



CONNECT AND PROTECT

Industrial Heat Tracing Solutions

Products and Services


nvent

RAYCHEM

ADVANCED INDUSTRIAL SOLUTIONS

We provide electric thermal solutions that connect and protect critical processes and facilities while maximizing performance and reliability. We are the inventor of self-regulating heating technology. Our cables are designed & manufactured in the USA since 1972. We offer turnkey project solutions, delivering seamless project management, efficient system designs, on-time delivery, schedule compression & power distribution savings. Our systems provide maximum performance with more than 600,000 km (2B ft) of cable installed in 100+ countries since 1972. With more than 1900 employees in 28 countries around the globe, we are a global leader in thermal management solutions and are uniquely positioned to manage the heat you need for projects of any size and scope.

THE HEART OF OUR SOLUTIONS

nVent RAYCHEM heat trace systems offer superior reliability with the highest lifetime value at lower installed cost and lower cost of ownership. As the inventor of self-regulating heat tracing in 1972, our nVent RAYCHEM solutions and services are recognized for technical leadership in the industries we serve.

Innovations like HTV and XTVR self-regulating cables, which provide the Industry's highest proven power retention (HPR) and longest design life, and proprietary TracerLynx 3D Heat Management Software, which streamlines and optimizes electric heat trace designs, confirm our continued industry leadership.

Our mineral insulated heating cables and wiring have led the industry for more than 80 years. Able to withstand extreme, harsh environments, our MI cables provide the most reliable heat tracing solution for high-temperature applications.

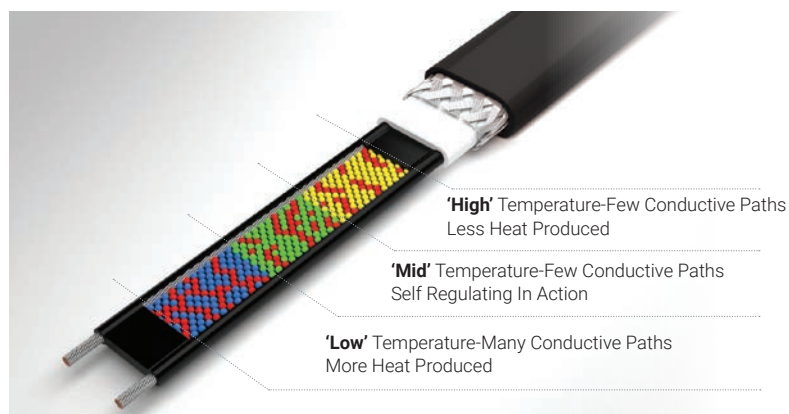
nVent RAYCHEM advanced control & monitoring solutions deliver energy savings and full connectivity, to minimize operational risk and maximize productivity.

Our nVent TRACER services team provides a full suite of Life Cycle services from front-end engineering, installation and commissioning, to expert and proactive MRO, audit, field service and training support.



HOW SELF-REGULATION WORKS IN OUR CONDUCTIVE-POLYMER HEATERS

At higher temperatures, the polymer expands, reducing the number of electrical paths thereby reducing the power output of the cable. At low temperatures, there are many conductive paths, allowing higher level of current to flow between the bus wires. Producing the 'right amount of heat' saves you money with no wasted energy.



Tested and Qualified

nVent RAYCHEM heating systems are tested to the most stringent industry standards to ensure maximum reliability and performance for our customers.



Robust Construction

Long service life assurance through through modified polyolefin or fluoropolymer insulation and jacket materials.

Life Expectancy

Our extensive scientific testing and field history prove that when properly installed and maintained, nVent RAYCHEM self-regulating cables are expected to work for many decades. An industry leading 10 year extended warranty is available.



In 1972, the heat tracing division of the Raychem Corporation (now a part of nVent) patented and produced the first commercially successful electric self-regulating heat tracing cable. The technology was celebrated as the 200th induction into IEEE's historic Milestones Program in 2019. nVent is the proud producer of the world's #1 conductive polymer self-regulating heat tracing cable.

BUILDING A MORE SUSTAINABLE AND ELECTRIFIED WORLD



Our nVent RAYCHEM solutions work to connect and protect a more sustainable and electrified world with products and services that increase **energy efficiency**, enhance **customer productivity**, extend the **lifespan of systems** and improve **end-user safety**.

nVent.com/RAYCHEM

BUILDING A MORE SUSTAINABLE AND ELECTRIFIED WORLD

We provide freeze protection and heat management solutions to a wide range of industrial markets: oil & gas, (petro) chemical, pharmaceutical, manufacturing, power, mining...

Our solutions also support the energy transition, with applications in LNG, Clean Fuels, Hydrogen, Carbon Capture & Storage.



Energy Efficiency

Our solutions improve energy efficiency for our customers.



Customer Productivity

Our solutions reduce labor cost in design and installation, improve utilization and reduce total cost of ownership.



Safety

Our solutions improve end-user safety and help our customers enhance the safety of their operations.



Resiliency and Protection

Our solutions add resiliency to critical systems by helping keep them safe from natural and manmade disruptions.



Lifespan and Serviceability

Our solutions extend the lifespan of our customers' systems, reducing waste and lowering cost.



Eco-Friendly

We support customers sustainability goals by developing environmentally friendly products and solutions.

BEFORE YOU BUY, WEIGH THE FACTS....



TIME-TESTED QUALITY

QUALITY

We are the **inventor** of self-regulating heating technology. Our cables are designed & manufactured in the USA since 1972.

- We offer **complete systems**
- 20+ year** design life
- 10-year** product warranty
- High Power Retention (HPR) technology**



**200+ EXPERT DESIGNERS
6000+ INSTALLERS**

EXPERTISE

We offer **turnkey project solutions**, delivering seamless project management, efficient system designs, on-time delivery, schedule compression & power distribution savings

- 200+** expert designers
- 300+** trained field personnel
- 600,000+** optimized EHT circuits
- Engineering automation



**600,000KM INSTALLED =
15X AROUND THE GLOBE**

RELIABLE

Our systems provide maximum performance with 600,000 km (2B ft) of cable installed in 100+ countries since 1972.

- Proven to perform in the **world's most remote and harshest environments**
- Advanced **control & monitoring**
- Wide temperature ranges from **-200°C (-328°F) to +1000°C (+1832°F)**

Highest **QUALITY** Products



EXPERTISE Optimal System Design & Installation



RELIABLE Performance & Lower Cost of Ownership

PRODUCTS

- ✓ Industrial Heat-Tracing & Wiring
- ✓ Control, Monitoring & Sensing

- ✓ Life Cycle Services
- ✓ Leak Detection

- ✓ Tank Insulation

INDUSTRIES

- ✓ Oil & Gas
- ✓ Chemicals, Petrochemicals
- ✓ Biofuels

- ✓ Carbon Capture Use & Storage
- ✓ Hydrogen
- ✓ LNG

- ✓ Power
- ✓ Food & Beverage



nVent Solutions Protect Critical Processes

ENERGY TRANSITION

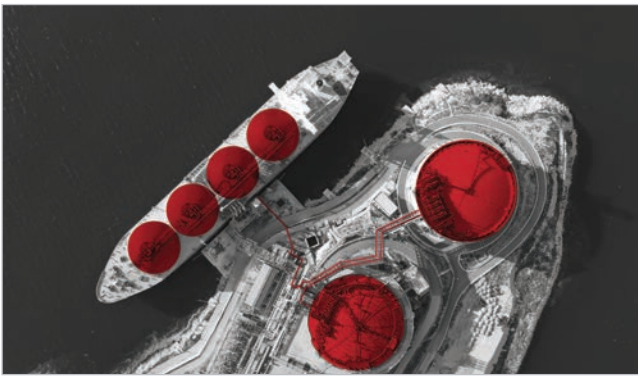
nVent is proud of its mission critical role in the energy transition. We design, manufacture, market, install and service high performance products and solutions that help build a more sustainable and electrified world.

We Connect and Protect a More Sustainable and Electrified World

nVent RAYCHEM heat tracing and leak detection solutions keep critical processes operational, protect pipes and equipment from freezing, keep the flow in transfer lines, provide winter safety and detect liquid leaks in pipes and tanks.

That's how we help keep people and environment safe and maximize your productivity in an energy efficient and environmentally responsible manner.

LEARN ABOUT OUR MISSION CRITICAL SOLUTIONS IN ENERGY TRANSITION AND DECARBONIZATION INDUSTRIES.



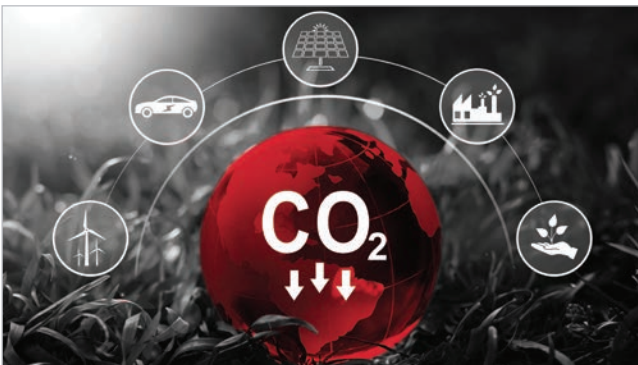
Liquefied Natural Gas

Natural gas and LNG are essential in the energy transition as they play an instrumental role in shifting away from coal and reducing carbon emissions.



Biofuels

Biofuels and clean fuels are essential in the energy transition towards attaining carbon neutrality.



Carbon Capture

Carbon Capture, Utilisation & Storage (CCUS) is essential in the energy transition as it plays a critical role in CO₂ removal from the atmosphere.



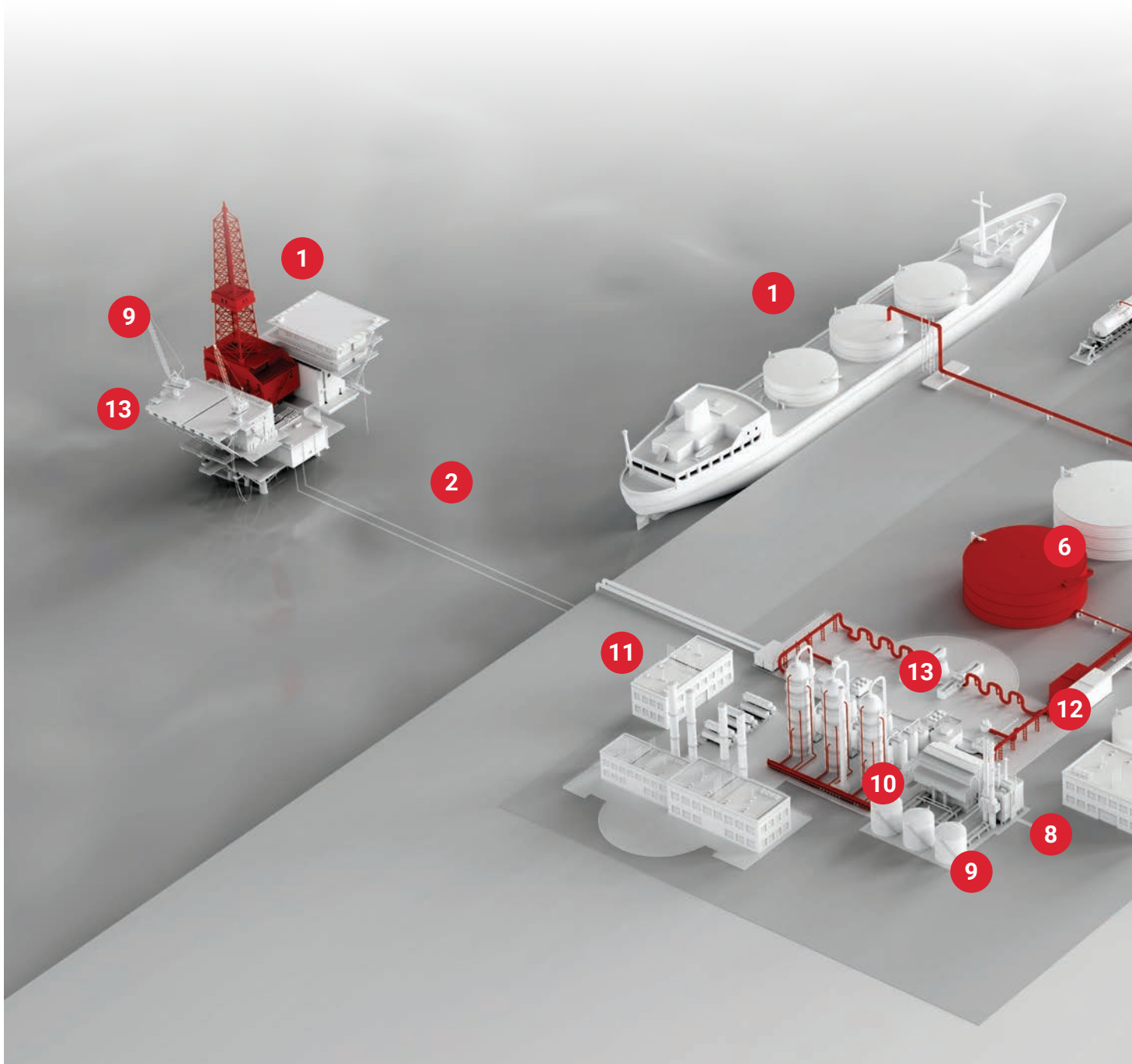
Hydrogen

Hydrogen (H₂) is essential in the energy transition toward attaining a carbon-neutral world.

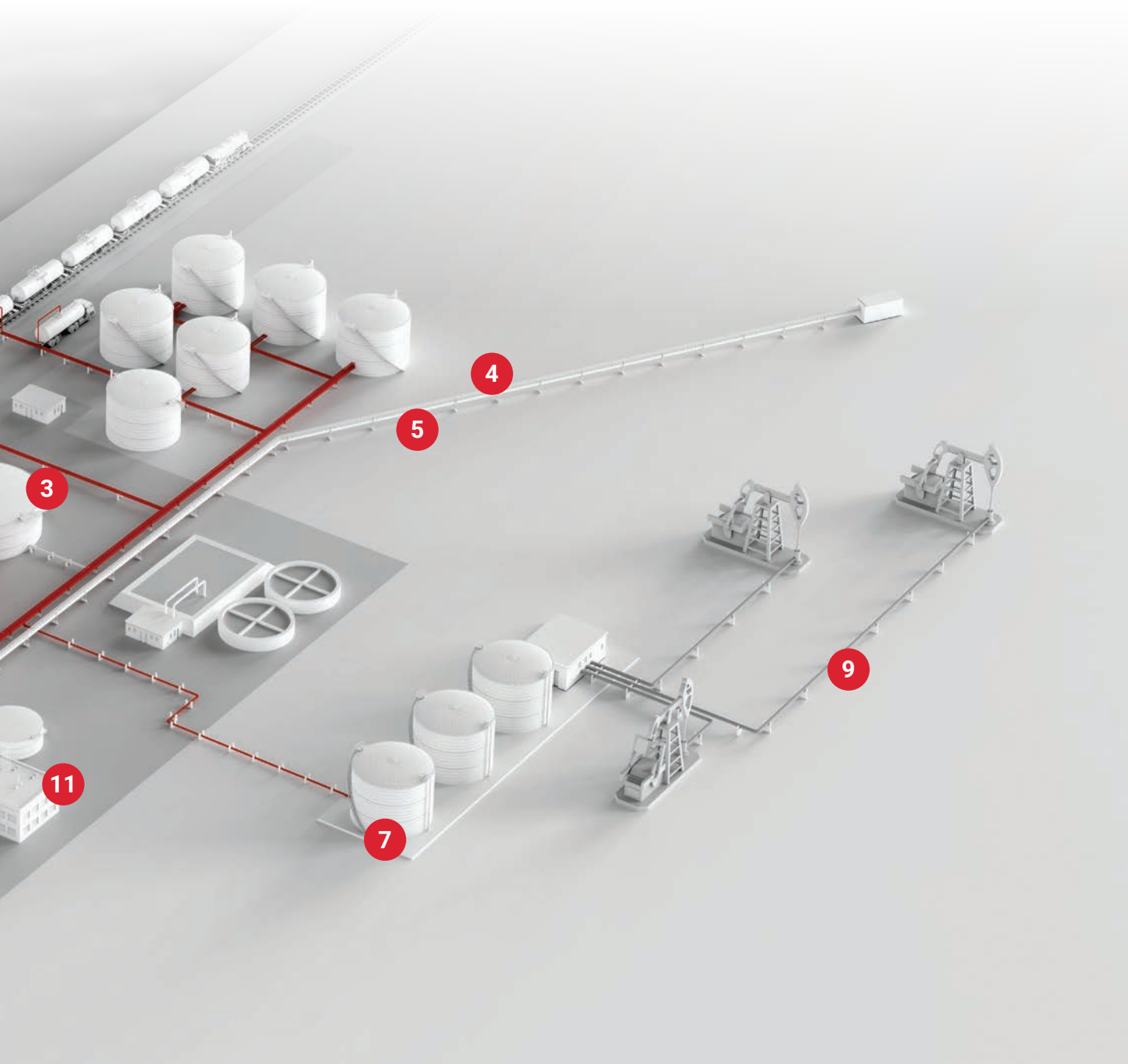


Advanced Industrial Solutions

nVent provides solutions to a wide range of industrial markets, primarily for the oil and gas, energy transition, power generation, transport and storage, decarbonization and (petro-) chemical industries.



- 1 Anti-icing & de-icing
- 2 Submerged transfer lines
- 3 Frost heave prevention of cryogenic LNG tanks
- 4 Long line heating and monitoring with nVent RAYCHEM Skin-effect Tracing System (STS), nVent RAYCHEM Pipeline Supervisor (RPS) & pre-insulated piping
- 5 Comprehensive pipeline leak detection solutions
- 6 Tank insulation with Trac-Loc vertical lock seam systems
- 7 Tank heating & leak-detection solutions
- 8
- 9
- 10
- 11
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- 13

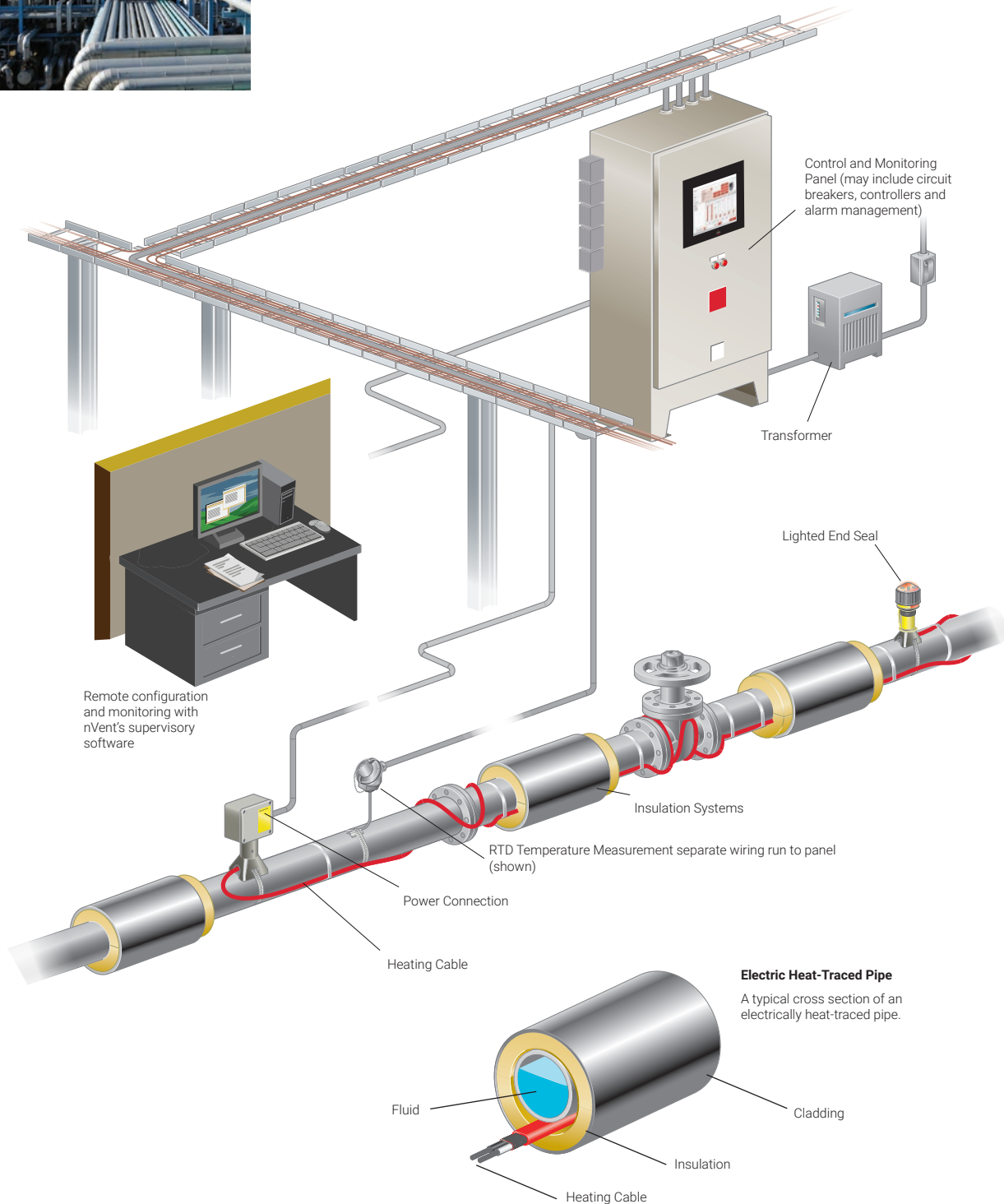


- 8 Process temperature maintenance
- 9 Pipe freeze protection
- 10 Pre-traced, pre-insulated tubing for instrumentation & sample lines
- 11 Advanced control & monitoring systems
- 12 Power distribution
- 13 Fire & performance wiring

Complete Electric Heat-Tracing System

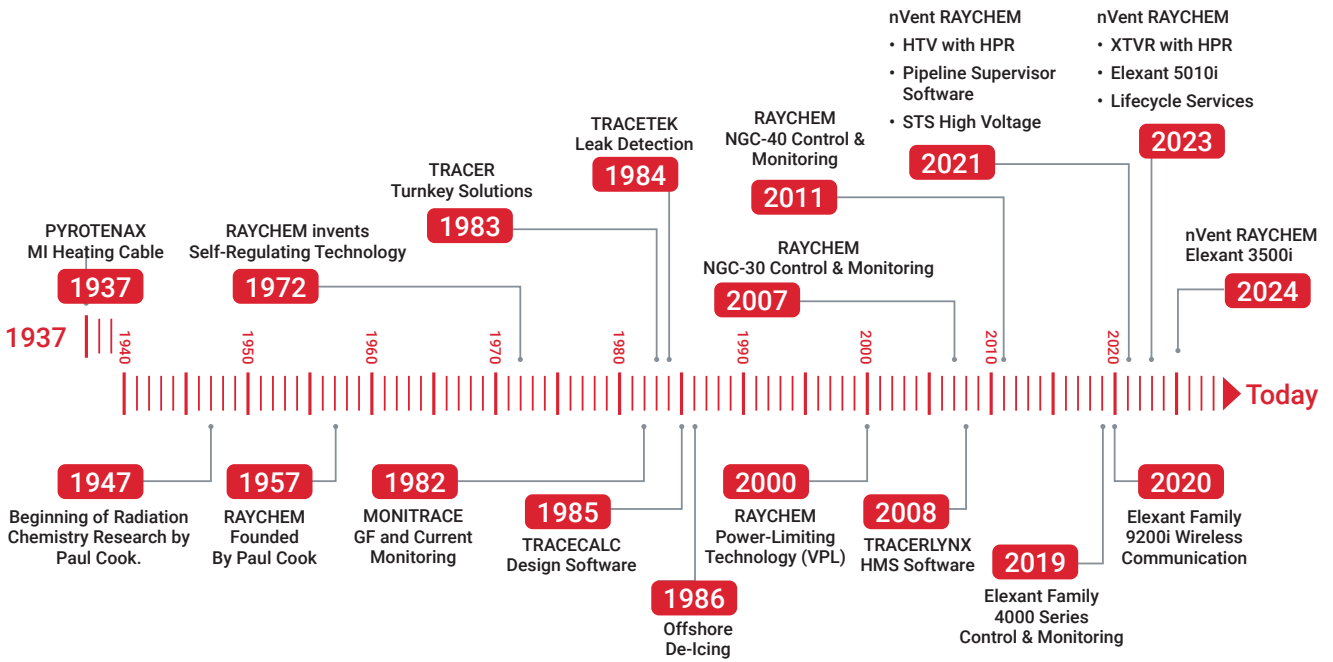


An electrical heat-tracing system is much more than just the heating cable. nVent provides a complete system including the transformer, control and monitoring panels, power connections, heating cable, end terminations, and related accessories where all parts are designed and certified to function as a complete system. We manage the heat you need – from pipe freeze protection, or process temperature maintenance, to process heat-up applications.



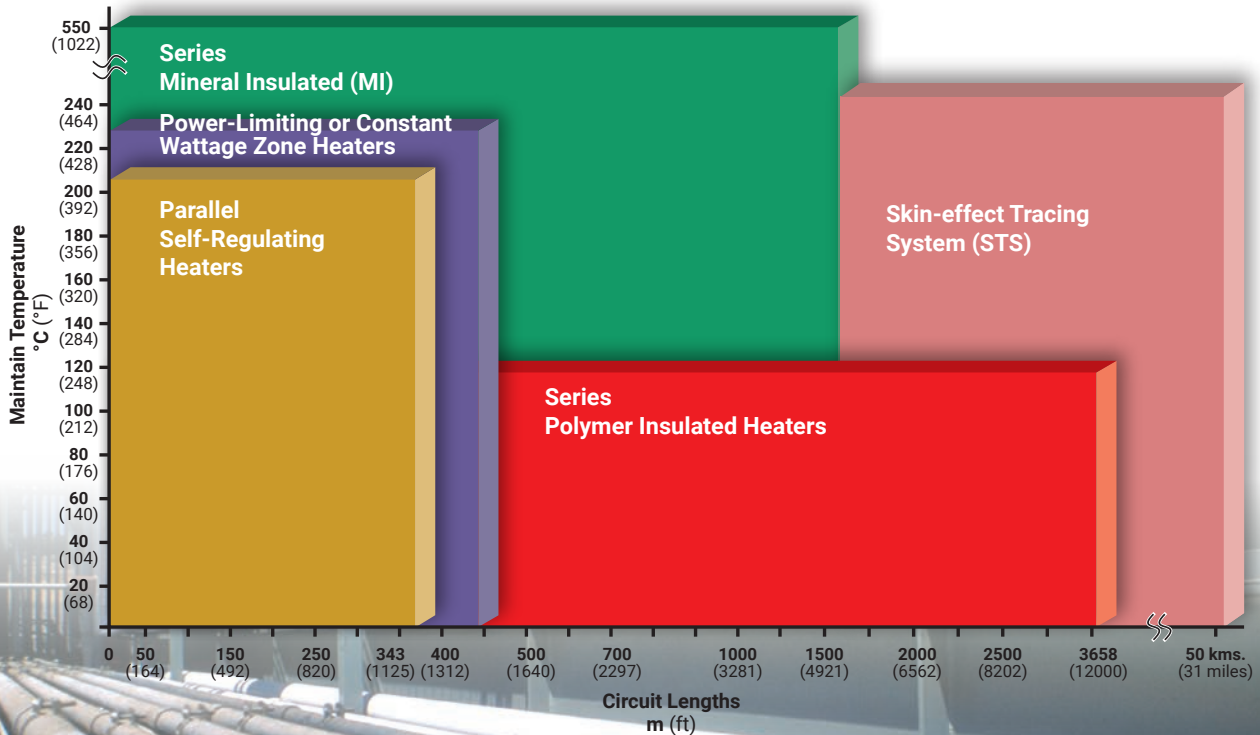
Note: The illustrations on these pages do not necessarily depict actual applications and installations.

A Rich History in Innovations



Cable Technology Portfolio

nVent offers the industry's most complete line of heat-tracing product technologies to meet every need—for everything from pipe freeze protection to high temperature process maintenance. We provide solutions that cover a wide range of temperature and length requirements for any application.



Innovative Heating Cable Systems

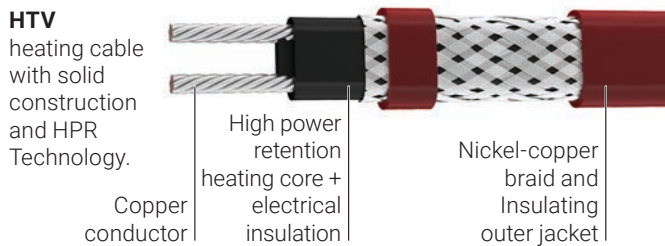
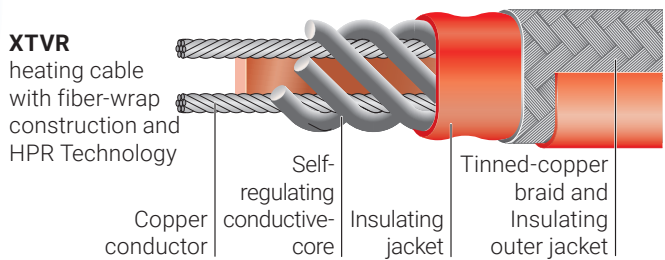
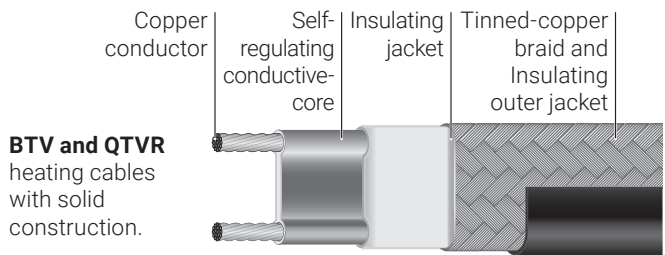
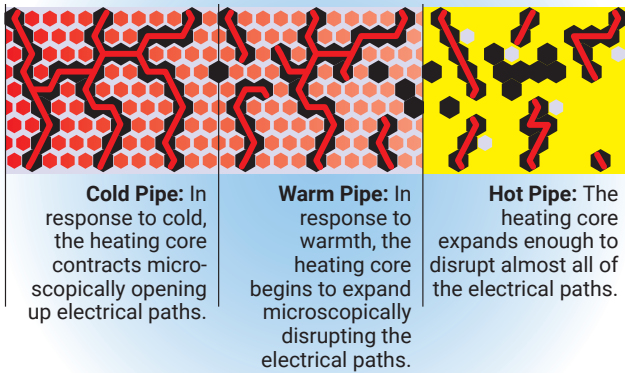
SELF-REGULATING TECHNOLOGY

nVent RAYCHEM revolutionized the heat-tracing industry when it invented self-regulating heater technology over 50 years ago. Self-regulating heating cables incorporate a heating element made of polymer mixed with conductive carbon black. This special formulation of materials creates an electrical path for conducting current between the parallel bus wires along the entire cable length. In each heating cable, the number of electrical paths between the bus wires changes in response to temperature fluctuations, allowing for more uniform temperatures. Additionally, the ability to cut-to-length on site allows for easy installation.

High Power Retention Technology: With decades of experience in polymer science technology, nVent RAYCHEM's newest HTV and XTVR cables were developed with a High Power Retention (HPR) heating cores to maintain superior levels of performance and design life.

Applications include: freeze protection, temperature maintenance, viscosity control, or anti-condensation for any process in pipes, tanks or vessels.

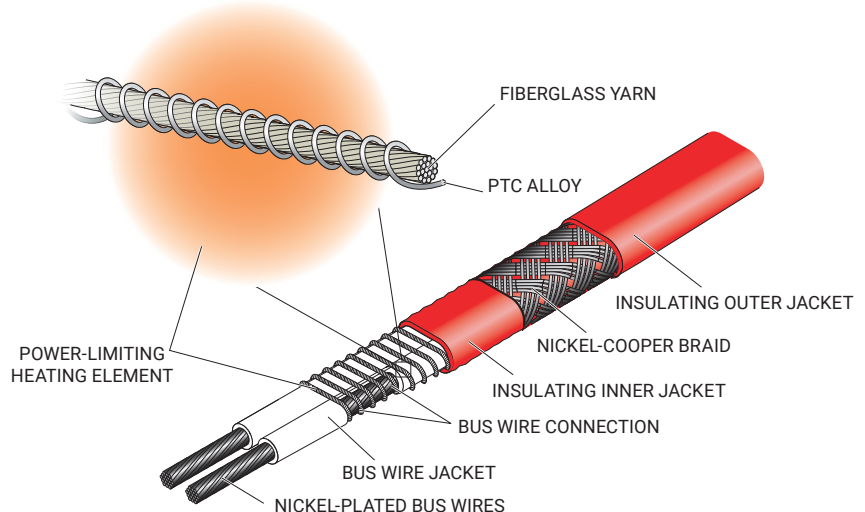
How it works:



POWER-LIMITING TECHNOLOGY (VPL)

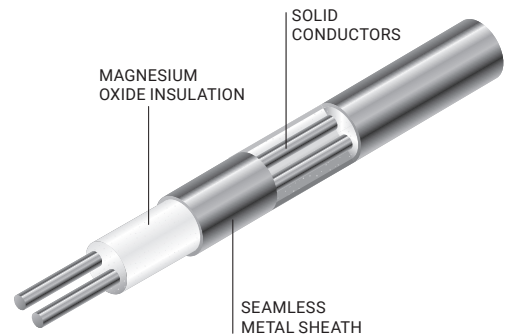
nVent RAYCHEM Power-Limiting (VPL) heater is based on a coiled resistor alloy heating element wrapped around two parallel bus wires. The resistance of this heating element increases as its temperature increases, creating a positive temperature coefficient (PTC) effect. VPL can be used for high power output and /or high temperature exposure requirements which can reduce the number of heating cable runs required.

Applications include: all industrial applications with a need for high maintain or high continuous exposure temperatures.



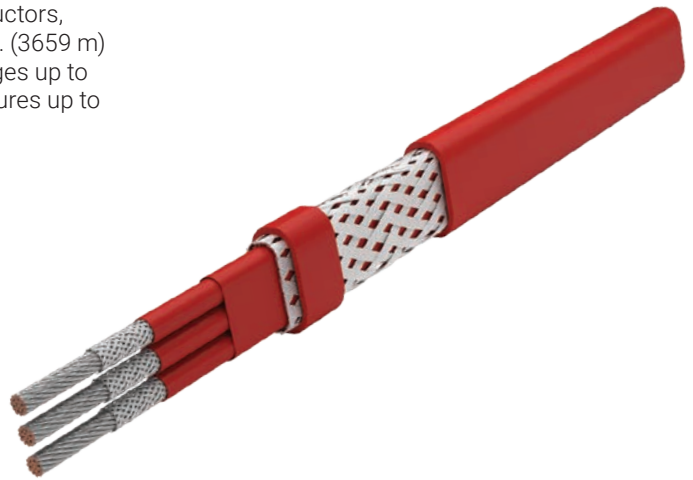
MINERAL INSULATED (MI) TECHNOLOGY

nVent RAYCHEM mineral insulated (MI) heating systems provide the optimum solution when extreme high power outputs and temperatures are required. Applications include: industrial processes with a need for very high maintain temperatures (<600°C) or extreme exposure temperatures (<1000°C).



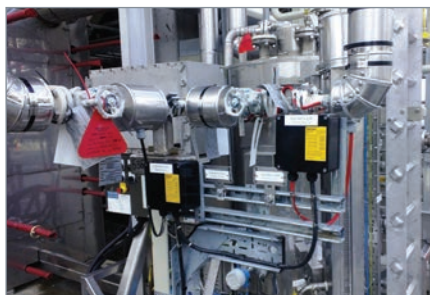
SERIES RESISTANCE (SC) TECHNOLOGY

nVent RAYCHEM series resistance (SC) trace heating cables provide freeze protection and high-temperature maintenance for longline heating applications. Available with single/dual/triple conductors, they can be used for continuous circuit lengths to 12,000 ft. (3659 m) powered from a single source, capable of supporting voltages up to 600 VAC and suitable for continuous exposure to temperatures up to 482°F/250°C.



Triple conductor (3SC)

ADVANCED CONNECTION KITS



nVent RAYCHEM connection kits are rugged, resist corrosion, take less time to install, have fewer parts, and offer visible monitoring status of power and continuity.

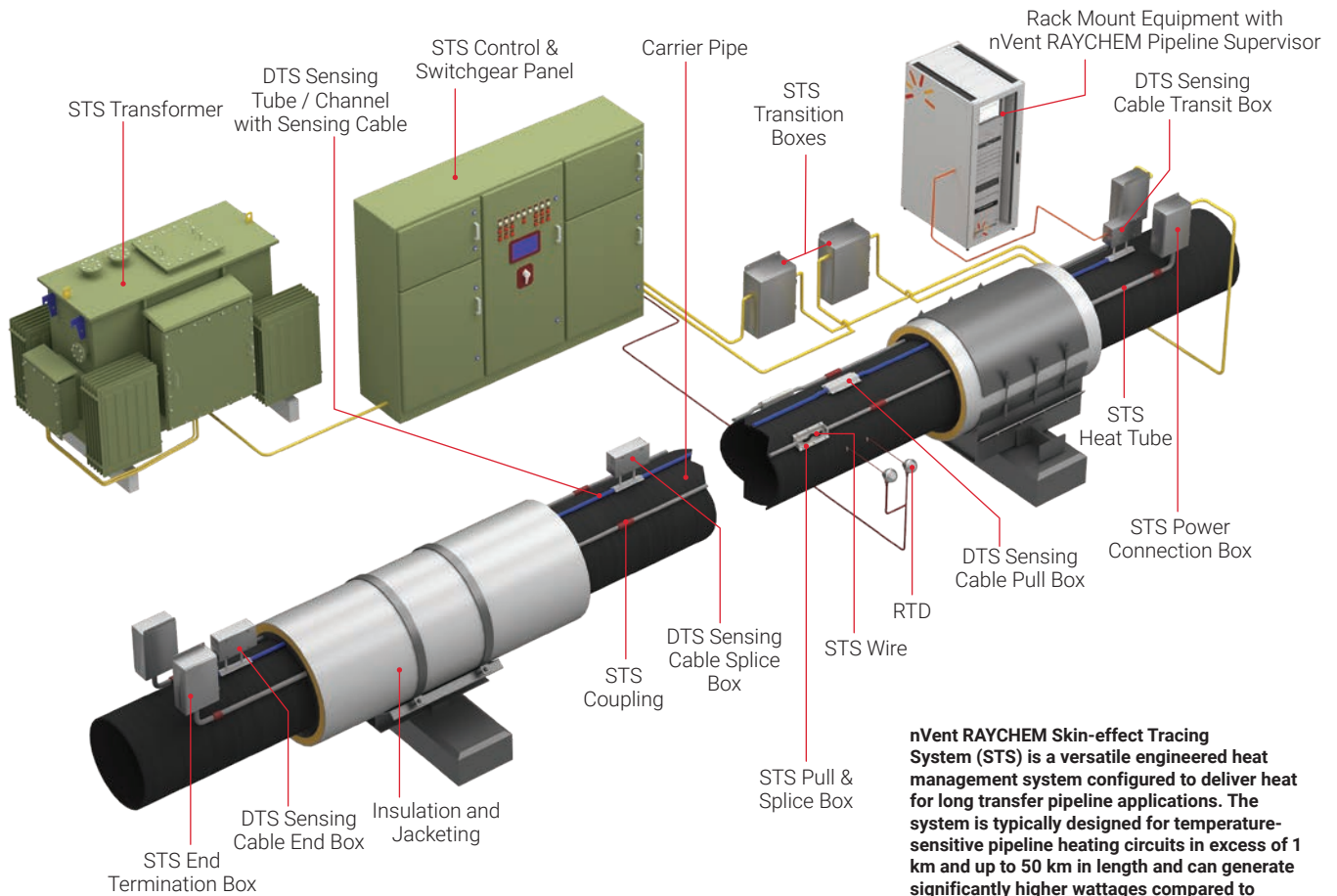
- One range of connection kits compatible with all nVent RAYCHEM self-regulating heating cables.
- An integral part of the complete hazardous area system approval.
- Unique nVent RAYCHEM cold-applied core sealer (patented technology) allows connection without the use and required curing time of RTV silicone.
- Spacious boxes with front access, reliable spring type terminals and captive lid screws for fast installation.

Innovative Heat-Tracing System

SKIN-EFFECT TRACING SYSTEM (STS) TECHNOLOGY

nVent RAYCHEM Skin-effect Tracing System (STS) is a versatile engineered heat management system configured to deliver heat for long transfer pipeline applications (up to 50 kms / 31 miles). Ideally suited for viscous product transfer lines, snow & ice prevention, tank foundation heating, buried/submerged lines and HDDs, and prefabricated pre-insulated lines.

nVent RAYCHEM STS System consists of a thermally rated, electrically insulated wire installed inside a ferromagnetic heat tube. The insulated wire is connected to the heat tube at the end termination, and an AC voltage source is connected between the heat tube and insulated wire at the power connection. AC current flows down the wire, returning on the inside surface (or skin) of the tube.



nVent RAYCHEM Skin-effect Tracing System (STS) is a versatile engineered heat management system configured to deliver heat for long transfer pipeline applications. The system is typically designed for temperature-sensitive pipeline heating circuits in excess of 1 km and up to 50 km in length and can generate significantly higher wattages compared to conventional heating system solutions.

Specialized Engineered Systems

TRAC-LOC TANK INSULATION SYSTEM

nVent RAYCHEM Trac-Loc standing seam tank insulation system is ideally suited for large, flat-bottomed tanks used for the storage of materials that are sensitive to temperature fluctuations and require a covering of insulation and jacketing to reduce heat loss or gain.

Trac-Loc is a thermally efficient and cost effective solution designed to help reduce a customer's total installed and operating costs. The system is virtually maintenance free and provides a lower insulation cost when compared to conventional insulation methods.

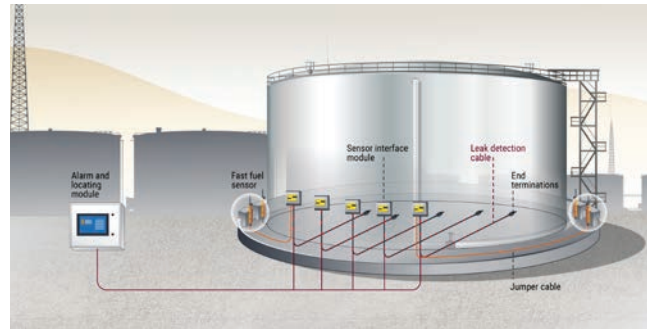
With its unique design, panel construction and installation techniques, Trac-Loc is engineered as a complete installed heat management system.



FUEL AND CHEMICAL LEAK DETECTION SOLUTIONS

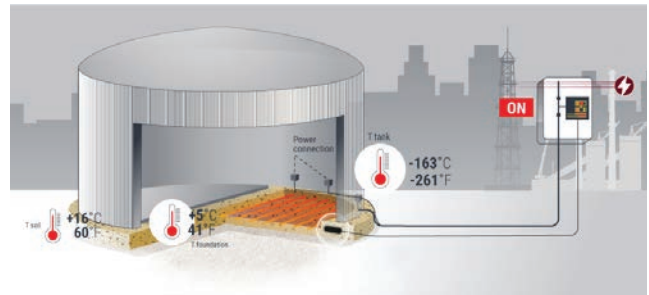
nVent RAYCHEM TraceTek advanced leak detection systems provide peace of mind in protecting industrial facilities and the environment from major hydrocarbon fuel and chemical leaks that can lead to catastrophic explosions.

A TraceTek leak detection system consists of sensor cables, fast acting, resettable probes, monitoring and alarm panels. Ideal for tank farms, pipelines, refueling & bunker area ports and refineries.



FROST HEAVE PREVENTION

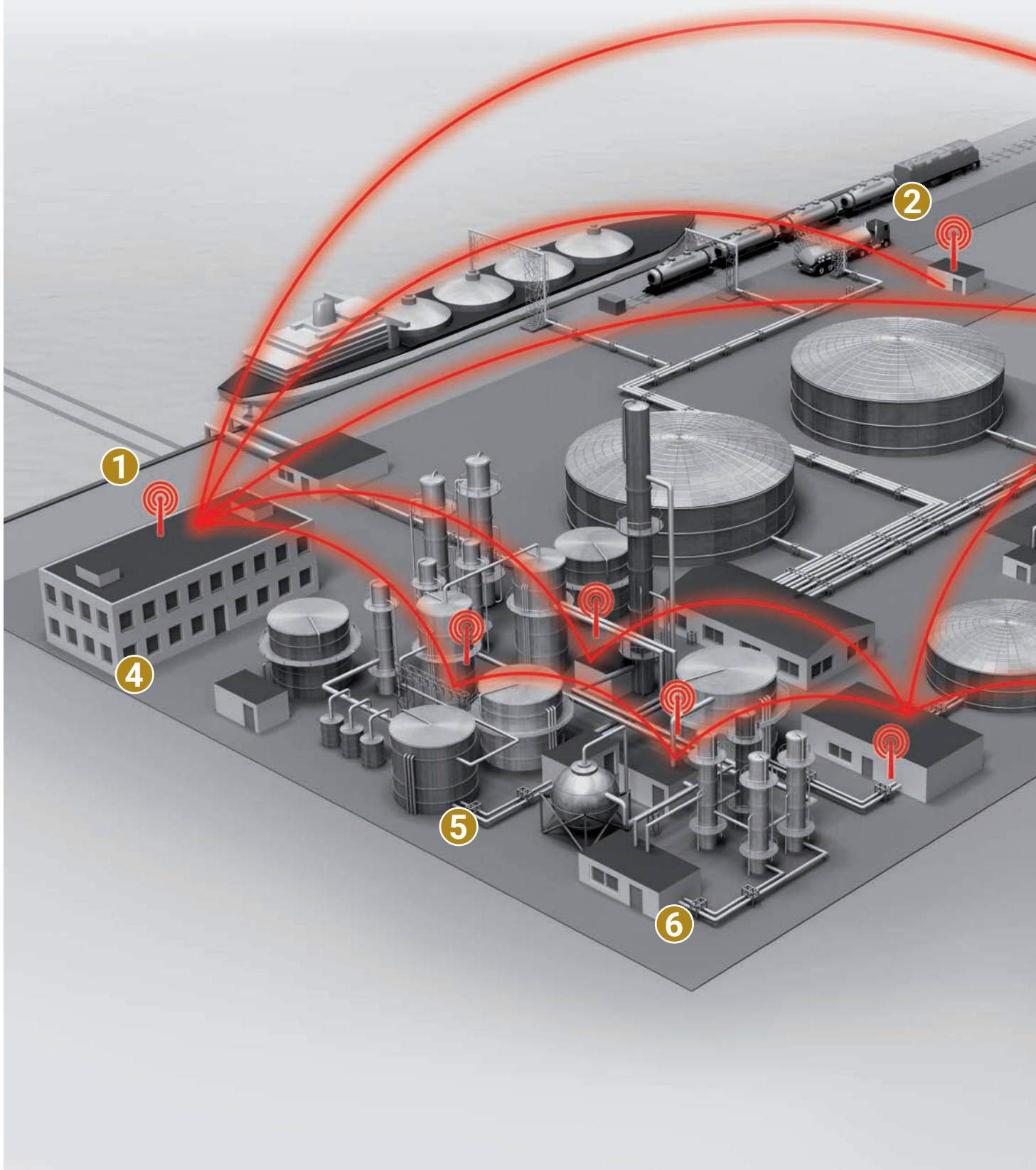
The FHP (self-regulating) and FHPC (parallel constant wattage) family of heating cables prevent frost heave by maintaining the temperature of cryogenic and low temperature storage tank foundations above freezing. FHP and FHPC cables are available for all tank sizes and construction, can be cut to length and terminated in the field, and are suitable for in-conduit installations. The heating cables are designed for use in hazardous and nonhazardous areas, including areas where corrosives may be present.

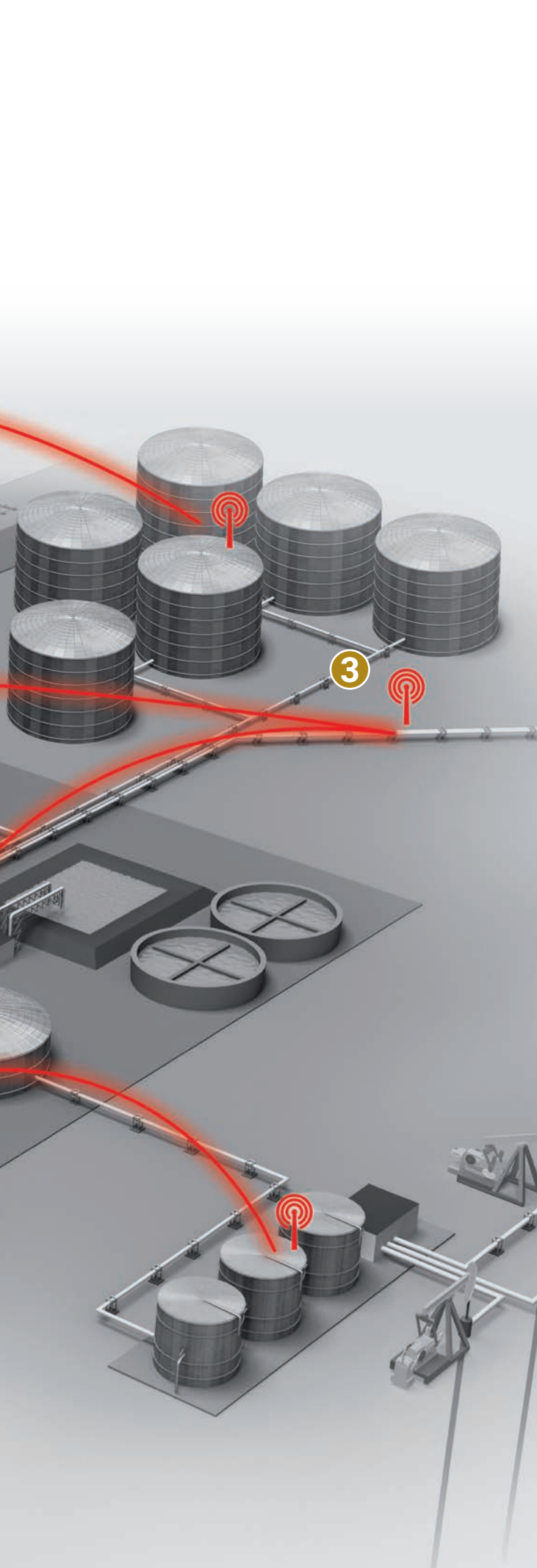


Advanced Control and Monitoring Systems

With today's Industrial processing demands for higher yield productions and quality improvements, while still maintaining high safety standards, the need for a reliable heat tracing solution has never been greater. Data driven insights and connectivity are at the forefront of those needs.

nVent RAYCHEM provides a comprehensive heat tracing solution to help industrial facilities run efficiently. At the heart of that solution is our control and monitoring systems delivering smart advanced features for increased safety, reliability and reduced maintenance time and cost.





1 nVent RAYCHEM Supervisor

Remote monitoring & configuration of heat tracing circuits (alarm logging, trending, reporting, data-analysis)



2 Connectivity

Hardwired or wireless connection of all components for local/remote configuration, monitoring and integration



3 nVent RAYCHEM Pipeline Supervisor

Remote monitoring of long pipelines with critical fluids, utilizing Distributed Temperature Sensing data from fiber optic sensor



4 Multi-circuit Control Panels

Factory assembled and tested panels with or without integrated power distribution for hazardous or nonhazardous areas



5 Single-circuit Field Control

Hazardous and nonhazardous versions. Advanced features with configuration & monitoring via a local user Interface / Tablet and nVent RAYCHEM Supervisor Software



6 Multi-circuit Control Panel Skids

Factory assembled and tested modules with integrated power distribution and transformer for hazardous or nonhazardous areas

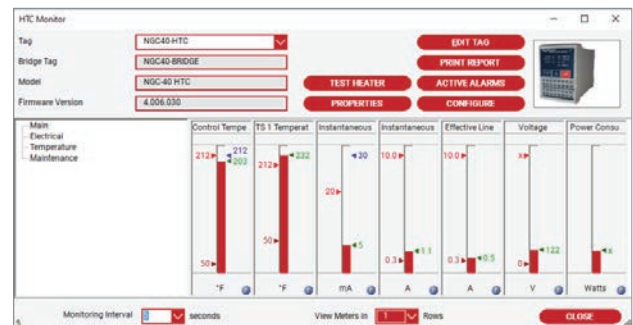


Advanced Control and Monitoring System

We provide a broad range of control & monitoring solutions that can be configured with the Elexant Connect App and monitored via local user interface / Tablet or networked to the nVent RAYCHEM Supervisor software. Wired or wireless connection options are available for all components for full heat trace visibility over your entire facility. Secure data collection and analysis combined with remote monitoring & configuration of heat tracing circuits optimizes system performance and reliability.

NVENT RAYCHEM SUPERVISOR

- nVent RAYCHEM Supervisor heat-tracing controller configuration and monitoring software provides a graphical user interface for nVent RAYCHEM heat-tracing communication and controller products. Heat-trace system information can be accessed and managed from almost anywhere in the world, making nVent RAYCHEM Supervisor a powerful management tool for the entire Heat Management System (HMS).
- The software incorporates advanced features such as datalogging, trending, batch and recipe processing, scheduled events, and alarm monitoring, with the ability to acknowledge and clear alarms. Devices can communicate with nVent RAYCHEM Supervisor via simple hard-wired serial communications, wireless interfaces, network infrastructures including Ethernet LANs (Local Area Networks), and Internet-based WANs (Wide Area Networks).



CONNECTIVITY

- nVent RAYCHEM connectivity solutions provide ultimate flexibility to connect our control systems to the entire facility. Our systems support Modbus RTU and Modbus/TCP communications protocols with RS-485 and Ethernet communications interface capabilities. We also provide options for DCS integration, pre-packaged communications converters, repeaters, and field proven wireless solutions ensuring that your facility is IIoT and Industry 4.0 ready.



Elexant 9200i

NVENT RAYCHEM PIPELINE SUPERVISOR (RPS)

- nVent RAYCHEM Pipeline Supervisor (RPS) is a culmination of nVent's many years of experience troubleshooting, optimizing and maintaining our clientele's temperature-critical pipeline applications. nVent RAYCHEM Pipeline Supervisor (RPS) is the world's premiere temperature critical pipeline monitoring software solution that provides unprecedented access to pipeline performance trends and rich actionable data insights to keep your pipeline operating safely and efficiently.
- Combines nVent RAYCHEM's market leading heat-tracing technologies with fibre optic (FO) Distributed Temperature Sensing (DTS) to capture thousands of data points 24/7 along the entire length of the pipeline asset. Utilizes advanced algorithms, developed based on actual pipeline events, to provide operators and maintenance personnel of pending threats such as the formation of hot and cold spots, time-to-freeze, and pipeline plugs.
- nVent RAYCHEM Pipeline Supervisor is part of nVent's Heating Bundled Solutions that include FO DTS, nVent RAYCHEM Skin-effect Tracing System (STS), Pre-insulated Pipe, and Thermally Isolated Anchors and Supports.



Advanced Control and Monitoring System

MULTI-CIRCUIT CONTROL PANELS

- nVent RAYCHEM offers advanced multi-circuit panels for centralized control in both hazardous and nonhazardous locations for sub-station, and field installation. These panels leverage hardwired or wireless connection of all components for local/remote configuration, monitoring, and integration with other equipment (DCS, PLC).
- Central monitoring and configuration via nVent RAYCHEM Supervisor Software provides advanced features such as temperature, ground fault, operating current and voltage measurements along with full alarming, data logging & trending capabilities.



SINGLE-CIRCUIT FIELD CONTROL

- nVent RAYCHEM offers robust, easy-to-use single-circuit controllers that provide advanced capabilities to meet industrial processing demands. These controllers can be field-mounted for localized configuration and monitoring with the flexibility to connect to nVent RAYCHEM Supervisor Software.
- Advanced features such as temperature, ground fault, operating current and voltage measurements along with full alarming capabilities makes these controllers your best choice for distributed control of your heat tracing.



Elexant 4010i

MULTI-CIRCUIT CONTROL PANEL SKIDS

- Integrated control and power distribution panels along with a local skid mounted transformer for hazardous or nonhazardous areas.
- These skids provide all of the features of the nVent RAYCHEM multi-circuit control panels with the lower cost, lead time reduction, and reliability improvements of a pre-configured and tested factory assembly.



Don't see what you want? Custom designs are available. Contact your local nVent Sales representative for more information.

Advanced Controller Matrix

| nVent RAYCHEM | Thermostats | | | | | | Controllers | | | | |
|----------------------------------|-----------------|-------------------|--------------|--------------|--------------|---------------|---------------------|---------------|---------------|---------------|--------------|
| | Mechanical | | | | | Electronic | Single/Dual Circuit | | | Multi-Circuit | |
| | AMC-1A / AMC-F5 | AMC-1B / AMC-2B-2 | AMC-1H | E507S-LS | E507-2LS-2 | Elexant 3500i | 920 | Elexant 4010i | Elexant 4020i | NGC-30 | NGC-40 |
| Controller architecture | | | | | | | | | | | |
| Single circuit | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | | ✓ |
| Multi-circuit | | | | | | | | | ✓ | ✓ | |
| Dual-circuit | | | | | | | ✓ | | | | |
| Control | | | | | | | | | | | |
| Ambient sensing | ✓ | | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Line sensing | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| PASC / Proportional Ambient | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ |
| Multiple Temperature Sensors | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Soft-start | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ |
| Autocycle | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Max Load | 22 A / 480 V | 22 A / 240 V | 22 A / 480 V | 22 A / 480 V | 22 A / 240 V | 32 A / 277 V | 60 A / 600 V | 32 A / 277 V | 63 A / 690 V | 60 A / 600 V | 60 A / 600 V |
| Monitoring | | | | | | | | | | | |
| Temperature | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Ground Fault | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Current | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Voltage | | | | | | | ✓ | ✓ | ✓ | ✓ | |
| 3-Phase loads | | | | | | | ✓ | | ✓ | ✓ | ✓ |
| Installation location | | | | | | | | | | | |
| Local | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Remote | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Hazardous Area | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Interface | | | | | | | | | | | |
| Local display | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ |
| Remote display | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Alarm Relay | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Communications | | | | | | | | | | | |
| (DCS) Distributed Control System | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| nVent RAYCHEM Supervisor | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

On Demand Stock Panels

The nVent RAYCHEM On Demand Stock Panels program offers rapid delivery of optimized best-in-class standard panel configurations for customer projects. Panels are built with quality components including premium nVent RAYCHEM controllers for use in hazardous and nonhazardous areas. Many configurations have C1D2 circuit breakers and Type 4X stainless steel enclosures.

Improve Efficiency and Reduce Lead Times

Standardized EHT Panel Designs

- Accelerated delivery with an ideal standard configuration
- Minimize schedule risk and maximize productivity
- Available for rapid delivery

Broad Selection of Configurations

Immediate Availability of Best-in-Class Advanced Control Options

- Now stocking a wide range of the best advanced control & monitoring systems – single-circuit to 40 circuit
- Standard selections:
 - Single-circuit (Elexant 4010i) and Dual-circuit (920)
Now with higher stocking levels to meet your project schedule needs!
 - Multi-circuit (Elexant 4020i, NGC-30 & NGC-40 technologies)
- Over 25 configurations for fast delivery to keep your project on track



Consistent Design

Time-tested Quality for your Project

- Approved and ready for use in hazardous locations
- Factory assembled and tested panels guaranteed with nVent Control & Monitoring warranty
- Drawings available immediately, eliminating the need for drawing review and approval process

nVent RAYCHEM Elexant 4010i Single Circuit Controller

| Part # | Cat # | Description |
|-----------|-----------------|---|
| 10380-001 | 4010i-EMR-FW | Elexant 4010i controller in an 8 in x 10 in FRP enclosure with window. 2-pole 32A EMR. Controls a single circuit with a 2-pole electromechanical relay. |
| 10380-002 | 4010i-SSR-FW | Elexant 4010i controller in an 8 in x 10 in FRP enclosure with window. 2-pole 32A 277V SSR. Controls a single circuit with a 2-pole solid-state relay. |
| 10380-003 | 4010i-EMR-SW | Elexant 4010i controller in an 8 in x 10 in stainless steel enclosure with window. 2-pole 32A EMR. Controls a single circuit with a 2-pole electromechanical relay. |
| 10380-004 | 4010i-SSR-SW | Elexant 4010i controller in an 8 in x 10 in stainless steel enclosure with window. 2-pole 32A 277V SSR. Controls a single circuit with a 2-pole solid-state relay. |
| 10380-005 | 4010i-EMR-IS-FW | Elexant 4010i controller in an 8 in x 10 in FRP enclosure with window. 2-pole 32A EMR. Controls a single circuit with a 2-pole electromechanical relay. Includes intrinsically safe barriers on RTD inputs. |
| 10380-006 | 4010i-SSR-IS-FW | Elexant 4010i controller in an 8 in x 10 in FRP enclosure with window. 2-pole 32A 277V SSR. Controls a single circuit with a 2-pole solid-state relay. Includes intrinsically safe barriers on RTD inputs. |
| 10380-007 | 4010i-EMR-IS-SW | Elexant 4010i controller in an 8 in x 10 in stainless steel enclosure with window. 2-pole 32A EMR. Controls a single circuit with a 2-pole electromechanical relay. Includes intrinsically safe barriers on RTD inputs. |
| 10380-008 | 4010i-SSR-IS-SW | Elexant 4010i controller in an 8 in x 10 in stainless steel enclosure with window. 2-pole 32A 277V SSR. Controls a single circuit with a 2-pole solid-state relay. Includes intrinsically safe barriers on RTD inputs. |

Note: Please refer to product datasheets for more information.

nVent RAYCHEM 920 Dual Circuit Controller

| Part # | Cat # | Description |
|-----------|------------------------------------|--|
| 10160-010 | 920*E4FWL*SIS302*SS3102*HTC*CON | 920 controller in a fiberglass enclosure with window. Controls two circuits independently, each with a 1-pole solid-state relay. |
| 10160-011 | 920*E4FWL*SIS302*SS3102*HTC485*CON | 920 controller in a fiberglass enclosure with window. Controls two circuits independently, each with a 1-pole solid-state relay. Includes ability for 2-wire RS-485 communication. |
| 10160-012 | 920*E4FWL*SIS302*SS3202*HTC*CON | 920 controller in a fiberglass enclosure with window. Controls two circuits independently, each with a 1-pole solid-state relay. Includes ability for 2-wire RS-485 communication. |
| 10160-013 | 920*E4FWL*SIS302*SS3202*HTC485*CON | 920 controller in a fiberglass enclosure with window. Controls two circuits independently, each with a 2-pole solid state relay. Includes ability for 2-wire RS-485 communication. |

nVent RAYCHEM Elexant 4020i Multi-Circuit Controller

| Part # | Cat # | Description |
|-----------|-------------------------|---|
| 10380-050 | 4020i-A-2-FW-2A1SS3-CVH | Elexant 4020i controller in a fiberglass enclosure with window. Controls two circuits independently, each with a 1-pole solid-state relay. |
| 10380-051 | 4020i-A-2-FW-2A2SS3-CVH | Elexant 4020i controller in a fiberglass enclosure with window. Controls two circuits independently, each with a 2-pole solid state relay. |
| 10380-052 | 4020i-A-4-FW-4A1SS3-CVH | Elexant 4020i controller in a fiberglass enclosure with window. Controls four circuits independently, each with a 1-pole solid-state relay. |
| 10380-053 | 4020i-A-6-FW-6A1SS3-CVH | Elexant 4020i controller in a fiberglass enclosure with window. Controls six circuits independently, each with a 1-pole solid-state relay. |

nVent RAYCHEM NGC-30 Multi-Circuit Power Distribution and Control Panel

| Part # | Cat # | Description | Recommended Transformer Size |
|-----------|---|---|------------------------------|
| 10721-022 | NGC-30-F-4X-H-40(1P)30A-277-175-N-0-T | 40 ckt NGC-30. SSR Qty. Encapsulated Breakers. 40 277V 30A. 175A MCB | 112.5 kVA |
| 10721-023 | NGC-30-F-4X-H-30(1P)30A-277-125-N-0-T | 30 ckt NGC-30. SSR Qty. Encapsulated Breakers. 30 277V 30A. 125A MCB | 75 kVA |
| 10721-024 | NGC-30-F-4X-H-20(1P)30A-277-80-N-0-T | 20 ckt NGC-30. SSR Qty. Encapsulated Breakers. 20 277V 30A. 70A MCB | 45 kVA |
| 10721-025 | 40ckt NGC30 EMR Z-PURGE 120V 24-16 30A | 40 ckt NGC-30. EMR, Z-Purge, Qty. 24 120V 30A, Qty. 16 208V 30A. 225A MCB | 75 kVA |
| 10721-026 | 40ckt NGC30 EMR Z-PURGE 120V30A-225A MB | 40 ckt NGC-30. EMR, Z-Purge, Qty. 40 120V 30A. 225A MCB | 75 kVA |

nVent RAYCHEM NGC-40 Multi-Circuit Power Distribution and Control Panel

| Part # | Cat # | Description | Recommended Transformer Size |
|------------|-------------------------------------|---|------------------------------|
| 101723-001 | NGC-40-F-4-H-480-N-110 | 4 ckt NGC40. SSR, no power distribution | not applicable |
| 101723-002 | NGC-40-F-4X-H-10(1P)30A-277-50-N-0 | 10 ckt NGC-40. SSR, Encapsulated Breakers, 277V 30A. 50A MCB | 30 kVA |
| 101723-003 | NGC-40-F-4X-H-20(1P)30A-277-80-N-0 | 20 ckt NGC-40. SSR, Encapsulated Breakers, 277V 30A. 70A MCB | 45 kVA |
| 101723-004 | NGC-40-F-4X-H-30(1P)30A-277-125-N-0 | 30 ckt NGC-40. SSR, Encapsulated Breakers, 277V 30A. 125A MCB | 75 kVA |
| 101723-005 | NGC-40-F-4X-H-40(1P)30A-277-175-N-0 | 40 ckt NGC-40. SSR, Encapsulated Breakers, 277V 30A. 175A MCB | 112.5 kVA |

Turnkey Heat Management System Services

nVent TRACER Life Cycle Services technical support teams and network of 6000+ trained field personnel around the world execute turnkey project solutions, delivering seamless project management, efficient system designs, on-time delivery, schedule compression & power distribution savings. From concept to delivery, we optimize your heat tracing projects for timing, budget and scope with a fully integrated approach. You can rely on our experts to ensure safety, quality and performance for projects of any size and scope.



FRONT END PLANNING

Engaging nVent early in the planning process allows us to help you make decisions which can reduce the overall installed cost of the heat management system.

PROCUREMENT

nVent will manage all materials procurement and fabrication activities making sure the right materials get to the right work location at the right time.

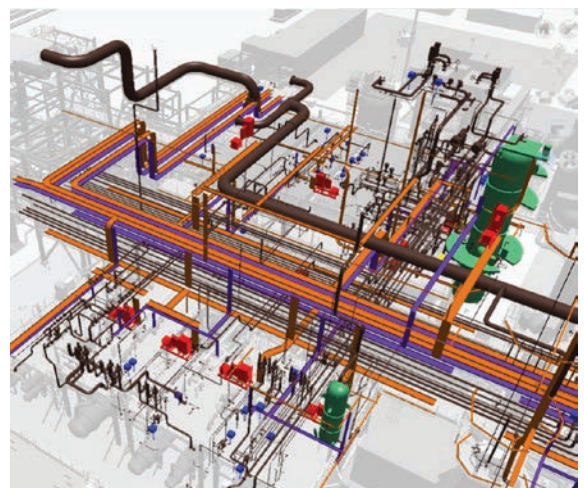
DETAILED ENGINEERING

Our experienced engineers apply product and optimization strategies to design a heat management system which meets your specific requirements at the lowest possible cost.

TRACERLYNX

3D HEAT MANAGEMENT SYSTEM SOFTWARE

nVent's state-of-the-art proprietary 3D heat management system design software. Created to minimize errors, delays and rework for heat tracing circuits, nVent RAYCHEM TracerLynx is one powerful database that combines all client information, design data and deliverables. With TracerLynx, every element needed to design a full heat management system can be imported to one system, where the entire project can be managed and designed. With this software, you will have a more efficient and accurate EHT system, saving you thousands in Total Installed Costs.



Turnkey Heat Management System Services

We are committed to the reliability of your operations. Our expertise in heat management system gives you piece of mind that your facility will operate efficiently and perform at the highest level.



INSTALLATION AND CONSTRUCTION

Our construction teams are fully trained and experienced in heat-tracing installation techniques. Leverage our expertise to ensure timely and accurate installation of your heat management system components, insulation and cladding.

COMMISSIONING

Our commissioning services ensure that the heat management system is operating as expected. This includes full system audits, programming and set up of control panels and operational checks.

POST INSTALLATION SERVICES AND MAINTENANCE

Providing regular Heat Management System audits or implementing a maintenance agreement, nVent provides you with the security of having your system regularly evaluated by experts in the heat-tracing industry, allowing timely resolution of potential system problems.

SITE SERVICES

Using our Site Services allows you to maintain a single point of responsibility and accountability through the entire installation process. This ensures continuity of project knowledge from engineering through start-up.

QUALITY ASSURANCE / QUALITY CONTROL

Our Quality Management System addresses all processes including the design, supply, installation, and commissioning to ensure your Heat Management System is operating as intended.

WE MANAGE THE HEAT YOU NEED

- World class safety record
- Commitment to quality
- Single point of contact for your project needs

Visit our website at nVent.com/TRACER
Or contact us at 1-800-545-6258

Website and Design Software

[VISIT NVENT.COM/RAYCHEM](http://nvent.com/raychem)

Explore nVent RAYCHEM virtual worlds on our website where you can find animations showing where our advanced heat tracing solutions apply in an industrial facility, and how they work.

Additionally, our website provides all the latest tools and information you need to design, select, and purchase a complete heat-tracing system. Use our web-based program, or downloadable design software to help you with your projects.

Browse and find the most up-to-date product brochures, data sheets and installation instructions.

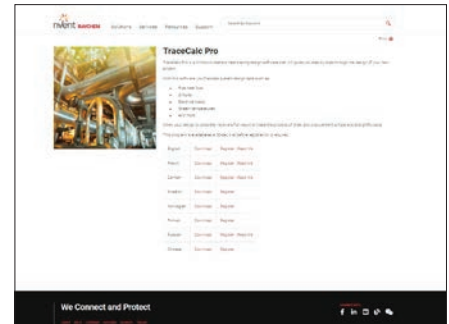
DESIGN SOFTWARE

nVent RAYCHEM TraceCalc Pro design software brings you the latest advances in automated heat-tracing design capabilities.

TraceCalc Pro provides an intuitive, easy-to-navigate and user-friendly interface to create simple or complex heat-tracing designs for pipes, tanks and vessels.

With the TraceCalc Net online tool, you can create a heat-tracing design in a few simple steps to:

- Identify the right products for your application
- Select quantities for a complete bill of materials
- Choose optional control and monitoring systems



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