



Build-to-Order Tubular Heater Solutions



www.nexthermal.com

Who is Nexthermal?

Nexthermal is a solution provider where engineers design build-to-order electric heaters and temperature sensors for industrial manufacturing processes and new product development. When heat and sensing is vital to your application, the most cost-effective process improvement are heaters and temperature sensors respectively designed specifically for your operating conditions.



“Nexthermal uses the latest Technology and industry knowledge in developing Robust Heater Solutions”

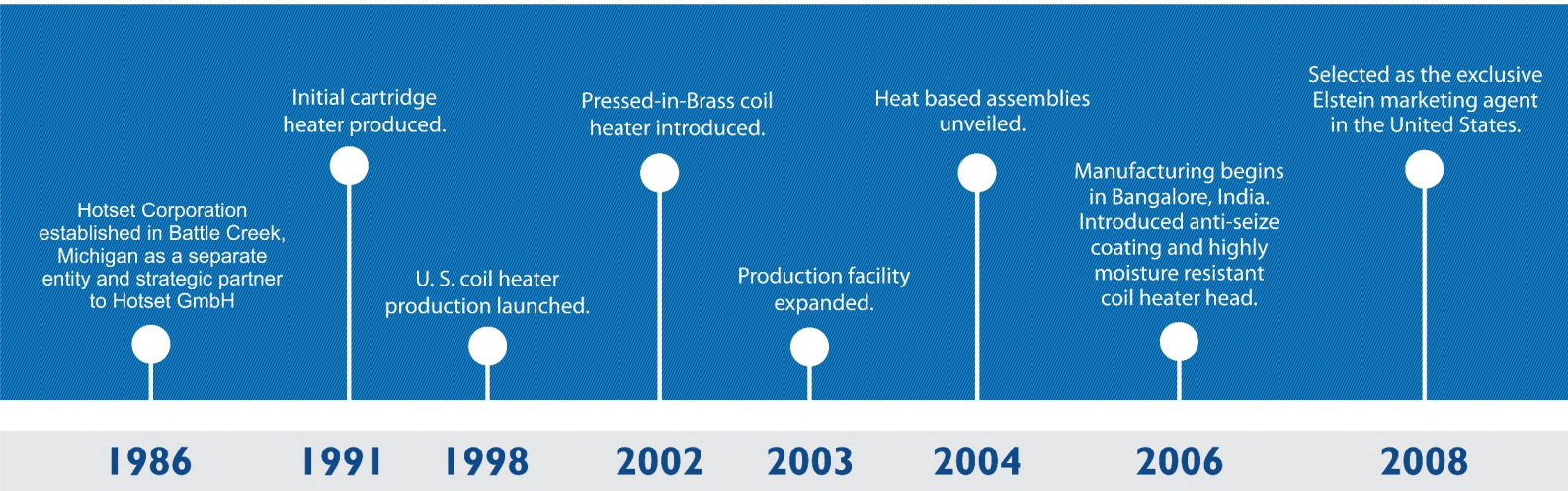


Together, we can design the right Temperature Sensors and heaters for you.



*If heat sensing is vital to your process... add **Nexthermal** to your team!*

Nexthermal can combine your unique process knowledge and objectives with our thermal transfer expertise. This collaboration can lead to shorter cycle times, improved product quality, and extended throughput capabilities.



Tubular Heaters

As your partner, Nexthermal Strives to be:

Approachable — Welcoming discussions, highly interested in the details of your application. Sincerely committed to helping you succeed.

Dynamic — Responding with a sense of urgency, proactively anticipating and planning for challenges, demonstrating agility that incorporates your input and experience to accelerate the best solution.

Knowledgeable — Our application experience and ability to understand your process will generate market driven solutions, which leads you to clearly see that Nexthermal is your heat management expert.

International — HQ in the United States, we have a global reach. With customers and strategic partners worldwide, Nexthermal has the resources to generate the right solution delivering world class benefits well beyond your investment in our products and services.

Innovative — Delivering application-based solutions with your requirements in mind. Developing new product capabilities to address emerging needs.



Renamed **Nexthermal** to emphasize commitment to heat management solutions worldwide. Introduced eheat energy efficient cartridge heaters.

Nexthermal proudly becomes a 100% U.S. owned company. Introduced new Nextflex® Flexible Tubular Heater and began manufacturing Thermocouples

Nexthermal begins initial planning stage for another production expansion.

Hotflow circulation heater invented, targeting electric vehicle, medical and food production markets.

Nexthermal Thermal Solution team created, providing customers with the option of adding advanced thermal modeling and design capabilities to important development projects.

Received certified minority owned business certification.

Production expansion of U.S. manufacturing facility.

Nexthermal India In-house R&D recognized by The Department of Scientific and Industrial Research

2009

2010

2012

2014

2015

2018

2022

Tubular Heater Performance Options



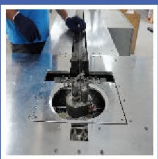
Moisture Resistance

For applications that require wash down, immersion in liquid, have high amounts of humidity in the ambient air, or have machining oil nearby, Nexthermal offers build-to-order options to deliver moisture resistance at your operating temperature.



Standard Flanges, Special Flanges and Threaded Fittings

For applications requiring a specific insertion depth, or must be held in place, Nexthermal offers standard / customized flanges and threaded fittings with tubular heaters.



CNC Precision Bending

Bending of tubular heaters are carried out with automatic precised CNC bending machine in almost any shape required for the application.



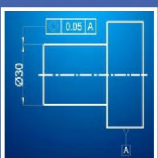
CE, RoHS, REACH

Our products have compliance as per CE, RoHS, REACH directives. We are committed to produce environment friendly products.



Customized Design

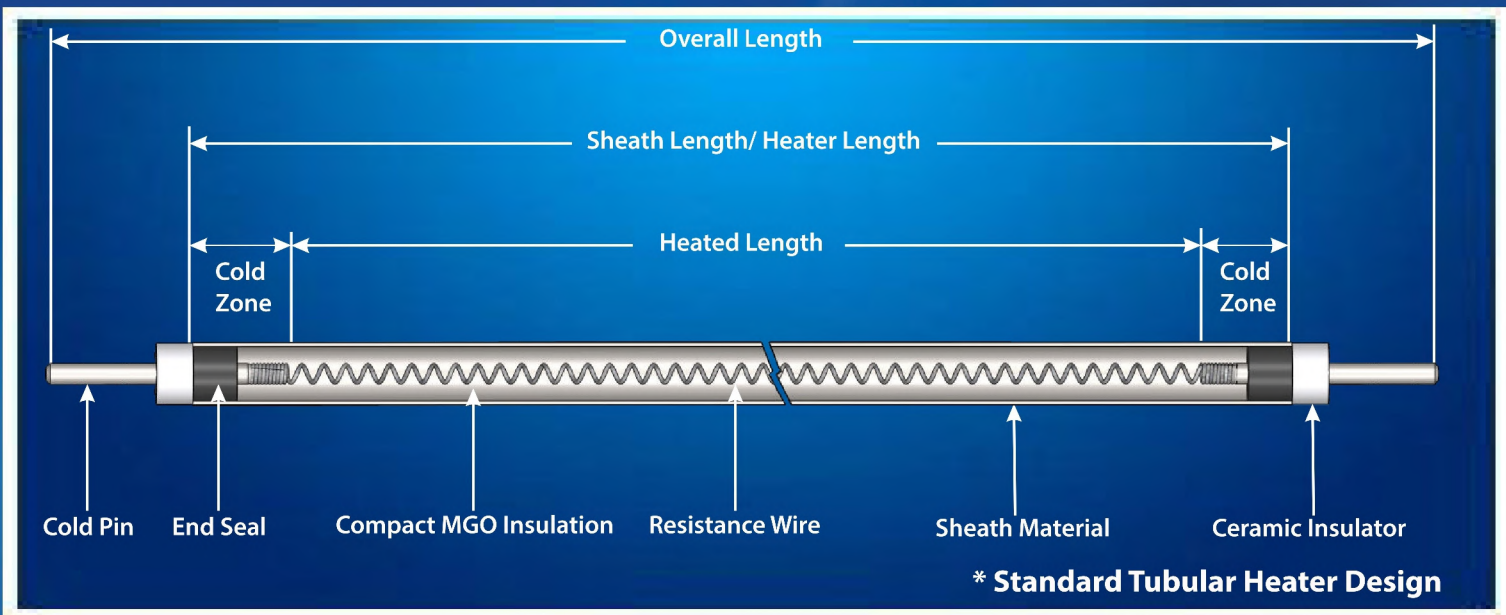
Tubular heaters designed by considering the industrial standards to meet the unique specifications and to ensure superior performance



Special Critical Tolerance

Nexthermal can hold special and premium tolerances for specific customized requirements.

Tubular Heating Elements and Technical Data



Technical Data

Dimensional

Standard Diameter Tolerance	±0.004"/ 0.1mm
Premium Diameter Tolerance	Upon Request
Standard Length Tolerance	±1.5 % or ± 1 mm (whichever is higher)
Premium Length Tolerance	Upon Request
Minimum Heater Length	300 mm
Maximum Heater Length	Please see chart at page no : 6

Material

Sheath Material	• SS304(rated 842°F/ 450°C) • SS321(rated 1472°F/ 800°C) • Nickel(rated 600°F/ 315°C) • Incoloy800(rated 1472°F/ 800°C) • Incoloy840(rated 1472°F/ 800°C) • SS316/SS316L(rated 1292°F/ 700°C)
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Tubular Heater Technical Data

Sheath Material						
Heater Dia	SS304	SS321	Nickel200	Incoloy800	Incoloy840	SS316/SS316L
0.134"/ 3.4 mm			✓			Upon Request
0.197"/ 5.0 mm			✓			Upon Request
0.256"/ 6.5 mm	✓	✓		✓		Upon Request
0.315"/ 8.0 mm	✓	✓		✓	✓	Upon Request
0.335"/ 8.5 mm	✓	✓		✓	✓	Upon Request
0.429" / 10.9 mm	✓	✓		✓	✓	Upon Request

Electrical Specifications	
Standard Wattage Tolerance	±10
Premium Wattage Tolerance	±7.5%, +5/+10%, ±5%, +15/0%, +10/-5%, +5/-10%
Standard High Voltage Stability(cold)≤24V	500V-AC @100mA
Standard High Voltage Stability(cold)>24V	1500V-AC @100mA
Premium High Voltage Stability(cold)>250V	Upon Request
Insulation Resistance	Min 5 Meg ohms at 500V-DC
Premium Insulation Resistance	Upon Request
Discharge Current(cold)/ Leakage Current	Max 0.5 mA at 253V-AC
Maximum Connection Voltage	480V

Tubular Leads and Potting Options

Minimum Cold Section by Heat length

Available Heater Dia (d)	Max. Heater Length	Min. Cold Zone at Both Side	Min. Bending Radius*
0.134"/ 3.4 mm	98"/ 2500 mm	20 mm	4.75 mm
0.197"/ 5.0 mm	98"/ 2500 mm	20 mm	6.25 mm
0.256"/ 6.5 mm	98"/ 2500 mm	20 mm	8 mm
0.315"/ 8.0 mm	256"/ 6500mm	20 mm	10 mm
0.335"/ 8.5 mm	256"/ 6500mm	20 mm	10.5 mm
0.429" / 10.9 mm	256"/ 6500mm	25 mm	12.5 mm

Bending Radius Structure



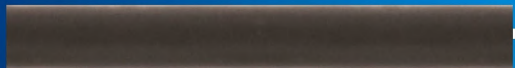
*The bend can be customized according to the customer's request.

Tubular Leads and Potting Options

LEADS



Fiberglass (Standard)
Temperature UL Rated to : 482 °F | 250 °C



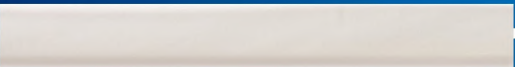
Silicone
Temperature Rating : 356 °F | 180 °C



Silicone Cable
Temperature Rating : 356 °F | 180 °C



Teflon®
Temperature Rating : 500 °F | 260 °C



Teflon® (High Amperage)
Temperature Rating : 500 °F | 260 °C



Fiberglass (High Temp)
Temperature Rating : 932 °F | 500 °C

POTTING OPTIONS

Ceramic
Temperature Rating
1000 °F | 538 °C



Epoxy
Temperature Rating
600 °F | 315 °C



Silicon
Temperature Rating
500 °F | 260 °C



Silicone(High Temp.)
Temperature Rating
650 °F | 343 °C



Tubular Heater Terminal Options



T.Style 1



T.Style 2



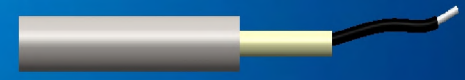
T.Style 3



T.Style 4



T.Style 5



T.Style 6



T.Style 7



T.Style 8



T.Style 9



T.Style 10

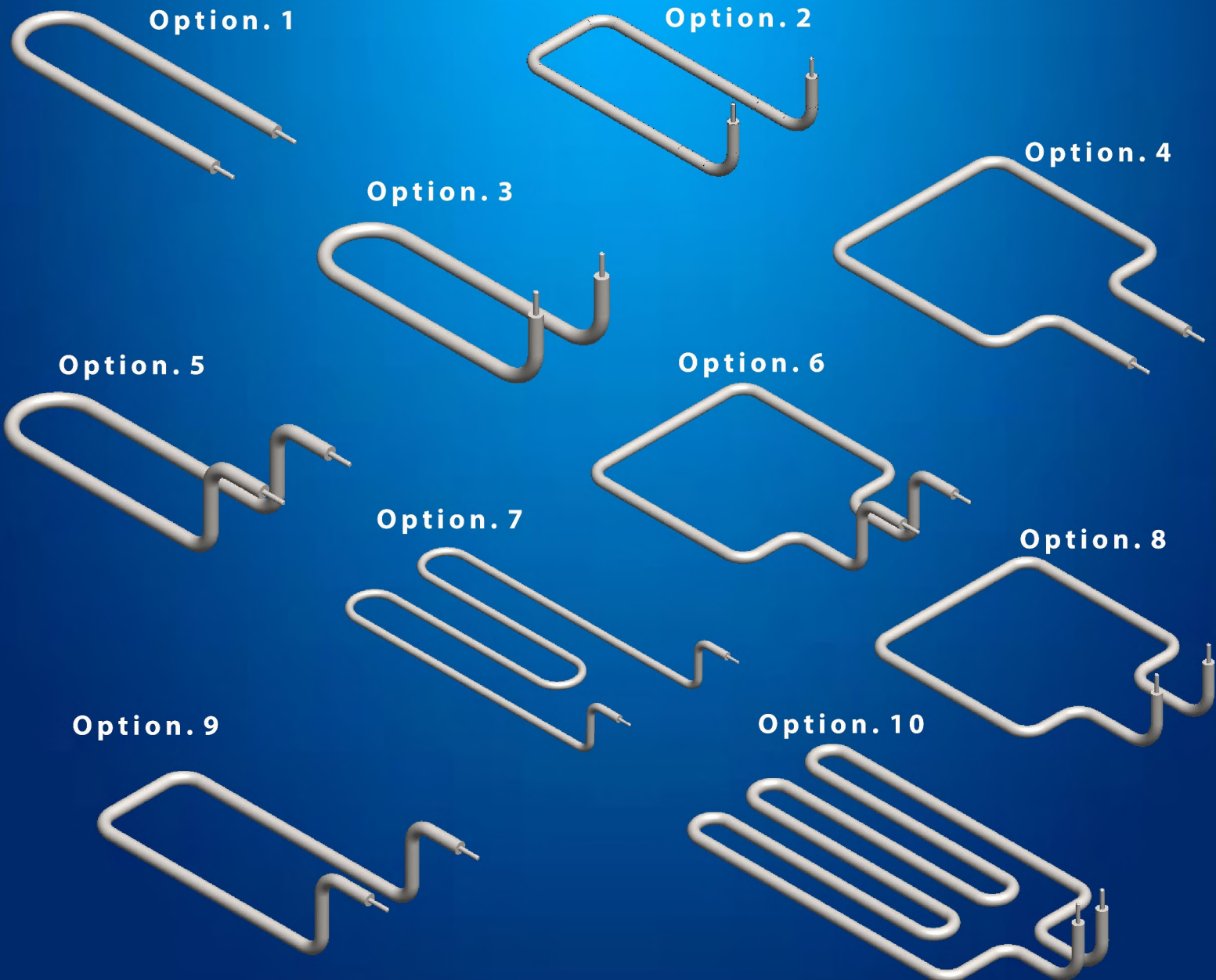


T.Style 11

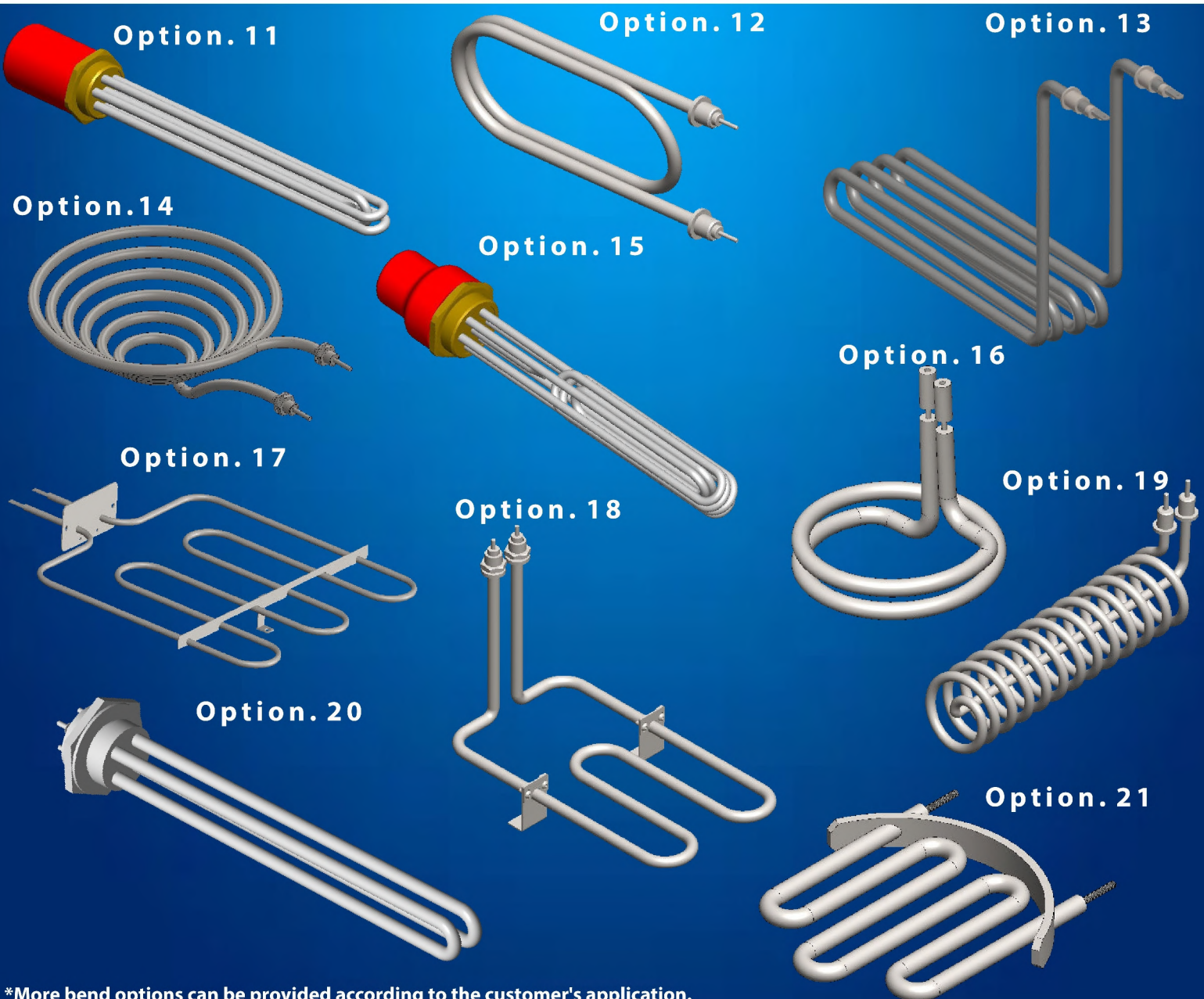


T.Style 12

Tubular Heater Bend Options



Tubular Heater Bend Options



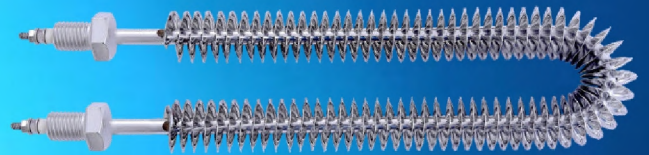
*More bend options can be provided according to the customer's application.

Nexthermal's Tubular Heaters

Air Heater Example - 1



Air Heater Example - 2



Air Heater Example - 3



Air Heater Example - 4



Air Heater Example - 5

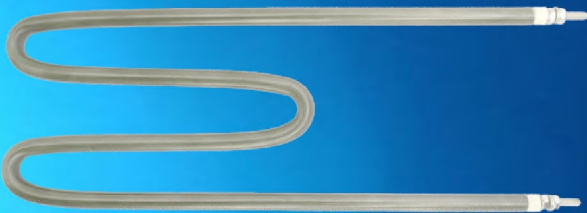


Air Heater Example - 6



Nexthermal's Tubular Heaters

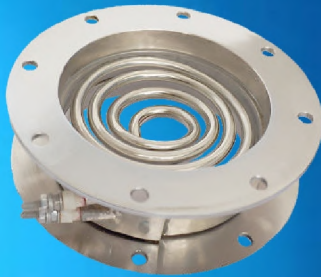
Air Heater Example - 7



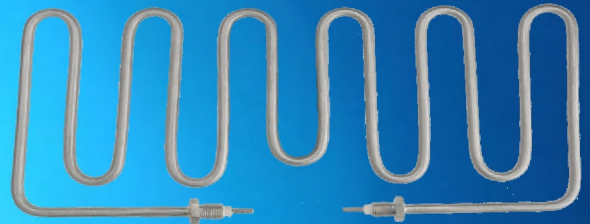
Air Heater Example - 8



Air Heater Example - 9



Air Heater Example - 10



Air Heater Example - 11

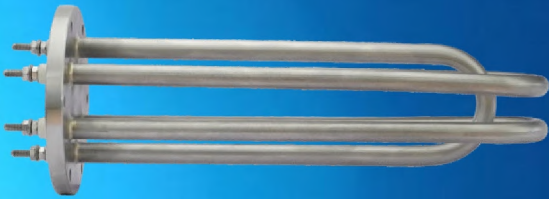


Cast-in Heater Example - 1

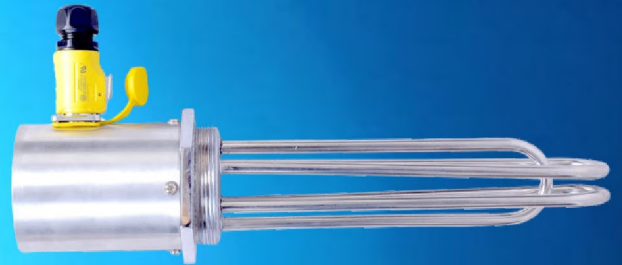


Nexthermal's Tubular Heaters

Immersion Heater Example -1



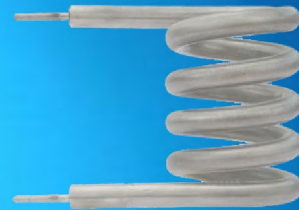
Immersion Heater Example -2



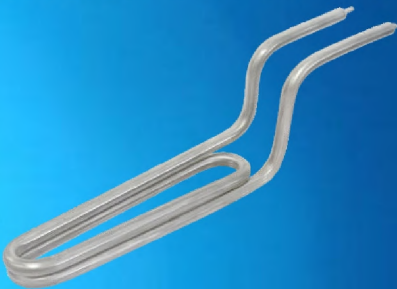
Immersion Heater Example -3



Immersion Heater Example -4



Immersion Heater Example -5



Immersion Heater Example -6



Nexthermal's Tubular Heaters

Container Heater Example - 1



Container Heater Example - 2



Container Heater Example - 3



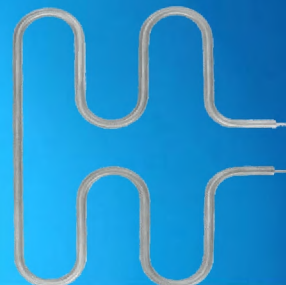
Profiled Heater Example - 1



Profiled Heater Example - 2



Profiled Heater Example - 3



sales@nexthermal.com

sales@nexthermal.in

