

Cartridge Heaters

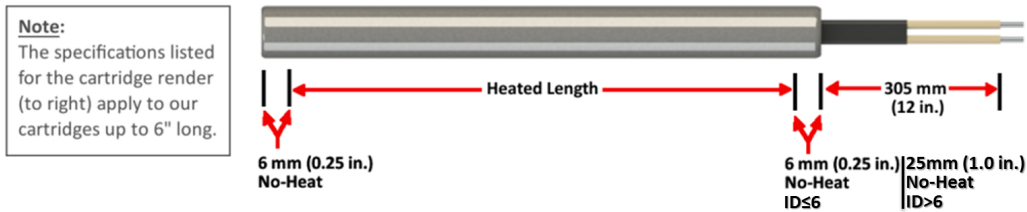
Cartridge heaters are tube-shaped, heavy-duty, industrial joule heating elements (electrical resistance) used in the process heating industry, usually custom manufactured to a specific watt density, based on its intended application. Cartridge Heaters provide superior heat transfer with uniform temperature and resistance from oxidation and corrosion at high temperatures. Our popular Cartridge heaters are the following design styles: Straight, Right Angle, Flange, 90 Degree, Posts out Both Ends, Post on Same End, and Distributive Wattage. Click to see our full line of: Cartridge Heaters

Cartridge Heater Applications: Molds, Platens, Dies, Hot Plates, Sealings, Aerospace, Fluid heating, Life sciences, Semiconductors, Food-service equipment

Cartridge Heater Specifications:

- 304 Stainless Steel Sheath
- All heaters are swaged at 3/6 L for immersion applications
- Watt densities (guaranteed to 150) up to 200 W/in² (62 W/cm²)
- Part temperatures to 1000° F (540°C) for optional stainless steel sheath
- Part temperatures to 1400°F (760°C) on Incoloy® sheath

Cartridge Heater Standard Tolerance Chart:



Note:
The specifications listed for the cartridge heater (to right) apply to our cartridges up to 6" long.

Diameter inches	Number of Circuits ^③	
	1-phase	3-phase
¼	3	1.0
1	5	2.0

Cartridge Diameter inches	Volts Max	Amp Max. ^①	Minimum Wats @ 120V ^②			Maximum Watts				
			Heater Length			120V 1-phase	240V 1-phase	480V 1-phase	240V 3-phase	480V 3-phase
			25 mm (1 in.)	38 mm (1.5 in.)	50 mm (2 in.)					
¼	240	3.1	—	8	5	360	720	—	—	—
¼	240	4.4 ^④	100	55	40	525	1050	—	—	—
½	240	6.7	65	35	25	800	1600	—	④	—
½	240	9.7	40	25	20	1,160	2,320	—	④	—
¾	480	23.0	35	20	15	2,760	5,520	11,000	④	—
¾	480	23.0	30	15	10	2,760 ^⑤	5,520	11,000	9,550	19,100

Some Min & Max figures may not be compatible. Call to confirm before placing an order.

Diameter: Cart Distributive Wattage Style 21

1 inch units: ±0.003 inches (±0.076 mm)

All other units: ±0.002 inches (±0.0508 mm)

Length:

All units up to 4 1/2" (115 mm) long: ±3/32 inch (±2.4 mm)

All other units over 4 1/2" (115 mm) long: ±2 percent

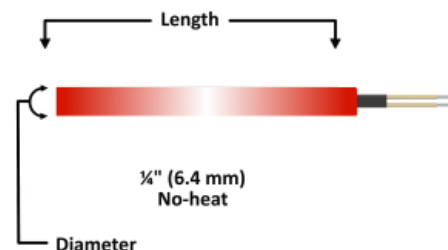
Wattage:

All other units: +5 percent, -10 percent

Resistance:

All other units: +10 percent, -5 percent

Distributed Wattage
Cartridge Style 21



Three circumstances where resistance can be measured:

1. Temperature of room before use; nominal ohms are 90 percent of ohm's law calculation.
2. Temperature of room after use; nominal ohms are 90 percent of ohm's law calculation.
3. Temperature during use – depending on the application; nominal ohms are 00 percent of ohm's law.