



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

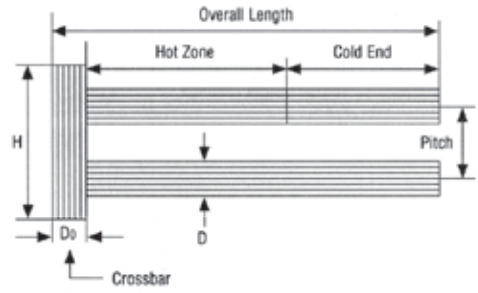
Others

- 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

U - TYPE



This Type consists of two EREMA E (F) elements combined to form a U-shaped heating element. This is a single phase heating element with two terminal sections in one direction. With this product, furnaces of an energy saving construction can be built. Pin holes are optional.

Size				Hot Zone Surface Area	Nominal Loading Values		
Dia meter	Hot Zone Length	Cold End Length	Overall Length		cm ²	Volts	Watts
mm	mm	mm	mm	cm ²	Volts	Watts	Ohms
16	300	300	40	301	121	4600	3.18
	400	300		402	160	6080	4.21
	400	400		402	163	6190	4.29
	500	300		502	200	7600	5.26
20	300	400	50	377	112	5990	2.09
	350	400		440	130	6960	2.43
	400	400		502	147	7870	2.75
	450	350		565	167	8770	3.07
	500	400		628	183	9790	3.42
	500	500		628	185	9900	3.46
	600	400		754	218	11700	4.07
	600	500		754	220	11800	4.11
	700	400		879	253	13500	4.73
	700	500		879	256	13700	4.79
	800	400		1005	289	15500	5.40
	800	500		1005	291	15600	5.44
25	400	400	60	628	131	9370	1.83
	400	500		628	133	9510	1.86
	450	400		707	147	10500	2.06
	500	400		785	163	11700	2.28
	500	500		785	165	11800	2.31
	550	400		864	179	12800	2.50
	600	400		942	194	13900	2.71
	600	500		942	196	14000	2.74
	700	400		1099	226	16200	3.16
	700	500		1099	228	16300	3.19
	800	400		1256	258	18500	3.61
	800	500		1256	260	18600	3.64

Size				Hot Zone Surface Area	Nominal Loading Values		
Dia meter	Hot Zone Length	Cold End Length	Overall Length		cm ²	Volts	Watts
mm	mm	mm	mm	cm ²	Volts	Watts	Ohms
30	500	400	70	942	148	13800	1.58
	500	500		942	149	13900	1.59
	600	400		1130	176	16500	1.88
	600	500		1130	178	16600	1.90
	700	400		1318	205	19200	2.19
	700	500		1318	207	19400	2.21
	800	400		1508	234	21900	2.50
	800	500		1508	236	22100	2.52
	900	400		1695	263	24600	2.81
	900	500		1695	265	24800	2.83
35	600	400	80	1319	180	19100	1.68
	600	500		1319	182	19400	1.70
	700	400		1539	210	22200	1.96
	700	500		1539	212	22400	1.98
	800	400		1758	240	25400	2.24
	800	500		1758	241	25600	2.26
	900	400		1978	270	28600	2.52
	900	500		1978	271	28800	2.54
	1000	500		2198	301	32000	2.82

Crossbar Size (mm)

D	16	20	25	30	35
Do	25	30	35	40	45
H	76	90	110	125	140

Notes:

- The overall length of U-type heating elements consists of the indicated dimension of U-type products (cold end length plus hot zone length) and the tip length (Do).
- The maximum width of U-type heating elements is equivalent to the dimension of H.

- 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 40mm Hot zone 1500mm overall length 1800mm
- In addition, W-type products are manufactured to be used in float glass manufacturing furnaces.
- Products with special shapes are manufactured to meet the requirements of size, application and operating conditions.