BROTHER FURNACE

Brother Furnace

More than 200 types of furnace and apply to various application fields

More than 600 sets in stock

Large scale electric furnace manufacturer in China

Product Selection Manual

Zhengzhou Brother Furnace Co.,Ltd

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ZHENGZHOU • CHINA

About us

Zhengzhou Brother Furnace Co., Ltd is established in March 2008, specialized in R&D Electric Furnace, MoSi2 Heating Element and SiC Heating Element. After many years of development , Brother Furnace owns complete organization structure system and most comprehensive R&D production system in China. At the same time, Brother Furnace first create the modular and large-scale production in electric furnace field, and make a contribution for the competition of China furnace in the world.

Production advantage

1. Complete production line: Brother Furance owns 5 workshops including metal plate, painting, MoSi2 heating element, chamber carve, furnace assembling & QC.
2. Technical team: Brother Furnace owns production technical team for the mechanical design, electrical automation control and thermal technology, we are able to provide approving solution according to customer requirement.
3. Delivery: Around 600 standard models in stock and have the ability to finish the production of furnace shell, chamber and heating element in quick time. The delivery time of standard model takes 3 days and customizable model takes 15 days.
4. Stable quality: Has professional quality control department, IQC for raw material testing; QC for the testing of production before packing.

Company Version

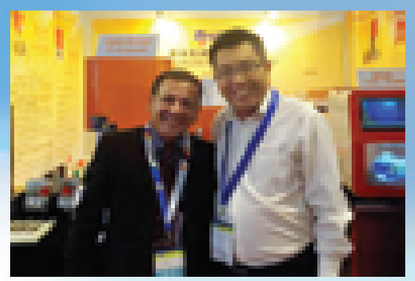
World quality professional furnace brand

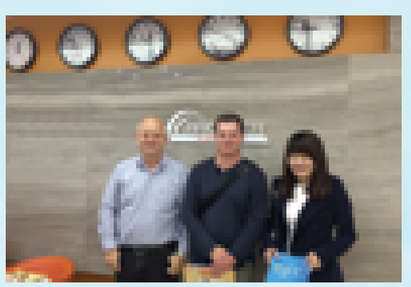
Company Mission

Create value for customer, create platform for stuff

Core Value

Customer first, keep learning, be proactive, neat & orderly

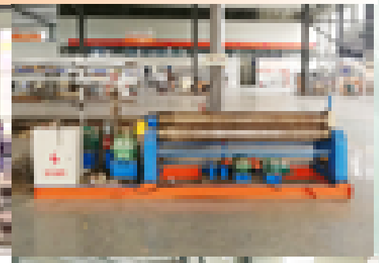


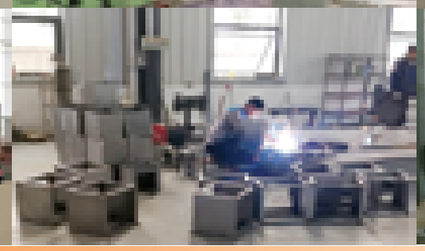


博纳热电炉生产制造流程

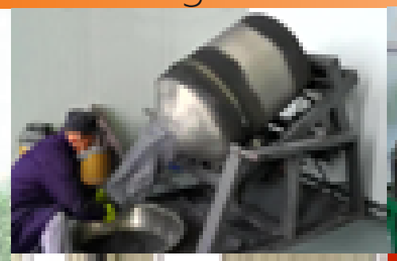
1 Metal plate workshop



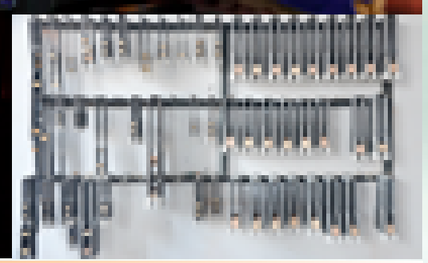




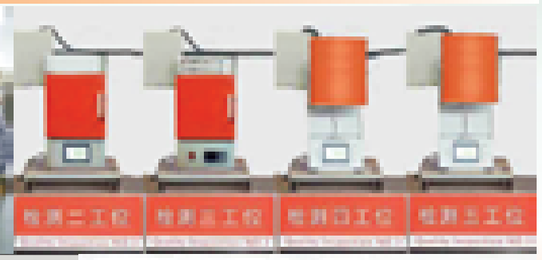
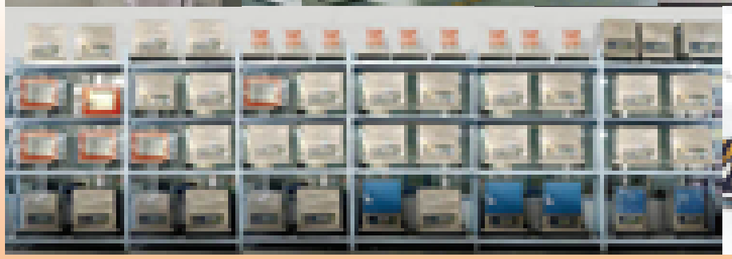

2 Heating element workshop





3 Furnace workshop


Content

T-Crystal

T-Crystal box sintering furnace adopts high purity polycrystalline mullite fiber as furnace material, which is light in weight, small in volume and only 1kW in power. It is suitable for small laboratory and even family working environment.。

Features

- ●T-Crystal is specially designed for the sintering of small batch samples of zirconia denture crystal, structural ceramics and polymer ceramics.
- ●The rated power is only 1kW, which is suitable for any small lab.
- ●High speed temperature increasing, 0-40℃/min.
- ●7 inch HD touch screen, easy to operate, can store 30 different processes, program.

Optional Spares

- ●Special sintering plate
- ●Observation hole
- ●Easy to observe the heating in the furnace

Technical Parameters	
Chamber size	100mm*100mm*100mm (W*H*D)
Max temperature	1700℃ (<2 hour)
Working temperature	1600℃
Temperature control	50 segments programmable and auto control
Thermocouple	B Type
Temperature accuracy	±1℃
Power	1kW
Net Weight	58kgs
Shape size	410mmx380mmx610mm

Dental Furnace T-Bright

T-Bright lifting sintering furnace, the electric lifting platform is used to accurately and quickly place the crucible in the furnace. 5 pcs MoSi2 is heated in a ring shape and the material is heated more evenly. Especially for zirconia dentures, the dentures that are fired are more transparent and beautiful.

Features

- ●T-Crystal is specially designed for the sintering of small batch samples of zirconia denture crystal, structural ceramics and polymer ceramics.
- ●The rated power is only 1kW, which is suitable for any small lab.
- ●High speed temperature increasing, 0-40℃/min.
- ●7 inch HD touch screen, easy to operate, can store 30 different processes, program.
- ●5pcs Mosi2 is heated in a ring shape, higher furnace temperature uniformity.

Standard Spares

- ●MoSi2 elements 2 pcs
- ●Alumina crucible 1pc
- ●Zirconia beads 1bag

Optional Spares

T-Bright Special sintering crucible

Technical Parameters	
Chamber size	100mm*100mm (Dia*H)
Max temperature	1700℃ (<2 hour)
Working temperature	1600℃
Temperature control	50 segments programmable and auto control
Thermocouple	B Type
Temperature accuracy	±1℃
Power	2 kW
Net Weight	75kgs
Shape size	420mmx570mmtx825mm

Porcelain Furnace T-Run

T-Run vacuum porcelain furnace, the high-quality quartz tube is used as the furnace, and the Fe-Cr-Al-Mo wire heating element is the famous Kanthal Fe-Cr-Al-Mo wire heating element, which ensures the uniformity of heat and the porcelain effect is better.

Features

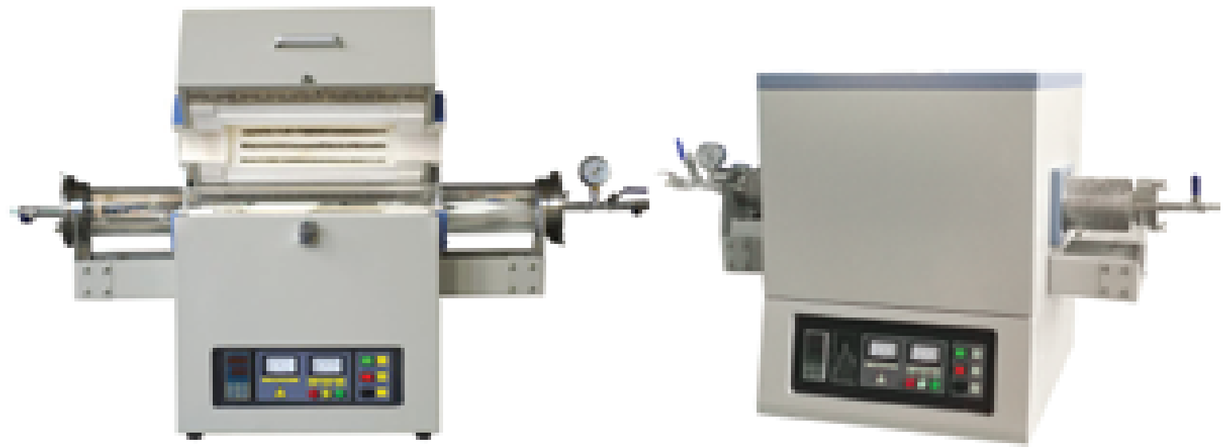
- The device stores 100 commonly used programs.
- The rated power is only 1.6kW, which is suitable for any lab rooms.
- High speed temperature in creasing, 0-150℃/min.
- Imported high quality oil-free vacuum pump, using multi-layer filter structure vacuum tube, can ensure the stability and life of related components.
- 10 inch HD touch screen, easy to operate.

Optional Spares

- Built-in program can be extended to 500
- Vacuum porcelain furnace special tray.

Technical Parameters	
Chamber size	100*80mm (Dia*H)
Max temperature	1200℃ (<2 hour)
Working temperature	1100℃
Vacuum	-98Kpa
Temperature control	30 segments programmable and auto control
Temperature accuracy	±1℃
Power	1.6kW
Net Weight	27kgs
Shape size	480mm*360mm*660mm

Vacuum Tube Furnace



Brother vacuum tube furnace used high pure alumina or quartZ tube as furnace chamber. Working range is from 300℃ to 1600℃. Precise and advanced auto temperature controller, high temperature accuracy, easy operation, excellent heat-insulation effect, symmetrical temperature uniform, Brother tube furnace widely used in the labs of university and Research Institutions, also used in factory for production.

Features

- Max temperature: 1200℃ (HRE Fe-Cr-Al-Mo wire)
  1400℃ (Sic Heater)
  1600℃ (MoSi2 Heater)
- 50 segments programmable and auto control
- Furnace structure, double layer steel dual cooling fan, surface temperature below 50℃
- 304 stainless steel sealing flange
- Adjustable flange support structure at both ends to extend furnace tube life
- Over-temperature protection function, automatic power-off when the temperature exceeds the allowable set value
- Safety protection Automatically power off when the furnace body leaks
- Heating rate ≦20℃/min
- Temperature accuracy ±1 ℃
- Max vacuum -0.1MPa
- Configuration molecular pump, Vacuum 7x10^(-4)Pa

Standard Spares

- Plugging tube 4 pcs
- Furnace tube 1 pc
- Vacuum pump 1 set
- Vacuum sealing flange 1 pc
- Vacuum gauge 1pc

Optional Spares

- Vacuum system (Rotary vane vacuum pump, Diffusion pump, Molecular pump)
- Atmosphere system (Float flow meter, Mass flow meter)
- Quick release flange, Three-way flange
- 7 inch HD touch scree

Vacuum Tube Furnace

Standard specification						
Model	Dia (mm) *Heating zone (mm)	Power(kW)	Max working temperature(℃)	Thermocouple	Furnace tube material	Heating elements
BR-12NT-40/300	40x300	3	1200	K type	Quartz tube	Fe-Cr-Al-Mo wire
BR-12NT-60/300	60x300	3				
BR-12NT-80/300	80x300	5				
BR-12NT-100/300	100x300	5				
BR-12NT-120/300	120x300	6				
BR-12NT-40/450	40x450	3				
BR-12NT-60/450	60x450	3				
BR-12NT-80/450	80x450	5				
BR-12NT-100/450	100x450	5				
BR-12NT-120/450	120x450	6				

Standard specification						
Model	Dia (mm) *Heating zone (mm)	Power(kW)	Max working temperature(℃)	Thermocouple	Furnace tube material	Heating elements
BR-14ST-40/300	40x300	4	1400	S type	Alumina tube	SiC heater
BR-14ST-60/300	60x300	4				
BR-14ST-80/300	80x300	4				
BR-14ST-100/300	100x300	6				
BR-14ST-120/300	120x300	6				
BR-14ST-40/450	40x450	4				
BR-14ST-60/450	60x450	4				
BR-14ST-80/450	80x450	4				
BR-14ST-100/450	100x450	6				
BR-14ST-120/450	120x450	6				

Standard specification						
Model	Dia (mm) *Heating zone (mm)	Power(kW)	Max working temperature(℃)	Thermocouple	Furnace tube material	Heating elements
BR-16MT-40/300	40x300	4	1600	B type	Alumina tube	MoSi2 heater
BR-16MT-60/300	60x300	4				
BR-16MT-80/300	80x300	4				
BR-16MT-100/300	100x300	6				
BR-16MT-120/300	120x300	6				
BR-16MT-40/450	40x450	5				
BR-16MT-60/450	60x450	5				
BR-16MT-80/450	80x450	5				
BR-16MT-100/450	100x450	7				
BR-16MT-120/450	120x450	7				

According to different temperature, furnace tube is high pure quartz or alumina, assembled with vacuum sealing flange. The furnace can heat or quench samples fast under vacuum or flowing inert gas situation. It is idea furnace for making quenching test and temperature measurement.

Features

- Max temperature: 1200℃ (HRE Fe-Cr-Al-Mo wire)
  1400℃ (SiC Heater)
  1600℃ (MoSi2 Heater)
- 30 segments programmable and auto control
- Furnace structure, double layer steel dual cooling fan
- Stainless steel double sealing flange
- Adjustable flange support structure at both ends to extend furnace tube life
- Over-temperature protection function, automatic power-off when the temperature exceeds the allowable set value
- Safety protection Automatically power off when the furnace body leaks
- Heating rate ≦20℃/min
- Temperature accuracy ±1 ℃
- Max vacuum -0.1MPa
- Configuration molecular pump, Vacuum 7x10^(-4)Pa

Standard Spares

- plugging tube 4 pcs
- Thermocouple 1pcs
- Furnace tube 1 pc
- Vacuum pump 1 set
- vacuum flange 1 pc
- Vacuum gauge 1pcs

Standard specification						
Model	Dia (mm) *Heating zone (mm)	Power(kW)	Max working temperature(℃)	Thermocouple	Furnace tube material	Heating elements
BR-12NVT-40/300	40x300	3	1100	K type	Quartz tube	Fe-Cr-Al-Mo wire
BR-12NVT-60/300	60x300	3				
BR-12NVT-80/300	80x300	5				
BR-12NVT-100/300	100x300	5				
BR-12NVT-120/300	120x300	6				
BR-12NVT-40/450	40x450	3				
BR-12NVT-60/450	60x450	3				
BR-12NVT-80/450	80x450	5				
BR-12NVT-100/450	100x450	5				
BR-12NVT-120/450	120x450	6				

Standard specification						
Model	Dia (mm) *Heating zone (mm)	Power(kW)	Max working temperature(℃)	Thermocouple	Furnace tube material	Heating elements
BR-14SVT-40/300	40x300	4	1300	S type	Alumina tube	Sic Heater
BR-14SVT-60/300	60x300	4				
BR-14SVT-80/300	80x300	4				
BR-14SVT-100/300	100x300	6				
BR-14SVT-120/300	120x300	6				
BR-14SVT-40/450	40x450	4				
BR-14SVT-60/450	60x450	4				
BR-14SVT-80/450	80x450	4				
BR-14SVT-100/450	100x450	6				
BR-14SVT-120/450	120x450	6				

Standard specification						
Model	Dia (mm) *Heating zone (mm)	Power(kW)	Max working temperature(℃)	Thermocouple	Furnace tube material	Heating elements
BR-16MVT-40/300	40x300	4	1500	B type	Alumina tube	MoSi2 Heater
BR-16MVT-60/300	60x300	4				
BR-16MVT-80/300	80x300	4				
BR-16MVT-100/300	100x300	6				
BR-16MVT-120/300	120x300	6				
BR-16MVT-40/450	40x450	5				
BR-16MVT-60/450	60x450	5				
BR-16MVT-80/450	80x450	5				
BR-16MVT-100/450	100x450	9				
BR-16MVT-120/450	120x450	9				

Features

Brother multi-zone tube furnace is split with two, three or five heating zones, which can achieve faster heating up to 1200oC and create a different thermal gradient by adjust different heating zone temperature. It is excellent furnace to prepare functional materials under thermal gradient, epitaxial film growth by CVD or PVD with a vacuum system, and also can be used for annealing, diffusing and sintering sample in various atmospheres.

Standard Parts

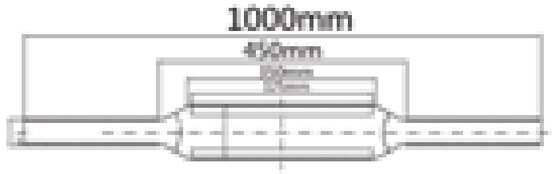
- Tube plug 4 pcs
- Quartz tube 1 pcs
- Vacuum flange 1 sets
- Thermocouple 1 pcs
- Vacuum pump 1 pcs
- Vacuum gauge 1 pcs

Technical Parameter							
Model	Tube outer dia(mm)* Heating zone length(mm)	Power (kW)	Max working temperature(℃)	Heating zone	Thermocouple	Tube material	Heating element
BR-12NT-40/220-2	40x220x220	5	1200	2 zones	K type	Quartz tube	Fe-Cr-Al -Mo wire
BR-12NT-60/220-2	60x220x220	5					
BR-12NT-80/220-2	80x220x220	6					
BR-12NT-100/300-2	100x300x300	12					
BR-12NT-120/300-2	120x300x300	12					
BR-14ST-40/220-2	40x220x220	5	1400	2 zones	S type	Alumina tube	SiC heating element
BR-14ST-60/220-2	60x220x220	5					
BR-14ST-80/220-2	80x220x220	6					
BR-14ST-100/300-2	100x300x300	12					
BR-14ST-120/300-2	120x300x300	12					
BR-16MT-40/220-2	40x220x220	6	1600	2 zones	B type	Alumina tube	MoSi2 heating element
BR-16MT-60/220-2	60x220x220	6					
BR-16MT-80/220-2	80x220x220	6					
BR-16MT-100/300-2	100x300x300	12					
BR-16MT-120/300-2	120x300x300	12					

Note: It can also be made into 3 heating zones and 5 heating zones according to customers' requirement.

Rotary Tube Furnace

BR-12RTF rotary tube furnace is designed for calcining inorganic compound with better uniformity, especially excellent for preparing Li-Ion battery cathode materials with conductive coating, such as LiFePO3, LiMnNiO3, etc in R&D Laboratory.



Features

- Max temperature 1200 ℃
- 50 segments programmable and PID auto control
- Heating rate: 0~20 ℃/min
- Temperature accuracy: ±1 ℃
- Upper open furnace cover design for real-time observation of heated materials
- Furnace tilt angle 0 - 30℃ variable, it' s convenient for loading and unloading material
- Tube rotating Speed 3 - 7 RPM variable (reversible), and there are 3 quartz lifting plates on the inner wall of the tube. When rotating, the material is fully turned over and evenly heated
- It has safe operation functions such as opening and closing power, over temperature alarm and leakage protection

Standard Parts

- Tube plug 4 pcs
- Thermocouple 1 pc
- Quartz tube 1 pc
- Vacuum pump 1 pc
- Vacuum flange 1 set
- Vacuum pressure gauge 1 pc

Technical Parameter

Model	Tube size (Thin end dia meter*Heating zone length)	Thick end diameter(mm)	Power(kW)	Max working temperature	Thermocouple	Tube material	Heating element
BR-12NRT-60/300	60x300mm	120	3	1100℃	K type	Quartz tube	Fe-Cr-Al -Mo wire
BR-12NRT-60/450	60x450mm	120	5				
BR-12NRT-80/300	80x300mm	150	3				
BR-12NRT-80/450	80x450mm	150	5				
BR-12NRT-100/300	100x300mm	180	5				
BR-12NRT-100/450	100x450mm	180	7				
BR-12NRT-150/300	150x300mm	200	7				
BR-12NRT-150/450	150x450mm	200	9				

1. Multi-channel gas mixing tank

Float flowmeter gas mixing tank

(3 channels or 4 channels gas, gas flow adjustable from 0-1000 ml/min)

Mass flow meter gas mixing tank

(3 channels or 4 channels gas, gas flow adjustable from1-500sccm)

2. High vacuum system

Diffusion pump

(Max vacuum degree 6x10-3Pa)

Molecular pump

(Max vacuum degree 6x10-4Pa)

3. Mobile furnace frame

High Temperature Oven

450 °C high temperature oven is widely used in laboratories, electronic communication, plastics, cables, electroplating, hardware, optoelectronics, plastic products, molds, shoe materials, spraying, printing, medical, scientific research units, colleges and universities, industrial and mining enterprises, teaching special equipment , university laboratories, aerospace and higher education institutions.

Features	Additional optional
●Working temperature： Room temperature ~ 450℃ ●The inner is made of high quality brushed 304 stainless steel; the exterior is painted with Q235 steel plate ●The heater is made of high quality stainless steel with finned electric heating tube, which has high temperature and long service life ●Double air duct horizontal air supply ●With timing function, over temperature protection function, timeout over temperature automatic power off alarm ●PID dual digital display intelligent temperature control, high precision ●leakage, short circuit, overload protection; blast motor overload phase loss protection	●Multi-layer baking tray ●Stainless steel baking rack ●Strong exhausting ●Independent electric cabinet ● Explosion-proof system ●Nitrogen filling system ●Touch screen PLC control ●Multi-point temperature measurement

Technical Parameter

Model	Width(mm)	Height(mm)	Depth(mm)	Power(KW)	Volume (L)	Voltage(V)	Heating way
BR-DRY-27L	300	300	300	2	27	220	Electric heating
BR-DRY-70L	450	450	350	3	70	220	
BR-DRY-136L	550	550	450	3.6	136	220	
BR-DRY-225L	600	750	500	4.5	225	380	
BR-DRY-640L	800	1000	800	9	640	380	
BR-DRY-1000L	1000	1000	1000	12	1000	380	
BR-DRY-1440L	1200	1200	1000	15	1440	380	
BR-DRY-1880L	1200	1500	1000	21	1880	380	
BR-DRY-2700L	1500	1500	1200	27	2700	380	

1200℃ Muffle Furnace

Using polycrystalline mullite fiber lining, and total thickness is 120-250mm, to ensure very good thermal effect. Double layer of furnace shell with fan cooling, Surface temperature is less than 60℃,Strength structured furnace roof, to ensure long life to avoid any collapse from continuous working. The furnaces is a special equipment specially developed for the sintering, melting and analysis of metal, non-metal and other compound materials in laboratories and industrial and mining enterprises of universities and research institutes.

Feature (1200 type)	Standard Parts
●Max working temperature RT ~ 1200℃ ●Volume 1 ~ 1000L ●High quality Fe-Cr-Al-Mo resistance wire ●The upper door and the side door can be customized to keep the operator away from the heat source ●50 segments programmable and PID auto control ●With over temperature alarm function ●Cooling fan can reduce the temperature of the casing	●High temperature gloves ●Crucible clip ●Operation Manual **Optional Parts** High temperature gloves;Crucible clip;Operation Manual 7 inch touch screen;Gas Vent; Observation Hole; Furnace Furniture; Alumina crucible; Software

Technical Parameter (1200 type)

Model	Max temperature(°C)	Inner size (W *H * D) mm	Volume(L)	Power(kW)	Phase	Thermocouple
BR-12N-1	1200	100*100*100	1	0.8	1	K type
BR-12N-2	1200	120*120*130	2	1.2	1	K type
BR-12N-3	1200	150*150*150	3	2.5	1	K type
BR-12N-5	1200	150*150*200	5	3	1	K type
BR-12N-8	1200	200*200*200	8	5	1	K type
BR-12N-12	1200	200*200*300	12	6	1	K type
BR-12N-27	1200	300*300*300	27	8	1	K type
BR-12N-36	1200	300*300*400	36	10	3	K type
BR-12N-64	1200	400*400*400	64	16	3	K type
BR-12N-125	1200	500*500*500	125	25	3	K type
BR-12N-216	1200	600*600*600	216	36	3	K type
BR-12N-512	1200	800*800*800	512	64	3	K type
BR-12N-729	1200	900*900*900	729	80	3	K type
BR-12N-1000	1200	1000*1000*1000	1000	100	3	K type

Chamber size can be customized

1400℃ Muffle Furnace

Feature (1400 type)

- Max working temperature RT ~ 1400℃
- Volume 1 ~ 1000L
- High quality SiC heating element
- The upper door and the side door can be customized to keep the operator away from the heat source
- 50 segments programmable and PID auto control
- With over temperature alarm function

Standard Parts

Fire brick, High temperature gloves; Crucible clip; Operation Manual; SiC heating element 2pcs

Optional Parts

7 inch touch screen; Gas Vent; Observation Hole; Furnace Furniture; Alumina crucible; Software

Technical Parameter (1400 type)

Model	Max temperature(℃)	Inner size (W *H * D) mm	Volume(L)	Power(kW)	Phase	Thermocouple
BR-14S-1	1400	100*100*100	1	1	1	S type
BR-14S-2	1400	120*120*130	2	2	1	S type
BR-14S-3	1400	150*150*150	3	3	1	S type
BR-14S-5	1400	150*150*200	5	4	1	S type
BR-14S-8	1400	200*200*200	8	5	1	S type
BR-14S-12	1400	200*200*300	12	7	1	S type
BR-14S-27	1400	300*300*300	27	9	1	S type
BR-14S-36	1400	300*300*400	36	11	3	S type
BR-14S-64	1400	400*400*400	64	18	3	S type
BR-14S-125	1400	500*500*500	125	27	3	S type
BR-14S-216	1400	600*600*600	216	40	3	S type
BR-14S-512	1400	800*800*800	512	70	3	S type
BR-14S-729	1400	900*900*900	729	88	3	S type
BR-14S-1000	1400	1000*1000*1000	1000	110	3	S type

Chamber size can be customized

1700℃ Muffle Furnace

Feature (1700 type)

- Max working temperature RT ~ 1700℃
- Volume 1 ~ 1000L
- High quality MoSi2 heating element
- The upper door and the side door can be customized to keep the operator away from the heat source
- 50 segments programmable and PID auto control
- With over temperature alarm function

Standard Parts

Fire brick, High temperature gloves; Crucible clip; Operation Manual; MoSi2 heating element 2pcs

Optional Parts

7 inch touch screen; Gas Vent; Observation Hole; Furnace Furniture; Alumina crucible; Software

Technical Parameter (1700 type)

Model	Max temperature(℃)	Inner size (W *H * D) mm	Volume(L)	Power(kW)	Phase	Thermocouple
BR-17M-1	1700	100*100*100	1	1	1	B type
BR-17M-2	1700	120*120*130	2	3	1	B type
BR-17M-3	1700	150*150*150	3	4	1	B type
BR-17M-5	1700	150*150*200	5	5	1	B type
BR-17M-8	1700	200*200*200	8	7	1	B type
BR-17M-12	1700	200*200*300	12	8	1	B type
BR-17M-27	1700	300*300*300	27	10	3	B type
BR-17M-36	1700	300*300*400	36	12	3	B type
BR-17M-64	1700	400*400*400	64	20	3	B type
BR-17M-125	1700	500*500*500	125	30	3	B type
BR-17M-216	1700	600*600*600	216	45	3	B type
BR-17M-512	1700	800*800*800	512	80	3	B type
BR-17M-729	1700	900*900*900	729	96	3	B type
BR-17M-1000	1700	1000*1000*1000	1000	120	3	B type

Chamber size can be customized

Feature (1800 type)

- Max working temperature 1800℃; continuous working temperature 1750℃
- Volume 1 ~ 36L
- High quality MoSi2 heating element imported from the USA
- Ceramic fiber chamber imported from Japan, ultra-high temperature coating inside
- 50 segments programmable and PID auto control
- With over temperature alarm function
- Double layer of furnace shell with fan cooling, Surface temperature is less than 60℃

Technical Parameter (1800 type)

Model	Max temperature(℃)	Inner size (W *H * D) mm	Volume(L)	Power(kW)	Phase	Thermocouple
BR-18HM-1	1800	100*100*100	1	2	1	B type
BR-18HM-2	1800	120*120*130	2	4	1	B type
BR-18HM-3	1800	150*150*150	3	6	1	B type
BR-18HM-5	1800	150*150*200	5	7	1	B type
BR-18HM-8	1800	200*200*200	8	8	1	B type
BR-18HM-12	1800	200*200*300	12	9	1	B type
BR-18HM-27	1800	300*300*300	27	12	3	B type
BR-18HM-36	1800	300*300*400	36	15	3	B type

This furnace is pre-vacuumed to ensure that the oxygen content in the furnace is minimized, and then nitrogen, argon or nitrogen-hydrogen is introduced to obtain the desired heating treatment under the protection of the atmosphere. Due to its excellent atmosphere and compactness, it has been widely used in material laboratories or small batch production of semiconductors, silicon nitride and other products.

Features

- RT ~ 1700℃
- The furnace is made of alumina polycrystalline fiber, and the temperature field is balanced and pollution-free.
- Fully enclosed structural furnace, double-layer thickened steel plate, can bear 0.1 Mpa pressure
- The top, left, right, and back are made of 12mm solid square steel for reinforcement, and the vacuum is not deformed. The maximum vacuum can be up to -0.08MPa.
- Temperature controlling system adopts industrial precision 0.2-level intelligent instrument, PID adjustment, 50-segment programming
- The furnace door has good sealing performance. Four hand wheels lock the furnace door,and use the silicone ring to seal.

Standard accessories

Furnace door fire brick (except 1200 type);
high temperature gloves; tongs; manual;
two pcs heating elements (except 1200 type),
rotary vane vacuum pump

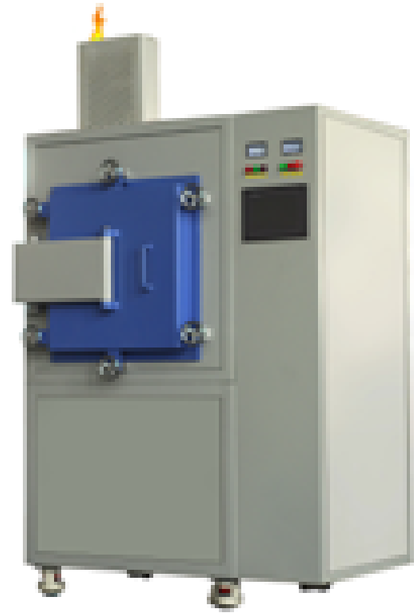
Additional accessories

Direct-connected vacuum pump;
touch screen / computer connection software;
crucible (multi-layer kiln furniture);
heating element (Sic and MoSi2);
Air system (float / proton flow meter, 2 / 3 channels of gas)

Technical Parameter:1200 type				
Model	Max. Temp.(℃)	Chamber size(mm)	Voltage(V)	Power(kW)
BR-12AN-1	1200	100*100*100	220	0.8
BR-12AN-2	1200	120*120*130	220	1.2
BR-12AN-3	1200	150*150*150	220	2.5
BR-12AN-5	1200	150*150*200	220	3
BR-12AN-8	1200	200*200*200	220	5
BR-12AN-12	1200	200*200*300	220	6
BR-12AN-27	1200	300*300*300	380	8
BR-12AN-36	1200	300*300*400	380	10
BR-12AN-64	1200	400*400*400	380	16

Technical Parameter:1400 type				
Model	Max. Temp.(℃)	Chamber size(mm)	Voltage(V)	Power(kW)
BR-14AS-1	1400	100*100*100	220	1
BR-14AS-2	1400	120*120*130	220	2
BR-14AS-3	1400	150*150*150	220	3
BR-14AS-5	1400	150*150*200	220	4
BR-14AS-8	1400	200*200*200	220	5
BR-14AS-12	1400	200*200*300	220	7
BR-14AS-27	1400	300*300*300	380	9
BR-14AS-36	1400	300*300*400	380	11
BR-14AS-64	1400	400*400*400	380	18

Technical Parameter:1700 type				
Model	Max. Temp.(℃)	Chamber size(mm)	Voltage(V)	Power(kW)
BR-17AM-1	1700	100*100*100	220	1
BR-17AM-2	1700	120*120*130	220	3
BR-17AM-3	1700	150*150*150	220	4
BR-17AM-5	1700	150*150*200	220	5
BR-17AM-8	1700	200*200*200	220	7
BR-17AM-12	1700	200*200*300	220	8
BR-17AM-27	1700	300*300*300	380	10
BR-17AM-36	1700	300*300*400	380	12
BR-17AM-64	1700	400*400*400	380	20



Hydrogen atmosphere furnace is specially designed for sintering or annealing materials in hydrogen or inert gas environment. The highest temperature can reach to 1700℃. Alumina fiber is used as furnace chamber material and Mo wire is used as heating element. Cooling water pipe is embedded in the sealing plate at the top of the furnace body to ensure the sealing performance during working. This electric furnace is suitable for materials (such as fluorescent materials, titanium alloys, etc.) that need to be sintered in the environment of inert gas or reducing atmosphere.

Features

- The working temperature can be adjusted at 0 ℃ ~ 1600 ℃.
- Heating element: High purity molybdenum wire (molybdenum content 99.99%)
- Double-layer shell structure with air-cooling and water-cooling system to maintain positive internal pressure of 0.02MP and negative pressure up to -0.1MP.
- Build pressure sensor and pressure controller. According to the set pressure limit, control the inlet and outlet valves to protect the high and low pressure.
- The furnace body is equipped with two large-flow flowmeters (N2: 0~3.5L / min, H2: 0~3.5L / min) float flowmeter, which can freely control the gas flow.
- H2 safety device: H2 tail gas is automatically ignited and burned. The flame detector will automatically ignite when the flame is extinguished. The H2 is automatically cut off when the ignition fails, and then filling N2 for security.

Technical Parameter				
Model	Max. Temp.(℃)	Chamber size(mm)	Voltage(V)	Power(kW)
BR-16AH2-5	1200	150*150*200	220	6
BR-16AH2-12	1200	200*200*300	220	8
BR-16AH2-36	1200	300*300*400	380	12

Warning: You must ensure that a qualified hydrogen detector is installed to alert you to a hydrogen leak. .

High temperature bottom loading furnace

The bottom loading furnace is very convenient to load and unload, and the heating elements are distributed around the furnace evenly,so that the temperature is uniform.The working temperature is from 0°C to 1700°C. The lifting platform is located under the electric furnace, which can lifting manually or automatically.The furnace can also be made into a Bogie Hearth Furnace,which is convenient to operate. The bottom loading electric furnace is widely used for battery materials, electronic ceramics, magnetic materials, non-ferrous metals, chemical raw materials, etc., meanwhile it is suitable for sapphire wafer annealing and zirconia sensor heating treatment in scientific lab or universities etc.

Features	Additional accessories
●Operating temperature RT ~ 1700°C. ●Large loading capacity, easy operation and high efficiency, ●Suitable for small workpiece high temperature heating treatment. ●Four-sided heating, excellent furnace temperature uniformity (< ±5 °C). ●The furnace materials use the vacuum-formed high-purity alumina fiber materials, which can bear the high temperature, excellent heat preservation performance. ●Digital intelligent temperature controller with PID control, 50-segments programmable temperature rise curve. ●Electrostatic spray shell, resistant to corrosion and acid. ●Increase efficiency by built double rail trolley.	●RS232/RS485 software ●Silicon carbide / corundum board ●intake hole / exhaust hole ●7 inch HD touch screen

Technical Parameter

Model	Max. Temp.(℃)	Chamber size(W*H*D)mm	Liter(L)	Power(kW)	Phase	Heating elements	Thermocouple
BR-12BL-8	1200	200*200*200	8	5	1	Resistance wire	K type
BR-12BL-12	1200	200*200*300	12	6	1		
BR-12BL-27	1200	300*300*300	27	8	1		
BR-12BL-36	1200	300*300*400	36	10	3		
BR-12BL-64	1200	400*400*400	64	16	3		
BR-12BL-125	1200	500*500*500	125	25	3		
BR-12BL-216	1200	600*600*600	216	36	3		
BR-14BL-8	1400	200*200*200	8	5	1	SiC heating elements	S type
BR-14BL-12	1400	200*200*300	12	7	1		
BR-14BL-27	1400	300*300*300	27	9	1		
BR-14BL-36	1400	300*300*400	36	11	3		
BR-14BL-64	1400	400*400*400	64	18	3		
BR-17BL-8	1700	200*200*200	8	5	1	MoSi2 heating elements	B type
BR-17BL-12	1700	200*200*300	12	7	1		
BR-17BL-27	1700	300*300*300	27	9	1		
BR-17BL-36	1700	300*300*400	36	11	3		
BR-17BL-64	1700	400*400*400	64	18	3		

Bogie Hearth Furnace

The design of the bogie hearth furnace is divided into two types: medium temperature (0~ 950℃) and high temperature (0~ 1200℃), which is mainly used for High chromium, high manganese steel castings, gray cast iron parts, ductile iron parts, rolls, steel balls, crusher hammers, wear-resistant linings quenching, annealing, aging and heat treatment of various mechanical parts.

Features	Additional accessories
●Maximum temperature 950℃ and 1200℃。 ●All-fiber ceramic lining, high thermal efficiency, low heat loss and long lifetime. ●Four-side heating device achieves excellent temperature uniformity ●Japanese ceramic nails, ensure the installation of heating elements with long lifetime. ●Build horizontal silicon carbide plate/high temperature cast steel plate for trolley. ●Intelligent program temperature controller, which is available to edit and save multi-segment program.	●Electrical hydraulic lift furnace door ●Circulating hot air blower and thermal deflector ●Horizontal moveable auxiliary trolley ●Automatically turn-able trolley easy for quenching ●Temperature control by different zones to improve temperature uniformity ●Visualized PLC automatic control system to monitor and record in real time ●Top exhaust valve, and inlet valves on both sides

Medium temperature trolley (0 ~ 950℃)

Model	Chamber size (LWH)mm	Power (KW)	Dimensions (LWH)mm
XD-CBF-45	1100×550×450	45	3040×1480×1620
XD-CBF-50	1300×650×450	50	3240×1580×1620
XD-CBF-75	1500×700×600	75	3440×1630×1770
XD-CBF-90	1500×800×600	90	3440×1730×1770
XD-CBF-105	1800×900×700	105	3740×1830×1870
XD-CBF-135	2100×1050×750	135	4060×2010×1980
XD-CBF-150	2300×1200×650	150	4260×2560×1880
XD-CBF-300	2500×1500×1500	300	4690×2860×2750

High temperature trolley furnace (0 ~ 1200℃)

Model	Chamber size (LWH)mm	Power (KW)	Dimensions (LWH)mm
XD-CBF-65	1100×550×450	65	3100×1600×1750
XD-CBF-75	1300×650×450	75	3300×1700×1750
XD-CBF-110	1500×700×600	110	3500×1750×1900
XD-CBF-120	1500×800×600	120	3500×1850×1900
XD-CBF-150	1800×900×700	150	3800×1950×2000
XD-CBF-210	2100×1050×750	210	4120×2130×2110
XD-CBF-220	2300×1200×650	220	4320×2680×2010
XD-CBF-450	2500×1500×1500	450	4750×2980×2870

Low temperature degreasing (dispensing) furnace (1100℃)

This furnace is mainly used in the process of casting, injection molding, 3D printing, dry pressing, advanced ceramics, metal, glass, plastic and composite materials. It can also be used for magnetic materials, ceramic chips, ferrites. Debinding and pre-burning process of magnetic sheets and other electronic components. The unique thermal field control technology ensures the uniformity of the temperature field and required for the two process stages of debinding and sintering.

Features

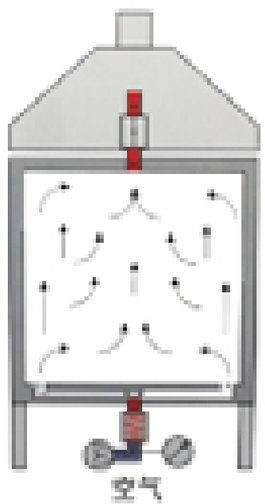
- Molybdenum-containing resistance wire, the maximum temperature is 1100℃.
- To ensure the ideal temperature field uniformity, heating in 5 sides.
- In order to speed up the discharge of exhaust gas and prevent the high concentration of hydrocarbons released from the rubber discharge with danger of explosion. This electric furnace is designed with fresh air entering the system.
- In order to prevent the unevenness of thermal field temperature fluctuation by fresh air, there is a design of the fresh air preheating system and the ceramic tube homogenization system, which can greatly improve the temperature uniformity.
- The exhaust gas collected to collecting cover of the furnace top through the electric exhaust cover, and collect the cooled wax.

Additional accessories

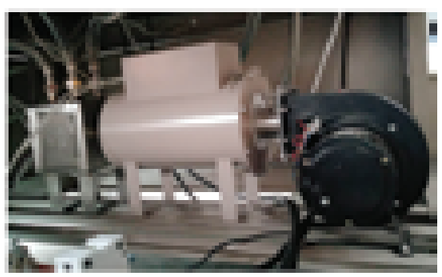
- Mullite multi-layer shelf.
- Exhaust gas pyrolysis package to pyrolyze the irritating organic matter.

Technical Parameter

Model	Heating zone(mm)	Temp.(℃)	Power (kW)	power supply(V)
BR-TZL-334	300*300*400	1100	12	380
BR-TZL-555	500*500*500	1100℃	25	380
BR-TZL-666	600*600*600	1100℃	36	380
BR-TZL-888	800*800*800	1100℃	64	380



Draining and sintering schematic



Air preheating system

Features

- The maximum temperature is 1700℃ and the continuous temperature is 1650 ℃.
- High-quality MoSi2 heating element.
- 4 sides heating with excellent temperature uniformity (±5℃).
- The bottom platform can be pulled out by the slide rails and convenient for loading.
- The bottom platform lifting adopts linear guide rail design with smooth movement.
- There is a corundum mullite support pre-embedded at the plate bottom to prevent the load bearing board from sinking and deforming.
- This furnace is designed with fresh air system to ensure temperature uniformity.
- At the end of the rubber discharge program, the rubber discharge port closed and the fresh air fan stopped automatically, then the program automatically entry the high temperature sintering. After the sintering finished, the exhaust port is automatically opened, and the fresh air fan start to speed up the cooling rate when the temperature is lowered to the specified temperature.
- The exhaust gas is collected by the collection cover that is discharged into the top of the furnace via the electric exhaust cover.

Additional accessories

- Mullite multi-layer shelf.
- Exhaust gas pyrolysis package to pyrolyze the irritating organic matter.

Technical Parameter

Model	Heating zone(LWH)mm	Temp. (℃)	Lifting method	Power(kW)	Power supply(V)
BR-TZH-433	400*300*300	1700	Electric screw	14	380
BR-TZH-644	600*400*400	1700	Electric screw	30	380
BR-TZH-855	800*500*500	1700	Electric screw	45	380
BR-TZH-1266	1200*600*600	1700	Electric screw	80	380

Vacuum Degrease Furnace

MIM (metal powder injection molding) negative pressure degreasing, degassing, high temperature sintering integrated treatment.

Features

- Square sealing box can be installed in furnace,on the one hand, the furnace space is more compact and the utilization rate is improved. It can also reduce the consumption of gas and heating power.The most important is to prevent degreasing volatile gas does not pollute the inner wall of the furnace and heat insulation materials, all discharged to the furnace.
- Inert gas (N2) is directly charged into the furnace chamber, and the vacuum is pre-pumped in the furnace chamber to effectively perform negative pressure degreasing.
- Multi-layer graphite pad, effectively use the furnace space for loading materials.
- Heating using graphite rod, insulation using high purity graphite composite carbon felt.
- The highest heating temperature can reach 1600 degrees.
- Adopts slide valve pump + roots pump vacuum unit, which can pump vacuum to 10Pa in 10 minutes.

Optional accessories

- Air intake device: glass rotor flowmeter (cheap);Mass flow meter (precise control)
- Wax collection system.

Technical parameters

Model	Chamber size(mm)	Capacity(kgs)	Power(kW)	Voltage(V)	Atmosphere
BR-TZV-334	300*300*400	50	40	380	N2/Ar
BR-TZV-446	400*400*600	100	80	380	N2/Ar
BR-TZV-669	600*600*900	300	120	380	N2/Ar

Special brazing furnace for NC cutter

BR-200BF Series Brazing furnace is widely used in the welding of various kinds of small size superhard materials, mainly used for cemented carbide tools (PCD tools, PCBN tools, CVD tools, CBN tools, engraving tools, etc.), drilling bit, stainless steel brazing, single crystal welding, porcelain metal brazing, heterotropic metal components, complex sheet: sandwich components, honeycomb structure, etc.

Features

- PLC full control, can also switch manual control, 10 inch HD touch screen, 50 programming, 30 program storage, simple operation, continuous production;
- Temperature curve and vacuum curve can be derived;
- Welding workpiece surface clean and nice and no oxidation; Double stainless steel platform, so that the welding materials placed in order;
- Using ring and bottom heating, high welding strength, 2-3 times of ordinary high frequency welding;
- High production capacity, single welding quantity can reach more than 600 pieces (take CNGA1204 as an example);
- Provide process and technical support with 20 years of experience to ensure quality products are produced.
- Vacuum system consists of direct pump and diffusion pump, working vacuum up to 10^(-3)pa

Optional accessories

Chiller; Vacuum oven;
Ultrasonic cleaning machine;
Flux solder paste

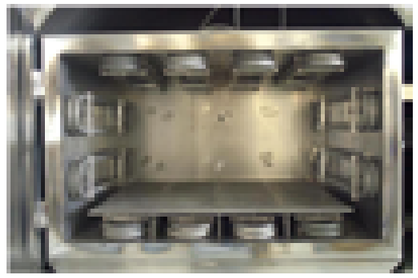
Main brazing process:
Ultrasonic cleaning →daub solder paste →vacuum drying→vacuum brazing.

Technical Parameters

Model	Max Temp.(℃)	Chamber size(mm)	Overall size(mm)	Power(kW)	Thermocouple
BR-200BF	1200	200x400	1235x1150x750	8	K Type

Aluminum base vacuum brazing furnace (stainless steel furnace)

Stainless steel chamber



This is a vacuum brazing furnace suitable for aluminum alloy and other low melting point workpieces. It can be used as vacuum furnace for low temperature sintering and heat treatment.

Stainless steel chamber

- Stainless steel metal furnace and electric heating alloy tube heating, the highest temperature can reach 750 ℃.
- Electrothermal alloy tube around heating, furnace temperature uniformity, up to plus or minus 5 degrees.
- Clean stainless steel furnace, equipped with mechanical pump + diffusion pump vacuum unit, cold vacuum 10-3pa;Working vacuum is 10^(-2)pa.
- Compared with vacuum furnace of molybdenum foil, this kind of electric furnace has low power, low price, economical use and is an ideal low temperature brazing equipment.

Optional accessories

- External quick cooling system;From brazing temperature to 180,
- Less than an hour.
- Stainless steel multi-layer rack, convenient for placing multi-layer brazing workpieces.
- Low-temperature al-zinc-based flux:

Flux composition	Color	Melting temp.(℃)
AlSi12	Black	580
AlSiCu	Black	480-550
Zn98Al	Black	450
ZnSnCu	Black	380

Technical parameters

Model	Chamber size(mm)	Temp.(℃)	Power(kW)	Voltage(V)
BR-QHS-223	200*200*300	750	3	380
BR-QHS-334	300*300*400	750	6	380
BR-QHS-446	400*400*600	750	12	380
BR-QHS-557	500*500*700	750	18	380
BR-QHS-669	600*600*900	750	28	380

Silver/copper/nickel-based vacuum brazing furnace (molybdenum foil furnace)

Molybdenum foil chamber

This kind of vacuum brazing furnace working temperature can reach 1350℃; Suitable for workpiece with silver/copper/nickel base as flux. Due to its high vacuum and high temperature, it can also be used for sintering and heat treatment of other workpieces.

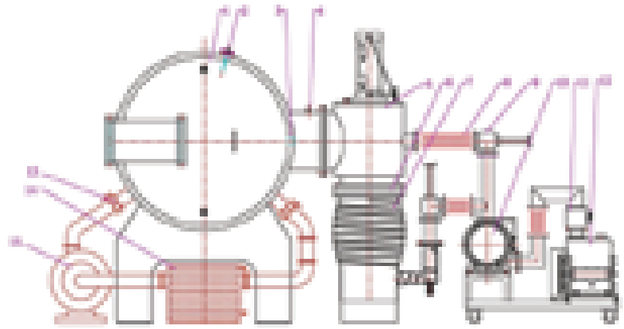
Features

- Using molybdenum foil metal furnace, and molybdenum and tropical for heating element, the highest temperature can reach 1350 ℃.
- The annular distribution of molybdenum heating belt and the furnace, the surrounding radiation heating, the furnace temperature uniformity is high, up to plus or minus 5 degrees.
- Clean stainless steel furnace, equipped with mechanical pump + diffusion pump vacuum unit, cold vacuum 10-3pa; Working vacuum is 10^(-2)pa.
- As required, inert gas can be added for accelerated cooling.

Optional accessories

- External quick cooling system;From soldering temperature to 180 degrees, less than 1 hour.
- Stainless steel multi-layer rack, convenient for placing multi-layer brazing workpieces.
- High quality flux imported from USA.

Brazing vacuum furnace quick cooling system



Assembly diagram of vacuum furnace

Due to the slow cooling of ordinary brazing furnace, the production efficiency is seriously affected. In order to accelerate the cooling rate, our company combined with years of production practice experience, developed a vacuum brazing furnace rapid cooling system.
The high-temperature nitrogen in the furnace is forcefully pumped out by the vacuum fan, cooled by the cooling water bag, and then sent back to the furnace by the vacuum fan. This rapid cycle leads to rapid cooling.

Technical parameters

Model	Chamber size(mm)	Temp.(℃)	Power(kW)	Voltage(V)
BR-QHM-223	200*200*300	1350	42	380
BR-QHM-334	300*300*400	1350	72	380
BR-QHM-446	400*400*600	1350	120	380
BR-QHM-557	500*500*700	1350	160	380
BR-QHM-669	600*600*900	1350	225	380

Low vacuum furnace

This electric furnace is a very cost-effective vacuum furnace. Low price, simple operation, excellent vacuum effect, good temperature field uniformity.It is used in high temperature vacuum sintering, annealing and tempering of ceramic materials, ceramic metal composites, refractory metals and alloy materials.

Features	Optional accessories
●Vacuum up to 10Pa (two-stage rotary vane vacuum pump) ●The highest temperature 1200 ℃ or 1700 ℃ is optional ●Designed with air inlet and exhaust port, it can be used for vacuum pumping or filling with inert gas. ●Pneumatic vacuum valve, easy to operate ●Helium mass spectrometry leak detector vacuum pickup, ensure the vacuum leakage rate is lower than 0.67Pa/h. ●Use alumina ceramic fiber furnace and resistance wire or silicon molybdenum rod heating.At the same time, the cost of electric furnace is greatly reduced. ●Double water-cooling, furnace shell surface temperature 50 ℃ or less ●High strength carbon steel, external electrostatic spray, beautiful and generous ●50 programmable temperature meter PID adjustment ●Upper limit alarm, deviation alarm, automatic stop at the end of program operation, no man on duty	●Independent control cabinet ●PLC automatic control system ●Rapid furnace cooling system

Technical parameter						
Model	Max Temp.(℃)	Chamber size(WxHxD)mm	Heating element	Capacity（L)	Power（kW)	Vacuum(Pa)
BR-12VF-1	1200	100*100*100	Resistance wire	1	1.2	10
BR-12VF-5	1200	150*150*200	Resistance wire	4.5	3.5	10
BR-12VF-12	1200	200*200*300	Resistance wire	12	5	10
BR-12VF-36	1200	300*300*400	Resistance wire	36	12	10
BR-12VF-64	1200	400*400*500	Resistance wire	80	18	10
BR-12VF-125	1200	500*500*700	Resistance wire	175	30	10
BR-12VF-216	1200	600*600*900	Resistance wire	324	50	10
BR-17VF-1	1700	100*100*100	MoSi2 heater	1	1.5	10
BR-17VF-5	1700	150*150*200	MoSi2 heater	4.5	5	10
BR-17VF-12	1700	200*200*300	MoSi2 heater	12	8	10
BR-17VF-36	1700	300*300*400	MoSi2 heater	36	12	10
BR-17VF-64	1700	400*400*500	MoSi2 heater	80	30	10
BR-17VF-125	1700	500*500*700	MoSi2 heater	175	45	10
BR-17VF-216	1700	600*600*900	MoSi2 heater	324	66	10

High Vacuum Furnace

This electric furnace is a very cost-effective vacuum furnace.Low price, simple operation, excellent vacuum effect, good temperature field uniformity. It is used for high temperature vacuum sintering, annealing,tempering and aging treatment of ceramic materials, ceramic metal composites, refractory metals and alloy materials, as well as vacuum brazing of alloy tools and superhard materials.

Features	Optional accessories
●Vacuum up to 7* 10-3pa (two-stage rotary vane vacuum pump + roots pump + diffusion pump unit) ●The highest temperature 1200 ℃ or 1700 ℃ is optional ●Designed with air inlet and exhaust port, it can be used for vacuum pumping or filling with inert gas. ●Pneumatic vacuum valve, easy to operate ●Helium mass spectrometry leak detector vacuum pickup, ensure the vacuum leakage rate is lower than 0.67Pa/h. ●Use alumina ceramic fiber furnace and resistance wire or silicon molybdenum rod heating.At the same time, the cost of electric furnace is greatly reduced. ●Double water-cooling, furnace shell surface temperature 50 ℃ or less ●High strength carbon steel, external electrostatic spray, beautiful and generous ●50 programmable temperature meter PID adjustment ●Upper limit alarm, deviation alarm, automatic stop at the end of program operation, no man on duty.	●independent control cabinet ●PLC automatic control system ●Rapid furnace cooling system

Technical parameter						
Model	Max Temp(℃)	Chamber size(WxHxD)mm	Heating element	Capacity(L)	Power(kW)	Vacuum(Pa)
BR-12HVF-1	1200	100*100*100	Resistance wire	1	1.2	7*10^(-3)
BR-12HVF-5	1200	150*150*200	Resistance wire	4.5	3.5	7*10^(-3)
BR-12HVF-12	1200	200*200*300	Resistance wire	12	5	7*10^(-3)
BR-12HVF-36	1200	300*300*400	Resistance wire	36	12	7*10^(-3)
BR-12HVF-64	1200	400*400*500	Resistance wire	80	18	7*10^(-3)
BR-12HVF-125	1200	500*500*700	Resistance wire	175	30	7*10^(-3)
BR-12HVF-216	1200	600*600*900	Resistance wire	324	50	7*10^(-3)
BR-17HVF-1	1700	100*100*100	MoSi2 heater	1	1.5	7*10^(-3)
BR-17HVF-5	1700	150*150*200	MoSi2 heater	4.5	5	7*10^(-3)
BR-17HVF-12	1700	200*200*300	MoSi2 heater	12	8	7*10^(-3)
BR-17HVF-36	1700	300*300*400	MoSi2 heater	36	12	7*10^(-3)
BR-17HVF-64	1700	400*400*500	MoSi2 heater	80	30	7*10^(-3)
BR-17HVF-125	1700	500*500*700	MoSi2 heater	175	45	7*10^(-3)
BR-17HVF-216	1700	600*600*900	MoSi2 heater	324	66	7*10^(-3)

Non-pressure Atmosphere Furnace

Non-pressure atmosphere furnace is equipped with Vacuum System,when the air in the chamber pumped out, inlet high purity N2 into the chamber, and sintering under N2 protective environment. When used for production of high purity Si3N4 powder, the N2 and Si powder can fully react, flour extraction rate can reach 92%.

Feature

- Ceramic Fiber Chamber, Mosi2 heating element, max. temperature can be 1600℃
- Can realize multi-zone temperature control as per heating zone length, make sure the temperature uniformity of the working chamber.
- Chamber bottom adopt high strength alumina brick, with loading car rail, can easily load sintering material.
- Double-pole rotary mechanical pump, vacuum can be 10Pa.
- Special gas circuit design, High purity N2 inlet into the chamber through the gas circuit after deoxidation and dewatering treatment,exhaust at the release port of chamber, thus ensure N2 can circuit effectively.
- Sliding furnace tank design, can maintenance conveniently。

Option

- Si3N4 loading box
- Si3N4 protection board

Technical Parameter				
Model	Heating Zone (3 zone)mm	Temperature(℃)	Power(kW)	Voltage(V)
BR-WYA-4412	400*400*1200	1600	60	380
BR-WYA-6616	600*600*1600	1600	105	380

This Vacuum Furnace is periodic working, adopt graphite tube as heating elements, working chamber is round and vertical, mainly used for sintering metal material, non-metal material in vacuum or protective atmosphere environment, can also be used for sintering and purification of optical material.

Feature

- Graphite heating element, max. Temperature can be 2400℃.
- Furnace shell inner layer is stainless steel, outer layer is carbon steel, double layers water cooling structure.
- Furnace shell has observation hole, can see heating situation in the chamber.
- Adopt W-Re thermocouple and infrared thermometer to measure temperature, thermocouple go in and out automatically.

Technical Parameters					
Model	Heating Zone (Dia.* Height)mm	Temperature(℃)	Power(kW)	Voltage(V)	Vacuum(Pa)
BR-22STV-20	Φ80×100	2200	20	380	6.67×10^(-3)
BR-22STV-25	Φ90×120	2200	25		
BR-22STV-40	Φ140×160	2200	40		
BR-22STV-50	Φ160×200	2200	50		
BR-22STV-60	Φ260×270	2200	60		
BR-22STV-100	Φ320×320	2200	100		

The ultra-temperature graphite furnace is an performance intelligent heating furnace, adopt advanced temperature measurement, temperature control, intelligence, new material and furnace chamber design. This furnace is mainly used for high temperature treatment of materials in vacuum or protective atmosphere environment.

Feature

- Graphite heating element, max. Temperature can be 2400℃.
- Insulation furnace chamber adopt import graphite soft felt and hard felt.
- Furnace shell inner layer is stainless steel, outer layer is carbon steel, double layers water cooling structure.
- Furnace door adopt front open and back open, easy to load and unload material.
- Furnace shell has observation hole, can see heating situation in the chamber.
- Adopt W-Re thermocouple and infrared thermometer to measure temperature, thermocouple go in and out automatically.

Technical Parameters

Model	Heating Zone(mm)	Temperature(℃)	Power(kW)	Voltage(V)
BR-GHM-223	200*200*300	2200	45	380
BR-GHM-334	300*300*400	2200	60	380
BR-GHM-446	400*400*600	2200	90	380
BR-GHM-557	500*500*700	2200	150	380
BR-GHM-669	600*600*900	2200	180	380

Vacuum tungsten wire furnace adopt tungsten wire net as heating elements, pollution-free, mainly used for heat treatment of ceramic, sapphire glass, zirconia in vacuum environment. Also used for universities and research centers for mass production.

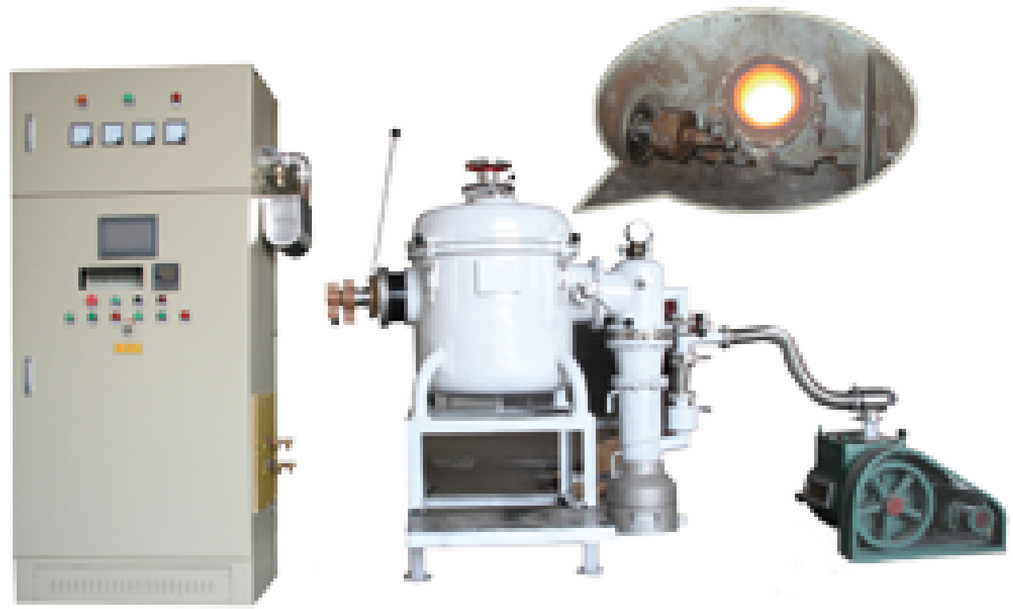
Feature

- Special designed tungsten net, tungsten foil as heating element, max. temperature can be 2200℃
- Vacuum system can choose turbo pump, ultimate vacuum can be 6x10^(-5)Pa.
- Can inlet N2, Ar, H2, N2 and H2 mixed gas etc.

Technical Parameter

Model	Heating Zone (Dia.* Height)mm	Temperature(℃)	Temp Uniformity(℃)	Power(kW)	Vacuum(Pa)
BR-WSL-1010	ϕ100x 100mm	1900	±3	21	6x10^(-5)
BR-WSL-2030	ϕ200x300mm	1900	±3	68	6x10^(-5)
BR-WSL-3050	ϕ300x500mm	1900	±3	120	6x10^(-5)
BR-WSL-4060	ϕ400x600mm	1900	±3	160	6x10^(-5)

Vacuum Melting Furnace



The vacuum melting furnace adopt the theory of medium frequency induction heating and build high vacuum system, so that the metal could be melted under high vacuum situation. This furnace is widely used in many kinds of research and production, such as nickel and special steel,precision alloy,activity metal,high temperature alloy,magnet material etc. Also suitable for the vacuum precision cast of small parts.

Feature

- Adopt IGBT medium frequency power supply, the max temperature is 1700℃.
- The vacuum system is composed by mechanical pump,roots pump,diffusion pump, the working vacuum level is 6x10^(-3)Pa.
- The alloy feeder built inside. The material can be fed into melting crucible by operating the feeder handle.
- The furnace cover is equipped with an observation window, easy to observe the performance of the furnace.
- Induction heater consists of a rectangular copper tube, through the two mating nuts fixed on the electrode, easy to disassemble.
- The crucible could be placed inside the inductor. The crucible material should be following the melt alloy type.

Technical parameter

Model	Capacity(kgs)	Max.temp(℃)	Frequency(HZ)	Voltage(V)	Power(kW)	Ultimate vacuum(Pa)	Cooling water
BR-RLL-10	10	1700	4000	220	35	6x10^(-3)	1.5m3/H
BR-RLL-25	25	1700	2500	250	50	6x10^(-3)	2.5m3/H
BR-RLL-50	50	1700	2500	300	100	6x10^(-3)	10m3/H
BR-RLL-100	100	1700	2000	300	160	6x10^(-3)	10m3/H
BR-RLL-150	150	1700	2000	320	175	6x10^(-3)	10m3/H
BR-RLL-200	200	1700	1500	350	200	6x10^(-3)	10m3/H

Vacuum Hot Press Furnace

The vacuum hot press furnace mainly used for the high temperature sintering and hot press treatment, such as inorganic material, hard alloy, function ceramic, metallurgy powder. The material density could be increased under vacuum condition or protective atmosphere.

Feature

- The heating element could be selected according to the difference of hot press temperature and vacuum level. The resistance module is suitable below 1200℃ and graphite heater is suitable over 1200℃.
- The press range is adjustable below 5 tons, so that it’ s can be used for sample sintering and hot press testing to avoid resource waste.
- Ranging by grating ruler with high accuracy to 0.02mm.
- All the action could be controlled by PLC system, including temperature control, press adjustment, temperature auto tracking. All the furnace running monitoring and data could be displayed and record on touch screen, such as temperature, vacuum level, displacement. The data curve could check in real time.
- W-Re thermocouple at low temperature and infrared thermocouple for high temperature. The W-Re thermocouple will be auto quit at high temperature.

Technical Parameter

Model	Working size(mm)	Max. temp(℃)	Press	Displacement(mm)	Power(kW)	Ultimate vacuum(Pa)
BR-RYL-10	Φ160x160	2000	20	100	25	6x10^(-3)
BR-RYL-20	Φ200x200	2000	20	150	60	6x10^(-3)
BR-RYL-30	Φ300x300	2000	20	200	120	6x10^(-3)
BR-RYLA-10	Φ160x160	1100	20	100	8	6x10^(-3)
BR-RYLA-20	Φ200x200	1100	20	150	12	6x10^(-3)
BR-RYLA-30	Φ300x300	1100	20	200	20	6x10^(-3)

Vacuum gas quenching furnace

The vacuum gas quenching furnace is mainly used in vacuum bright quenching and sintering,brazing of tool steel, die steel, elastic alloy,stainless steel, 3D additional material etc. The furnace is mainly composed by pressure tank, heating room, vacuum system,electric control system, air inflation system, water cooling system, pneumatic system and carrier cart etc.

Feature

- The heating chamber is composed by graphite heater, graphite soft felt and hard felt, the max operation temperature is 1300℃.
- The multiserial graphite spray nozzle located inside the heating chamber along with the induction inwall. The gas uniform sprayed from the spray nozzle during gas quenching.
- The material platform is composed by graphite support, hearth and Al2O3 sticker. This structure will prevent the adhesion between platform and hearth during high temperature.
- Gas cooling system: which is composed by high press wheel blower, multistage high-efficient copper heat exchanger and duct deflector. Filling high purity N2 or Ar during gas cooling, spray to workpiece through duct deflector to achieve workpiece uniform cooling.
- The gas cooling pressure is adjustable from 1-10bar.
- Max cooling rate: from 1150℃ to 250℃ less than 7min. (The cooling water temperature is lower than 35℃)

Technical parameter

Model	Working size(mm)	Max.Temp(℃)	Capacity(kgs)	Temperature uniformity(℃)	Power(kW)	Ultimate vacuum
BR-QCL-334	300*300*450	1320	100	±5	50	6x10^(-3)
BR-QCL-446	400*400*600	1320	200	±5	80	6x10^(-3)
BR-QCL-557	500*500*700	1320	300	±5	120	6x10^(-3)
BR-QCL-669	600*600*900	1320	500	±5	150	6x10^(-3)

Vacuum oil quenching furnace

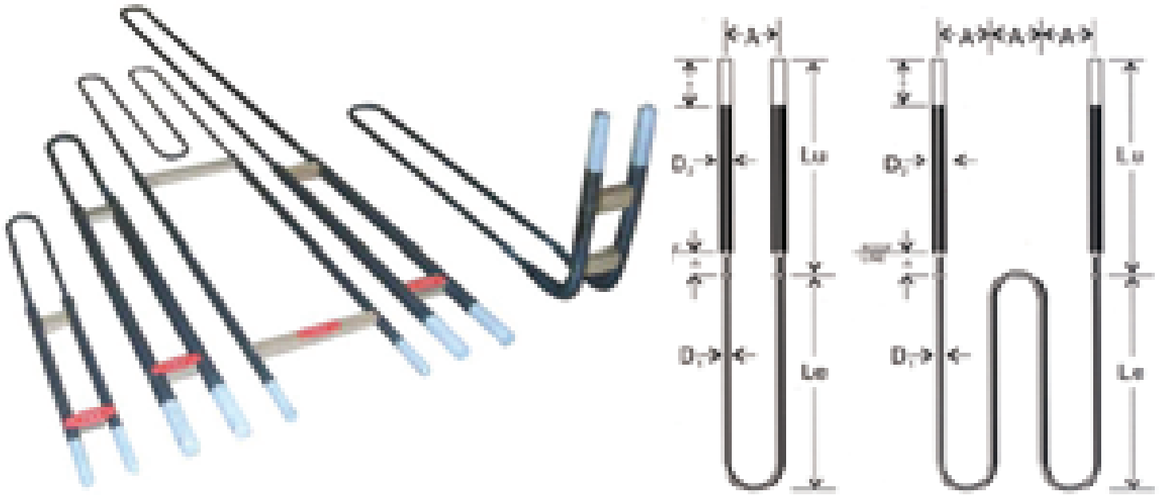
The vacuum oil quenching furnace is mainly used in bright quenching and annealing of alloy steel,tool steel,die steel,high speed steel,bearing steel,spring steel,stainless steel.Also used in vacuum sintering of ceramic and hard alloy,metal material brazing etc.The furnace is mainly composed by graphite chamber, graphite felt induction, PLC control system.

Feature

- Adopt graphite tube as the heating element, with long lifetime and easy maintenance.
- The compound flash-board have excellent heat insulation and trapping effect.
- The structure is double room, the back room is for heating and front room is for oil and gas cooling. Upside is gas quenching room and downside is oil quenching room, including lifting device, charging device, oil mixing device and oil heating device.
- Lifting device: The lifting skip car is driving by screw and nut, and driving by three-speed gear motor. There are three speed on lifting skip car, low speed for sending material, low speed start, high speed oil quenching and low speed location.
- Oil mixing system: The mixer is driving by reducer, the deflector could promote the circular flowing of vacuum quenching and promote the oil cooling capacity. The mixer is standard part with low noisy and high efficiency.
- The workpiece transfer is smooth and flexible, safe and reliable.
- The gas cooling cover adopt staggered teeth flange structure to ensure the sealing in positive and negative pressure.

Technical parameter

Model	Working size(mm)	Max.Temp(℃)	Capacity(kgs)	Temperature uniformity(℃)	Power(kW)	Ultimate vacuum(Pa)
BR-YCL-334	300*300*450	1320	100	±5	50	6x10^(-3)
BR-YCL-446	400*400*600	1320	200	±5	80	6x10^(-3)
BR-YCL-557	500*500*700	1320	300	±5	120	6x10^(-3)
BR-YCL-669	600*600*900	1320	500	±5	150	6x10^(-3)



Application: Widely used in research and production of glass, ceramic, refractory, metallurgy, steel-making, crystal, electronic parts, semiconductor material. The model including BR1700 (working temperature 1600℃) and BR1800 (working temperature 1700℃)

Feature

- The heater have the function of antioxidant and auto repair, and suitable to different kinds of continuous working during oxygen atmosphere.
- Moulding by heat process and model size is standard, so we can produce special shape and size according to customer requirement.
- Adopt special process for joint moulding with fasten welding and strong impact resistance.
- High density and excellent electrical conductivity, high heating rate and low power consumption.
- The old one and new one could using in series.

Technical parameter				
Hot zone diameter D1(mm)	Cooling zone diameter D2(mm)	Hot zone length Le(mm)	Cooling zone length Lu(mm)	Central distance A(mm)
3	6	80-300	80-500	25
4	9	80-350	80-500	25
6	12	80-800	80-1000	25-60
7	12	80-800	80-1000	25-60
9	18	100-1200	100-2500	40-80
12	24	100-1500	100-1500	40-100

Note: 1.Special size is customizable.

2.Delivery time only need 3 days for normal size

Model: BR1700 (working temperature 1600℃) and BR1800 (working temperature 1700℃)

Please confirm the D1， D2，Le，Lu，A before order.

Application: Widely used in various high temperature electric furnaces and other electric heating devices, such as in the industries of magnet,ceramics, powder metallurgy, glass, metallurgy and machinery etc.

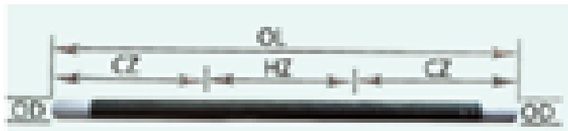
Feature

- Selecting high purity green SiC powder, to ensure best foundation for top quality.
- SiC tube is extruded by 500T press machine, to ensure high density uniform through whole length.
- Excellent resistance rate between heat zone and cold zone, to avoid over-temperature of cold zone to damage furnace body.
- Special technology to spread a protect film on the surface of hot zone, which enhance the Antioxidant property evidently and lengthen the service life.

Please confirm the following data before order

1. Type
2. Diameter OD
3. Hot zone length HZ
4. Cold zone length CZ
5. Total length OL
6. Resistance (if you have requirement)
7. Please confirm the central distance when you need U type and W type.

Technical parameter



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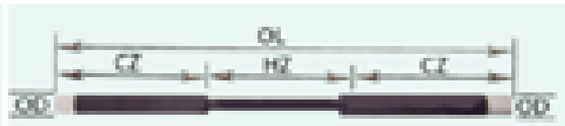

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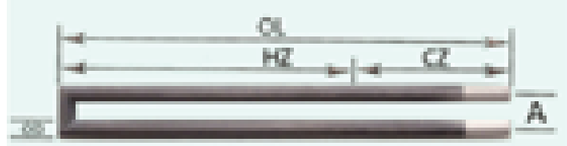

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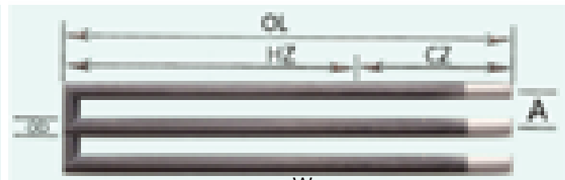

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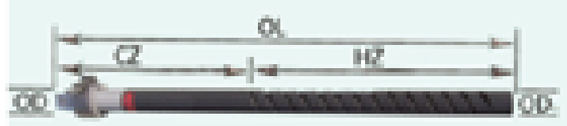

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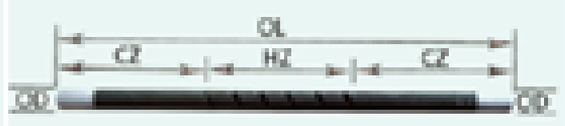

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