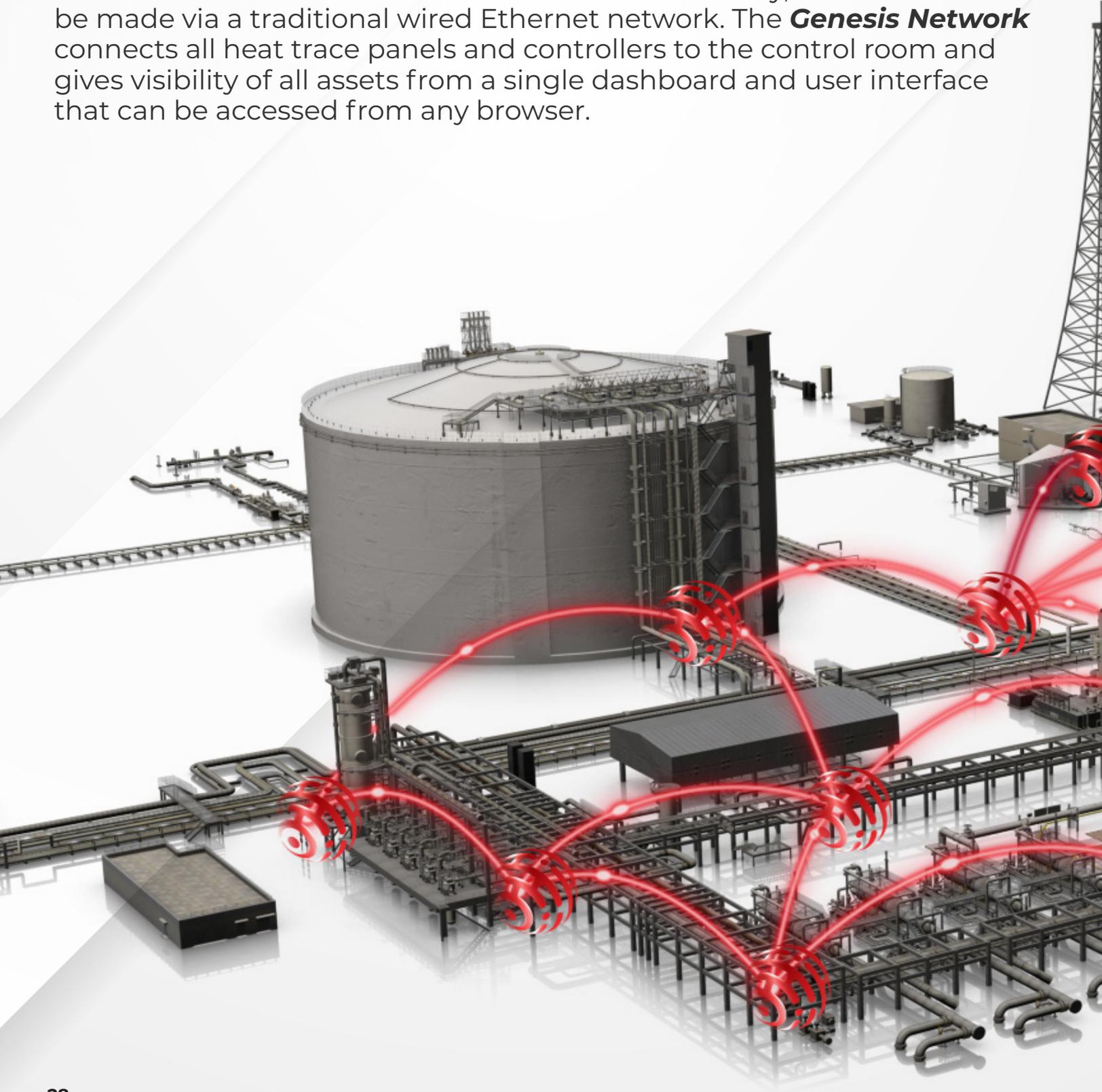
CompuTrace

- Automatically calculates heat transfer and loss
- Multi-segment design support
- Optimizing calculations based on extensive product and field data
- Design requirements and max temperature constraints are assured
- Calculates optimal solution and complete bill-of-materials
- Reviewed, adjusted and approved by Thermon design experts
- Decades of heat trace design experience captured in software

HEAT TRACING CONTROL AND MONITORING

THE GENESIS NETWORK

The Thermon **Genesis Network** consists of a control room server, a gateway, and a collection of field deployed bridges/nodes that form a wireless mesh communications network. Alternatively, the network can be made via a traditional wired Ethernet network. The **Genesis Network** connects all heat trace panels and controllers to the control room and gives visibility of all assets from a single dashboard and user interface that can be accessed from any browser.



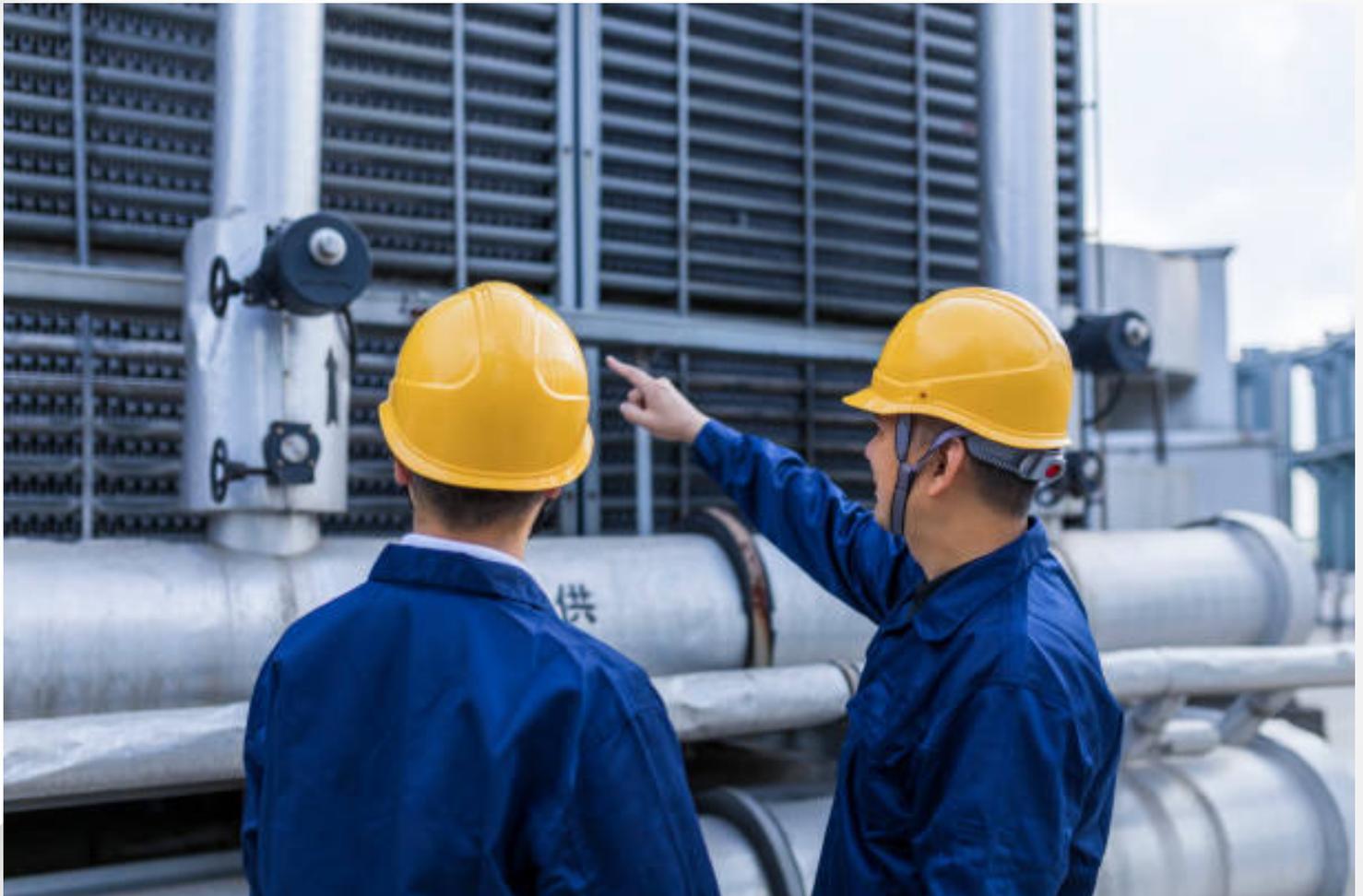


HEAT TRACING CONTROL AND MONITORING

GENESIS DUO

Thermon's innovative Genesis Duo is a microprocessor-based temperature and control module for heat tracing applications. The unit features a dual point IIoT enabled heat trace temperature controller and high temperature limiter that provides control and monitoring capabilities for one or two heat tracing circuits. The Duo can be configured to control and limit up to two intrinsically safe dedicated RTD inputs per circuit for the limiter channel.

Genesis Duo features a 11cm glove touch capable LCD display with an additional light ring for visual indication. As a native product to the Genesis Network, the Genesis Duo requires no additional hardware to communicate within Thermon's state of the art supervisory and management platform.



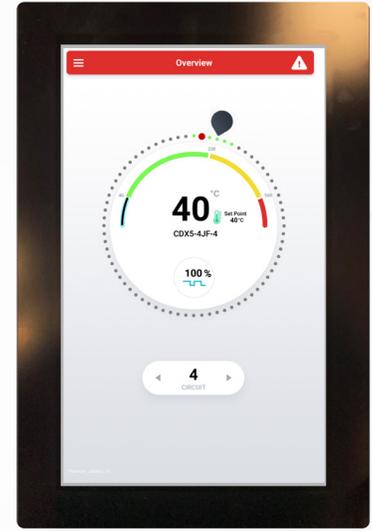


HEAT TRACING CONTROL AND MONITORING

GENESIS CONTROLLER

The Genesis Controller represents a quantum leap forward in thermal control and monitoring, whether functioning as a component of the Genesis Network or as a stand-alone controller for smaller applications. It's key capabilities include:

- Glove-Touch User Interface
- Day and Night Modes
- Up to 6 months History to Aid in Troubleshooting
- ISO drawing in pdf format for viewing on Genesis HMI



GENESIS BRIDGE

The Genesis Bridge links panels and controllers to the wireless mesh network. The Genesis Bridge is a more cost effective, flexible, and feature rich method for establishing communication when compared to traditional wired networks.

The Genesis Bridge acts as a repeater for other nodes. It dynamically adjusts to “heal” or “repair” paths within the mesh network. Industrial facilities have numerous obstacles that can interfere with wireless communications, and the Genesis Bridge provides the additional redundant wireless paths to maximize communication success.

Alternatively, bridges can communicate using a traditional wired Ethernet network.

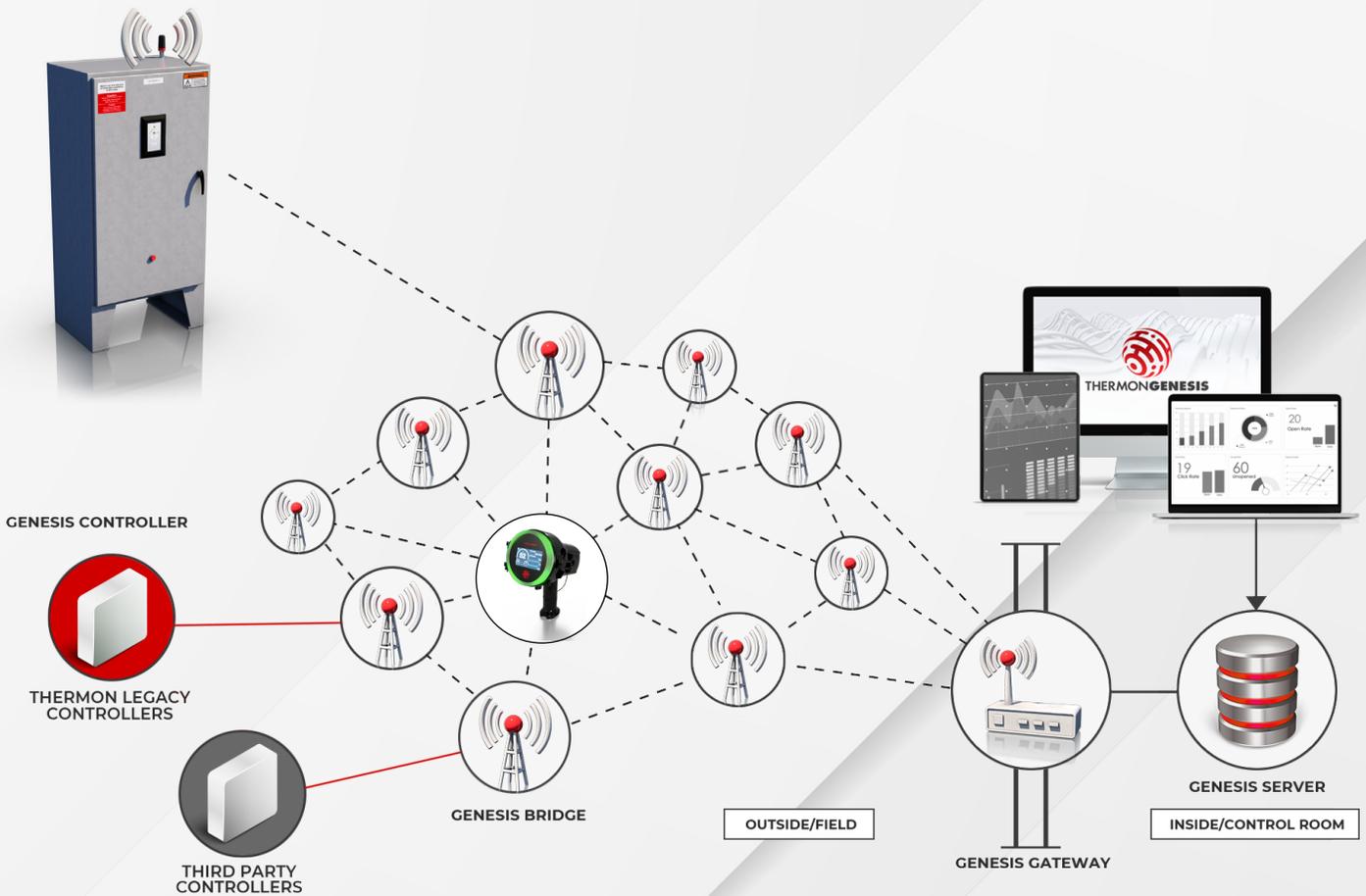


GENESIS GATEWAY

The Genesis Gateway is the access point between the control room server and wireless mesh network in the field. It manages all communications to and from the Genesis Bridges and network nodes. The Genesis Gateway securely controls the addition and removal of any node on the network. The gateway also manages the deployment and installation of software updates for all Genesis smart devices and controllers.

GENESIS SERVER

Genesis Server is industry-leading software running on a server in the control room. Genesis Server communicates with all heat trace panels and controllers in the facility, and displays and communicates alarm status and summaries. It collects performance history of the heating system including temperatures and heater current over time for analysis, reporting, and troubleshooting. Genesis Server pushes software updates to panels and controllers in the field when new features and value added improvements are released



HEAT TRACING CONTROL AND MONITORING

ELECTRONIC CONTROLLERS WITH POWER DISTRIBUTION

Pre-assembled controller skids are an integral component of Thermon's total systems approach to provide you with the most cost effective system.

Designed specifically for YOUR electrical requirements, Thermon Controller skids can include transformer(s), distribution panel, electrical heat tracing controller panel, and connection accessories. All on one convenient skid.

- Reduce site installation costs
- Pre-wiring is done in a controlled environment
- Completed assembly is delivered to your site ready for hook-up to your main power feed(s)
- Reduce RTD and power wiring costs
- Reduce maintenance and total costs of ownership
- Components are secured to a structurally designed, pre-wired skid



TraceNet™ ECM

- Encapsulated electronics and control
- One temperature control module for wide range of temperature control and limiter applications
- Energy saving accurate electronic temperature control action
- Data highway communication capability
- Selectable automatic or manual reset limiter action
- Control/limiter setting in degrees Centigrade or degrees Fahrenheit
- Combines power junction box and control module in one unit
- Also available as ambient thermostat (WP mount only)



Terminator ZT-C

- Adjustable control thermostat available in four temperature ranges
- Antistatic flexible capillary gland and insulation entry device
- Expediter attaches thermostat directly on the pipe
- Permits two heating cables to be connected within the enclosure
- Capillary ambient temperature sensor
- Approved for use in ordinary (nonclassified) and hazardous (classified) areas.
- Combines power junction box and control module in one unit
- For tank wall or pipe wall sensing
- Also available as ambient thermostat





LEGACY ELECTRONIC CONTROLLERS

TraceNet™ TCM18

- Monitor electric heat trace circuit operating and ground/earth leakage currents
- Selectable control method (On/Off, On/Off With Soft Start, Proportional, Ambient Proportional) on a per circuit basis
- Programmable alarm set points, with alarm acknowledgment and reset capability
- Programmable trip set-points for each circuit
- Temperature sensor status indication
- Unique circuit identifier
- Communication to host computer via RS485 serial communication.
- “Push to Test” ground/earth leakage test feature on a per circuit basis
- Ground/earth leakage interruption capability



TraceNet™ TCM2

- Monitor electric heat trace circuit operating and ground/earth leakage currents
- Selectable control method (On/Off, On/Off With Soft Start, Proportional, Ambient Proportional) on a per circuit basis
- Programmable alarm set points, with alarm acknowledgment and reset capability
- Programmable trip set-points for each circuit
- Temperature sensor status indication
- Communication to host computer via RS485 serial communication.
- “Push to Test” ground/earth leakage test feature on a per circuit basis
- Ground/earth leakage interruption capability



HEAT TRACING AND TUBING BUNDLE ACCESSORIES

POWER CONNECTION KITS



Terminator ZP and DP nonmetallic kits fabricate power connections of an electric heat trace circuit.



Terminator ZL and DL nonmetallic kits fabricate power connections and provide visual indication of an energized heat trace circuit.



PCA nonmetallic kits fabricate power connections of an electric heat trace circuit.

END TERMINATION KITS



Terminator ZS/ZE and DS/DE nonmetallic kits fabricate an end termination of an electric heat trace circuit.



Terminator ZE-B and DE-B nonmetallic kits provide visual indication of an energized heat trace circuit. (Also available in red)



PCS nonmetallic kits fabricate an end termination of an electric heat trace circuit.

T-SPLICE KITS



Terminator ZP and DP nonmetallic kits fabricate T-splice connections of an electric heat trace circuit.



PCA nonmetallic kits fabricate T-splice connections of an electric heat trace circuit.

MISCELLANEOUS



PETK power and end termination kits are required for use with all Thermon parallel trace heater connection kits.



SCTK splice connection kits are required when preparing splices with all Thermon parallel trace heater connection kits.



FT-1L, FT-1H fixing tapes for attaching trace heater to piping every 30 cm (12") or as required.



AL-20H, AL-30H aluminum tape for continuous (longitudinal) covering.

THERMOSTATS



TraceNet ECM Controller freeze protection and temperature maintenance that also acts as sensor and power connection for heat trace circuits



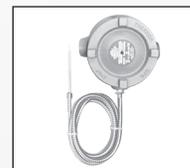
Terminator ZT-C adjustable control thermostat for freeze protection and temperature maintenance for tank wall or pipe wall sensing



B4X-15140 and B7-15140 provide ambient sensing control of electric heat trace circuits.



E4X-25325 and E7-25325 provide pipewall or tankwall sensing control of electric heat trace circuits.



E4X/7-35235JB, E4X/7-200600JB and 4X/7350235JB provide pipewall or tankwall sensing control of electric heat trace circuits.

IN-LINE SPLICE KITS

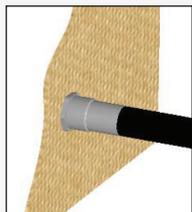


Terminator ZS/ZE and DS/DE nonmetallic kits fabricate in-line splices of an electric heat trace circuit.



PCS nonmetallic kits fabricate in-line splices of an electric heat trace circuit.

ENCLOSURE/SHELTER ENTRY KITS



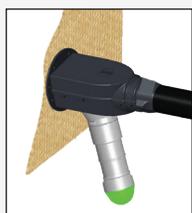
Bulkhead Entry Heat Shrink Seal FAK-9 Series provides an effective transition and strain relief when bundle passes through a wall 2.5 cm (1") thick or less.



FAK-1 Kit for bulkhead entry of TubeTrace and ThermoTube bundles. Creates waterproof seal around the bundle.



Terminator ZP/FAK-1 and DP/FAK-1 Kits for bulkhead entry of electrically heated TubeTrace bundles create a waterproof seal over the end of TubeTrace and terminate electric heat tracing.



Terminator ZE-B/FAK-1 and DE-B/FAK-1 Kits for bulkhead entry of electrically heated TubeTrace bundles create a waterproof seal over the end of TubeTrace and terminate electric heat tracing.

T-SPLICE KITS



T-Splice FAK-5 Kits create a waterproof seal over TubeTrace and ThermoTube splices.



Terminator ZP/FAK-5 and DP/FAK-5 Kits for T-splice of electrically heated TubeTrace bundles. Creates a waterproof seal at T-splice connections of TubeTrace bundle with electric heat tracing.

IN-LINE SPLICE KITS



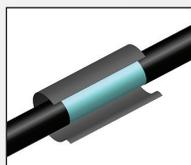
In-line Splice FAK-4 Kits create a waterproof seal over TubeTrace and ThermoTube splices.



Terminator ZP/FAK-4 and DP/FAK-4 Kits for an in-line splice power connection of electrically heated TubeTrace bundles.



Terminator ZS/FAK-4 and DS/FAK-4 Kits fabricate outside in-line splices on insulated TubeTrace with electric heat tracing.



FAK-8 Kits create a waterproof seal over TubeTrace and ThermoTube splices.

90° ELBOW TRANSITION KITS



90° Elbow Transition FAK-2 Kits create a waterproof seal over TubeTrace and ThermoTube splices.

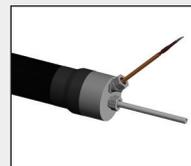


Terminator ZS/FAK-2 and DS/FAK-2 Kits fabricate accessible outside the insulation in-line splices or end terminations on TubeTrace with electric heat tracing.



Terminator ZP/FAK-2 and DP/FAK-2 Kits fabricate outside the insulation power connection, in-line splices or end terminations on TubeTrace with electric heat tracing.

HIGH TEMPERATURE SEAL KIT



FAK-7HTS Kits create a seal over the end of TubeTrace and ThermoTube for high temperature applications.

FIELD INSTALLED CONTROL SENSOR KITS

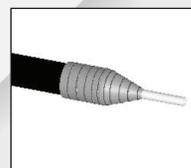


FAK-4T Kits provide a waterproof seal over TubeTrace for field installed thermostat.

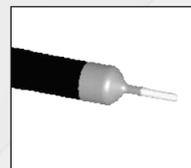


FAK-4S Kits provide a waterproof seal over TubeTrace for field installed sensor.

TERMINATION/SEAL KITS



FAK-7 Seal Kits create a waterproof seal over the end of TubeTrace and ThermoTube.



FAK-10 Kits create a waterproof seal over the end of TubeTrace and ThermoTube. Kits include heat shrink seal.

- Terminator "Z" kits Zone 1 and Zone 2 Areas.
- Terminator "D" kits Division 2 Areas
- Heat Trace power and end termination and splice connection kits purchased separately.



HEATING SYSTEMS



Cata-Dyne™

EXPLOSION-PROOF GAS CATALYTIC HEATERS



WX INFRARED GAS CATALYTIC HEATER

Features:

- The industry standard for space or spot heating applications in hazardous environments, including comfort heating for industrial buildings and installations, freeze protection for equipment and components, and drying or curing processes
- Models range from 1,250 to 60,000 BTU/hr and 12 to 600 V
- Available for either natural gas or propane fuel
- CSA, FM and CE/ATEX certified for use in hazardous locations
- EAC marked for Eurasian markets



MKII INFRARED GAS CATALYTIC HEATER

Features:

- Like the WX Series, the MKII Series is an industry standard for space or spot heating applications in hazardous environments, including comfort heating for industrial buildings and installations, freeze protection for equipment and components, and drying or curing processes
- Side mounted hardware for lower installation profile
- Models range from 5,000 to 40,000 BTU/hr and 12 to 600 V
- Available for either natural gas or propane fuel
- CSA and FM certified for use in hazardous location
- EAC marked for Eurasian markets





Ruffneck™

HEATERS FOR THE HARSHTEST ENVIRONMENTS



CX1 PROVECTOR® CONVECTION HEATER

Features:

- Designed and manufactured specifically for demanding requirements and harsh operating conditions such as those in the gas well drilling industry
- Models range from 0.75 to 10.0 kW, 120 to 60V, 1 PH, and 208 to 600 V, 3 PH
- CE marked
- UL C/US certified for Groups A, B, C, D, IIA, IIB and IIC; IP55 moisture ingress protection available



RGE REGULAR-DUTY FORCED AIR UNIT HEATER

Features:

- Designed for use in regular-duty industrial and commercial space heating applications
- Models range from 2 to 40 kW and 208 to 600 V
- CSA C/US certified
- CE marked
- EAC marked



RGX HEAVY-DUTY FORCED AIR UNIT HEATER

Features:

- Specifically engineered for heavy-duty use in industrial environments
- Models range from 15 to 50 kW and 208 to 600 V
- CSA C/US certified
- CE marked
- EAC marked



FE2 EXPLOSION-PROOF ELECTRIC AIR UNIT HEATER

Features:

- Designed for the harshest industrial environments including dry indoor industrial applications, drilling rigs, plant and process buildings
- Models range from 3 to 35 kW and 208 to 600 V
- ATEX certified for Zone 1, T3 environments.
- UL certified for the following hazardous area location classifications: Class 1, Divisions 1 & 2, Temperature Code T3B 165°C (329°F)



FX6 EXPLOSION-PROOF ELECTRIC AIR UNIT HEATER

Features:

- Designed for the harshest industrial environments including dry indoor industrial applications, drilling rigs, plant and process buildings
- Models range from 3 to 35 kW and 208 to 600 V
- Two levels of over temperature protection with dedicated contactor, standard on all FX6 heaters
- UL and CSA certified motors
- All models are CRN registered
- EAC marked for Eurasian markets
- NOT CE/ATEX MARKED



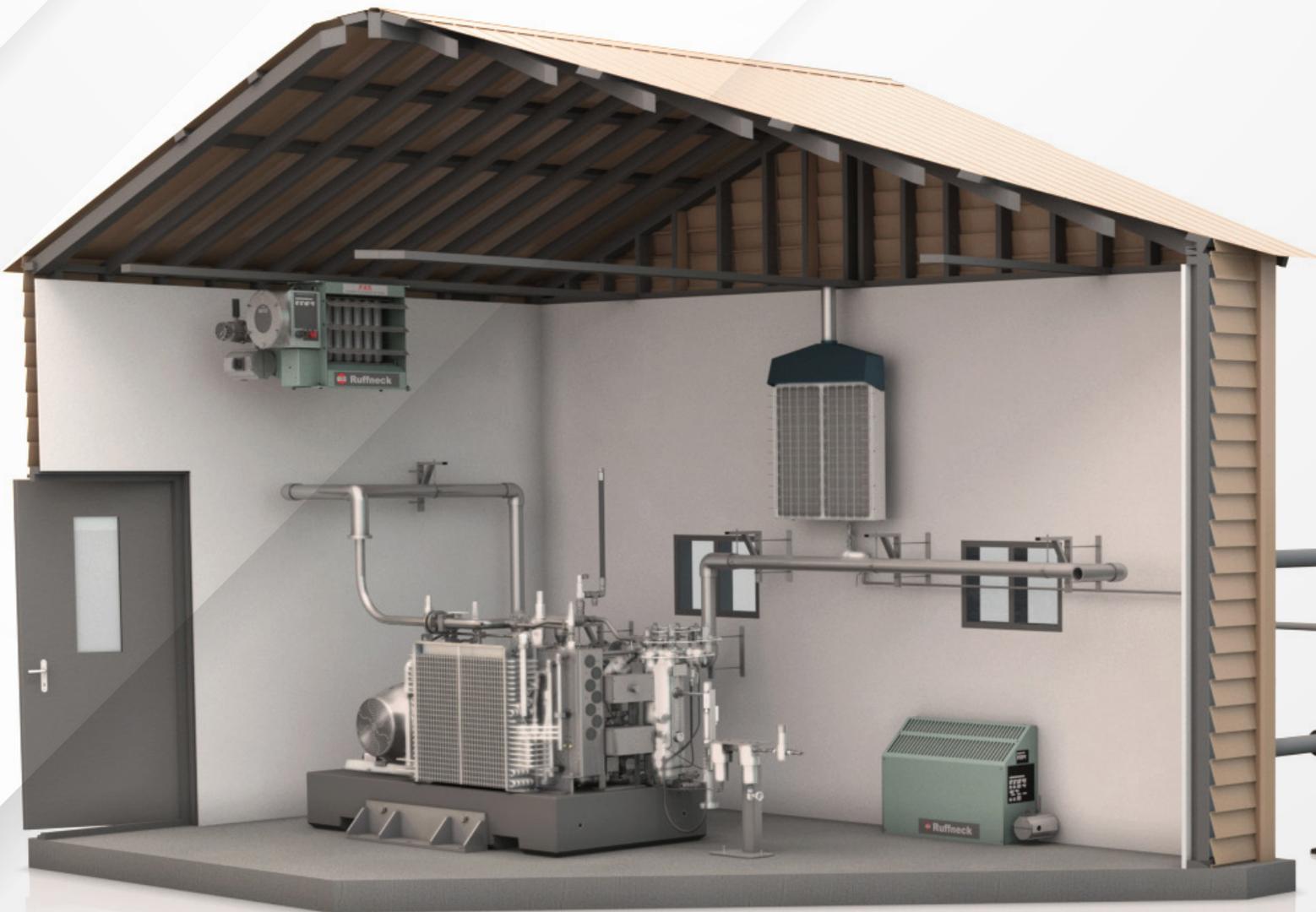
Ruffneck™

HEATERS FOR THE HARSHTEST ENVIRONMENTS

FX6-SD SEVERE DUTY ELECTRIC AIR UNIT HEATER

Features:

- Built for severe duty applications that can lead to accelerated wear of the electrical components and damage to the heater core, including locations with fluctuating power quality, temporary power generation, high vibration, dirty or corrosive atmospheres or extended maintenance intervals
- Models range from 3 to 35 kW and 208 to 600 V
- UL certified for the following hazard location classifications:
 - Class I, Divisions 1 & 2, Groups C & D; Class II, Divisions 1 & 2, Groups E, F & G; Class I, Zones 1 & 2; Group IIA & IIB; Temperature Code T3B 165°C (329°F)
- NOT CE/ATEX MARKED



HP HIGH PRESSURE HEAT EXCHANGER UNIT HEATER

Features:

- Extra heavy-duty to meet the most demanding service and long life requirements for rugged industrial applications, such as space heating and liquid cooling

- Models range from 115 to 575 V
- Explosion-proof or general purpose
- UL and CSA certified motors
- All models are CRN registered
- EAC marked for Eurasian markets
- NOT CE MARKED



FR FROST-RESISTANT HEAT EXCHANGER UNIT HEATER

Features:

- Specifically designed for steam applications that may be subject to freezing conditions, and of particular value for outdoor applications

- Models range from 115 to 575 V
- Explosion-proof or general purpose
- UL and CSA certified motors
- All models are CRN registered
- EAC marked for Eurasian markets
- NOT CE MARKED



CRI TRITON™ CORROSION-RESISTANT WASHDOWN HEATERS



Features:

- A new generation of NEMA 4X corrosion-resistant washdown heaters
- Entire heater is NEMA Type 4X
- Epoxy coated fan blade
- 16-gauge stainless-steel cabinet
- Custom configured stainless-steel elements
- Optional built-in accessories
- Stainless-steel wall/ceiling mounting kit
- 120 V controls
- Stainless-steel temperature high-limit
- Available in a wide range of wattages, from 3 to 39 kW
- NOT CE MARKED



Caloritech™

ENGINEERED ELECTRIC HEAT

CCRI TRITON™ WASHDOWN UNIT HEATER

Features:

- NEMA 4X corrosion-resistant washdown heater, suitable for non-hazardous locations and applications using water pressure of less than 70 psi
- Available in a range of wattages, from 3 to 39 kW
- UL listed for Coast Guard and marine applications
- EAC marked
- NOT CE MARKED



GE REGULAR-DUTY FORCED AIR UNIT HEATER

Features:

- Designed for use in regular-duty industrial and commercial space heating applications
- Models range from 2 to 40 kW output
- Available in a range of voltages from 208 to 600 V
- CSA C/US certified
- CE marked for global markets
- EAC marked



GX HEAVY DUTY FORCED AIR UNIT HEATERS

Features:

- Specifically engineered for heavy-duty use in industrial environments
- Available in 15–50 kW units (optional 10 kW unit); 40 and 50 kW units incorporate split loads (50%) for remotely controlled energy management systems
- CSA C/US certified
- CE marked for global markets
- EAC marked

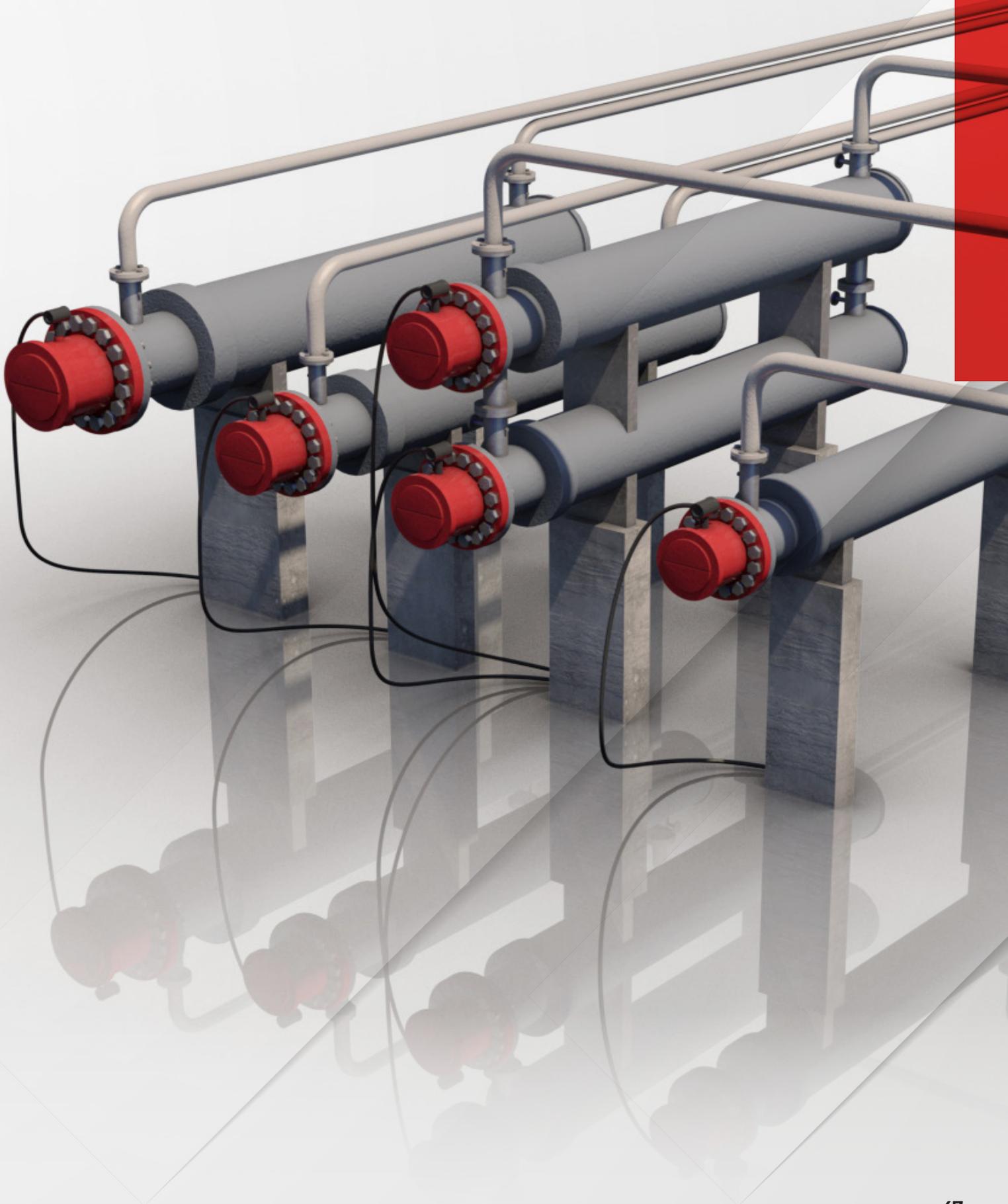


IMMERSION HEATERS

Features:

- Immersion heaters are mainly used for process heating in both hazardous and non-hazardous areas such as in tanks, pressure vessels, and pipe assemblies
- Process fluids include water, heavy and light hydrocarbons, acids, polymers, salts and gases
- Available in 500 W–2.5 MW depending on the element length and voltages from 110 V to 690 V
- High quality replacements for the most commonly used heater types
- CSA C/US certified
- CE/ATEX & IECEX marked
- EAC marked





Caloritech™

ENGINEERED ELECTRIC HEAT

PGH PILOT GAS HEATER

Features:

- Designed to heat the pilot tube gas stream of an automatic pressure reducing valve
- Combines a high efficiency aluminum casting with a digital temperature controller to maintain the pilot tube gas stream temperature, regardless of the gas flow rate
- The precise temperature control of this heater prevents damage to valve seals caused by freezing of entrained moisture, while maintaining a temperature low enough to prevent damage caused by overheating
- Temperature code: T4
- Available in 250–750 W and 120 V, 208 V, and 240 V
- CSA C/US certified to Class I, Divisions 1 & 2, Groups A, B, C & D; Class II, Divisions 1 & 2, Groups E, F & G; Class III, Divisions 1 & 2; Class I, Zones 1 & 2, Group IIA, IIB & IIC
- NOT CE MARKED



INDIRECT CIRCULATION HEATER

Features:

- Used primary in indirect heating applications where the process fluid needs to be isolated from the heating source or media
- Based on a helicoidal coil immersed in an oil bath that is heated by an electric immersion heater
- Typical applications include high pressure gas (above 3000 psi) and applications with low gas flow rates
- Certified to CSA C/US, CE/ATEX, IECEx, and B31.3 (on coil)
- EAC marked



CIRCULATION HEATERS

Features:

- For use in liquid and gas applications
- Available in horizontal or vertical orientations
- Available in vessel sizes up to 127 cm (50")
- Carbon steel or custom alloy materials
- Available in wattages up to 5000 kW and voltages from 110 to 690 V
- Certified to CSA C/US, IECEx, and CE/ATEX
- EAC marked for Eurasian markets
- ASME Section VIII, Division 1 or Division 2



HEAT TRANSFER SKID

Features:

- Custom designed, skid mounted unit provides process heat utilizing electric heaters to heat water, glycol, oil or heat transfer mediums
- Custom designs can incorporate water or steam boilers, super heaters and filtration equipment
- Available in wattages up to 5000 kW and voltages from 110 to 690 V
- Carbon steel or custom alloy materials
- PLC or hard-wired controls
- Certified to CSA C/US, IECEx, and CE/ATEX
- EAC marked
- ASME Section VIII, Division 1 or Division 2



ENGINEERED SYSTEMS

Features:

- Customized heating, filtration, and process solutions in a turnkey package
- Complete switch gear and control packages
- Design registration
- ASME Section VIII, Division 1 and 2
- Certified to CSA C/US, IECEx, and CE/ATEX
- EAC marked
- ASME rated interconnecting piping
- Available on-site start-up and commissioning assistance



CONTROL PANELS

Features:

- Custom built to meet various environmental requirements, including dust, oil, and water, as well as corrosive or hazardous locations
- Certified to CSA C/US, UL, IECEx, and CE/ATEX
- EAC marked
- Designs suitable for Ordinary and Hazardous Locations Class I, Division 1, Groups C & D, Zone 1, flameproof & purged versions for ATEX and IECEx are also available.



THERMON QUANTUM TRUFLOW HEATER™

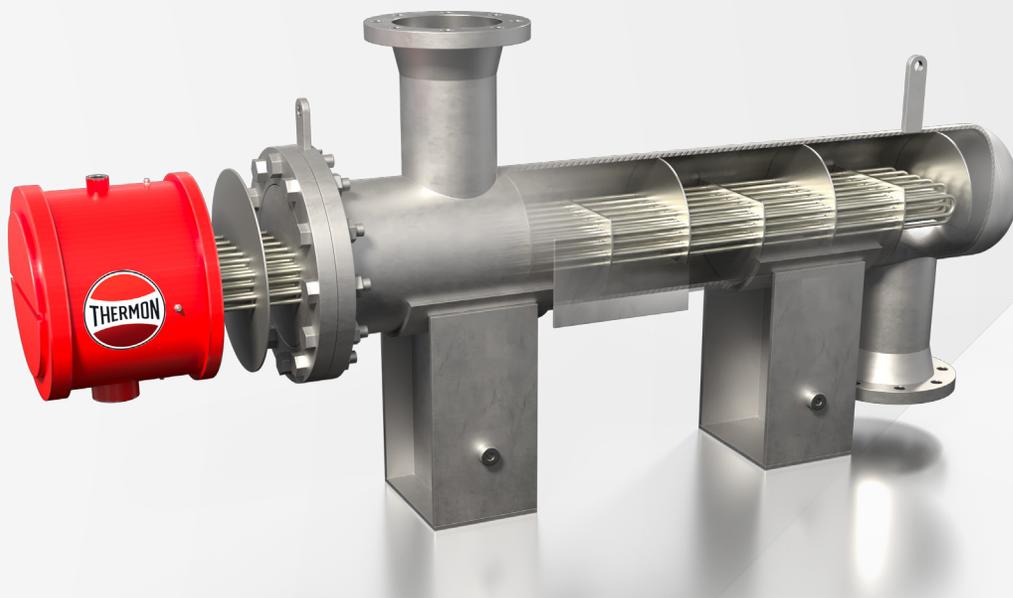
ENGINEERED ELECTRIC HEAT

Caloritech Thermon Quantum TruFlow Heater™ is the next evolution of Thermon's flange heater line-up. With enhanced baffle technology tailored for both ordinary and hazardous locations, the Thermon Quantum Truflow Heater™ can be custom designed to offer highly engineered solutions while meeting our customers' specific needs. Thermon's baffle solutions offers superior heat

transfer performance. The baffle design technology eliminates the risk of overheating by removing the heat source within the low flow zones.

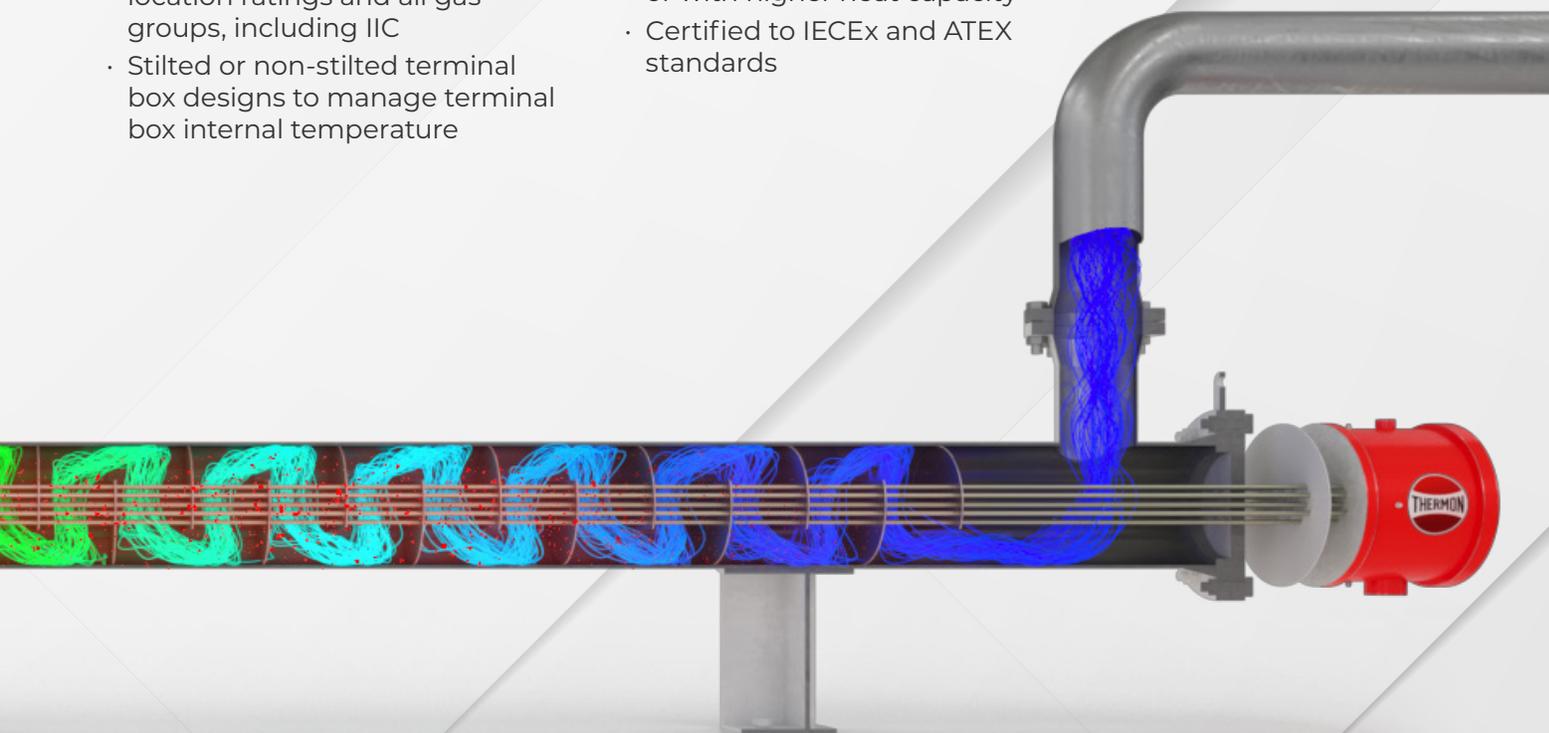
Thermon Quantum Truflow Heater provides a solution to improve heat transfer efficiency over traditional design and can be customized to specific applications.





Features:

- Flexible design to optimize heat transfer and pressure drop
- Predictable thermal management with high heat flux, no low flow zones, elimination of hotspots and sheath temperature prediction
- Hazardous and non-hazardous location ratings and all gas groups, including IIC
- Stilted or non-stilted terminal box designs to manage terminal box internal temperature
- Customized terminal box design configurations
- Factory installed temperature sensors for connection to temperature controllers
- Retrofit, allows replacement of existing flange heaters with increased thermal performance or with higher heat capacity
- Certified to IECEx and ATEX standards



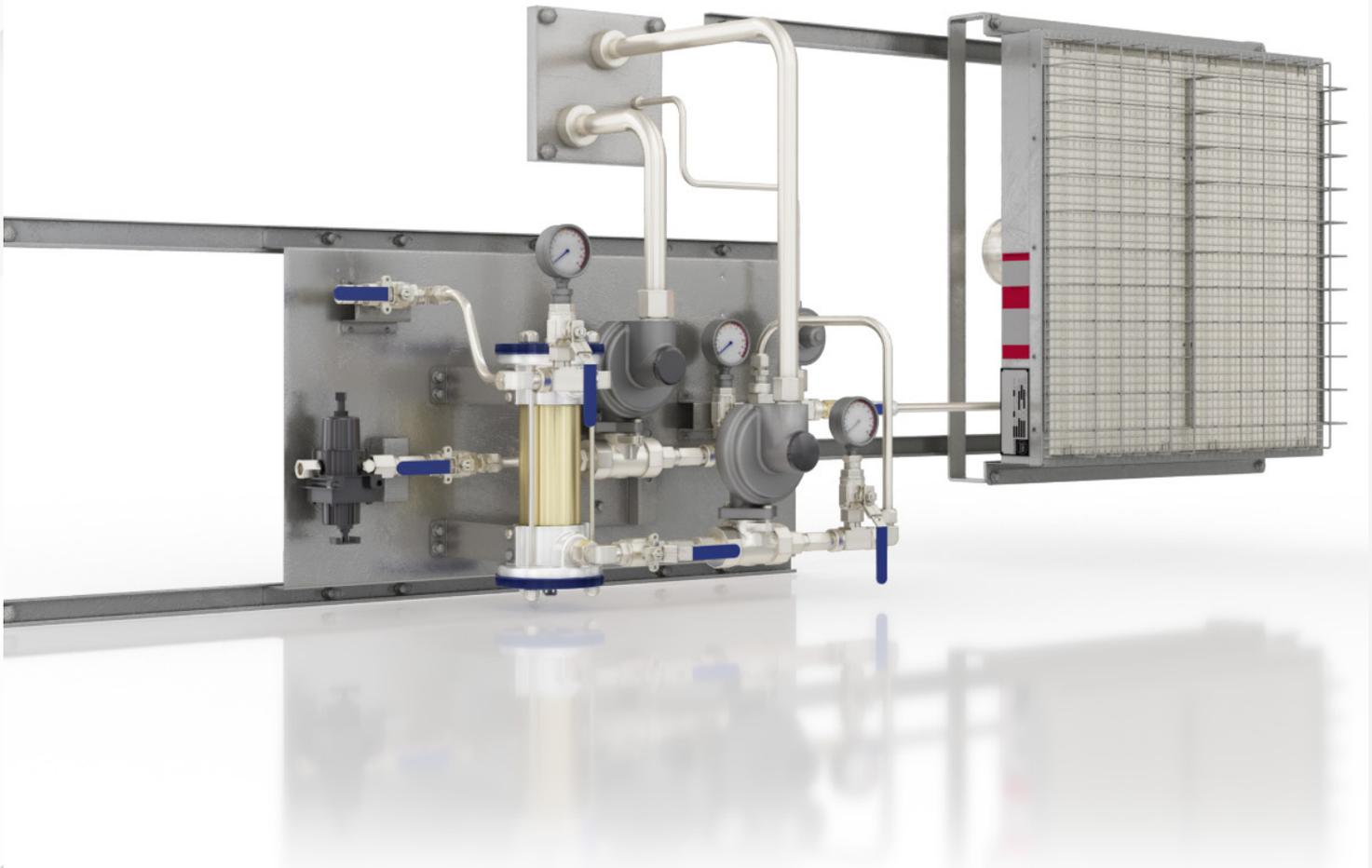
EnviroDyne™

METHANE DESTRUCTION UNIT

THERMON ENVIRODYNE METHANE DESTRUCTION UNIT

Features:

- The Thermon EnviroDyne™ MDU is a safe, highly efficient, and easy to install methane abatement solution for use in the reduction of fugitive gas emissions
- Targets the flameless conversion of methane to carbon dioxide and water vapor
- Designed for continuous use and only requires temporary electric power (often via a battery) for initial start-up
- The unit is designed to operate indefinitely once started and contains no moving parts
- Certified to ATEX







Norseman™

ELECTRIC EXPLOSION-PROOF HEATERS

XB EXPLOSION-PROOF NATURAL CONVECTION HEATER

Features:

- Designed for heating applications where explosive substances may be present, such as control cabinets and small enclosures
- Safe and reliable heater offers state-of-the-art design, featuring Thermon Heating Systems' unique copper-free aluminum extruded converter and patented x-Max® terminal housing
- A range of voltages available, from 120 to 600 V, depending on heater configuration
- A range of wattages available, from 475 to 5000 W, depending on heater configuration
- Temperature codes: T2D, T3B, T4A or T6
- CSA C/US certified
- CE/ATEX
- EAC marked



XGB EXPLOSION-PROOF FORCED AIR UNIT HEATER

Features:

- Designed for heating industrial spaces where explosive atmospheres may exist
- Two sizes available; small cabinet units rated up to 10 kW and large cabinet units rated up to 35 kW
- CSA certified for Class I, Division 1 & 2, Groups C & D and Class II, Division 1 & 2, Groups E, F & G hazardous locations
- Temperature codes: T2C, T2D, T3A or T3B
- EAC marked
- NOT CE MARKED



XPA EXPLOSION-PROOF PANEL HEATER

Features:

- Designed specifically for freeze protection of control enclosures in locations where explosive atmospheres may exist
- Available in 50–700 W and 120 V, 208 V and 277 V configurations
- Suitable for both 50 Hz and 60 Hz
- CSA C/US certified for Class I, Division 1 & 2, Groups A, B, C & D hazardous locations
- Temperature codes: T2 (215°C), T3 or T4
- EAC marked
- CE/ATEX
- IECEx



XPAS Panel Heater Mounted In a Control Panel

Fastrax™

TRANSPORTATION HEATERS

SWITCHBLADE® ELECTRIC ELEMENT RAIL HEATERS

Switchblade electric element heaters clear ice and snow from point to heel of railway switches. Elements fasten to and directly heat the rail by conduction. The heated rails heat the tie plates and melt snow and ice allowing the points to move freely.

Ratings/Features:

- Patented SwitchBlade® heaters design
- Flat profile design maximizes heat transfer and increases energy efficiency.
- Stainless-steel heavy-duty construction resists corrosion and offers protection and durability in rugged railroad environments.
- Available in any length up to 26 feet.
- Available in AC or DC voltages.
- Watt densities of 100 to 500 W/ft.
- Utilizes Fastrax® patented spring clamp technology allowing for expansion and contraction of the heater without binding or losing contact with the rail. No drilling required.



CRIB HEATERS

Crib heaters eliminate ice and snow in the crib area at the critical switch point allowing for easy maintenance of switch rods and smoother switch operation. Exclusive jack bolt technology ensures secure fit, eliminating movement and potential switch fouling.

Ratings/Features:

- Heavy gauge aluminum construction resists corrosion and offers protection and durability in rugged railroad environments
- 26 ft premium grade marine power cable lead is resistant to chemicals and severe weather
- Model lengths range from 4' to 8'8"
- Standard wattages range from 600 W to 2700 W
- Available in AC or DC voltages, from 120 V to 750 V

CONTROL PANELS – ELECTRIC ELEMENT

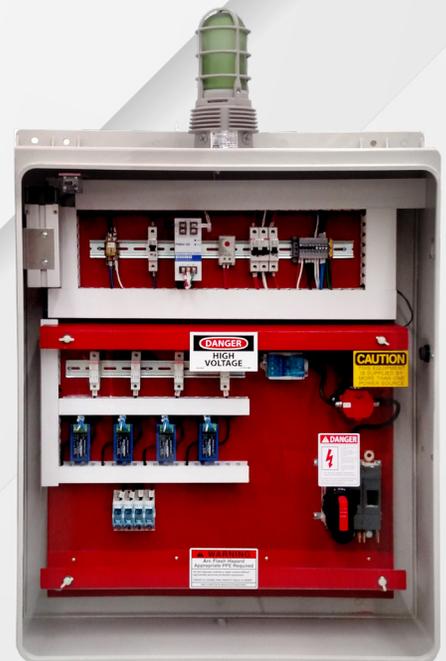
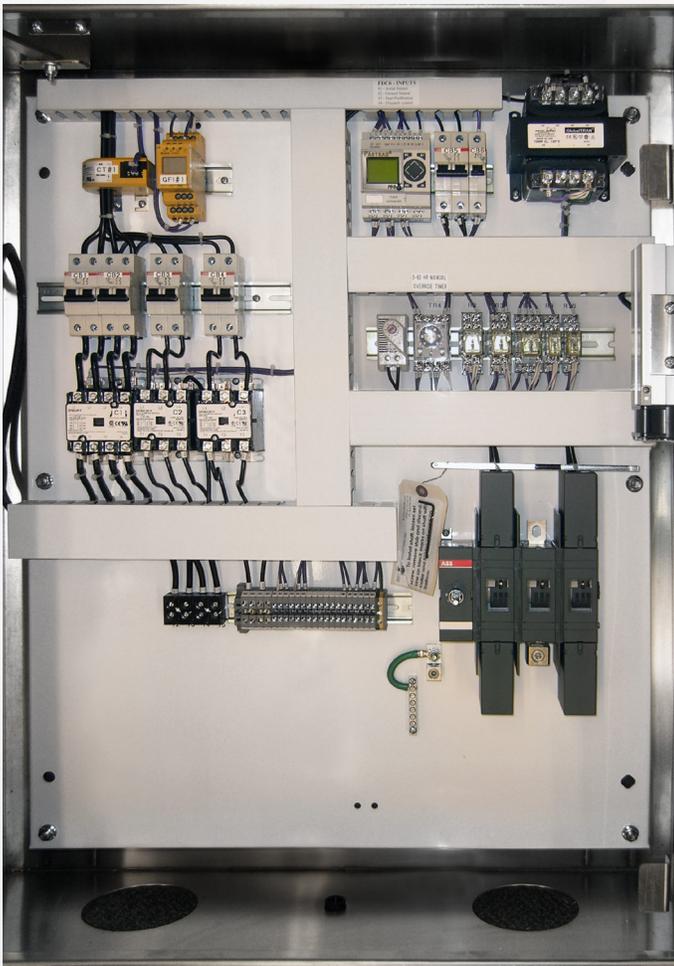
The control panel forms an integral part of a railway switch heating system that safely controls the heating of multiple switches and provides automatic operation based on ArcticSense snow detection.

Ratings/Features:

- Ground fault protection
- Individual heater circuit breaker protection
- Local controls and annunciation lights
- Adjustable or indefinite run time
- UL and ULC approved electrical components
- Mounted safety/service disconnect
- Terminal connections for field wiring
- Internal panel heater
- Tamper proof, safe “dead-front” design
- NEMA 4X stainless steel enclosure for AC
- Available from 120 V to 600 Vac, or up to 750 VDC
- Custom designs and layouts available.
- Each panel provides dispatch control and indication.

DC Specific Ratings/Features:

- NEMA 4 Fiberglass enclosure
- Hermetically sealed contactors
- 1000 V DC rated components
- Load breaking disconnect switch
- Isolated high voltage section
- GPO-3 nonconductive back pan



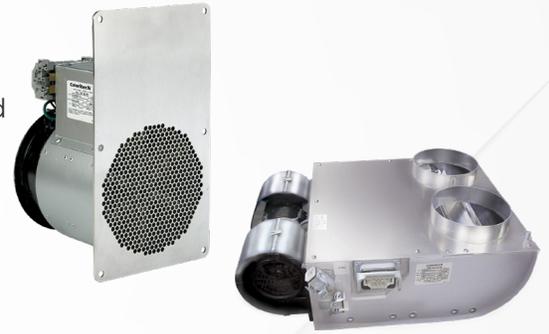
Velocity™

TRANSPORTATION HEATERS

FORCED AIR HEATERS

Ratings/Features:

- Fully customized to suit customer specifications
- Lab certified qualification tested to ensure reliable performance and safe operation
- Elements: Open coil, tubular, strip heater, Calvane™
- Fans: Axial, centrifugal, radial
- Controls: Digital controller, thermostats, fan speed control, remote indicators
- Rugged/robust design
- High resistance to shock and vibration
- Fast heat up and cool down response times
- Light weight
- Low noise
- High quality components
- Long lifespan



FLOOR HEATERS

Calvane Heater Assemblies

- Standard Calvane™ and louvered Calvane™
- Length Range: 10" to 83"
- Width: 2¼" or 3¼"
- Fast start-up and cool down periods
- No magnetic noise
- Low pressure drop
- Resistance to damage from shock and vibration
- Easily isolated for high voltage applications
- Uniform heat distribution
- Low watt density for long life performance



Strip Heaters

- Standard, finned or sealed
- Length Range: 5.5 ½" to 42 ¼"
- Element Material: Aluminized steel, or stainless steel

Radiant In-Floor Heaters

- Semi-permanent adhesive for ease of maintenance
- Even heat distribution,
- Durable construction



DUCT HEATERS

Ratings/Features:

- Elements: Open coil, tubular, finned tubular
- Element Configuration: Straight, Hairpin, W-shape, Helical
- Fully protected against mechanical shock, vibration or breakage.
- Low element mass yields relatively small amounts of residual heat on fan shut down, reducing heat effect on surrounding material.
- Static pressure drop through open coil is very low, reducing fan horsepower requirements



THRESHOLD & DOOR POCKET HEATERS

Door Pocket

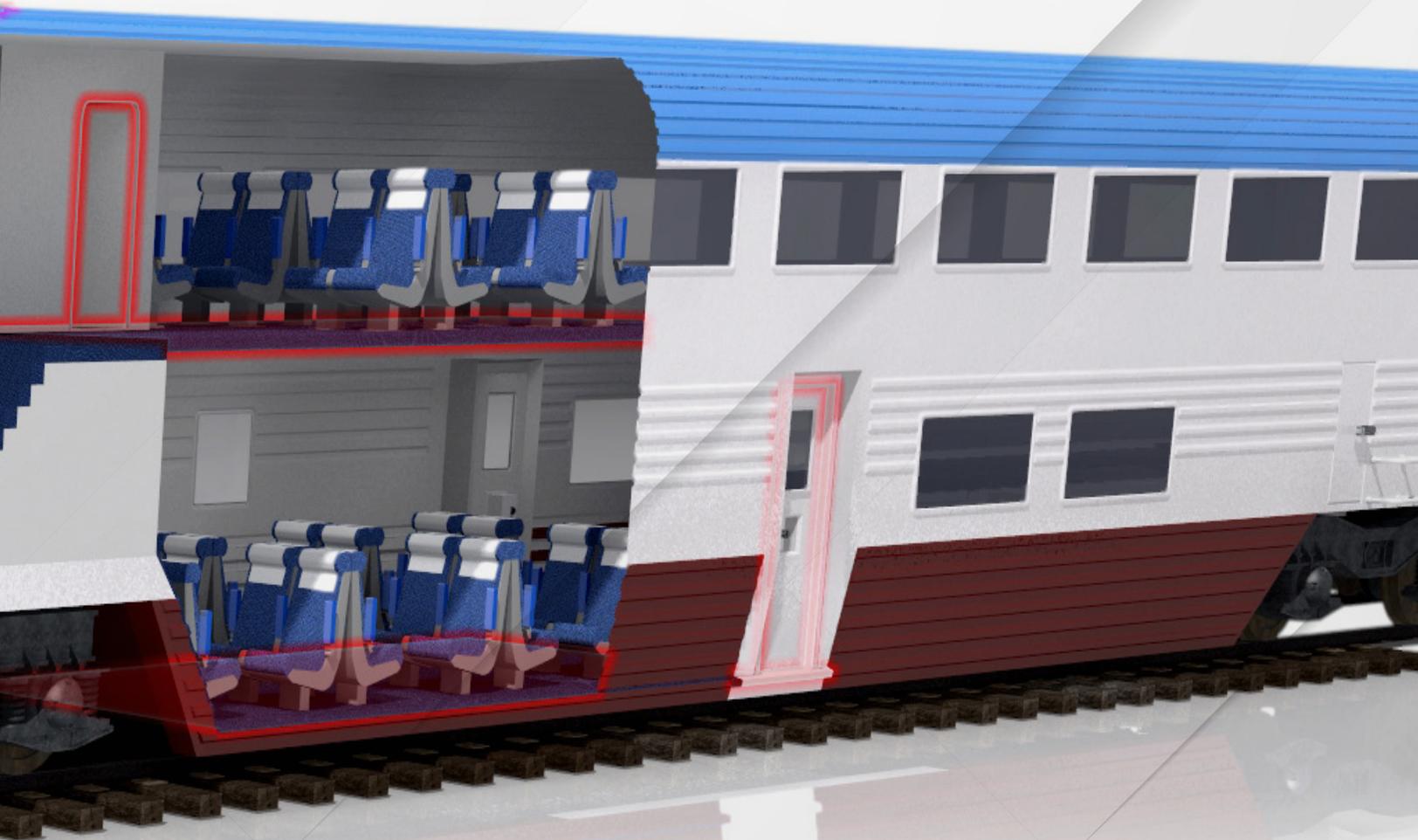
These heaters are engineered to eliminate frost and snow from interfering with door operation. We offer a variety of designs incorporating strip heaters, tubular elements or silicon pad heaters.

Threshold

Threshold heaters eliminate frost and snow build up on door threshold areas to help passengers safely enter and exit the train. Only Thermon Heating Systems offers the robust Calbar™ element for threshold heating applications. Tubular style heating elements and silicone pads are also available.

Ratings/Features:

- Watertight design
- Durable construction
- Resistance to shock, vibration and friction
- Compact size
- Corrosion resistant



A blurred background image of a person wearing a blue uniform, possibly a police officer or a security guard, standing in a hallway or similar indoor setting. The person is out of focus, and the lighting is warm, with a prominent orange and yellow glow in the center.

TRAINING AND SERVICES



THERMON PRODUCT TRAINING AND SERVICES

Thermon offers multiple levels of competitively-priced training to all of our valued customers. Students get a combination of practical and hands-on training, from basic operations of the many different controllers to the final connections of communications and supervisory software.

This highly recommended training gives site staff and contractors the confidence and ability to operate heat tracing systems to their full ability, saving time and money and preventing unnecessary down time due to failed equipment.

Construction and Commissioning Services

- Complete EHT System Installation (Heat Tracing, Tubing Bundles, Power/End Kits & JB's, RTDs, Controllers, Power Distribution, Insulation)
- QA/QC, Testing, Documentation & Support
- Comprehensive Controller, EHT, RTD and Communication Commissioning
- Baseline Testing & Design Confirmation
- Deficiency Management & Rectification
- Fielding Engineering and Design Support

EHT Audits

- Visual inspection and walk down of each circuit to inspect thermal insulation.
- Visual inspection of the heating system components.
- Inspection of controller settings and verification of dielectric insulation resistance.
- Verification and recording of heater supply voltage and heater circuit current readings.
- IR camera checks for cold sections (heat sinks) and heater circuit current readings.

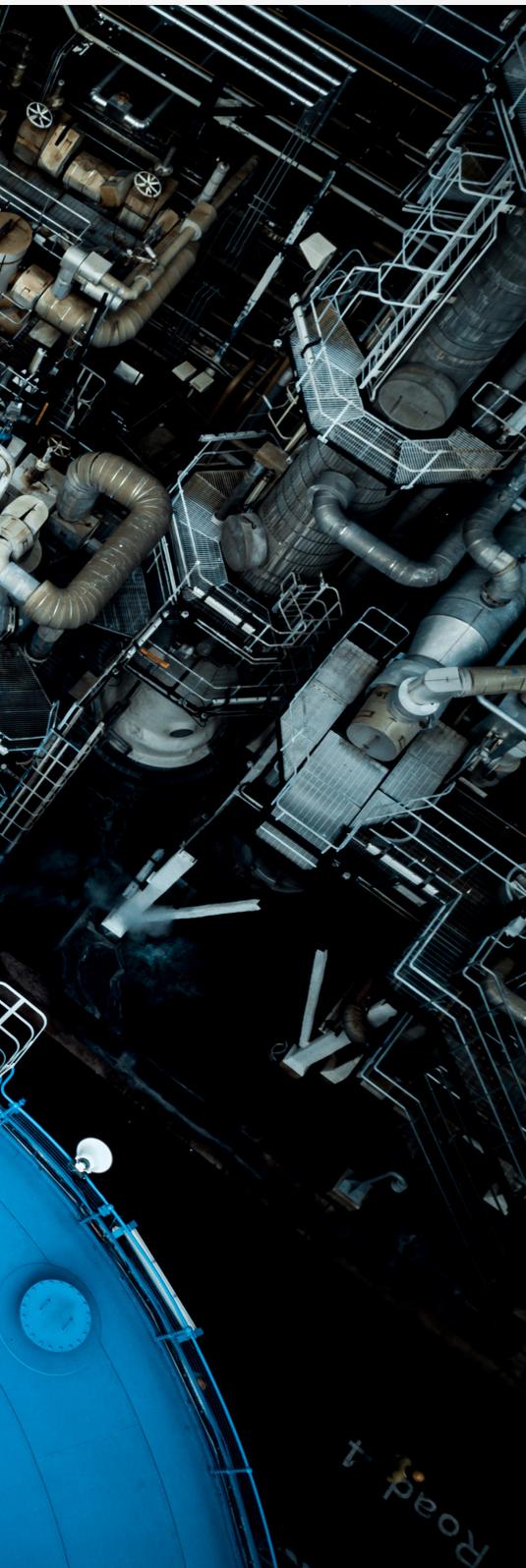
Maintenance and Troubleshooting

- Thermon has some of the best service technicians in the industry, with many years of troubleshooting and repair experience. It takes years of practice to become proficient at splicing and finding failures, and with our expertise we are able to complete the job quicker than workers that are new to the process. Customers benefit by having a warranty on all work completed, complete documentation as well as fast, reliable service at the best possible price.
- Contracts - Thermon offers special pricing on service contracts. We work closely with customers to design a contract that meets their heat tracing needs.
- Rope access is available.



THERMON PRODUCT
TRAINING AND SERVICES





Panel Maintenance Program

- The panel Maintenance program is a good offering for late spring, summer, and early fall.
- Ensure your panels are in perfect operating condition for the winter season.
- Custom-built programs can include full health checks of all your EHT and operating systems, as well as alarm management.

On-Site Technicians Providing Service and Ongoing Support

- Installation Inspections—complete testing and inspections, with documentation, for peace of mind that your system is installed correctly.
- Inspection/Supervision for all work on EHT system changes—ensure factory warranties are kept intact by having Thermon oversee or inspect any work completed on its products.
- Ongoing on-site support for small or large projects assisting with all aspects of your EHT systems, from splicing to inspections and QA/QC.
- Verification of set points for customer program data sheets and logging of any discrepancies.
- Re-torquing of all terminal blocks and related hardware.
- IR camera inspection and logging of any overheating relays.
- Panel out megger and resistance testing and logging of each circuit in the panels.
- Logging of displayed alarms.
- Recommendations and quoting for repair of identified issues.



SAFETY

Safety is a core value at Thermon. We operate in a manner that helps protect our employees, contractors, customers and the communities where we operate. Our approach to safety includes identifying possible risks, implementing measures to prevent potential incidents, and educating employees about unsafe behaviors. Our Incident Management System (Progress) has established a set of worldwide expectations for addressing risks and serves as the foundation for communicating leading and lagging indicators.

Thermon(s) 2020 total recordable workforce (employees and contractors) incident rate per 200,000 work hours was 0.20, similar to our performance in 2019. When compared to our NAICs industry workforce benchmark of 2.3, Thermon continues to be among the industry leaders in safety performance.

THERMON
OFFICES WORLDWIDE

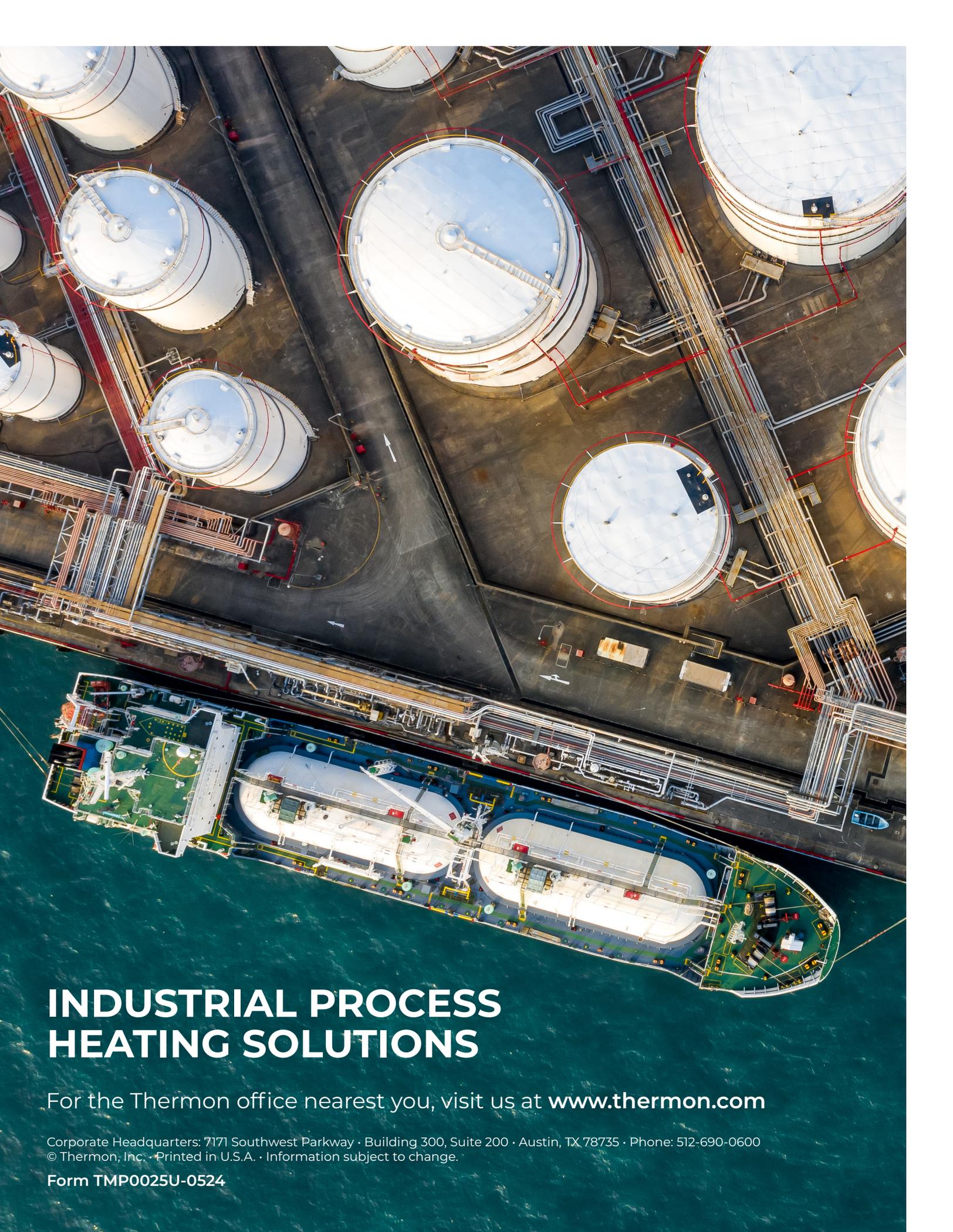


- HEADQUARTERS
- PRODUCTION PLANT
- SALES AND ENGINEERING
- TURNKEY/CONSTRUCTION SERVICES

Thermon's global footprint with local presence. Thermon serves the global Energy, Power Generation, and Chemical markets to provide innovative solutions for industrial heating applications by deeply understanding our customers' needs.



UNITED STATES | CANADA | MEXICO | NETHERLANDS | UNITED KINGDOM | FRANCE
GERMANY | AUSTRALIA | MALAYSIA | CHINA | INDIA | JAPAN | SOUTH KOREA | BAHRAIN



INDUSTRIAL PROCESS HEATING SOLUTIONS

For the Thermon office nearest you, visit us at www.thermon.com

Corporate Headquarters: 7171 Southwest Parkway • Building 300, Suite 200 • Austin, TX 78735 • Phone: 512-690-0600
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