



**CONNECT AND PROTECT**

# nVent RAYCHEM Data Center Solutions

Leak Detection/Heat Tracing/Project Services



**RAYCHEM**

# Advanced Leak Detection and Heat Tracing Solutions



## DATA CENTER SOLUTIONS

Data Centers rely on nVent RAYCHEM Electric Heat Trace and Leak Detection solutions and services. Our systems ensure facility protection, performance, and winter safety throughout the design, construction, and ongoing operation and maintenance.

## LEAK DETECTION SOLUTIONS

Our nVent RAYCHEM TraceTek water and fuel leak detection systems with sensor cables, probes and monitoring systems, let you quickly detect and pinpoint the source of a leak, allowing you to take corrective action before the leak can cause significant damage to property, data or customer goodwill.

The TraceTek leak detection system is a versatile system with many interchangeable components that can be configured as needed for each application. The broad range of TraceTek alarm modules and modular components allows you to tailor the monitoring approach and layout to the application.

With more than 10 million meters of sensing cable sold and thousands of installations completed worldwide since 1984 you can rely on nVent RAYCHEM TraceTek leak detection solutions for greater performance for your building.

## ELECTRIC HEAT TRACE SOLUTIONS

We provide quality solutions for winter safety, comfort, and performance. From nVent RAYCHEM pipe freeze protection, flow maintenance for generator diesel fuel lines, de-icing roofs and gutters, and melting snow for critical entrances, you can rely on nVent solutions for greater winter safety, comfort, and building performance.

## SERVICE SOLUTIONS

The nVent Projects & Services team of experts partner with you to address all types of projects, from design to installations, commissioning and ongoing service we deliver optimized solutions to enhance safety, comfort and performance. Consulting engineers can rely on our extensive capabilities and expertise in all building types to ensure every heating system and leak detection system performs per the original design specifications. Contractors can count on nVent to work with you to provide best-in-class deliverables to reduce risk and maximize your installation productivity.

### What we offer



Project Design



Value Engineering



Project Management



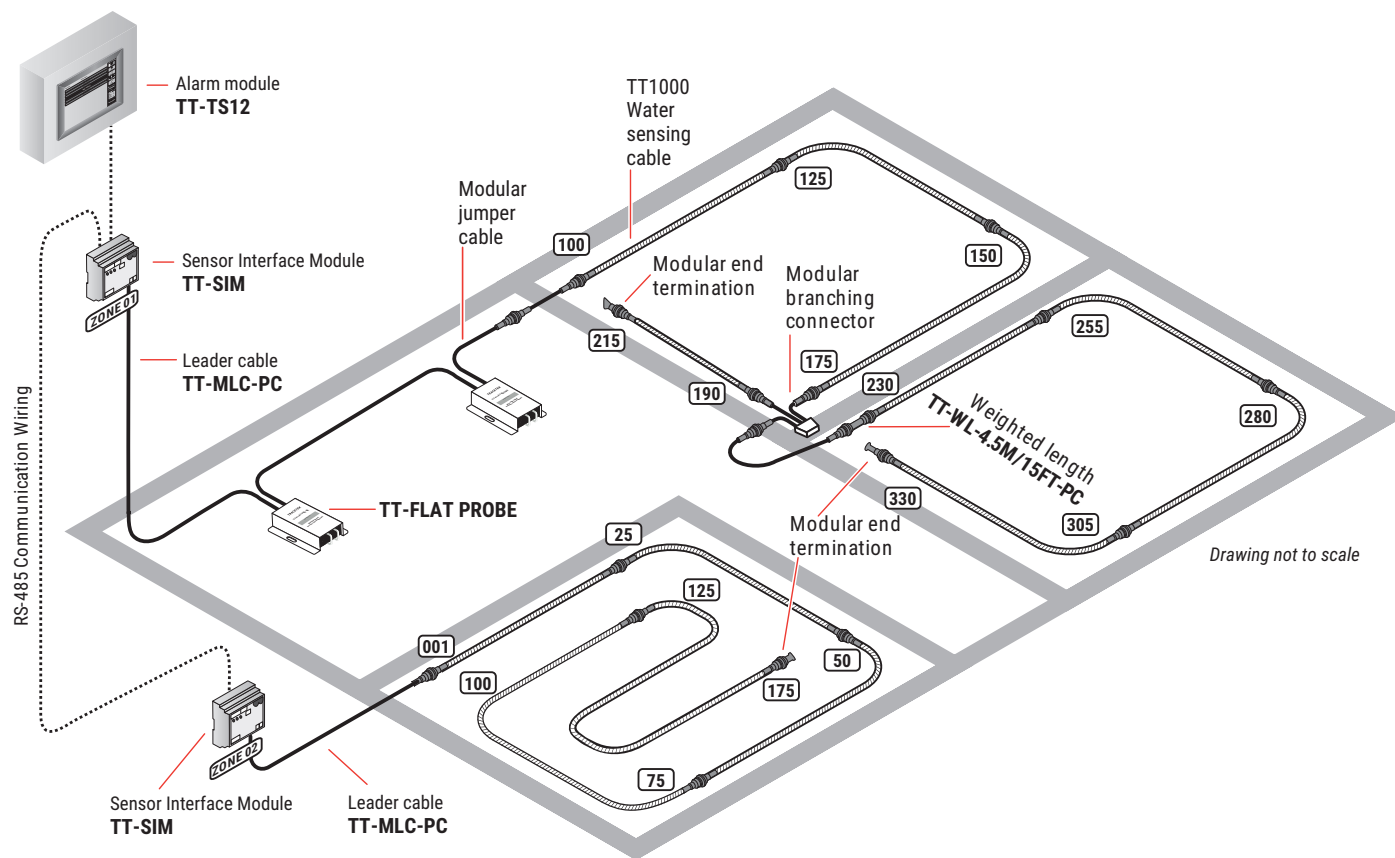
Start-Up and  
Commissioning



Annual Service  
Programs

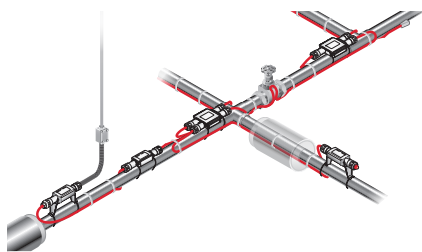
# Key Applications

## LEAK DETECTION



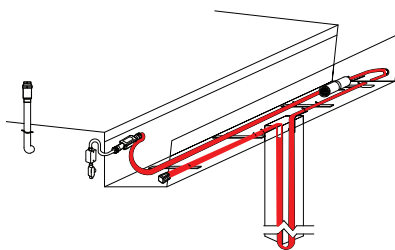
## PIPE HEATING APPLICATIONS

- Freeze Protection
- Process Temperature Maintenance
- Hot Water Temperature Maintenance



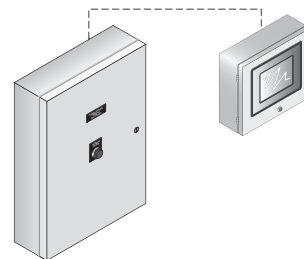
## ROOF & GUTTER DE-ICING

- Prevent Ice Dams
- Maintain Water Flow Paths
- Heating Cable or Concealed Systems



## CONTROL AND MONITORING

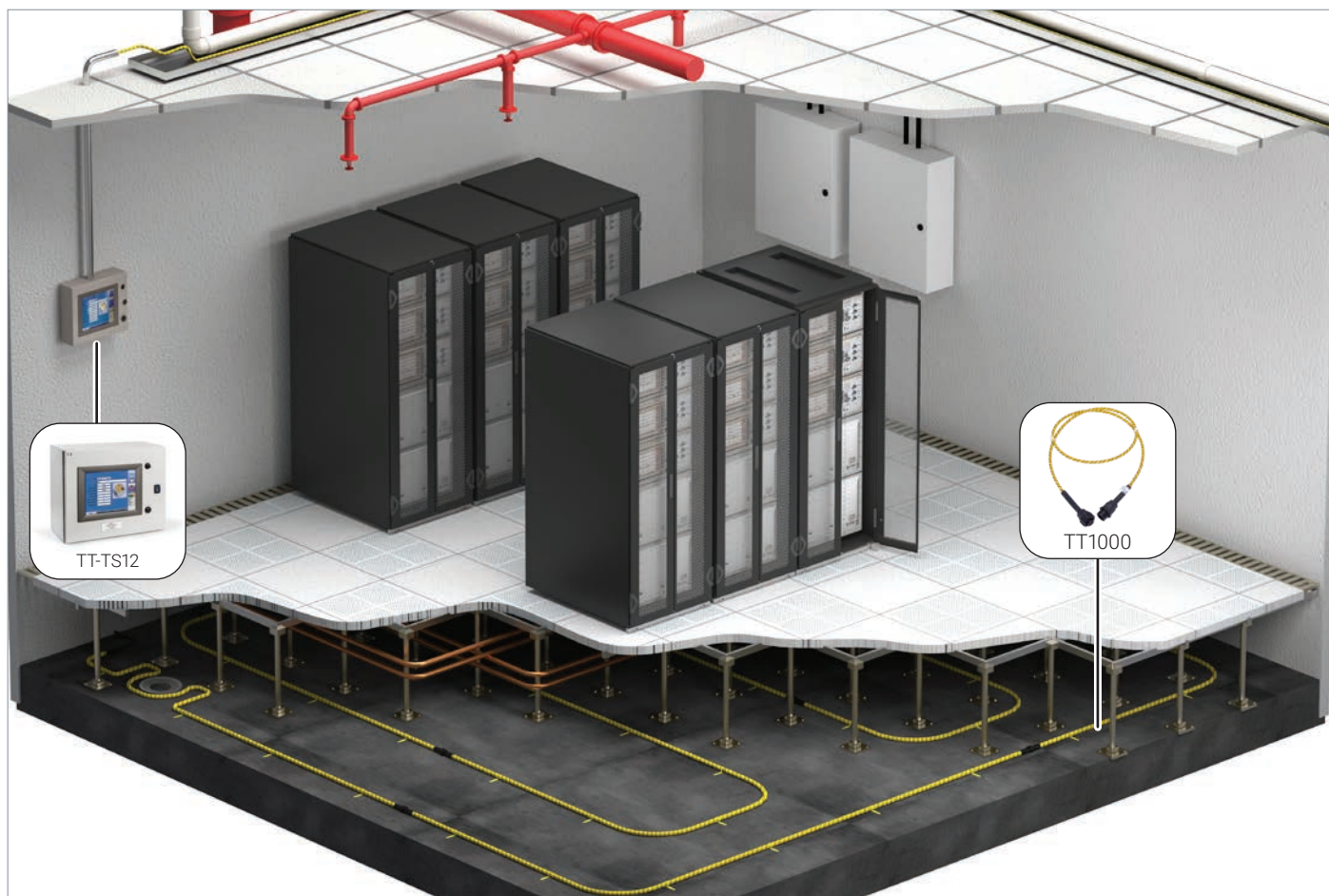
- Smart Building Technology
- Power Distribution and Control
- Controls all Heat Tracing Applications





# Leak Detection Solutions for Data Centers and Server Rooms

TraceTek is installed in more than 5000 data centers worldwide



## THE THREAT

Server facilities are the nerve centers for most modern businesses. Thousands of optical and electrical connections are concentrated in a densely packed space. Racked equipment generates a large amount of heat and in order to prevent equipment failures, the heat must be extracted. The HVAC equipment must pump chilled water into and out of the facility to manage this heat extraction. However, water and electronics don't mix. Water accumulating on the floor or water dripping from overhead piping can and does interrupt and threaten server operations.

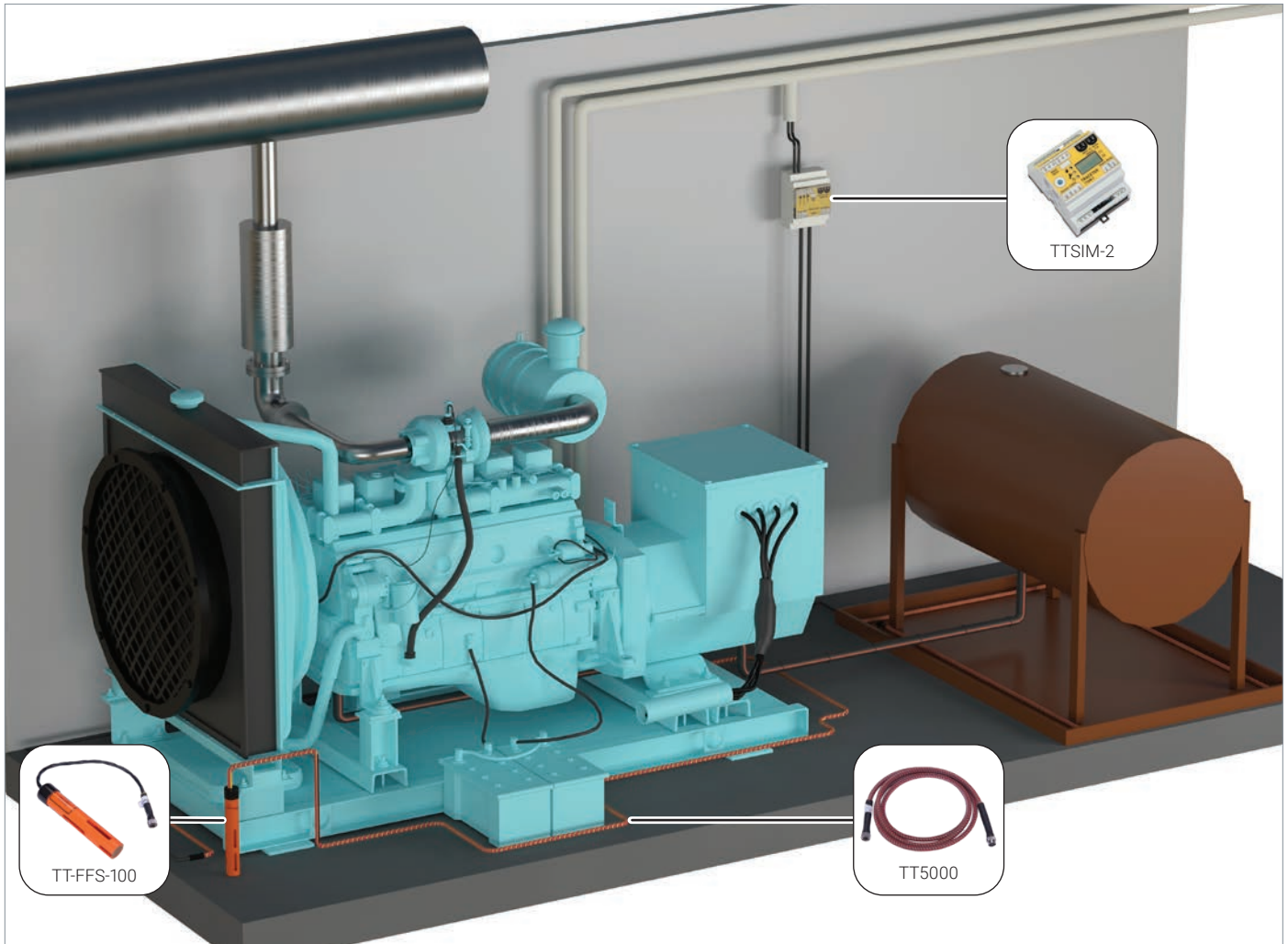
Early detection of any water leakage can get maintenance on scene in time to deal with the threat. Raised floor facilities are even more vulnerable because leakage is concealed. A water leak in a visible area might be noticed by employees but if the leak occurs beneath raised floors, the first alarm may occur when a critical system shuts down or water begins to rise through the structural floor to lower levels in the building.



## The Solution

TraceTek water sensing cable detects and precisely locates any water leakage. nVent RAYCHEM TraceTek TT1000 sensor cable is designed to work on flat surfaces and is installed directly on the concrete slab beneath all data and power cabling. Any water leaking from HVAC units, chilled water fittings or back-up drains is detected immediately with location accuracy sufficient to pick the right floor tile. For racked equipment, TraceTek TT1100-OHP can be fitted to the underside of overhead pipe or used in drip trays.

# Leak Detection Solutions for Generators and Fuel Lines



## NOT ALL PIPES CONTAIN WATER

Increasingly, commercial facilities must have back-up power sources and the most common way to provide that power is with diesel powered generators. However, pumping and storing diesel fuel inside of a building introduces a risk of fire that exceeds the rapid acceleration that the water sprinkler system can control. FM Global has recently released FM 7745 "Approval Standard for Diesel Leak Detectors". TraceTek's Fast Fuel Sensor Probe has been tested by FM approvals and is certified to meet the requirements of the new standard.

## THE PROBLEM

Hospitals, server facilities, large office buildings and many other commercial and institutional facilities require diesel powered back-up generators. In many older buildings, generators have been squeezed into spaces that were not originally designed for that purpose. Each generator requires a day tank, fuel pumps, valves, hose connections and similar fittings. Frequently there will be a supply and return piping connection to a larger underground diesel storage tank outside of the building footprint. An undetected diesel fuel leak presents a major fire risk and if ignited could lead to a rapidly growing fire beyond the extinguishing capacity of sprinkler systems.

## The Solution

TraceTek Fast Fuel Sensor (TT-FFS) and TT5000 Fuel Sensor Cable can be deployed around the generator pad, under day tanks, in double wall pipe or trenches connecting supply and return piping, and in similar applications. The TT-FFS probe can react to the presence of diesel within a few seconds. It will detect a puddle of diesel spreading across a flat surface or a layer of diesel floating on water. TT-FFS can be tested as desired, re-used and reset after a leak encounter. The TT5000 sensor cable can monitor tens of hundreds of meters of piping and provide the same precise leak location information that is a feature of all TraceTek cables.

# Advanced Heat Tracing Solutions

**At nVent, we believe that safer systems ensure a more secure world. We connect and protect our customers with inventive electrical solutions. We provide quality solutions for safety, comfort and performance to building and infrastructure design, construction, operation and maintenance professionals. From pipe freeze protection to flow maintenance and melting snow, or heating floors, you can rely on nVent RAYCHEM solutions and services for greater safety, comfort and performance.**

## 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. Over 1.8B feet of premium safety, performance, and comfort systems installed worldwide are protecting people, buildings, infrastructure and industry. 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. 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. However, 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.

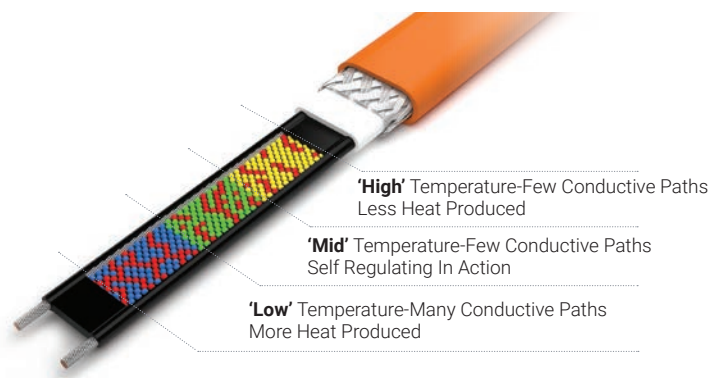
50+ years of time-tested quality, high power retention, reliability and proven performance minimizes downtime and damage while ensuring ease of use, lower installed cost, lower cost of ownership, and worry-free operation.

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 80 years. Able to withstand extreme, harsh environments, our cables provide the most reliable heat tracing solution for high-temperature applications.

## 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 assured advanced through modified polyolefin or fluoropolymer insulation and jacket materials.

### Highest Lifetime Value

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.

Our proven 20+ and 30+ year service life ratings are backed by our industry-leading 10 year warranty.



In 1972, the heat tracing division of the nVent 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 200<sup>th</sup> 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.



# Protect Pipes



Unprotected pipes



XL-Trace Edge System

Water lines and fire protection lines can freeze and burst when exposed to cold temperatures. Our systems help you prevent this.

## PIPE FREEZE PROTECTION OF WATER LINES

nVent RAYCHEM pipe freeze protection systems are flexible and easy to attach to the exterior of the pipe to keep pipes from freezing, bursting, and causing water damage. XL-Trace Edge systems can add a precise level of heat to prevent water pipes from freezing.



## PIPE FREEZE PROTECTION OF FIRE PROTECTION LINES

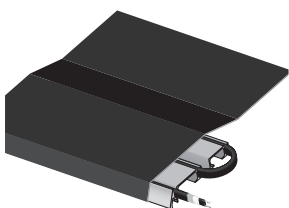
XL-Trace Edge fire sprinkler freeze protection systems can freeze protect above ground and buried supply pipes, fire standpipes, branch lines and branch lines containing sprinklers when run in areas subject to freezing. XL-Trace Edge is c UL us Listed for use on fire suppression systems under CSA 22.2 No 130-16 for Canada and IEEE 515.1-2005 for the US.



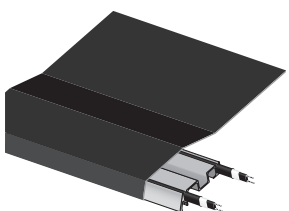
# Protect Roofs, Gutters and Downspouts



Unprotected  
roof and gutters



RIM System



RIM2 System



CCB



IceStop System

Ice dams can form on roofs, in gutters, and downspouts preventing water from properly draining which can result in water damage. Heavy icicles can fall and cause serious injury. Standing water can leak through to interior walls and furnishings. Our systems help you protect roofs, gutters, and downspouts.

## ROOF & GUTTER DE-ICING – RIM

nVent RAYCHEM's Roof Ice Melt (RIM) system is the premier, highest performing, aesthetically elegant roof & gutter de-icing solution ideal for new construction or renovation of residential or commercial buildings. The system consists of metallic panels that embed self-regulating heat tracing cable to provide high power output. RIM system with 3 runs of cable is ideal for heavy snow load areas. RIM2 system with 2 runs of cable is ideal for light to moderate snow load areas.



## RIM CABLE COVER BRACKET (CCB)

nVent RAYCHEM RIM Cable Cover Bracket (CCB) is a continuous coated aluminum housing. It provides additional protection from mechanical damage while increasing the output of the heating cable. The increased output amplifies the effective melting power of the system resulting in larger drain paths. Including CCB as part of the system design increases the extended warranty to 20 years.

## ROOF & GUTTER DE-ICING – ICESTOP

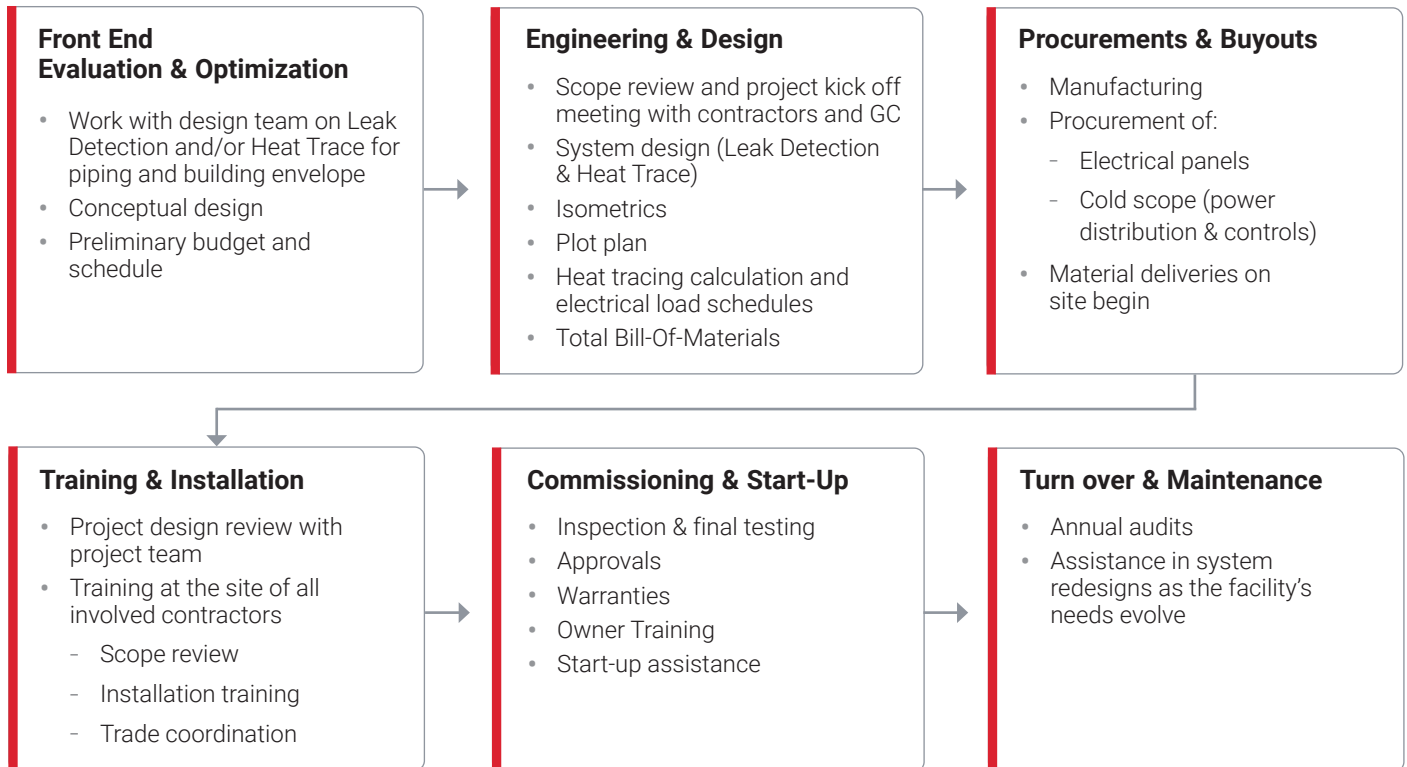
nVent RAYCHEM IceStop is an advanced, high performing, specified roof & gutter de-icing solution ideal for commercial buildings in light to heavy snow load areas. It can be cut to length for easy installation in plastic, copper, steel, or aluminum gutters, and on flat or pitched roofs, valleys and overhangs. The low operating temperature of the heating cable also makes it safe for use on modern membrane roofs.





# Projects & Services

The nVent Projects & Services team of experts partner with you to address all types of projects, from **buildings** to complex **infrastructure**, delivering optimized solutions to enhance safety, comfort and performance. For **consulting engineers**, you can rely on our extensive capabilities and expertise in all building types to ensure every heating system performs per the original design specifications. For **contractors**, you can count on nVent to provide best-in-class deliverables to reduce risk and maximize your installation productivity.



Beyond front end assistance of proposals, engineering and design, the Projects & Services team can be there every step of the way through construction and installation, to commissioning and post installation services.

# nVent Products

nVent solutions connect and protect critical infrastructure

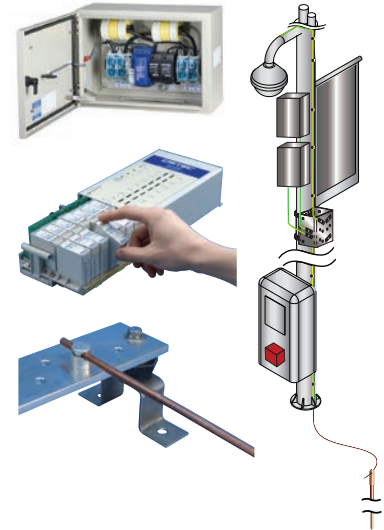
## Thermal Management



## Enclosures



## Electrical & Fastening Solutions



**Critical infrastructure protection**

### KEY PRODUCT OFFERINGS

- Leak detection systems
- Pipe freeze protection
- Roof and gutter de-icing
- Fire-rated wiring
- Annual service agreements



**Connecting, protecting and managing heat and data in critical systems**

### KEY PRODUCT OFFERINGS

- Electrical and electronic enclosures
- Data center and networking solutions
- Advanced cooling and climate control



**Labor-saving and easy-to-install solutions**

### KEY PRODUCT OFFERINGS

- Cable pathway installation systems
- Power and data resilience solutions
- Surge and lightning protection



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