



**CONNECT AND PROTECT**

# Industrial Heat Tracing Solutions

Products & Services

  
**nvent**

**RAYCHEM**

## ADVANCED INDUSTRIAL SOLUTIONS

As the world's largest provider of complete electrical heat management systems, primarily for the general process, oil and gas, chemical, and power generation industries, nVent provides innovative nVent RAYCHEM products and nVent TRACER turnkey solutions. nVent RAYCHEM heat trace systems offer superior reliability with the highest lifetime value at lower installed cost and lower cost of ownership. Our premiere turnkey solutions include full life cycle support—ranging from front-end engineering and installation to maintenance and operation services. Our global experience and office presence in 50 countries uniquely position us to manage the heat needed for projects of any size and scope.

## THE HEART OF OUR SOLUTIONS

As the inventor of self-regulating heat tracing in 1972, our nVent RAYCHEM brand is recognized for technical leadership in the industries we serve. Our cables deliver the right amount of heat exactly when and where it is needed. As the temperature drops, more heat is produced. Conversely, as the temperature rises, less heat is produced. But there are many more benefits:

- The smart cables can be overlapped without any risk of overheating.
- The heating cables can be cut to length "in the field". This means additional flexibility when plans do not correspond to the "real life" situation on site.

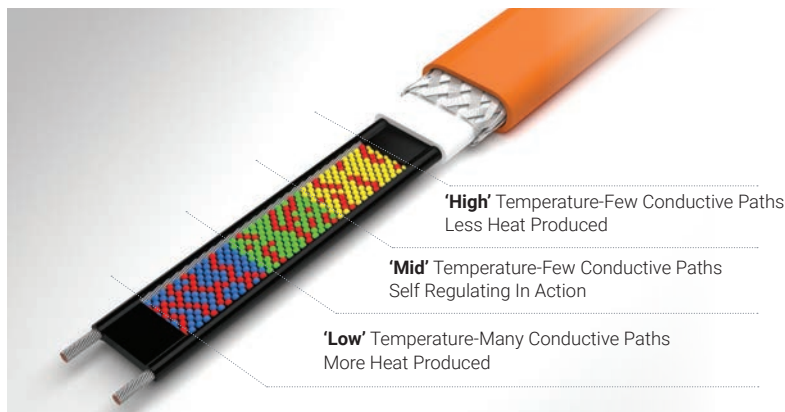
Since inventing the technology almost 50 years ago, we have sold over 1.8 billion feet of nVent RAYCHEM self-regulating cable. In addition to this product family that addresses a full range of temperature needs, we also offer other types of heating cables, control and monitoring solutions, and a full range of heating product services.

Our mineral insulated heating cables and wiring have led the industry for more than 84 years. Able to withstand extreme, harsh environments, our cables provide the most reliable heat tracing solution for high-temperature applications.

## Rely on the Heat Tracing Experts

## 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 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.



**RAYCHEM**



**TRACER**

## Protecting Critical Industrial Processes MAXIMIZING Performance and Reliability



### **INNOVATIVE PRODUCT SOLUTIONS**

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nVent RAYCHEM heat trace systems offer superior reliability with the highest lifetime value at lower installed cost and lower cost of ownership.

- Diverse portfolio of heat tracing technologies for any application
- Easy-to-design and install systems
- Smart control and monitoring systems protecting critical assets
- Flexible connectivity and integration to DCS and PLC systems

### **TURNKEY HEAT MANAGEMENT SYSTEM SERVICES**

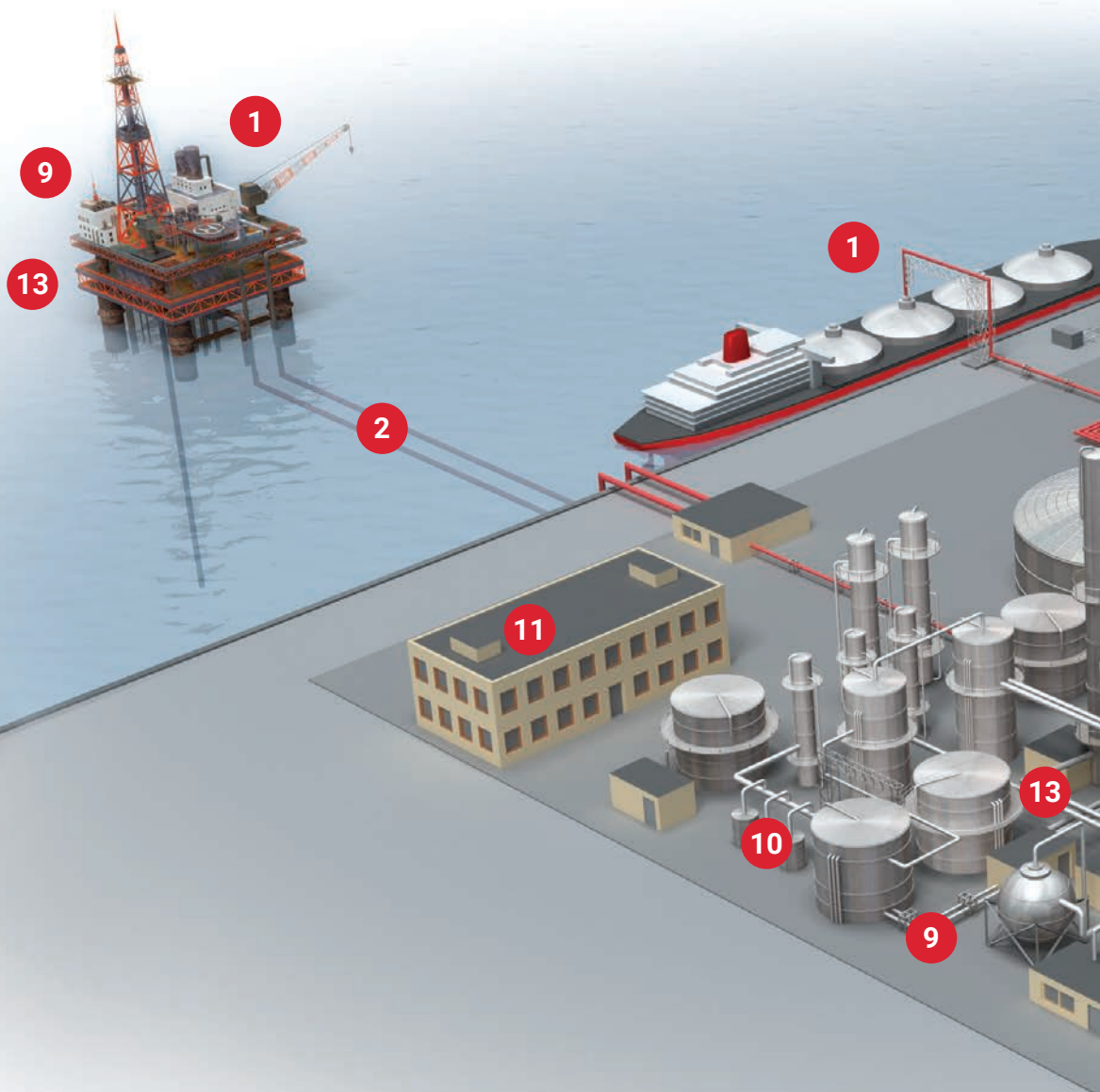
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nVent TRACER Services is the premiere provider of industrial heat management system (HMS) solutions to connect and protect projects of any size, anywhere on earth.

- Full suite of services including front-end engineering, installation and commissioning, to maintenance, monitoring and operational optimization
- MRO Expertise
- Audit Programs
- Control Panel Upgrade Expertise

# Advanced Industrial Solutions

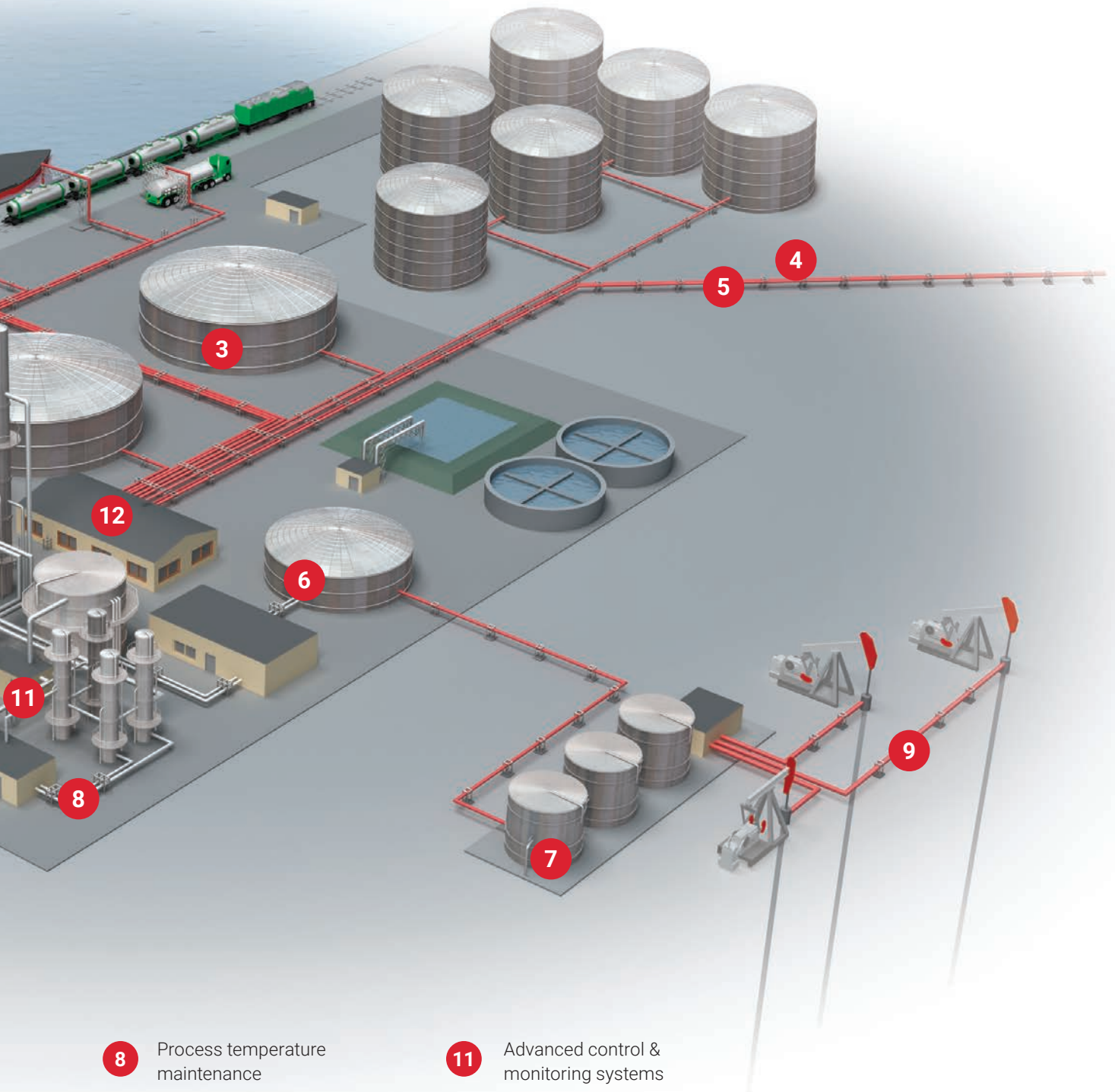
nVent provides solutions to a wide range of industrial markets, primarily for the oil and gas, power generation, transport and storage, and (petro-) chemical industries.



- 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



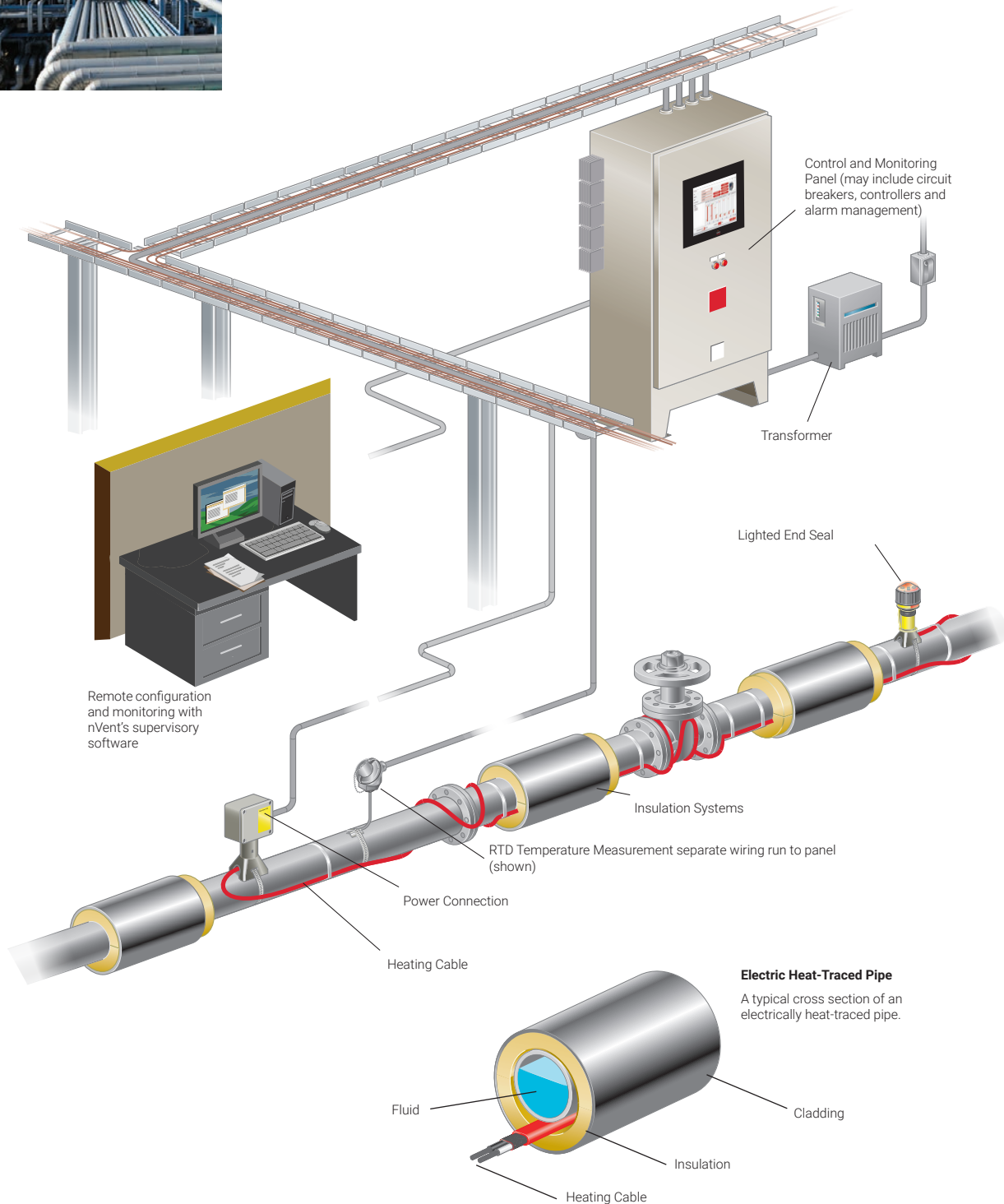
- 8 Process temperature maintenance
- 9 Pipe freeze protection
- 10 Pre-traced, pre-insulated tubing for instrumentation & sample lines

- 11 Advanced control & monitoring systems
- 12 Power distribution
- 13 Fire & performance wiring

# Complete Electric Heat-Tracing System

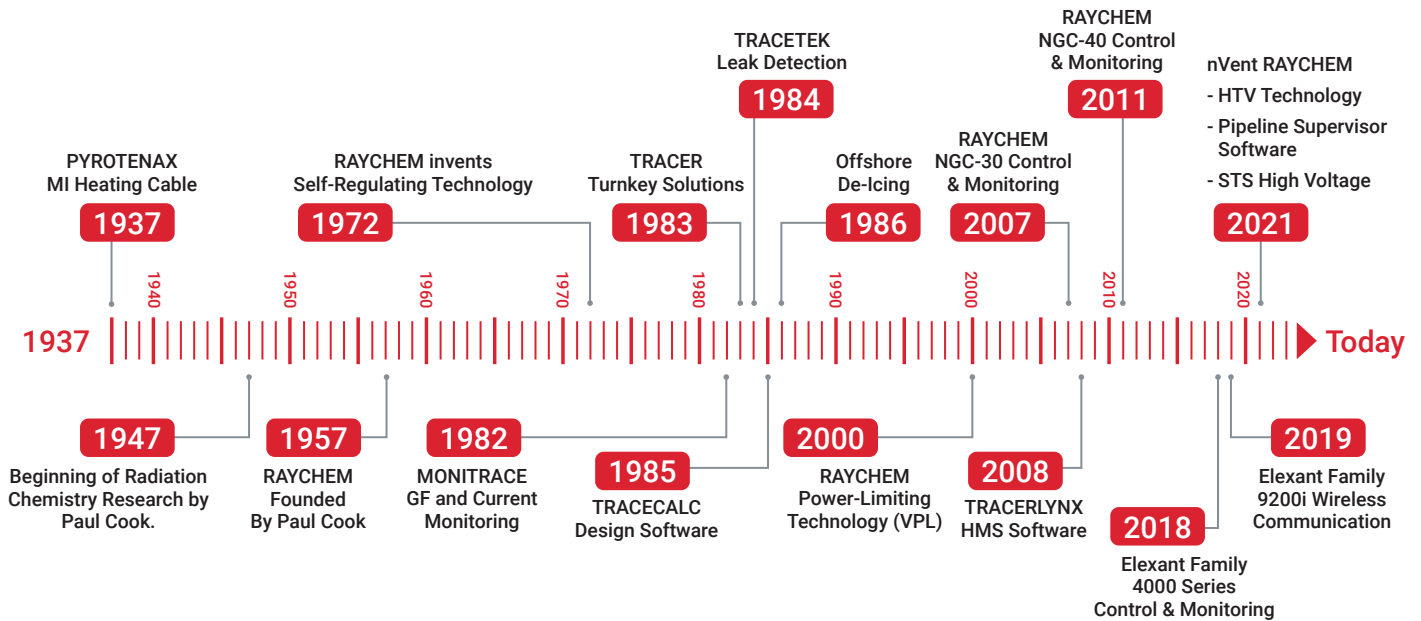


An electrical heat-tracing system is much more than just the heating cable. nVent provides a complete system including the transformer, control and monitoring panels, power connections, heating cable, end terminations, and related accessories where all parts are designed and certified to function as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



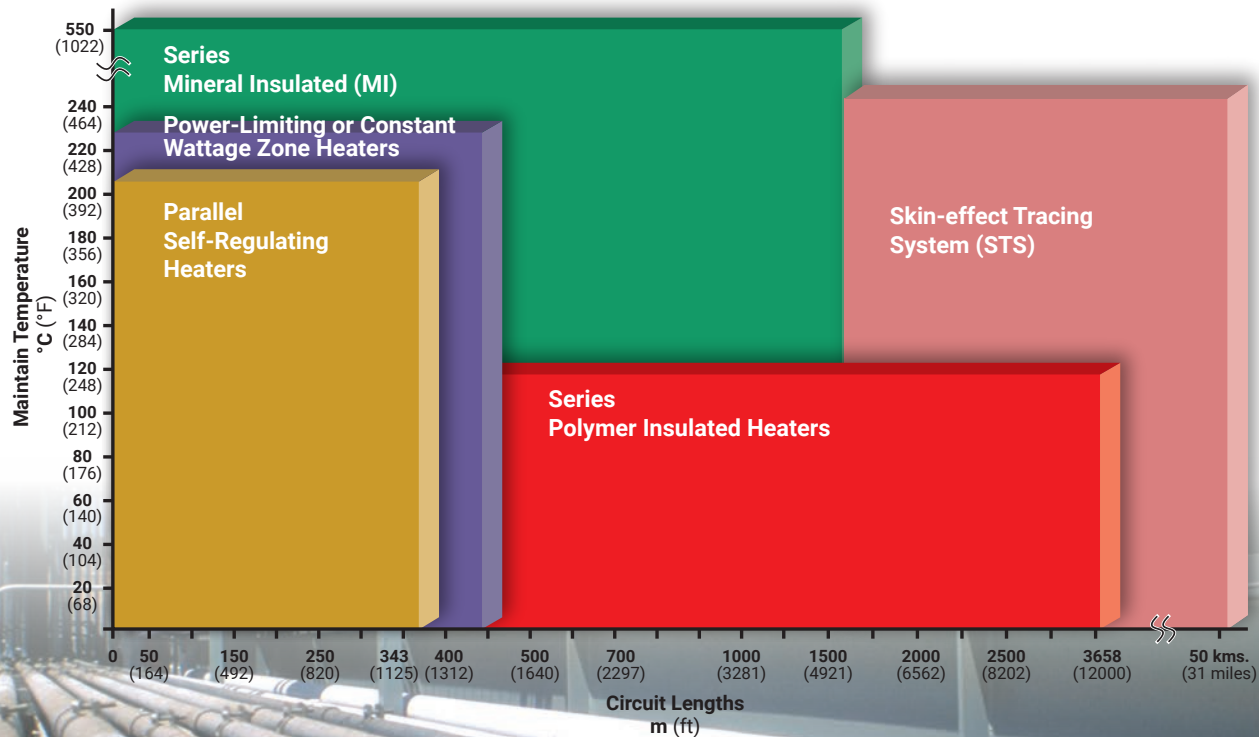
Note: The illustrations on these pages do not necessarily depict actual applications and installations.

# 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

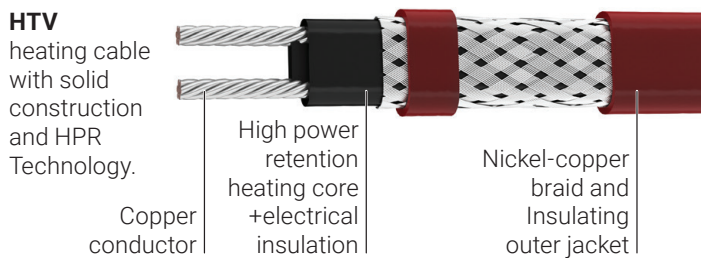
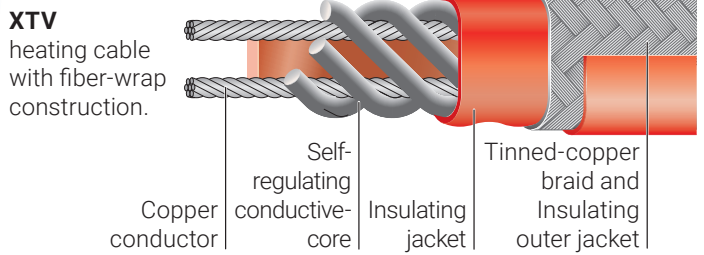
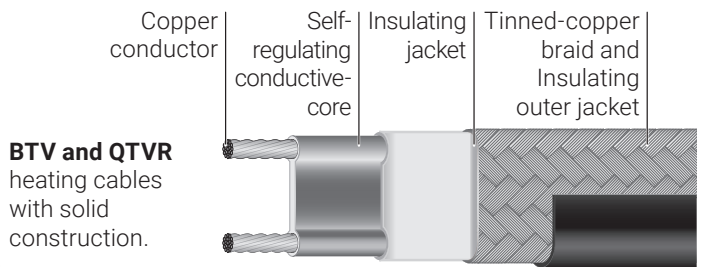
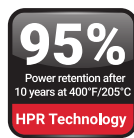
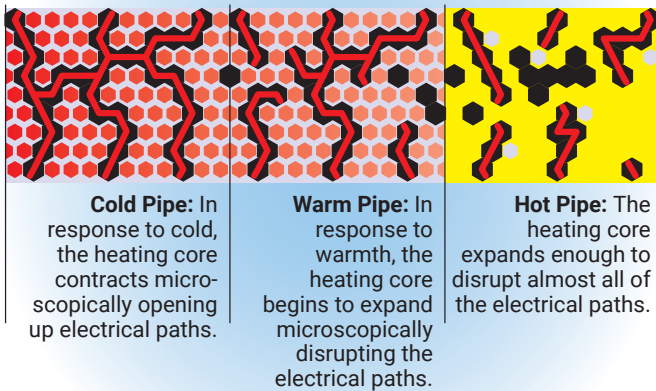
## SELF-REGULATING TECHNOLOGY

nVent RAYCHEM revolutionized the heat-tracing industry when it invented self-regulating heater technology 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 cable was developed with a High Power Retention (HPR) heating core 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.

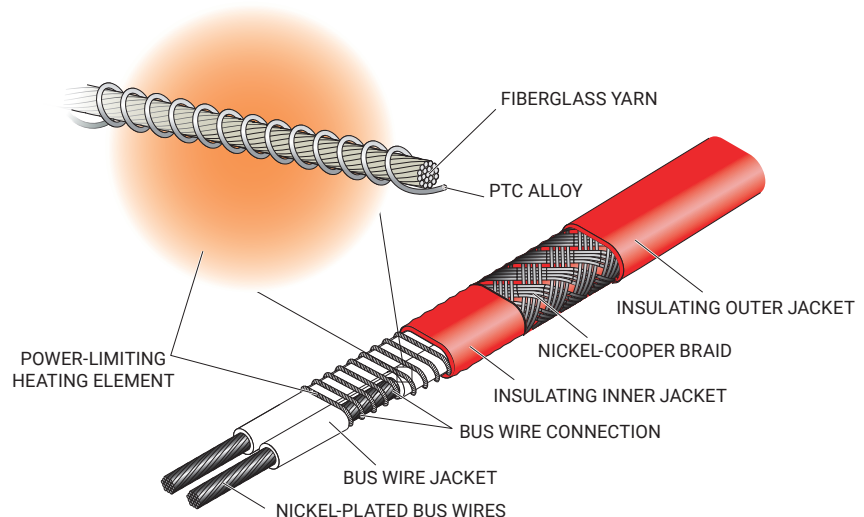
How it works:



## 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.

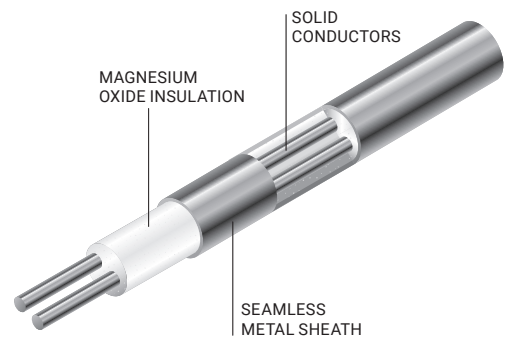
Applications include: all industrial applications with a need for high maintain or high continuous exposure temperatures.





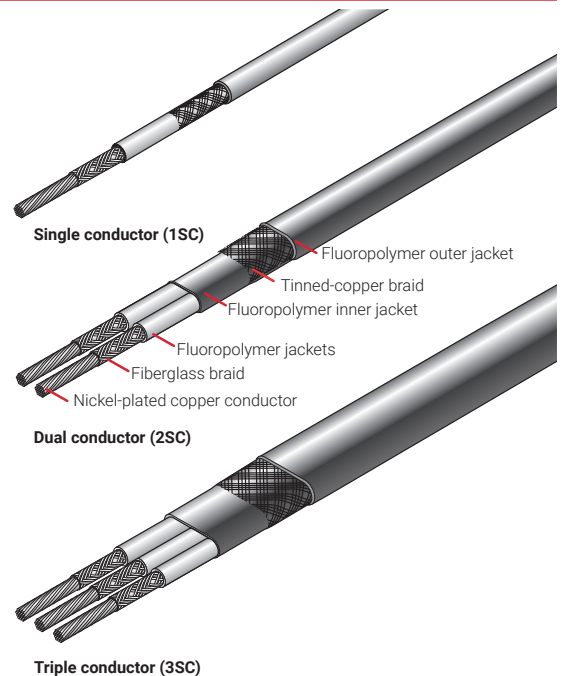
## MINERAL INSULATED (MI) TECHNOLOGY

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).

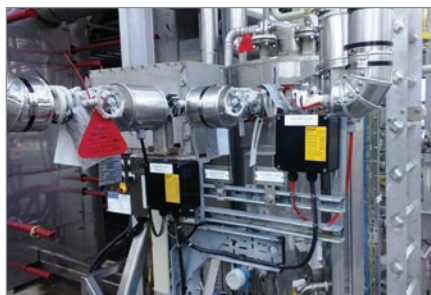


## SERIES RESISTANCE (SC) TECHNOLOGY

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 400°F/204°C.



## 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.

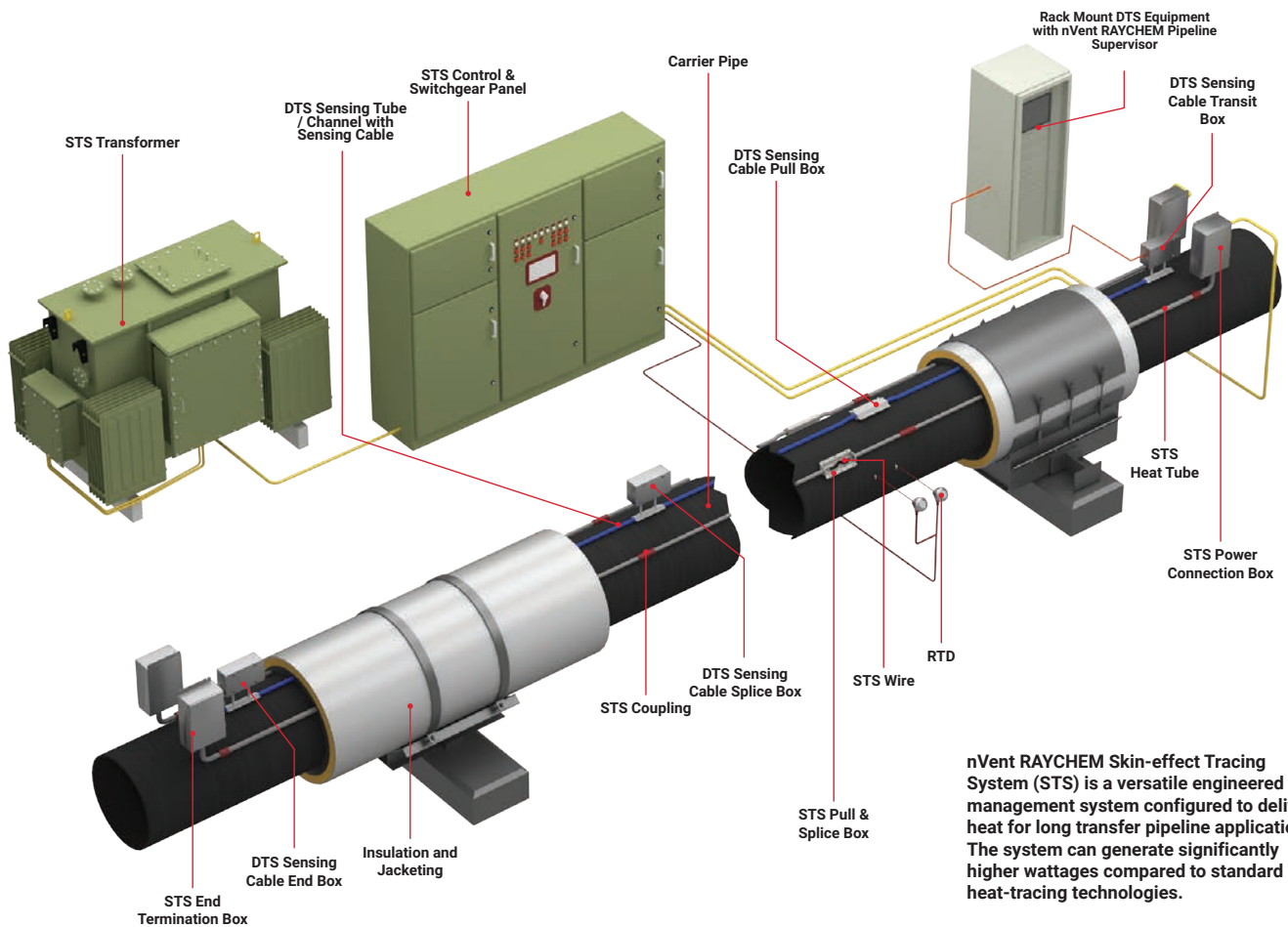
- One range of connection kits compatible with all nVent RAYCHEM self-regulating heating cables.
- An integral part of the complete hazardous area system approval.
- Unique nVent RAYCHEM cold-applied core sealer (patented technology) allows connection without the use and required curing time of RTV silicone.
- 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 can generate significantly higher wattages compared to standard heat-tracing technologies.

# 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.

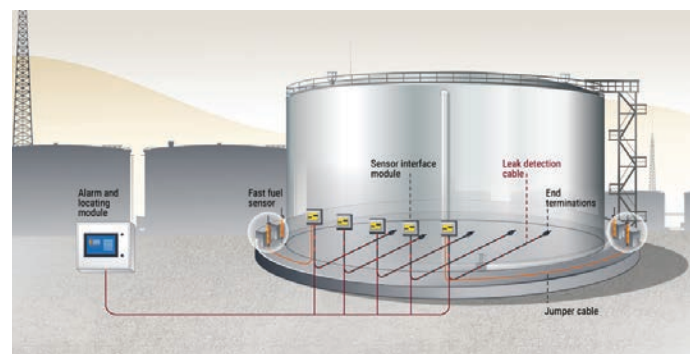
With its unique design, panel construction and installation techniques, Trac-Loc is engineered as a complete installed heat management system.



## FUEL AND CHEMICAL LEAK DETECTION SOLUTIONS

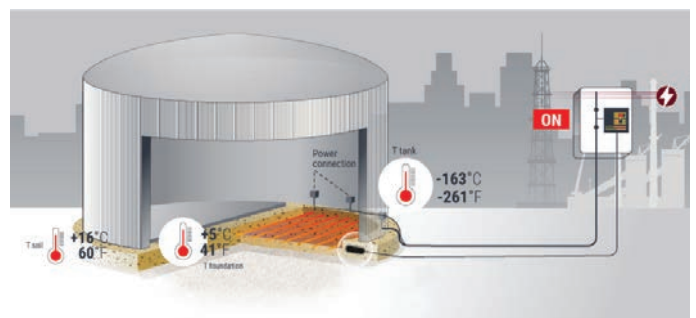
nVent RAYCHEM TraceTek advanced leak detection systems provide peace of mind in protecting industrial facilities and the environment from major hydrocarbon fuel and chemical leaks that can lead to catastrophic explosions.

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

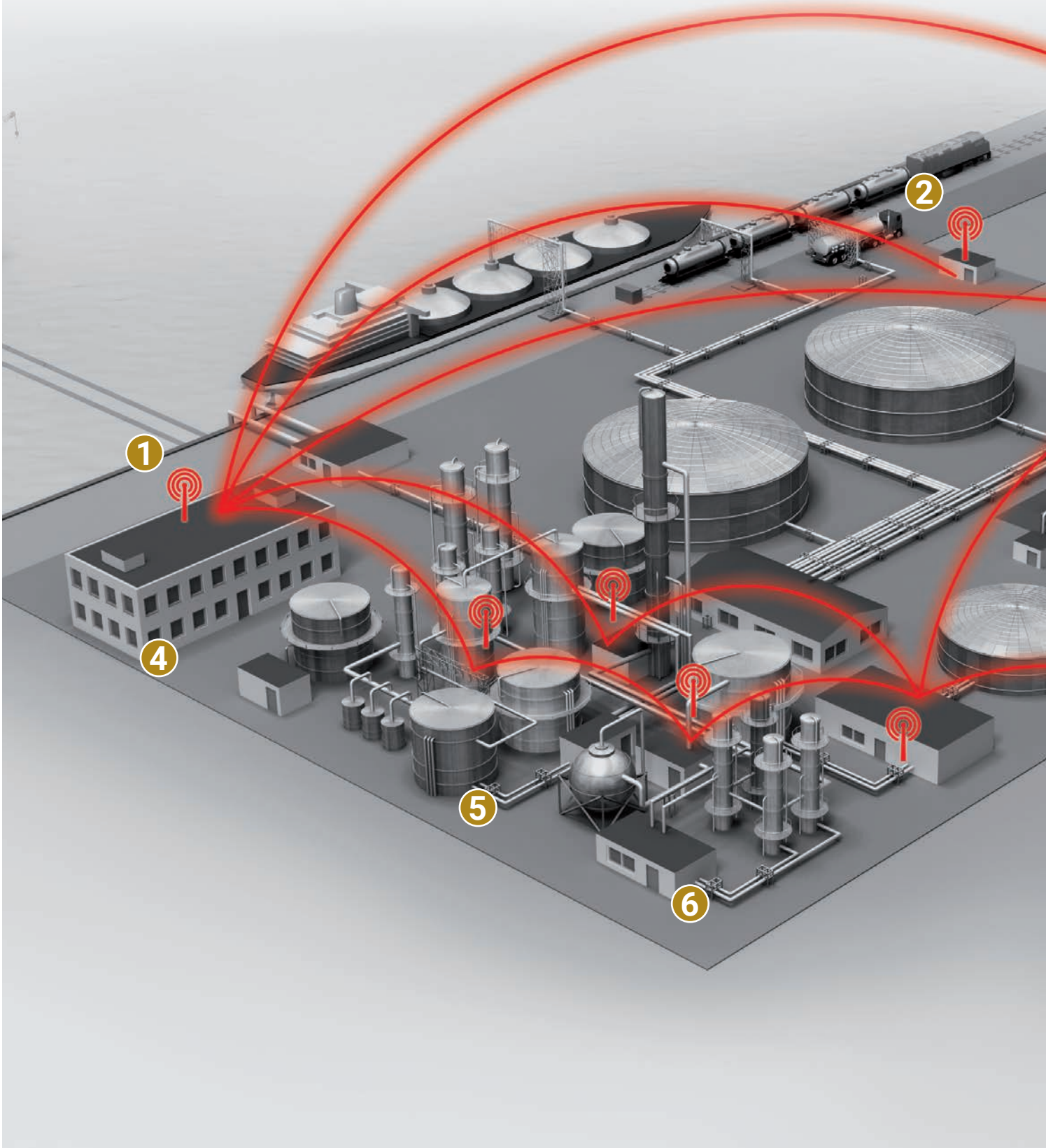
The FHP (self-regulating) and FHPC (parallel constant wattage) family of heating cables prevent frost heave by maintaining the temperature of cryogenic and low temperature storage tank foundations above freezing. FHP and FHPC cables are available for all tank sizes and construction, can be cut to length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

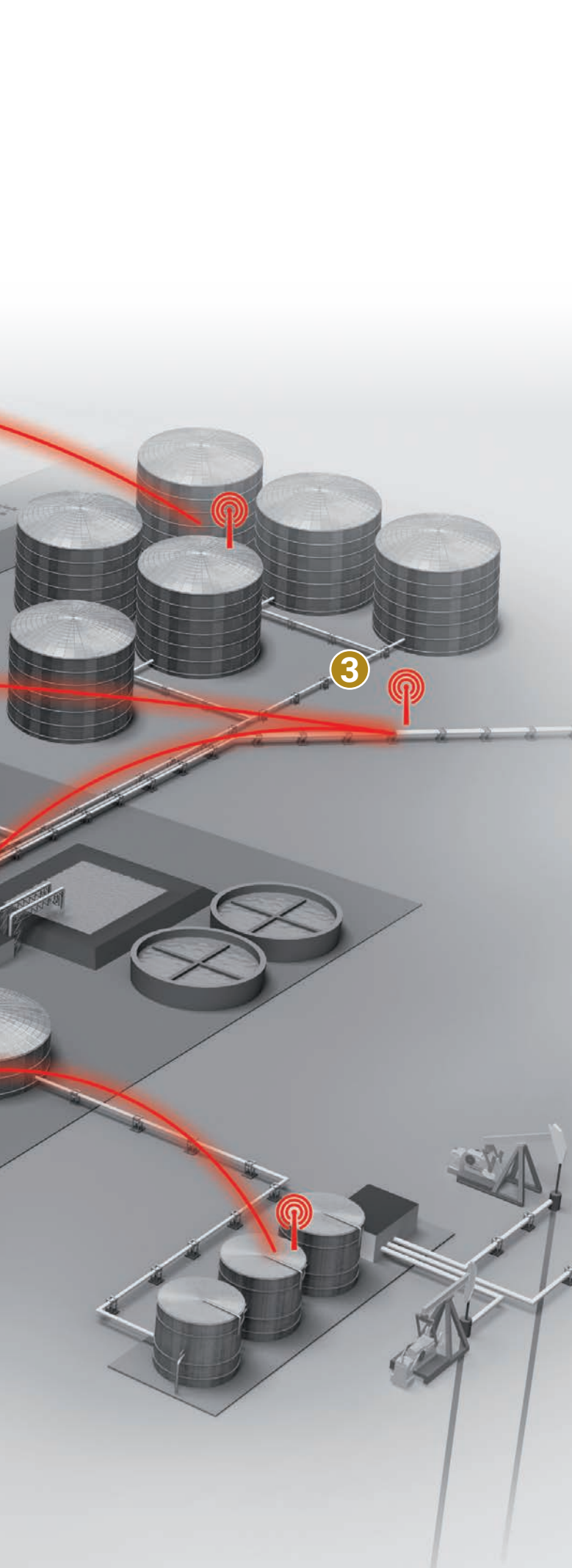


# Advanced Control and Monitoring Systems

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 non-hazardous areas



**5 Single-circuit Field Control**

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



**6 Multi-circuit Control Panel Skids**

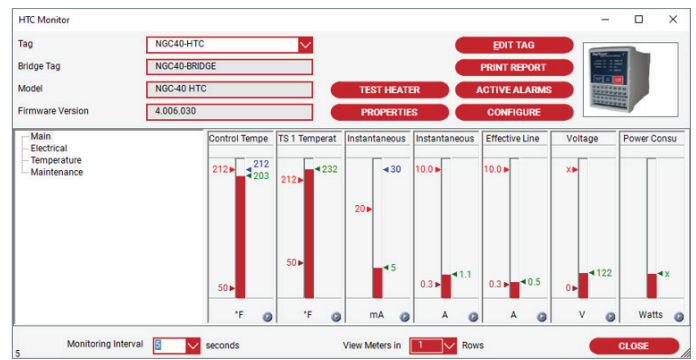
Factory assembled and tested modules with integrated power distribution and transformer for hazardous or non-hazardous areas



# Advanced Control and Monitoring System

## 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

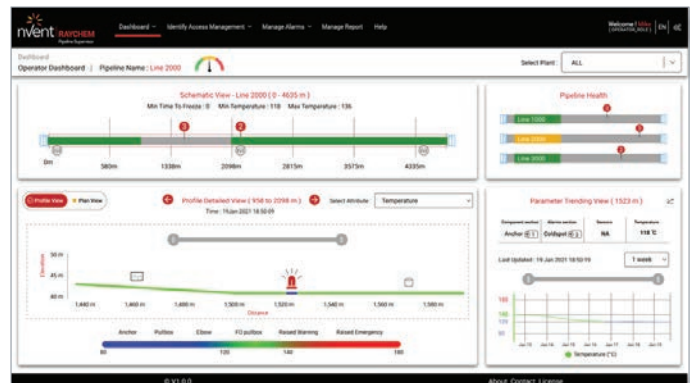
- nVent RAYCHEM connectivity solutions provide ultimate flexibility to connect our control systems to the entire facility. Our systems support Modbus RTU and Modbus/TCP communications protocols with RS-485 and Ethernet communications interface capabilities. We also provide options for DCS integration,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



Elxant 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 non-hazardous 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.



Elefant 4010i

## MULTI-CIRCUIT CONTROL PANEL SKIDS


- Integrated control and power distribution panels along with a local skid mounted transformer for hazardous or non-hazardous 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.



# Advanced Controller Matrix

Model	Elexant 4010i	Elexant 4020i	920
<b>Description</b>	 Single-circuit touch screen heat-tracing control and monitoring system	 Single or multi-circuit touch screen heat-tracing control and monitoring system	 Dual-circuit heat tracing control and monitoring system
<b>General</b>			
Ambient Operating Temperature	-40°C to 60°C (-40°F to 140°F)	-40°C to 70°C (-40°F to 158°F)	-40°C to 60°C (-40°F to 140°F)
Supply Voltage (+/- 10%)	100-277Vac nominal, 50/60Hz	100-277Vac nominal, 50/60Hz	100-277Vac nominal, 50/60Hz
NEMA Enclosure	Type 4X, IP64 (Fiberglass), IP66 (SS)	Type 4X, IP64 (Fiberglass), IP66 (SS)	Type 4X
NAM Approvals	UL (C,US) C1D2 Group A,B,C,D T4	UL (C,US) C1D2 Group A,B,C,D T4	CSA (C,US) C1D2 Group A,B,C,D, T4
IEC Approvals	ATEX / IECEx Zone 2, Ex ec nC [ia Ga] IIC T4 Gc	ATEX / IECEx Zone 2, Ex ec nC [ia Ga] IIC T4 Gc	N/A
<b>Output</b>			
Max. Load Current	32A @ 40°C	30A (standard) or 60A (optional) @ 40°C	30A (standard) or 60A (optional) @ 40°C
Max. Load Voltage	277Vac	277Vac (690Vac optional)	277Vac (690Vac optional)
Relay Type	Double-Pole EMR or SSR	3-pole EMR or 1-,2-,or 3-pole SSR	3-pole EMR or 1-,2-,or 3-pole SSR
<b>Temperature Sensors</b>			
Temperature Sensor Inputs	Up to 3 Temperature Sensors (100 Ω RTD or Thermocouples*)	Up to 3 Temperature Sensors (100 Ω RTD or Thermocouples*)	Up to 2 100 Ω RTDs per control point
Control Range	-200°C to 700°C (-328°F to 1292°F)	-200°C to 700°C (-328°F to 1292°F)	-60°C to 570°C (-76°F to 1058°F)
Local Alarm Contact Output	✓	✓	✓
<b>Control</b>			
Architecture	Single-Point	Single-Point	Dual-Point
PASC Algorithm	✓	✓	✓
Proportional Control	✓	✓	✓
Soft Start	✓	✓	✓
Output Limiting	Power or Current	Power or Current	Power
External Control Allowed	✓	✓	
<b>Monitoring</b>			
Monitor Current	✓	✓	✓
Monitor Ground Fault Current	✓	✓	✓
Monitor Voltage	✓	✓	✓
Total Heater Hours	✓	✓	
Contactory Cycle Count	✓	✓	✓
Heat Tracing System Diagnostic Test	1 to 750 hours	1 to 750 hours	1 minute to 240 hours
<b>Alarming</b>			
High/Low Temperature Alarm	✓	✓	✓
High Temperature Trip	✓	✓	✓
Low Temperature Trip	✓	✓	
Ground Fault Alarm	✓	✓	✓
Ground Fault Trip	✓	✓	✓
High/Low Current Alarm	✓	✓	✓
High/Low Voltage Alarm	✓	✓	✓
Sensor Failure	✓	✓	✓
Switch Failure	✓	✓	✓
<b>Interface</b>			
User Interface	Touchscreen Display	Touchscreen Display	LED Display with 6 Function Keys
Dimensions Inches	5" x 2.625"	5" x 2.625"	3" x 0.70"
Languages	English, French, German, Spanish, Russian	English, French, German, Spanish, Russian	English, French
Firmware Update via USB port	✓	✓	
Environmental Protection	Type 4X, IP64, IP66 optional	Type 4X, IP64, IP66 optional	Type 4X
Max. # Controllers Per User Interface	1	1	2
Interface Required for Control?	✓	✓	
Glove Touch Capatible	✓	✓	✓
Remote Analog RTD input			
Supports 3-phase Circuits		✓	✓
Measures Current On All 3 phases		✓	
<b>Communications</b>			
RS-485 Communications Port	✓	✓	✓
Ethernet Communications Port	✓	✓	
Elexant 9200i Wireless Compatible	✓	✓	✓
Communications Protocol	Modbus RTU or Modbus TCP/IP	Modbus RTU or Modbus TCP/IP	Modbus RTU or Modbus ASCII



Model	NGC-30	NGC-40
<b>Description</b>	 Multi-circuit touch screen heat tracing control, monitoring and power distribution system	 Multi-circuit heat tracing control, monitoring and power distribution system with single-point architecture and reliability
<b>General</b>		
Ambient Operating Temperature	-40°C to 60°C (-40°F to 140°F)	-40°C to 60°C (0°C to 50°C with Touch 1500)
Supply Voltage (+/- 10%)	Up to 600Vac	100-240Vac
NEMA Enclosure	Type 4 & 4X, IP 65	Type 12, 4X
NAM Approvals	ETL (C,US) Hazardous and Non-Hazardous Options	ETL (C,US) Hazardous and Non-Hazardous Options
IEC Approvals	ATEX and IECEx	ATEX and IECEx
<b>Output</b>		
Max. Load Current	60A per circuit @ 40°C	60A per circuit @ 40°C
Max. Load Voltage	120-600Vac	120-600Vac
Relay Type	3-pole EMR or 1-,2-,or 3-pole SSR	3-pole EMR or 1-,2-,or 3-pole SSR
<b>Temperature Sensors</b>		
Temperature Sensor Inputs	Up to 4 100 Ω RTD/ circuit	Up to 8 100 Ω RTD/ circuit
Control Range	-73°C to 482°C (-99°F to 900°F)	-80°C to 700°C (-112°F to 1292°F)
Local Alarm Contact Output	✓	✓
<b>Control</b>		
Architecture	Multi-Point. 5 circuits per module	Single-Point
PASC Algorithm	✓	✓
Proportional Control	✓	✓
Soft Start	✓	✓
Output Limiting	Power	Power or Current
External Control Allowed		
<b>Monitoring</b>		
Monitor Current	✓	✓
Monitor Ground Fault Current	✓	✓
Monitor Voltage	Optional	
Total Heater Hours	✓	✓
Contactors Cycle Count	✓	✓
Heat Tracing System Diagnostic Test	0 to 1000 hours	1 to 750 hours
<b>Alarming</b>		
High/Low Temperature Alarm	✓	✓
High Temperature Trip	✓	✓
Low Temperature Trip		
Ground Fault Alarm	✓	✓
Ground Fault Trip	✓	✓
High/Low Current Alarm	✓	✓
High/Low Voltage Alarm	✓	✓
Sensor Failure	✓	✓
Switch Failure	✓	✓
<b>Interface</b>		
User Interface	Touchscreen Display	Touchscreen Display
Dimensions Inches	11" x 9" x 2.75"	13.31" x 16.61"
Languages	English, Spanish, French, German, Russian, Chinese, Italian, Czech	English, French, German, Russian, Chinese
Firmware Update via USB port	✓	✓
Environmental Protection	Type 4X, IP 65	Type 4X, IP 65
Max. # Controllers Per User Interface	260 per UIT	Up to 500 per Touch 1500-EX
Interface Required for Control?	✓	
Glove Touch Capatible	✓	✓
Remote Analog RTD input	✓	✓
Supports 3-phase Circuits	✓	✓
Measures Current On All 3 phases		✓
<b>Communications</b>		
RS-485 Communications Port	✓	✓
Ethernet Communications Port	✓	✓
Elexant 9200i Wireless Compatible	✓	✓
Communications Protocol	Modbus RTU or Modbus TCP/IP	Modbus RTU or Modbus TCP/IP

# Turnkey Heat Management System Services

nVent TRACER is the premiere heat management system service provider for the industrial sector. 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.

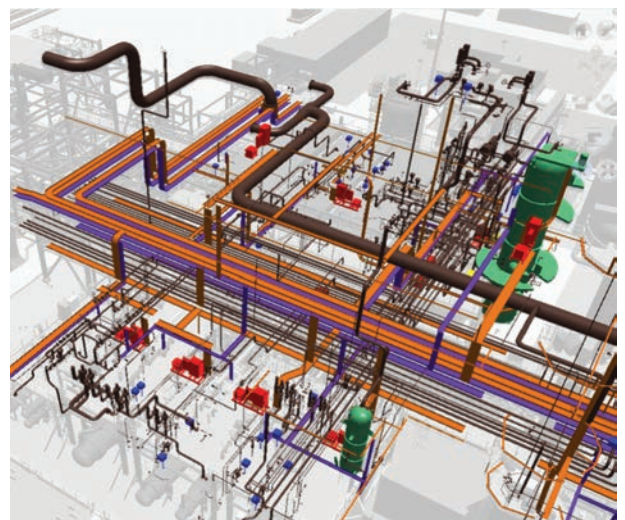
## **DETAILED ENGINEERING**

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 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](http://nVent.com/TRACER)  
Or contact us at 1-800-545-6258

# Website and Design Software

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

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.

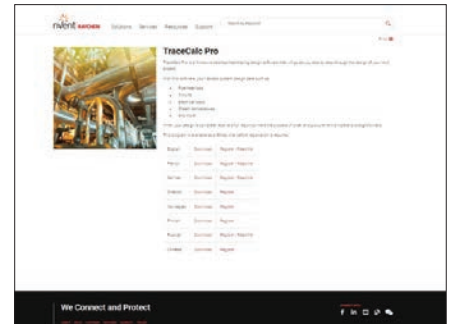
TraceCalc Pro provides an intuitive, easy-to-navigate and user-friendly interface to create simple or complex heat-tracing designs for pipes, tanks and vessels.

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



TraceCalc Pro



# nVent Solutions Protect Critical Processes



## INDUSTRIAL FACILITIES

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nVent RAYCHEM heat trace systems offer superior reliability with the highest lifetime value at lower installed cost and lower cost of ownership. 50+ years of time-tested quality, reliability and proven performance minimizes downtime and damage while ensuring ease of use, lower installed cost, lower cost of ownership, and worry-free operation.

## PEOPLE AND SAFETY

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We connect and protect our customers with inventive electrical solutions. Our systems maximize safety and performance. We are committed to providing training, education and a safe work environment on all projects of any size and scope.

## BEFORE YOU BUY, WEIGH THE FACTS

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nVent offers the most complete line of heating technologies and services. Whether you need **products, design tools, or project assistance from our heat tracing experts**, rely on the proven heating solutions leader to deliver optimized systems to protect your critical industrial processes.



We have the capabilities to make the difference in any project, from increasing safety and performance while lowering total installed costs.

We are where you need us, with more than 9000 employees and partnerships with leading wholesalers, we service the globe. We travel the globe to support our customers in their most exigent projects, providing design and installation support where needed.

**500+**  
Patents

**8,800+**  
Global  
workforce

**One nVent**



Global  
customers

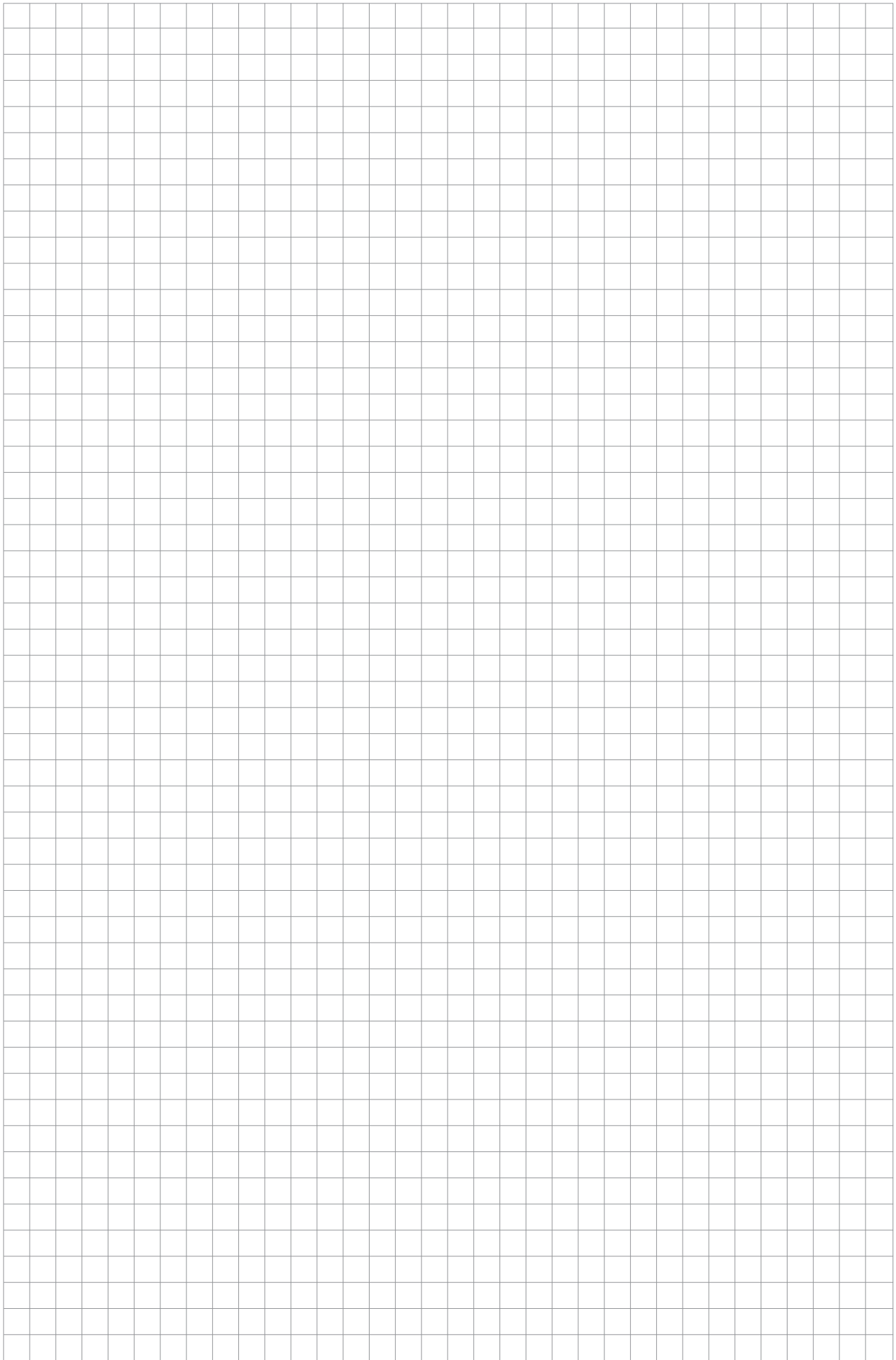


Local capabilities,  
and localized  
solutions



Positioned to serve  
fast-growing  
economies

**130+**  
Manufacturing,  
service, sales and  
distribution centers



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Our powerful portfolio of brands:

**CADDY ERICO HOFFMAN RAYCHEM SCHROFF TRACER**



[nVent.com/RAYCHEM](https://www.nVent.com/RAYCHEM)