



SiC heater is a kind of non-metal high temperature electric heating element. It is made of selected high-purity green silicon carbide as raw material which is made into blank and silicon crystal under high temperature of 2400°C. SiC can usually use in the furnaces which temperature from 600°C-1600°C. It can be directly used in an air atmosphere without any protection atmosphere the long-term usage of life can reach over 3000 hours. Furthermore, it has a higher working temperature and chemical stability, easy installation and extensively used in the fields metallurgy, ceramics, glass, machinery, analysis test, semiconductor, science and so on. Silicon carbide is a ceramic material with relatively high electrical conductivity

when compared to other ceramics. Typical heating elements are rods or tubes, with diameters between 0.5 and 3 inches and lengths from 1 to 10 feet. They have metalized ends for electrical connections, and they often have both connections at one end, with two helical slots stop short of the other end, thus approximating a twisted hairpin form.

Application

SiC Heater is designed with specially formulated cold ends which significantly reduce the heat loss from the terminals concentrating the heat where needed in the furnace. Reduced heat losses result in lower power consumption saving energy costs also helping to reduce the furnace carbon footprint by lowering the greenhouse gas emission.

Metal Industries

- Powder metallurgy sintering
- Solution, molten cast holding, and aging processing of aluminum alloy
- Gas carburizing hardening of components for automotive, aircrafts, and machinery
- Carburizing, nitriding, and bright annealing for steel parts
- Hardening and tempering of various dies
- Brightness processing of die steel
- Tempering and soldering of machine components
- Carbon and sulphur analysis, tempering process for band steel
- Patenting processing for steel wire

Electronics Industry

- Firing of ceramic capacitors
- Sintering of alumina and steatite
- Firing of piezoelectric elements
- Firing of I.C. substrate and grazing
- Firing of ceramic resistors, varistor and thermistors
- Temporary sintering and calculations of soft and hard ferrite
- Heat treatment of shadow mask for colour TV, pure iron, permalloy, bright annealing of silicon steel plate, heat treatment of copper soldering, optical fibre, and compact discs

Porcelain Industry

- Fusion, retention, and gradual cooling of glass
- Surface treatment of glass
- Heat treatment of liquid crystal
- Lens matching
- Manufacturing of safety glass
- Manufacturing of ceramics and glass fibre
- Manufacturing of various fine ceramics
- Firing of quartz raw materials
- Firing of porcelain enamel
- Firing of ceramic ware
- Firing of grind stone
- Test for various refractory products

Chemical Industry

- Firing of fluorescent paint
- Firing of various pigments
- Firing of carriers and catalyst
- Heating of reactive gas
- Coal carbonization
- Firing of activated carbon
- Cleaning furnace and deodorizing furnace

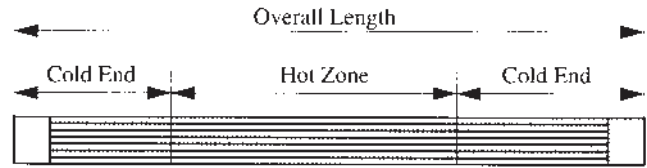
Others

- Various high temperature test furnaces
- Ignition of gas and kerosene appliances
- Ignition of various types of industrial equipment
- Various high temperature tests
- Local heating
- Ash melting surface

Materials

Silicon Carbide

Silicon Carbide Heating Elements



Our heating elements consist of fine, dense crystals. Because of their improved oxidation and heat resistance, as well as enhanced strength, products of this type are most widely used as economical heating elements applicable in a variety of atmospheres at high temperatures. Depending on the application, appropriate coats to resist oxidation and corrosion are used.

Size				Hot Zone Surface Area	Nominal Loading Values		
Dia meter	Hot Zone Length	Cold End Length	Overall Length				
mm	mm	mm	mm	cm ²	Volts	Watts	Ohms
8	100	100	300	25	35	430	2.8
	150	100	350	38	50	650	3.8
	200	100	400	50	65	850	5.0
	250	100	450	63	80	1070	6.0
	100	150	400	31	30	530	1.7
10	150	150	450	47	45	800	2.5
	200	150	500	63	60	1080	3.4
	250	150	550	79	75	1340	4.2
12	150	150	450	56	40	900	1.8
	200	200	600	75	55	1200	2.5
	250	200	650	94	70	1500	3.3
	300	200	700	113	80	1800	3.6
14	200	200	600	88	50	1400	1.8
	250	250	750	110	60	1750	2.1
	300	250	800	132	70	2100	2.3
	350	200	750	154	85	2450	3.0
	400	250	900	176	100	2800	3.6
16	300	250	800	150	70	2400	2.0
	400	250	900	200	95	3260	2.8
	450	250	950	225	110	3600	3.3
	500	250	1000	250	120	4000	3.6
	600	250	1100	300	140	4800	4.1
20	300	300	900	188	65	3000	1.4
	400	300	1000	251	85	4000	1.8
	500	400	1300	314	110	5000	2.4
	700	400	1500	439	150	7000	3.2
	800	400	1600	502	170	8000	3.6
	900	300	1500	565	190	9000	4.0
	1000	300	1600	627	210	10000	4.4

Size				Hot Zone Surface Area	Nominal Loading Values			
Dia meter	Hot Zone Length	Cold End Length	Overall Length					
mm	mm	mm	mm	cm ²	Volts	Watts	Ohms	
25	300	300	900	236	55	3600	0.9	
	400	400	1200	314	75	4700	1.2	
	500	400	1300	392	90	5800	1.4	
	600	400	1400	470	110	7000	1.7	
	700	400	1500	550	130	8200	2.1	
	800	400	1600	627	150	9400	2.4	
	900	300	1500	705	170	10600	2.7	
	1000	300	1600	785	190	11800	3.1	
	1100	300	1700	862	200	13000	3.1	
	1200	300	1800	940	220	14000	3.5	
	1300	300	1900	1020	230	15300	3.5	
	1400	300	2000	1095	250	16500	3.8	
	30	300	300	900	280	50	4300	0.6
		400	400	1200	380	65	5600	0.8
500		400	1300	470	80	6900	0.9	
600		400	1400	570	100	8700	1.1	
700		400	1500	660	115	10000	1.3	
800		400	1600	750	130	11300	1.5	
900		400	1700	850	150	13000	1.7	
1000		400	1800	940	160	14100	1.8	
1100		400	1900	1035	180	15600	2.1	
1200		400	2000	1130	200	17000	2.4	
1300		400	2100	1220	210	18300	2.4	
1400		400	2200	1320	230	19800	2.7	
1500		400	2300	1410	240	21000	2.7	
1600		300	2200	1500	260	22500	3.0	
1700		300	2300	1600	280	24000	3.3	

- Nominal Loading Values are measured with an EREMA Heating Element surface temperature of 1000°C in open air, and resistance values have a manufacturing tolerance of ±15%.
- Products of other sizes than those listed above are also manufactured.
- Manufacturable dimensions Diameter 30mm Hot zone 1800mm overall length 2400mm