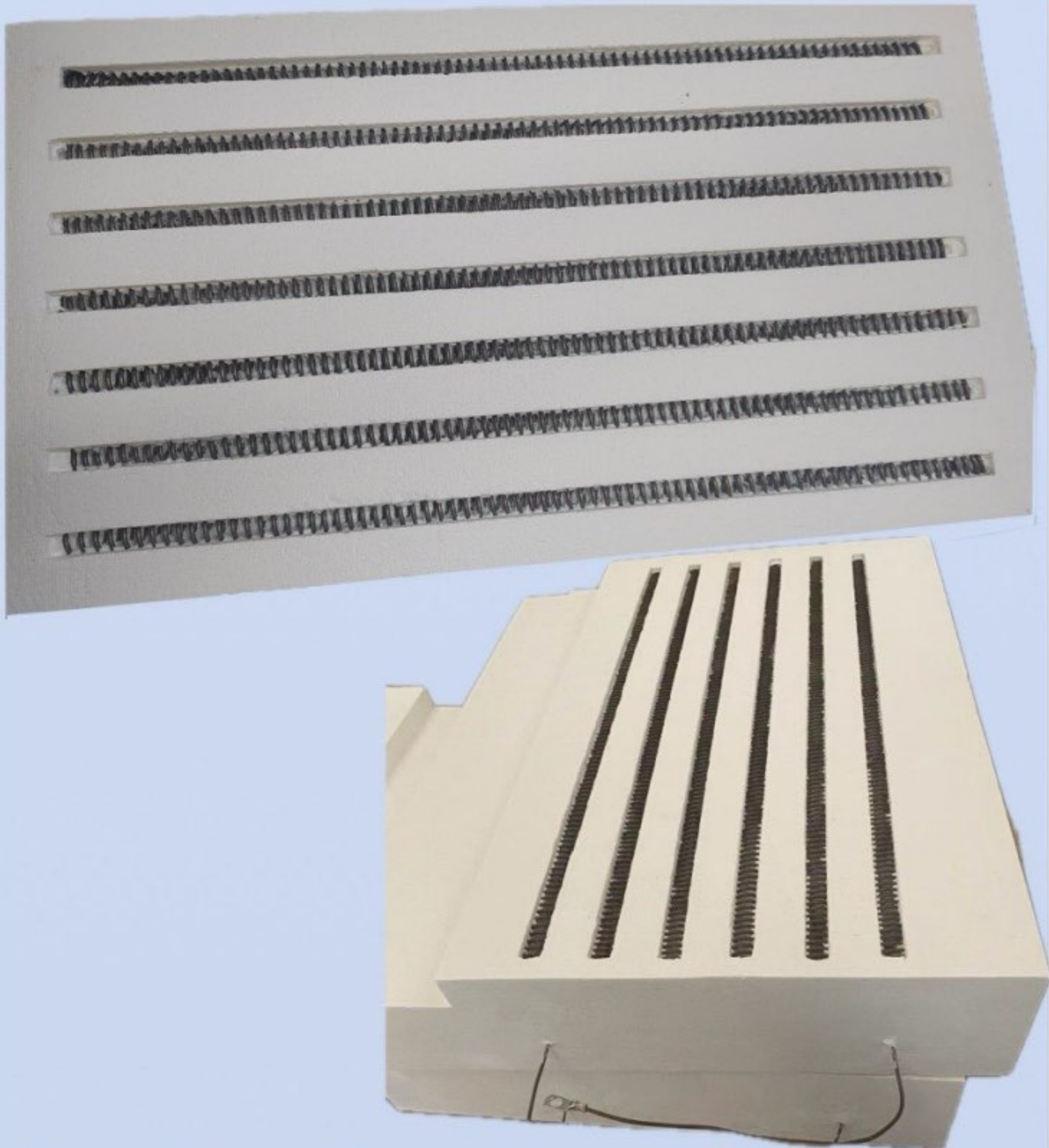


Ceramic Fiber Heater

Product Introduction

Ceramic fiber heater uses vacuum adsorption molding process to embed electric heating elements into refractory fiber moldings. It is an integrated product that integrates heating and insulation. The highest operating temperature can reach 1300°C, with excellent heating effect and thermal stability. It can be designed according to the needs of different environments and provide mature design solutions. The products are widely used in experimental electric furnaces, industrial furnaces, powder metallurgy, oil pipelines and other heating equipment.



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Ceramic Fiber Heater

Application

- Experimental furnace furnace materials
- Crystal growth furnace heater
- Photovoltaic silicon wafer oxide film growth furnace
- Semiconductor industry high temperature oxidation furnace, hydrogen and oxygen igniter
- Material preparation process heater

Specifications of conventional box furnace ceramic fiber heater:

Product Name	Assembly	Size (MM)	Capacit y (L)	Technical Data	Heating wire (group )	Operating temperatur e (°C)
1500Furnace chamber	Integral molding	200×120×80	1.92	220V/1.5KW,φ1.2, 1group wire, Single power 1.5KW	1	1100
1500Furnace chamber	Integral molding	200×150×150	4.5	220V/2.5KW,φ1.8, 1 group wire, Single power2.5KW	1	1100
1500Furnace chamber	Integral molding	300×200×120	7.2	220V/3.0KW,φ2.0, 1 group wire, Single power3.0KW	1	1100
1500Furnace chamber	Integral molding	300×200×200	12	220V/4KW,φ1.6, 2 groups wire, Single power2KW	2	1100
1500Furnace chamber	Integral molding	300×250×250	18.75	220V/5KW,φ1.8, 2 groups wire, Single power 2.5KW	2	1100
1500Furnace chamber	Assembly	400×300×300	36	380V/8KW,3 groups of resistance wires connected in parallel to 380V, 2 on the side/ wire diameter 1.4/3KW×2, 1 group of resistance wires on the top plate with a wire diameter of 1.2/2KW	3	1100
1500Furnace chamber	Assembly	500×400×400	80	380V/16KW, 3 sets of resistance wires connected in parallel to 380V, 2 wires on the side/wire diameter 2.0/5.5KW×2, 1 set of resistance wires on the top plate with a wire diameter of 2.0/5KW	3	1100

Specifications of conventional tube furnace ceramic fiber heater:

Product Name	Assembly	Size (MM)	Technical Data	Heating wire (group)	Operating temperature (°C)
1500 round furnace chamber	Semicircular opening	φ120/φ240*H440	The power of a single resistance wire is 110V/1.5KW, the wire diameter is 2.0, and two semicircles are combined into one set.	1	1100
1500 round furnace chamber	Semicircular opening	φ120/φ240*H205	Single resistance wire power 110V/0.8KW, wire diameter 1.4, two semicircles combined into one set	1	1100
1500 round furnace chamber	Semicircular opening	φ120/φ240*H155	The power of a single resistance wire is 110V/0.6 .5KW, the wire diameter is 1.2, and two semicircles are combined into one set	1	1100

Ceramic Fiber Heater

1500Polycrystalline fiber Vacuum formed shapes

Properties	
Classification Temperature°C	1500
Continuous Use Temperature, °C	1350
Density, kg/m3	300/350
Permanent Linear Shrinkage, %,24 hours	1400°C (<0.5)
Chemical Composition, %	
Alumina, Al2O3	62
Silica, SiO2	37
Other	<1
Thermal Conductivity, W/m·K	
400°C	-
600°C	0.11
800°C	0.15
1000°C	0.12

\*Special sizes can be designed and manufactured according to customer requirements. For more specifications and detailed technical solutions, please contact our sales engineer. The technical data of the product is the average value measured by the adopted test standard. The value will fluctuate within a certain range. This data does not represent the quality assurance data of the product.

Technical Data sheet of electric heating alloy

Metallic heating Elements	Spark HRE	Spark 0Cr21Al6Nb	KANTHAL A-1	KANTHAL APM
Classification Temperature°C,°F	1400(2552)	1350(2462)	1400(2552)	1400(2552)
Continuous Use Temperature°C, °F	1200	1150	120	1200
Nominal composition, %				
Cr	22-24.5	21	22	25
Al	5.8	6	5.8	6.0
Fe	Balance	Balance	Balance	Balance
Ni	-	-	-	-
density (g/cm3)	7.1	7.1	7.1	7.1
Resistivity at 20°C	1.45	1.45	1.45	1.45

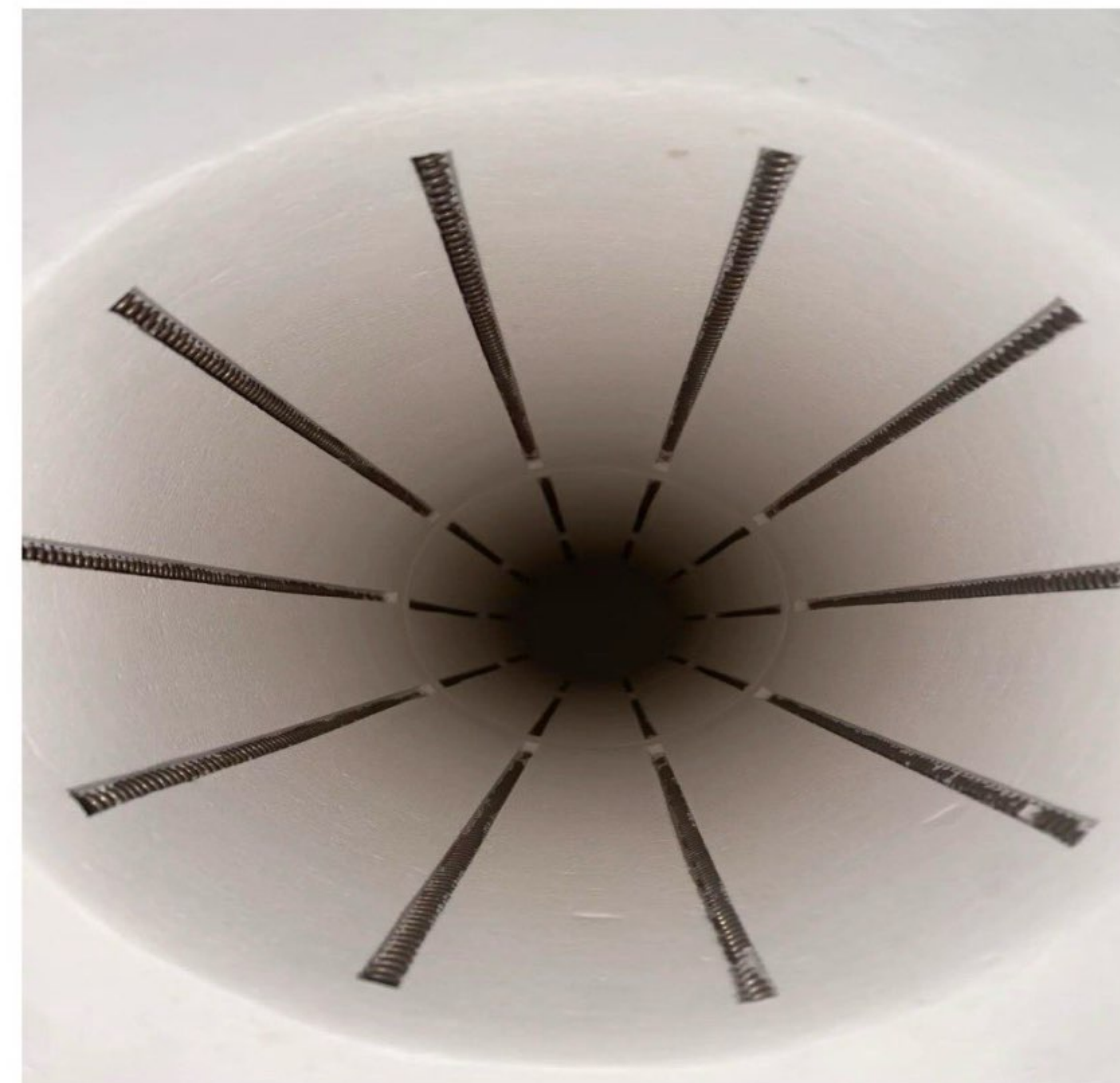
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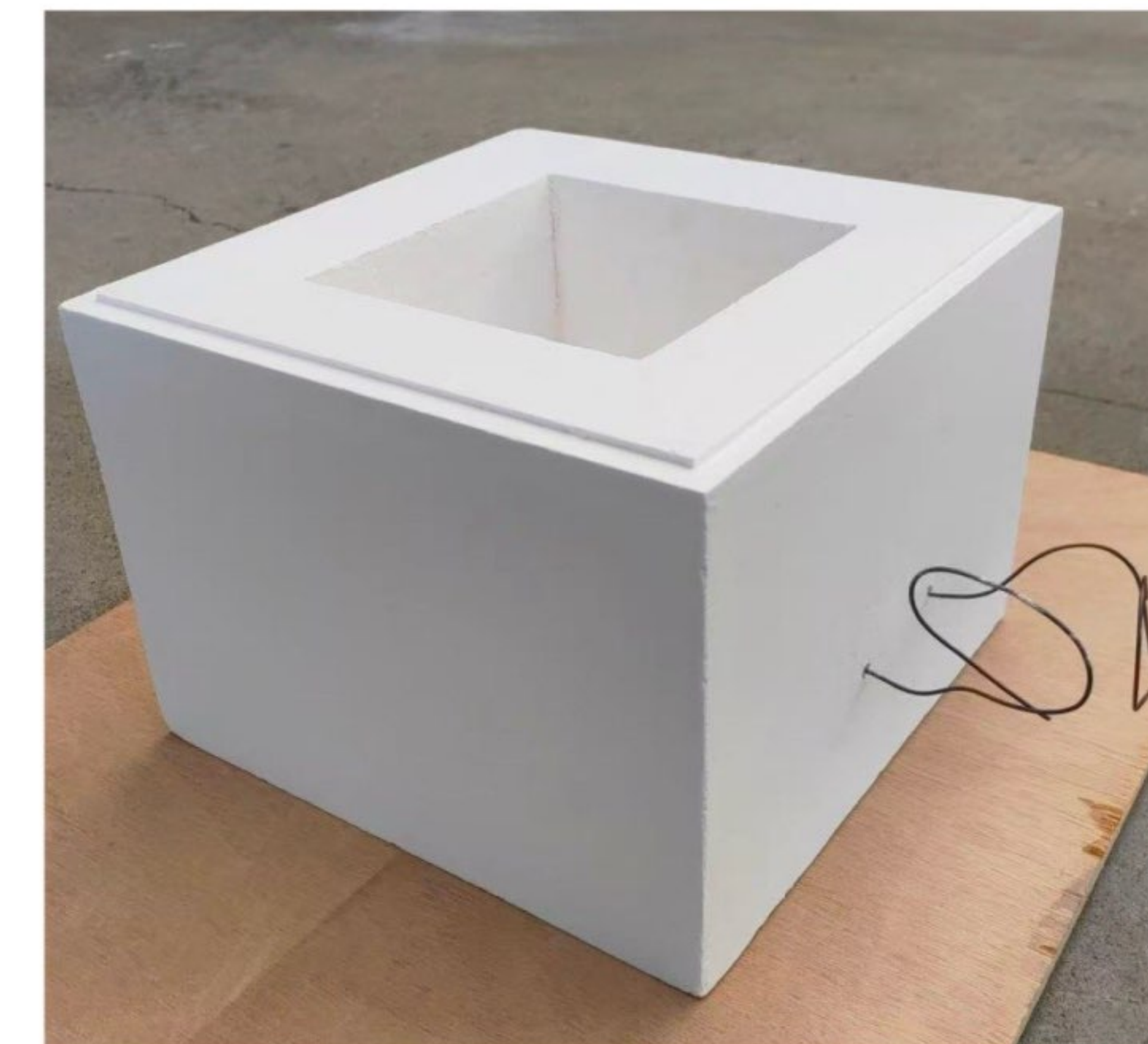
**Ceramic Fiber Heater  
(Semicircular split type)**



**Ceramic fiber heater (full circle)**



**Ceramic fiber heater (Muffle furnace chamber)**





## Ceramic Fiber Heater

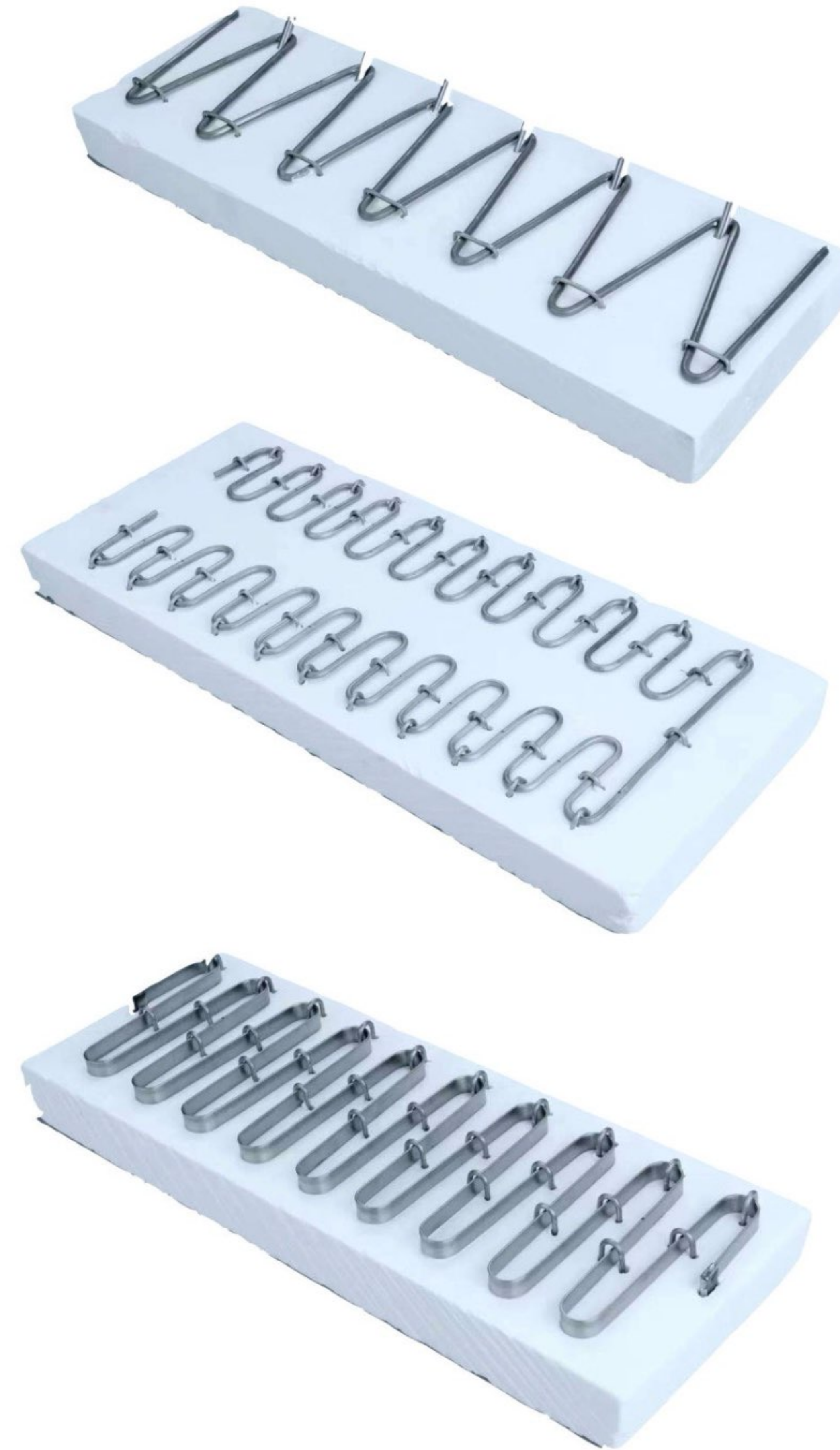
### Classification by operating temperature

- 1: Using FeCrAl heating wire adsorption heater, the maximum operating temperature is 1150°C
- 2: Using FeCrAl heating wire external heater, the maximum operating temperature is 1300°C
- 3: Using silicon carbon rod external heater, the maximum operating temperature is 1350°C
- 4: Using silicon molybdenum rod external heater, the maximum operating temperature is 1650°C
- 5: Using SUPERKANTHAL process silicon molybdenum rod external heater, the maximum operating temperature is 1800°C



**1: Adsorption type electric heating alloy heater**

## Ceramic Fiber Heater

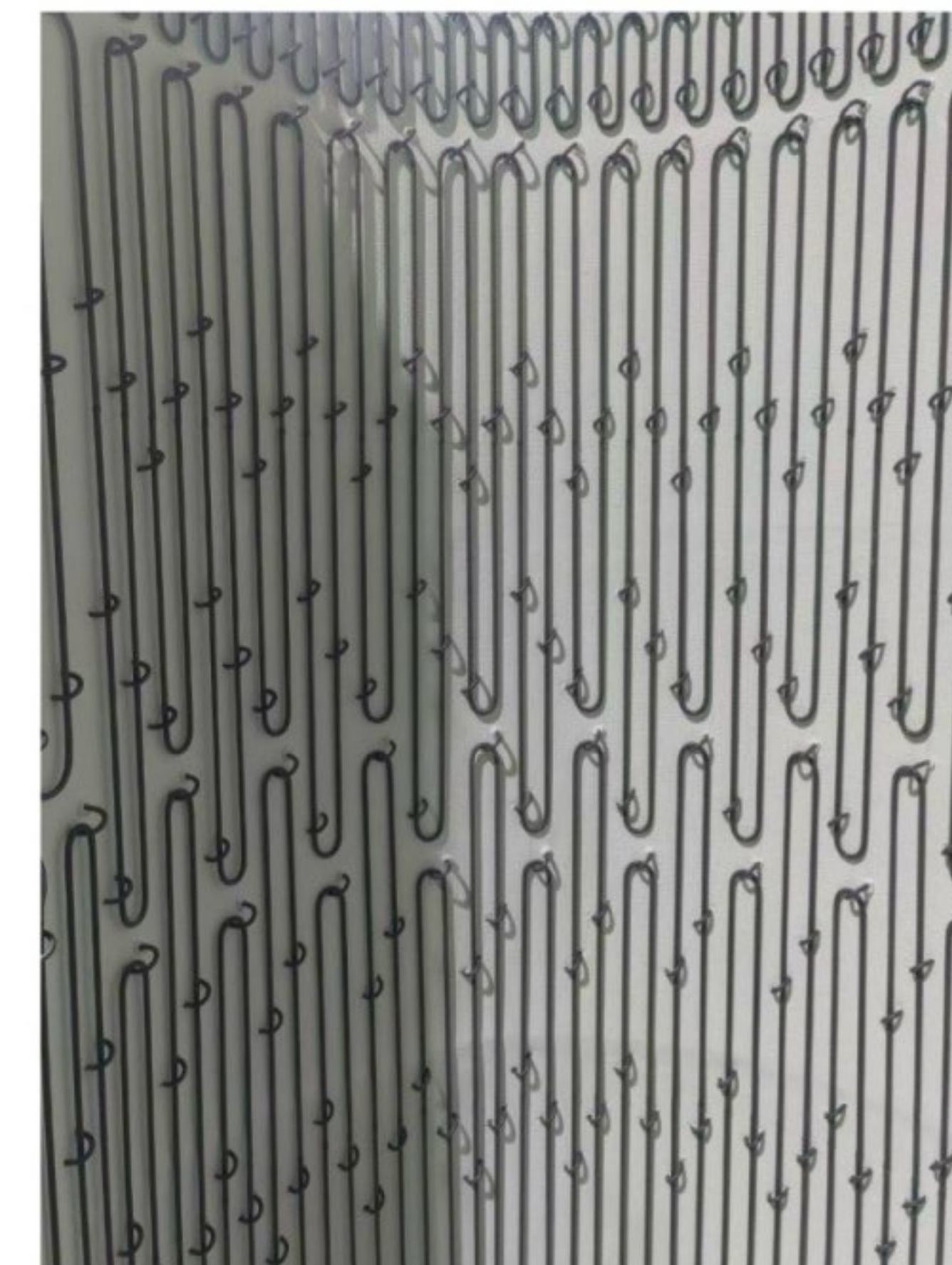


**2: External electric heating alloy wire heater**

## Polycrystalline Mullite Fiber Furnace Heater



**3: External silicon carbon rod heater (SiC rod furnace)**



**4&5: External silicon-molybdenum rod heater (MoSi2 rod furnace)**



**\*SiC Heater**



**\*SiMo2 Heater**

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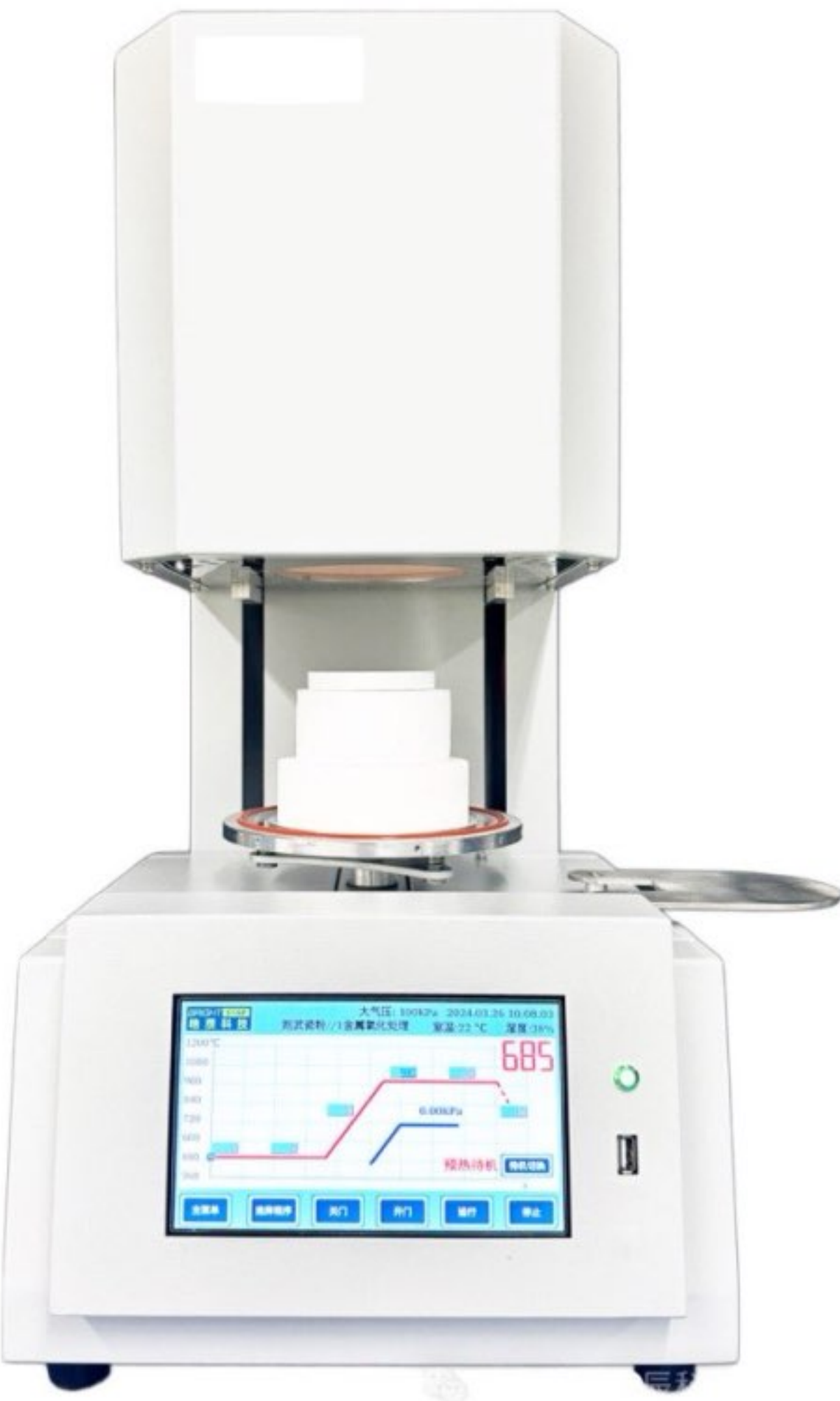


Zirconia Porcelain Furnace Chamber Materials

Product Introduction

The main application areas of porcelain furnaces include porcelain restoration in dental technology. Porcelain is a dental technology used to repair missing front and back teeth, with the advantages of high strength of metal, aesthetics and wear resistance of porcelain. It can be used not only to repair missing teeth, but also to repair discolored, fluoride spots, enamel hypoplasia, cones and partially missing front teeth.

Porcelain furnaces are usually composed of furnace covers, grilling tables, lifting tables, operating panels and other components. These components work together to ensure that the porcelain powder is evenly heated at high temperatures to achieve the ideal processing effect.



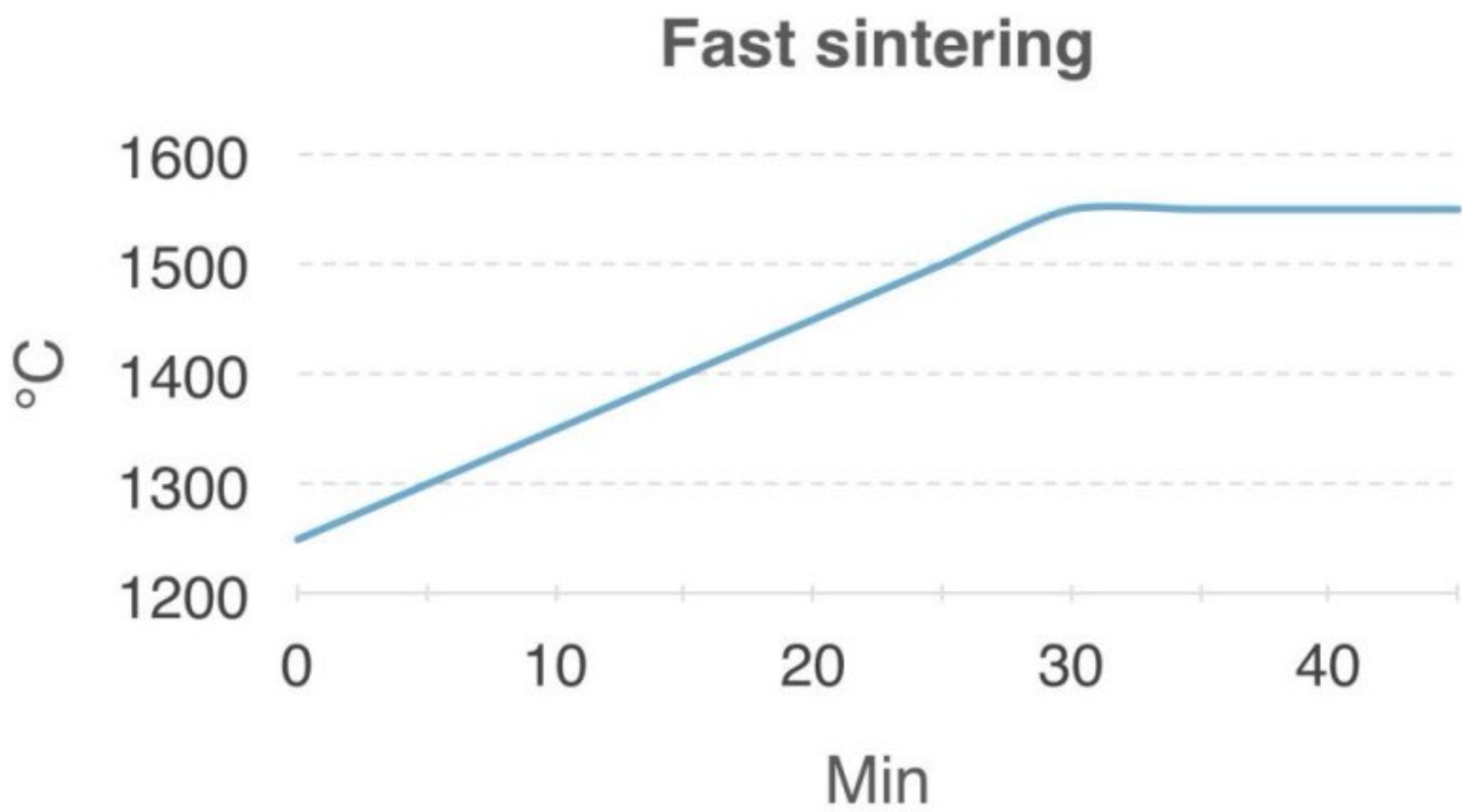
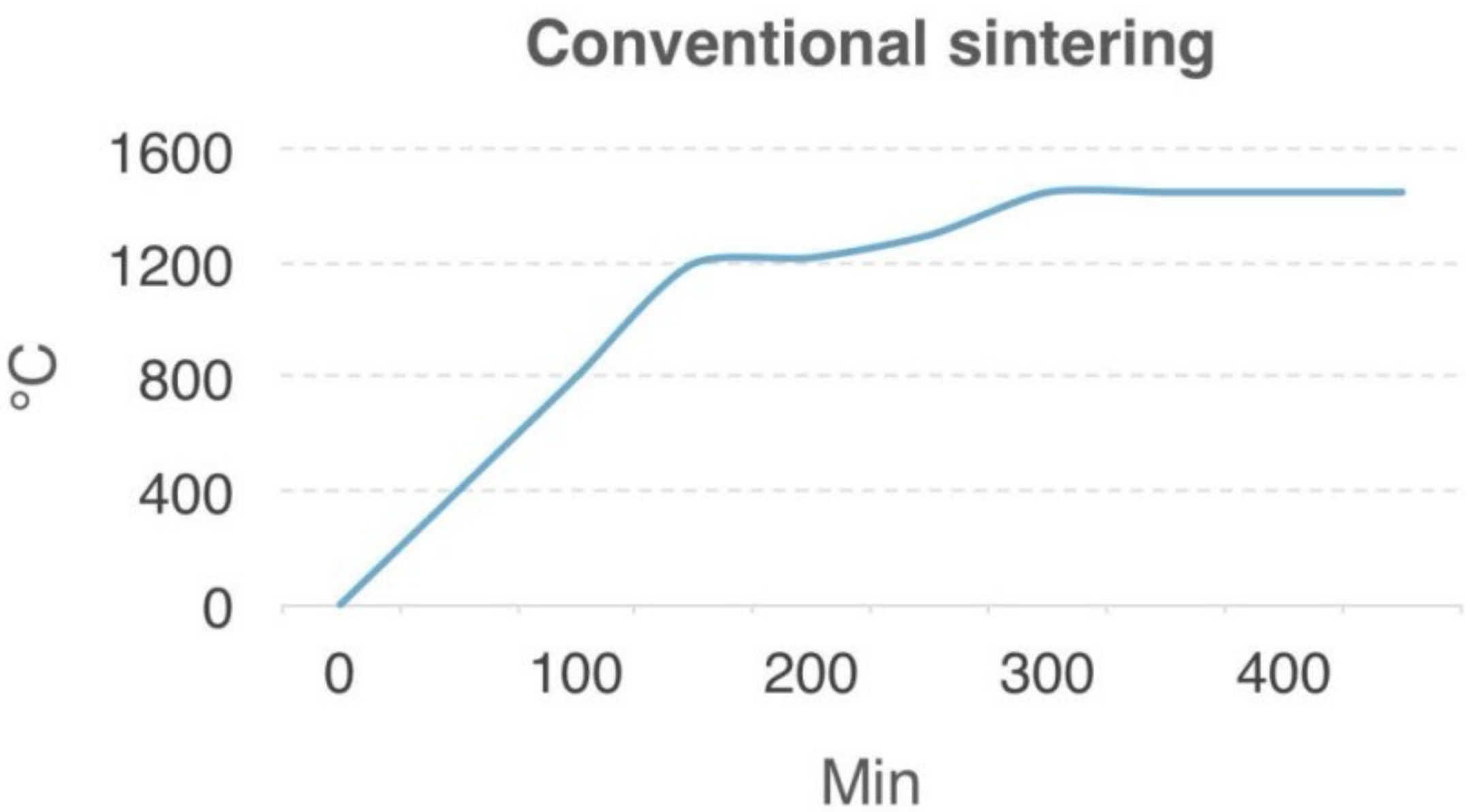
Zirconia Porcelain Furnace Chamber Materials

Application

Polycrystalline mullite fiber and alumina fiber can provide special-shaped furnace design according to the heating curve of the porcelain furnace, and cooperate with high-temperature electric heating alloy, silicon carbon rod or silicon molybdenum rod to realize the sintering of zirconia dental materials.

At the same time, it can also be equipped with a sintering box to load zirconium beads and zirconia embryos.

Zirconia porcelain furnace sintering temperature curve



Zirconia Porcelain Furnace Chamber Materials

Technical data sheet of furnace chamber for zirconia porcelain furnace

Properties	1500Polycrystalline fiber chamber	1700Polycrystalline fiber chamber	1800Aluminum fiber chamber
Color	white	white	white
Classification Temperature °C	1500	1700	1800
Continuous Use Temperature, °C	1350	1600	1700
Density, kg/m3	350	400	400
Permanent Linear Shrinkage, %,8 hours			
1400°C	<0.5		
1500°C			
1600°C		<0.5	
1700°C			<0.5
1750°C			
Chemical Composition, %			
Alumina, Al2O3	62	75	75
Silica, SiO2	37	24	24
Other	<1	<1	<1
Thermal Conductivity, W/m·K			
400°C	-	-	
600°C	0.11	0.12	0.12
800°C	0.15	0.15	0.16
1000°C	0.12	0.18	0.19

\*Special sizes can be designed and manufactured according to customer requirements. For more specifications and detailed technical solutions, please contact our sales engineer.

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