



PRODUCT DATASHEET

Quantum

Truflow Heater™

GAS APPLICATIONS

OVERVIEW

Thermon Quantum Truflow Heater™ is the next evolution of Thermon's flange heater line-up. With enhanced baffle technology tailored for both ordinary and hazardous locations, the Thermon Quantum Truflow Heater™ can be custom designed to offer highly engineered solutions while meeting our customers' specific needs. Thermon's baffle solution offers superior heat transfer performance. The Truflow baffle design technology eliminates the risk of overheating by removing the heat source within the low flow zones.

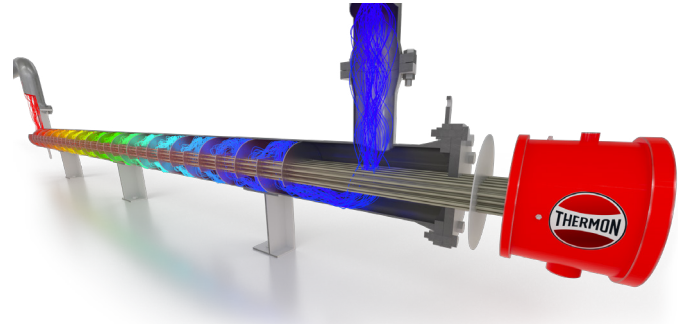
Thermon Quantum Truflow Heater™ provides a solution to improve heat transfer efficiency over traditional designs and can be customized to specific applications.

CERTIFICATION & COMPLIANCE

- Certified to UL, CSA, IECEx & ATEX standards
- Suitable for non-hazardous and hazardous locations and all gas groups including IIC
- Suitable for use in ambient temperatures from as low as -60°C and up to +80°C
- Power ratings up to 4MW, 690V, 3Ø, 50 or 60Hz

ADAPTABILITY & FLEXIBILITY

- Optimized Baffle arrangements based on flow rates, fluid properties, maximum allowable pressure drop, inlet and desired outlet temperature
- Flexible design to determine the optimal balance between heat transfer and pressure drop
- Customization to allow flexibility for heater and enclosure designs to suit new and retrofit applications
- Square/rectangular box has flexibility to be rotated to allow for easy installation and wiring
- Standard configurable designs for competitive industry lead times



FEATURES & BENEFITS

- Flexible design to optimize heat transfer and pressure drop
- Predictable thermal management
 - » High heat flux
 - » No low flow zones
 - » Elimination of hot spots, resulting in extended service life and reduced maintenance down time
 - » Sheath temperature prediction
- Heater designed simulation models using HTRI software for sizing and calculation of sheath temperatures and heat flux. HTRI models are validated through our empirical test data
- Reduced footprint as compared to conventional design
- Reduced element temperatures resulting in extended heater life
- Hazardous and non-hazardous location ratings
- Stilted or non-stilted terminal box designs to manage terminal box internal temperature
- Customized terminal box design configurations to suit customer/site specific wiring connections
- Factory installed temperature sensors for connection to temperature controllers
- Lower installed costs
- Retrofit, allow replacement of existing flange heaters with increased thermal performance or with higher heat capacity



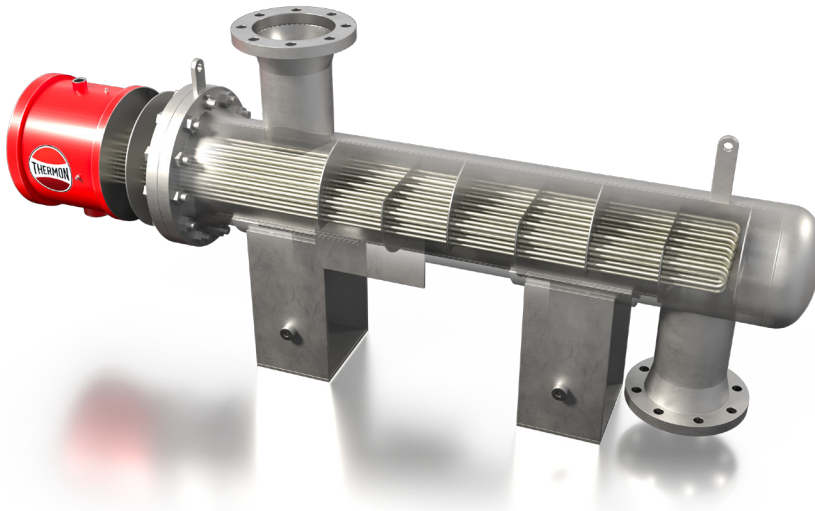
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IMMERSION HEATERS - UL, CSA, IECEX OR ATEX

Heater Connection Type	Flanged
Heater Type	Tubular
Mounting Orientation	Horizontal or Vertical
Ambient Temperature Range	From as low as -60 °C and up to +80 °C
Voltage	Up to 690 VAC
Frequency	50 & 60 Hz
Heater Power	Up to 4000 kW
Heating System Power	Up to 10MW *
Design Pressure	Up to 3000 psig (200 atm) **
Design Temperature	Up to 1200 °F (650 °C)
Heat Flux Density	Up to 120 w/in2 (18.6 w/cm2)
Mechanical Design Code	ASME Code Section VIII, Div 1, Div 2 or PED
Electrical Design Code	UL, CSA, IECEX or ATEX
Heater Diameter	Up to 50 inches (1400 mm) Diameter
Element Materials	Carbon Steel, 304 SS, 316 SS, 321 SS, Incoloy 800, Inconel 600, Others
Electrical Ratings	Voltages up to 690 Vac, 1 or 3 PH., Wattages Up To 4,000KW, 50 or 60Hz
Certifications and Approvals	Ordinary Locations
	Wet & Outdoor Locations
	Hazardous Locations - Class I, Div.1 Groups B, C, D
	Explosive Atmospheres - IECEX Ex db IIC T1...T6 Gb
	ATEX II 2 G Ex db IIC T1...T6 Gb
	Explosive Atmospheres - IECEX Ex eb IIC T1...T6 Gb
	ATEX II 2 G Ex eb IIC T1...T6 Gb

*Please contact your local Thermon Representative for higher power applications

**Please contact your local Thermon Representative for high pressure applications



Caloritech™ by Thermon electric heaters, heating elements and heating accessories are well-known in the industry for their quality, reliability, performance and versatility. Caloritech™ offers engineered heating solutions custom designed, manufactured and tested to satisfy nuclear specifications. No matter what the application or environment, Caloritech™ has a solution for any specialty project.