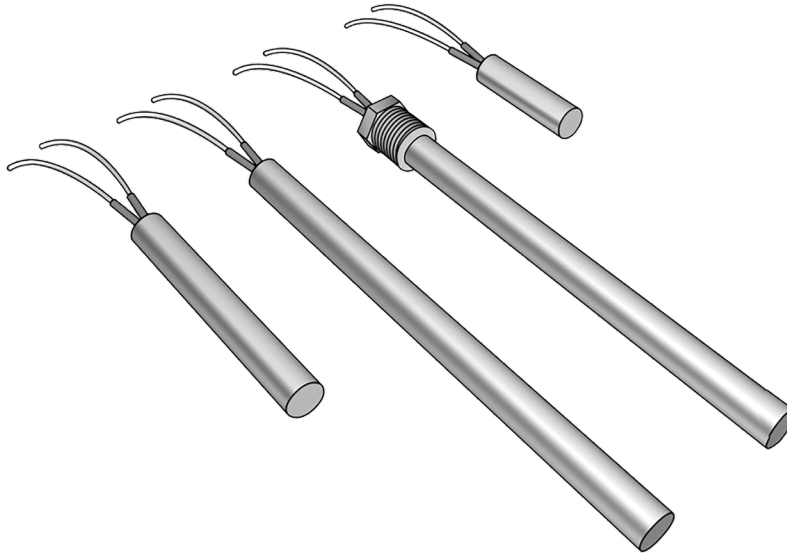




Cartridge heating elements



Application

Cartridge heating elements are specially designed to generate large amounts of heat in a concentrated manner at a location of your choice. For example, for machine parts that need to be heated locally.

The areas of application include foundries and the plastics processing, textile, packaging, glass and rubber industries. Cartridge heating elements are available as standard models or can be made to customer order. Heating Group International is happy to put forward proposals for the exact shape, based on the project specifications.

Technical description

Cartridge heating elements contain a resistance wire made from a high-quality alloy, which is wound around a ceramic core. These design features make the elements suitable for use up to extremely high temperatures. Products with a stainless steel case can withstand 750°C, brass is suitable up to 350°C.

The use of powdered magnesium oxide, which is an excellent electrical insulator even at high temperatures, ensures optimum heat transfer to the outer case. As cartridge heating elements can be subjected to heavy loads (up to 50W/cm²), very high localised power ratings can be achieved (up to 3kW). The table provides an overview of our standard high-load cartridges with a stainless steel case (230V).

Installation

To ensure a long service life and optimum heat transfer, the heating cartridges are precision-ground to an H7 fit. When using cartridge heating elements, users or designers must ensure that the hole for the cartridge heating element is also machined to this tolerance. If the rate of heat transfer is insufficient, the temperature in the cartridge element will rise excessively, causing the resistance wire to burn out. If the fit is accurate, heat transfer can be further improved by applying an assembly grease or assembly spray.

High-load standard cartridges, stainless steel (watts at 230V)

Length mm	32	40	50	60	80	100	130	160	200	250	300
Diameter											
Ø 6.5	75	100	125	125	125	125	125	150			
	100	125	150	150	175	150	150	200			
	150	150	175	175	200	200	200	300			
	750	175	200	200	250	250	250	350			
		200	250	250	300	300	300	400			
		250		300		350	350	500			
					400	400					
Ø 8		125	125	125	150	175	175	200			
		150	150	150	170	200	200	250			
		200	200	200	200	250	250	300			
			250	250	250	300	300	400			
				300	300	400	400	500			
				400	400			600			
Ø 10	75	100	125	125	150	200	250	300	400		
	100	125	150	150	200	250	300	400	500		
	150	150	200	200	250	300	400	500	600		
	200	200	250	250	300	350	500	600	750		
		250	300	300	400	400	600	800	1000		
		300	400	400	500	500	800				
					630	600					
						700					
Ø 12.5		125	160	125	125	160	250	400	300	500	500
		160	200	160	160	200	350	500	500	800	800
		200	250	200	200	250	400	600	600	1000	1000
		250	300	250	250	300	500	800	800	1250	1250
		300	350	300	300	400	600	1000	1000	1500	1500
		350	400	350	350	500	800	1200	1200	2000	2000
		400	500	400	400	600	1000		1500		
		500	600	500	500	800			2000		
				600	600	1000					
					750						
Ø 16		160	160	160	250	300	400	400	500	500	500
		200	200	200	300	400	500	500	800	800	800
		250	250	250	400	500	600	600	1000	1000	1000
		300	300	300	500	600	800	800	1250	1300	1300
		400	400	400	600	800	1000	900	1500	1600	1500
		500	500	500	800	1000	1200	1000	2000	2000	1800
			600	600	1000	1200			1250		2000
									1600		2500
Ø 20				200	300	350	400	500	800	800	1000
				300	400	450	500	800	1000	1000	1500
				500	500	600	600	1000	1500	1500	2000
				600	600	1000	800	1500	1800	2000	2500
				800	800	1400	1000	2000	2000	2500	
					1000	1600	1500		2500		
					1250		2000				