OMEGALUX™ High Watt Density Cartridge Heaters

OMEGA™

CIR Series

- **Reliable, Premium Quality**
- **Rugged - Shock and Vibration Resistant**
- **U.L. Component Recognized**
- **CSA Certified**
- **Up to 760ºC (1400ºF) Working Temperature**
- **Incoloy® 800 Sheath Material**
- **120 Vac and 240 Vac Models**
- **Patented Design**

Omegalux™ premium quality CIR high watt density cartridge heaters with Incoloy® 800 Sheath Material are specifically designed for high-temperature applications and are especially well suited for heating molds, dies, platens, hot plates and sealing operations.

Product Features

Sheath Material: OMEGALUX™ CIR Series cartridge heaters are made with high-temperature Incoloy® 800 sheath material. This sheath material allows working temperatures up to 760ºC (1400ºF) and sheath temperatures up to 870ºC (1600ºF). The CIR series patented construction and high Watt density capability let you put more heat in less space.

Black Oxide Sheath: Black surfaces transfer heat better than shiny surfaces. OMEGALUX heaters go to work immediately when energized and operate at cooler sheath temperatures. Shiny heaters initially begin operating at higher temperatures, shortening life expectancy while the sheath material slowly oxidized and turn black.

Resistance Wire: Highest quality (Grade A Nickel-Chromium) resistance wire is used for the resistance winding. Long life and consistent performance from one unit to the next are assured.

Refractory Insulation: The MgO between resistance wire and sheath is specially formulated and rigidly controlled to maintain high-temperature characteristics. Through special processes it is densely compacted to improve its thermal conductivity and dielectric strength.

Type F Leads: Standard on CIR Series. Consist of flexible manganese nickel wire insulated with impregnated Fiberglas®. Temperatures up 450°C (842°F). The leads are embedded in an air set cement at the terminal end of the sheath and can be bent at a sharp angle where they emerge through the flush terminal block, without exposing bare conductors.

Lead Length: Standard lead length is 14". When leads longer than 35 cm (14") are needed, additional lengths of high-temperature wire can be spliced on stock heaters, either at the factory or by the user. Specially fabricated CIR Series heaters can be supplied with unspliced leads up to 81 cm (32") in length.

Heavy Gauge End Disc: The welded end disc (at the end opposite leads) provides a positive seal against moisture or other contamination. This rugged construction and the black oxidation of the sheath material facilitate heater removal if required.

Internal Connections: Patented connector eliminates the possibility of any overheating of the internal connection between the stranded lead wire and the resistance wire. Highly reliable, the connector also prevents any life shortening stresses from occurring in the connection during heater operation.

Even Temperature: The sheath temperature throughout the heater's length is produced by the uniform winding of the wire on the smooth supporting core. Close and even spacing between wire and inside of sheath is maintained for good heat transfer. Tight spacing between turns permits use of largest gauge resistance wire.

Shock and Vibration Resistant: Tightly compacted refractory insulation for severe applications.

Corrosion Resistance: Excellent oxidation and corrosion resistance is provided by the Incoloy® 800 sheath material. Thermal expansion characteristics of sheath and refractory are closely matched.

Specifications for CIR

Diameter	Size	¼"	⅜"	½"	⅝"	¾"
	Decimal	0.246"	0.371"	0.496"	0.621"	0.746"
	Tolerance	±0.002				
Length	Tolerance	±3%*	±2%*			

**Length tolerance is either ±% or 3/32" whichever is greater.*