BOYUNTONG INSTRUMENT



Nanjing Boyuntong Instrument Technology Co., Ltd.

Company Profile

We Boyuntong Instrument company are a professional manufacturer who have engaged in manufacturing laboratory instrument for many years. we located in a beautiful city Nanjing- capital of Jiangsu province, which is near to Shanghai, and it is convenient to ship goods by air or by sea from Nanjing.

Our engineering department is made up of some professional engineers who have many years experience in laboratory instrument R&d, and we also cooperate with company from other countries. Innovation and improvement is our concept that we always insist, we always pay high attention to quality control.

We supply various Muffle furnace, Tube Furnace, Atmosphere Furnace, Ball mill, Grinding jar, Accessories and so on. Our products have be pushed to all over the world and gain good reputation from many customers.

Hope to cooperate with you!

Main products

Vacuum atmosphere furnace	Ball mill
Tube furnace	Vibratory mill
Many-zone tube furnace	Grinding jar
Vertical tube furnace	Pellet press
Muffle furnace	Vacuum system
Atmosphere muffle furnace	Gas system
Elevator furnace	Vacuum melting furnace



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Muffle Furnace

KF Series





KF1100-S



KF1100 KF1400 KF1600 KF1700

KF1100-S Series Muffle Furnace

KF1100-S series furnace has many advantages of uniform temperature field,low surface temperature,heating or cooling promptly,energy saving and so on. It is the ideal muffle furnace for high temperature sintering,metal annealing,quality inspection in Industry,Scientific research institutes,Universities, which offer Heating element of resistance wire and double layer walled housing, it can rise to 1000□ in 30 minutes.Temperature controller is 30-segments digital controller. The chamber is made of Polycrystalline alumina fibre imported from Japan.

Features:

1.**Chamber**:it is imported from Japan,good performance of heat preservation, high reflectivity, uniform temperature field, good ability of anti thermal expansion and cold contraction.
2.**Heating element**:This furnace is installed with resistance wire to ensure uniform temperature field and long service life.



Technical Parameter:

Item No.	**KF1100-S**
Power	1200W
Chamber size	100X100X100（DXWXH）
Voltage	220V
Phase	Single
Heating element	Resistance wire
Controller	30 programs
Chamber	Polycrystalline alumina fibre
Temperature Accuracy	+/- 1 ℃
Max. Temperature	1050 ℃
Constant temperature	1000 ℃
Thermocouple	Type K
Controlled silicon	Controlled silicon
Surface temperature	≤35℃

—— KF1100 Muffle Furnace ——

KF1100 series furnace has many advantages of uniform temperature field,low surface temperature,heating or cooling promptly,energy saving and so on. It is the ideal muffle furnace for high temperature sintering,metal annealing,quality inspection in Industry,Scientific research institutes,Universities, which offer Heating element of Kanthal resistance wire and double layer structure with air cooling system between the double walled housing to help the furnace heat or cool promptly, it can rise to 1000□ in 30 minutes.Temperature controller is Shimaden 40-segments digital controller imported from Japan. The chamber is made of Polycrystalline alumina fibre imported from USA.

Features:

1.**Temperature controller: Shimaden FP93**

- 40 programmable segments (Shimaden fp93 made in Japan), It can separate into 4,2,1 programs, ie. 4x10 segments.
- FP93 have 6 PID controls, different PID are used for low,middle,high temperature for precise control.
- Over-temperature and over-current protection, shutdown automatically when thermocouple is broken(it will shut down power when temperature is higher than 1120□ or thermocouples is broken, "ON" on the board is off and "OFF" is on)
- There is Fahrenheit (F) and Celsius (C) for option.
- With 485 communication interface: which can stop the furnace automatically.

2.**Cover opening protection syste**m: overtravel-limit switch is installed to protect user, it will cut off power when the cover open.

3.**Chamber**:it is imported from USA, good performance of heat preservation, high reflectivity, uniform temperature field, good ability of anti thermal expansion and cold contraction.

4.**Heating element**:This furnace is installed with excellent Kanthal A1 resistance wire to ensure uniform temperature field and long service life.

5.**Leakage protection function**:the furnace is installed with leakage air switch, it will cut off power Automatically when electricity leak or current exceed rated current.

6.**Software controlling system**:this furnace can control every parameter directly and observe PV and SV on the computer by communication interface and software, computer can draw and save actual heating curve, it is convenient to call these dates at any time.

7.**Controlling system**:
Power control: Chint; Controlled silicon:Germany Semikron 106/16E; Trigger:Phase-shift trigger

Technical Parameter:

Item No.	KF1100-I	KF1100-II	KF1100-III	KF1100-IV	KF1100-V
Chamber size (DxWxH)	300X200X120 mm	300X200X200 mm	300X250X250 mm	400X300X300 mm	500X400X400 mm
Overall Dimensions (DxWxH）	460X670X612 mm	460X670X672 mm	530X670X752 mm	600X770X832 mm	
Power	2.5KW	4KW	6KW	9KW	15KW
Voltage	220V	220V	220V	380V	380V
Phase	single	single	single	three	three
Max. Temperature	1100℃				
Constant temperature	1000℃				
Thermocouple	Type K				
Heating Element	Kanthal resistance wire				
Heating Rate	≤30℃ / min				
Recommended Heating Rate	≤15℃ / min				
Temperature Accuracy	+/- 1°C				
Temperature Controller	Shimaden fp93 (made in Japan) with 4 programs and 40 segments (ie. 4 x 10 segments or 2 x 20 segments)				
Chamber Material	Polycrystalline 98% alumina fibre, Imported from U.S., no powder is off. good heat reservation.high reflectivity.uniform temperature field. Good ability of anti thermal expansion and cold contraction.				
Trigger	Phase-shift trigger				

—— KF1400 Muffle Furnace ——

KF1400 series furnace has many advantages of uniform temperature field,low surface temperature,heating or cooling promptly,energy saving and so on. It is the ideal muffle furnace for power sintering,ceramic sintering,high temperature experiment and quality inspection in Industry,Scientific research institutes,Universities, which offer Heating element of Sic and double layer structure with air cooling system between the double walled housing to help the furnace heat or cool promptly.Temperature controller is Shimaden 40-segments digital controller imported from Japan. The chamber is made of 1600 Polycrystalline alumina fibre imported from Japan.

Features:

1.**Temperature controller: Shimaden FP93**

- 40 programmable segments (Shimaden fp93 made in Japan), It can separate into 4,2,1 programs, ie. 4x10 segments.
- FP93 have 6 PID controls, different PID are used for low,middle,high temperature for precise control.
- Over-temperature and over-current protection, shutdown automatically when thermocouple is broken(it will shut down power when temperature is higher than 1420□ or thermocouples is broken, "ON" on the board is off and "OFF" is on)
- There is Fahrenheit (F) and Celsius (C) for option.
- With 485 communication interface: which can stop the furnace automatically.

2.**Cover opening protection system**: overtravel-limit switch is installed to protect user, it will cut off power when the cover open.

3.**Chamber**:it is imported from USA, good performance of heat preservation, high reflectivity, even temperature field, good ability of anti thermal expansion and cold contraction.

4.**Heating element**:This furnace is installed with Sic heating element to ensure uniform temperature field and long service life.

5.**Leakage protection function**:the furnace is installed with leakage air switch, it will cut off power Automatically when electricity leak or current exceed rated current.

6.**Software controlling system**:this furnace can control every parameter directly and observe PV and SV on the computer by communication interface and software, computer can draw and save actual heating curve, it is convenient to call these dates at any time.

7.**Controlling system**:
Power control: Chint; Controlled silicon:Germany Semikron 106/16E; Trigger:Phase-shift trigger

Technical Parameter:

Item No.	KF1400-I	KF1400-II	KF1400-III	KF1400-IV	KF1400-V	KF1400-VI
Chamber size（DxWxH）	160X150X150 mm	200X200X200 mm	300X200X200 mm	300X250X250 mm	400X300X300 mm	500X400X400 mm
Overall Dimensions (DxWxH）	510X490X780 mm	560X550X830 mm	560X630X830 mm	610X630X880 mm	660X730X930 mm	900X910X120 mm
Power	4KW	6KW	8KW	10KW	12KW	18KW
Voltage	220V	220V	220V	380V	380V	380V
Phase	Single					Three
Max. Temperature	1400℃					
Constant temperature	1350℃					
Thermocouple	S Type					
Heating Element	Sic					
Heating Rate	≤30℃ / min					
Recommended Heating Rate	≤15℃ / min					
Temperature Accuracy	+/- 1°C					
Temperature Controller	Shimaden fp93 (made in Japan) with 4 programs and 40 segments (ie. 4 x 10 segments or 2 x 20 segments)					
Chamber Material	1600 Polycrystalline 98% alumina fibre, Imported from Japan, good heat reservation, High reflectivity, uniform temperature field, Good ability of anti thermal expansion and cold contraction.					
Trigger	Phase-shift trigger					

—— KF1600 Muffle Furnace ——

KF1600 series furnace has many advantages of uniform temperature field,low surface temperature,heating or cooling promptly,energy saving and so on. It is the ideal muffle furnace for power sintering,ceramic sintering,high temperature experiment and quality inspection in Industry,Scientific research institutes,Universities, which offer Heating element of MoSi2 and double layer structure with air cooling system between the double walled housing to help the furnace heat or cool promptly.Temperature controller is Shimaden 40-segments digital controller imported from Japan. The chamber is made of Polycrystalline 95% alumina fibre imported from Japan.

Features:

1.**Temperature controller: Shimaden FP93**

- 40 programmable segments (Shimaden fp93 made in Japan), It can separate into 4,2,1 programs, ie. 4x10 segments.
- FP93 have 6 PID controls, different PID are used for low,middle,high temperature for precise control.
- Over-temperature and over-current protection, shutdown automatically when thermocouple is broken(it will shut down power when temperature is higher than 1620□ or thermocouples is broken, "ON" on the board is off and "OFF" is on)
- There is Fahrenheit (F) and Celsius (C) for option.
- With 485 communication interface: which can stop the furnace automatically.

2.**Cover opening protection system**: overtravel-limit switch is installed to protect user, it will cut off power when the cover open.

3.**Chamber**:it is imported from USA, good performance of heat preservation, high reflectivity, uniform temperature field, good ability of anti thermal expansion and cold contraction.

4.**Heating element**:This furnace is installed with MoSi2 heating element to ensure uniform temperature field and long service life.

5.**Leakage protection function**:the furnace is installed with leakage air switch, it will cut off power Automatically when electricity leak or current exceed rated current.

6.**Software controlling system**:this furnace can control every parameter directly and observe PV and SV on the computer by communication interface and software, computer can draw and save actual heating curve, it is convenient to call these dates at any time.

7.**Controlling system**:
Power control: Chint; Controlled silicon:Germany Semikron 106/16E; Trigger:Phase-shift trigger

Technical Parameter:

Item No.	KF1600-I	KF1600-II	KF1600-III	KF1600-IV	KF1600-V	KF1600-VI	KF1600-VII
Chamber size （DxWxH）	160X150X150 mm	200X200X200 mm	300X200X200 mm	300X250X250 mm	400X300X300 mm	500X400X400 mm	1200X600X600
Overall Dimensions (DxWxH）	510X490X780 mm	560X550X850 mm	560X630X850 mm	610X630X930 mm	660X730X1340 mm	910X900X1500 mm	1670X1180X1500 mm
Power	3KW	5KW	7KW	9KW	12KW	21KW	65KW
Voltage	220V	220V	220V	380V	380V	380V	380V
Phase	Single					Three	
Max. Temperature	1400℃						
Constant temperature	1350℃						
Thermocouple	S Type						
Heating Element	MoSi2						
Heating Rate	≤30℃ / min						
Recommended Heating Rate	≤15℃ / min						
Temperature Accuracy	+/- 1°C						
Temperature Controller	Shimaden fp93 (made in Japan) with 4 programs and 40 segments (ie. 4 x 10 segments or 2 x 20 segments)						
Chamber Material	1700 Polycrystalline 98% alumina fibre, Imported from Japan, Good heat reservation.high reflectivity, uniform temperature field, Good ability of anti thermal expansion and cold contraction.						
Trigger	Phase-shift trigger						

—— KF1700 Muffle Furnace ——

KF1700 series furnace has many advantages of uniform temperature field,low surface temperature,heating or cooling promptly,energy saving and so on. It is the ideal muffle furnace for power sintering,ceramic sintering,high temperature experiment and quality inspection in Industry,Scientific research institutes,Universities, which offer Heating element of 1800 MoSi2 and double layer structure with air cooling system between the double walled housing to help the furnace heat or cool promptly.Temperature controller is Shimaden 40-segments digital controller imported from Japan. The chamber is made of Polycrystalline alumina fibre imported from Japan.

Features:

1.**Temperature controller: Shimaden FP93**

- 40 programmable segments (Shimaden fp93 made in Japan), It can separate into 4,2,1 programs, ie. 4x10 segments.
- FP93 have 6 PID controls, different PID are used for low,middle,high temperature for precise control.
- Over-temperature and over-current protection, shutdown automatically when thermocouple is broken(it will shut down power when temperature is higher than 1720□ or thermocouples is broken, "ON" on the board is off and "OFF" is on)
- There is Fahrenheit (F) and Celsius (C) for option.
- With 485 communication interface: which can stop the furnace automatically.

2.**Cover opening protection system**: overtravel-limit switch is installed to protect user, it will cut off power when the cover open.

3.**Chamber**:it is imported from USA, good performance of heat preservation, high reflectivity, uniform temperature field, good ability of anti thermal expansion and cold contraction.

4.**Heating element**:This furnace is installed with MoSi2 heating element to ensure uniform temperature field and long service life.

5.**Leakage protection function**:the furnace is installed with leakage air switch, it will cut off power Automatically when electricity leak or current exceed rated current.

6.**Software controlling system**:this furnace can control every parameter directly and observe PV and SV on the computer by communication interface and software, computer can draw and save actual heating curve, it is convenient to call these dates at any time.

7.**Controlling system**:
Power control: Chint; Controlled silicon:Germany Semikron 106/16E; Trigger:Phase-shift trigger

Technical Parameter:

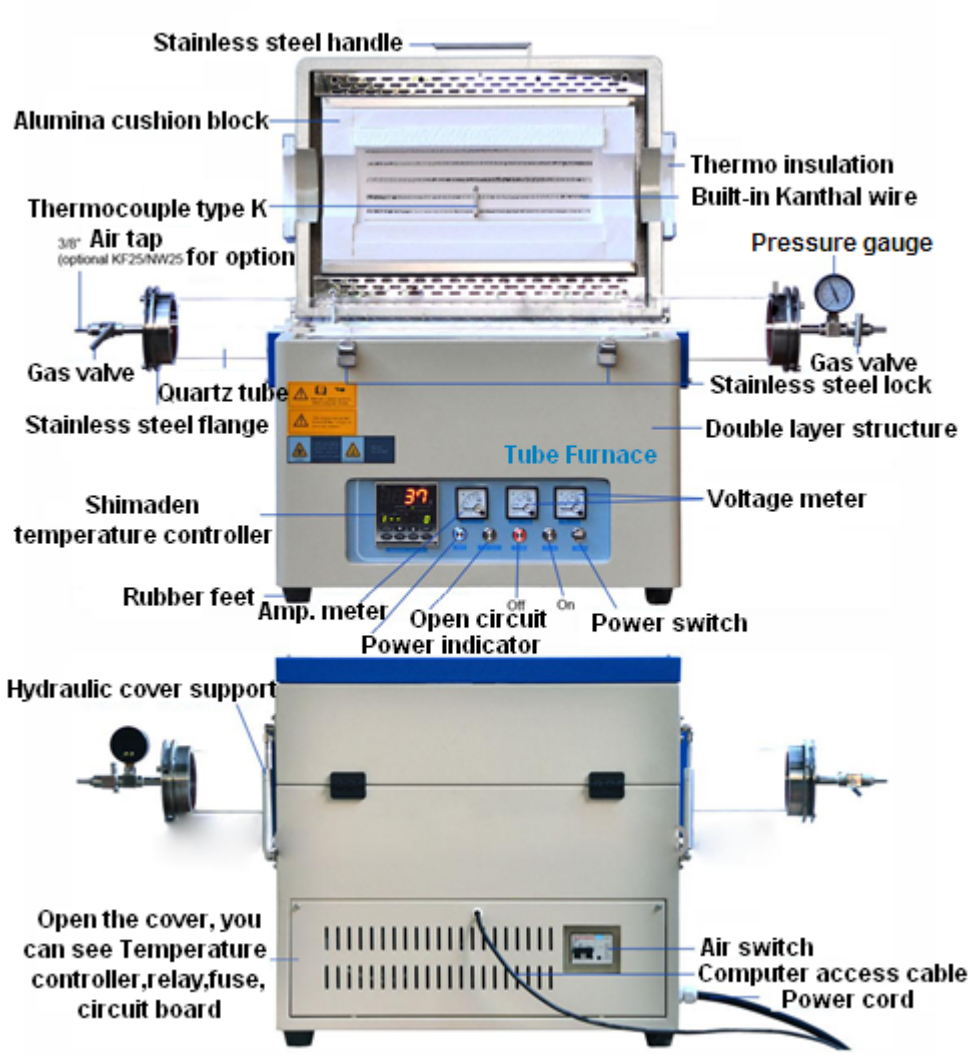
Item No.	KF1700-I	KF1700-II	KF1700-III	KF1700-IV	KF1700-V
Chamber size （DxWxH）	160X150X150 mm	200X200X200 mm	300X200X200 mm	300X250X250 mm	400X300X300 mm
Overall Dimensions (DxWxH）	510X490X850 mm	560X530X900 mm	560X630X900 mm	610X630X980 mm	660X730X1340 mm
Power	3KW	5KW	7KW	9KW	12KW
Voltage ()	220V	220V	220V	380V	380V
Phase	Single				
Max. Temperature	1700℃				
Constant temperature	1650℃				
Thermocouple	Type B				
Heating Element	MoSi2				
Heating Rate	≤30℃ / min				
Recommended Heating Rate	≤15℃ / min				
Temperature Accuracy	+/- 1°C				
Temperature Controller	Shimaden fp93 (made in Japan) with 4 programs and 40 segments (ie. 4 x 10 segments or 2 x 20 segments)				
Chamber Material	1800 Polycrystalline 98% alumina fibre.Imported from Japan, good heat reservation.high reflectivity.even temperature field. Good ability of anti thermal expansion and cold contraction.				
Trigger	Phase-shift trigger				

KF Series Standard Specification

Part Name	Quantity	Picture
KF Series muffle furnace	1pc	
Thermocouple KF1100: Type K KF1400: Type S KF1600: Type B KF1700: Type B	1pc	
Stainless steel Clamp	pc	
Alumina thermal cushion block	1pc	
Thermal gloves	1pair	
Alumina crucible	5pcs	
Spare fuse	2pcs	
485 Communication port	1set	
Owner manual	1pc	
Software	1pc	

Split Tube Furnace

TL1200 Series





TL1200-S Mini Series



TL1200 Series

—— TL1200 Split Tube Furnace ——

TL1200 series furnace has many advantages of uniform temperature field,low surface temperature,heating or cooling promptly,energy saving and so on. It is the ideal muffle furnace for high temperature atmosphere sintering,atmosphere reducing,CVD experiment,vacuum annealing in Industry,Scientific research institutes,Universities, which offer Heating element of Kanthal resistance wire and double layer structure with air cooling system between the double walled housing to help the furnace heat or cool promptly, it can rise to 1000□ in 30 minutes.Temperature controller is Shimaden 40-segments digital controller imported from Japan. The chamber is made of Polycrystalline alumina fibre imported from Japan, split Into two half sphere. The chamber can be opened when you need to cool the furnace immediately or change the tube.

Features:

1.**Temperature controller: Shimaden FP93**

- 40 programmable segments (Shimaden fp93 made in Japan), It can separate into 4,2,1 programs, ie. 4x10 segments.
- FP93 have 6 PID controls, different PID are used for low,middle,high temperature for precise control.
- Over-temperature and over-current protection, shutdown automatically when thermocouple is broken(it will shut down power when temperature is higher than 1200□ or thermocouples is broken, "ON" on the board is off and "OFF" is on)
- There is Fahrenheit (F) and Celsius (C) for option.
- With 485 communication interface: which can stop the furnace automatically.

2.**Cover opening protection system**: overtravel-limit switch is installed to protect user, it will cut off power when the cover open.

3.**Chamber**:it is imported from Japan, good performance of heat preservation, high reflectivity, uniform temperature field, good ability of anti thermal expansion and cold contraction.

4.**Heating element**:This furnace is installed with excellent Kanthal A1 resistance wire to ensure uniform temperature field and long service life.

5.**Leakage protection function**:the furnace is installed with leakage air switch, it will cut off power Automatically when electricity leak or current exceed rated current.

6.**Software controlling system**:this furnace can control every parameter directly and observe PV and SV on the computer by communication interface and software, computer can draw and save actual heating curve, it is convenient to call these dates at any time.

7.**Controlling system**:
Power control: Chint; Controlled silicon:Germany Semikron 106/16E; Trigger:Phase-shift trigger

8.**Vacuum system**: Vacuum level can be 10^{-1} or 10^{-4} with German molecular pump. TW-1.5 vacuum pump is for option.

9.**Gas system**:floating flow meter or digital flow meter is for option to control gas Speed.

10.**Flange**: with double ring sealing flanges, there are many adapter of the flanges to connect digital vacuum gauge,K25 vacuum Bellow. It can be made as hinge for removing conveniently.

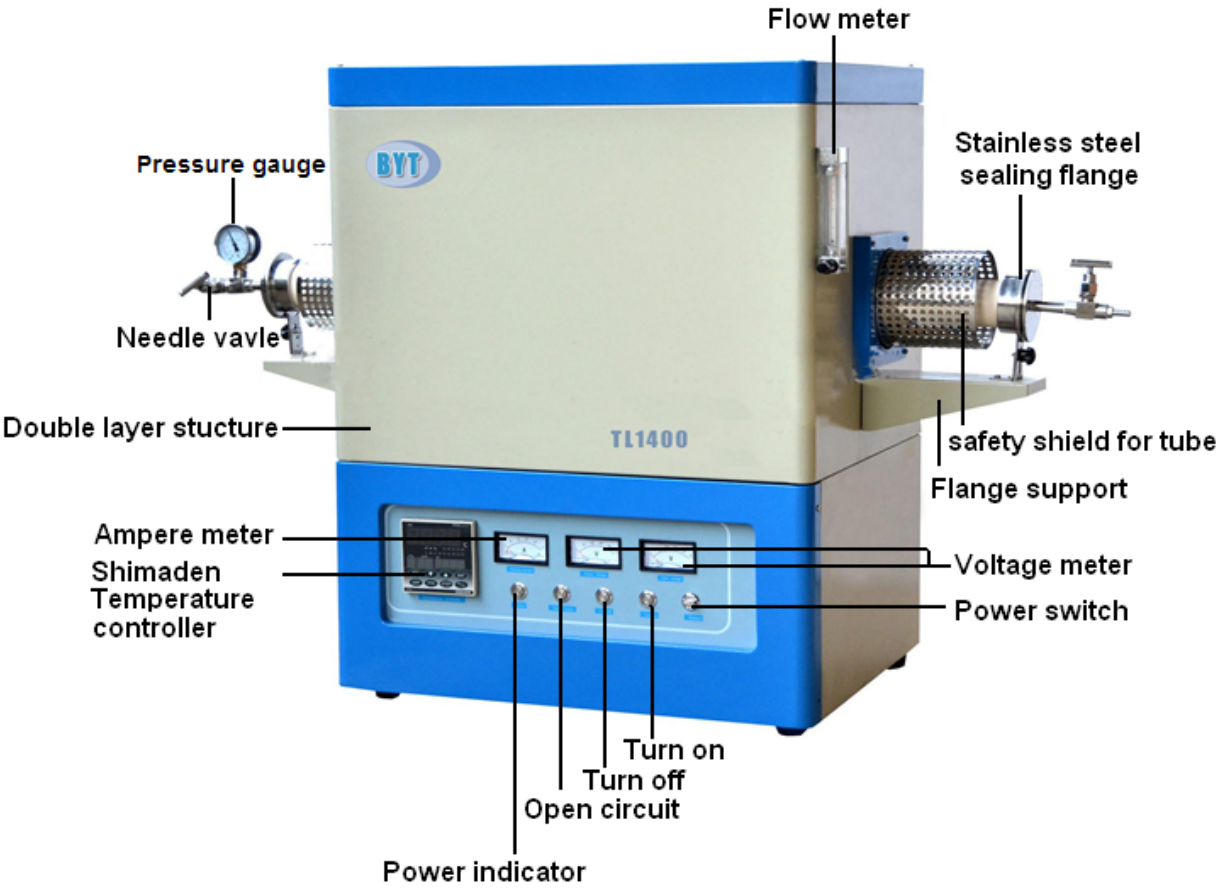
11.**Cover**: it is more safe and convenient to open the cover because of hydraulic lifter.

Technical Parameter

Item No.	TL1200-S-I	TL1200-S-II	TL1200-I	TL1200-II	TL1200-III	TL1200-IV
Chamber size	25X700mm	50X700mm	60X1000mm	80X1000mm	100X1000mm	120X1000 mm
Overall Dimension(mm)	340X290X415	340X290X415	580X370X515	580X420X565	580X420X565	600X440X585
Power	1.5KW	1.5KW	2.5KW	2.5KW	3.5KW	4KW
Voltage	220V					
Phase	Single					
Max. Temperature	1200℃					
Constant temperature	1100℃					
Thermocouple	K Type					
Heating Element	Kanthal resistance wire					
Heating Rate	≤30℃/min					
Recommended Heating Rate	≤15℃/min					
Temperature Accuracy	+/- 1°C					
Heating length	205mm		420mm			
Temperature Controller	3 programs		Shimaden fp93 (imported from Japan) with 4 programs and 40 segments (ie. 4 x 10 segments or 2 x 20 segments)			
Chamber Material	Polycrystalline 98% alumina fibre. Imported from Japan.					
Trigger	Phase-shift trigger					

Tube Furnace

TL series





—— TL1400 Tube Furnace ——

TL1400 series furnace has many advantages of uniform temperature field,low surface temperature,heating or cooling promptly,energy saving and so on. It is the ideal muffle furnace for high temperature atmosphere sintering,atmosphere reducing,CVD experiment,vacuum annealing in Industry,Scientific research institutes,Universities, which offer Heating element of Sic and double layer structure with air cooling system between the double walled housing to help the furnace heat or cool promptly. There are stainless steel flanges seal both ends of the ceramic tube, flow meter control gas inlet.Temperature controller is Shimaden 40-segments digital controller imported from Japan,Phase-shift trigger,Controlled silicon. The chamber is made of 1600 Polycrystalline alumina fibre imported from Japan.

Features:

1.**Temperature controller: Shimaden FP93**

- 40 programmable segments (Shimaden fp93 made in Japan), It can separate into 4,2,1 programs, ie. 4x10 segments.
- FP93 have 6 PID controls, different PID are used for low,middle,high temperature for precise control.
- Over-temperature and over-current protection, shutdown automatically when thermocouple is broken(it will shut down power when temperature is higher than 1420□ or thermocouples is broken, "ON" on the board is off and "OFF" is on)
- There is Fahrenheit (F) and Celsius (C) for option.
- With 485 communication interface: which can stop the furnace automatically.

2.**Cover opening protection system**: overtravel-limit switch is installed to protect user, it will cut off power when the cover open.

3.**Chamber**:it is imported from Japan, good performance of heat preservation, high reflectivity, uniform temperature field, good ability of anti thermal expansion and cold contraction.

4.**Heating element**:This furnace is installed with Sic to ensure uniform temperature field and long service life.

5.**Leakage protection function**:the furnace is installed with leakage air switch, it will cut off power Automatically when electricity leak or current exceed rated current.

6.**Software controlling system**:this furnace can control every parameter directly and observe PV and SV on the computer by communication interface and software, computer can draw and save actual heating curve, it is convenient to call these dates at any time.

7.**Controlling system**:
Power control: Chint; Controlled silicon:Germany Semikron 106/16E; Trigger:Phase-shift trigger

8.**Vacuum system**: Vacuum level can be 10^{-1} or 10^{-4} with German molecular pump. TW-1.5 vacuum pump is for option.

9.**Gas system**:floating flow meter or digital flow meter is for option to control gas Speed.

10.**Flange**: with double ring sealing flanges, there are many adapter of the flanges to connect digital vacuum gauge,K25 vacuum Bellow. It can be made as hinge for removing conveniently.

Technical Parameter

Item No.	TL1400-I	TL1400-II	TL1400-III	TL1400-IV
Chamber size	60X1000mm	80X1000mm	100X1000mm	120X1000mm
Overall Dimensions	610X480X758	610X480X758	610X530X826	740X570X871
Power	4KW	4KW	6KW	8KW
Voltage	220V			
Phase	Single			
Max. Temperature	1400℃			
Constant temperature	1350℃			
Thermocouple	Type S			
Heating Element	Sic			
Heating Rate	≤30℃/min			
Recommended Heating Rate	≤15℃/min			
Temperature Accuracy	+/- 1°C			
Heating length	260mm			
Temperature Controller	Shimaden fp93 (imported from Japan) with 4 programs and 40 segments (ie. 4 x 10 segments or 2 x 20 segments)			
Chamber Material	Polycrystalline 98% alumina fibre.Imported from Japan			
Trigger	Phase-shift trigger			

—— TL1600 Tube Furnace ——

TL1600 series furnace has many advantages of uniform temperature field,low surface temperature,heating or cooling promptly,energy saving and so on. It is the ideal muffle furnace for high temperature atmosphere sintering,atmosphere reducing,CVD experiment,vacuum annealing in Industry,Scientific research institutes,Universities, which offer Heating element of MoSi2 and double layer structure with air cooling system between the double walled housing to help the furnace heat or cool promptly. There are stainless steel flanges seal both ends of the ceramic tube, flow meter control gas inlet.Temperature controller is Shimaden 40-segments digital controller imported from Japan,Phase-shift trigger,Controlled silicon. The chamber is made of 1800 Polycrystalline alumina fibre imported from Japan.

Features:

1.**Temperature controller: Shimaden FP93**
- 40 programmable segments (Shimaden fp93 made in Japan), It can separate into 4,2,1 programs, ie. 4x10 segments.
- FP93 have 6 PID controls, different PID are used for low,middle,high temperature for precise control.
- Over-temperature and over-current protection, shutdown automatically when thermocouple is broken(it will shut down power when temperature is higher than 1620□ or thermocouples is broken, "ON" on the board is off and "OFF" is on)
- There is Fahrenheit (F) and Celsius (C) for option.
- With 485 communication interface: which can stop the furnace automatically.

2.**Cover opening protection system**: overtravel-limit switch is installed to protect user, it will cut off power when the cover open.

3.**Chamber**:it is imported from Japan, good performance of heat preservation, high reflectivity, uniform temperature field, good ability of anti thermal expansion and cold contraction.

4.**Heating element**:This furnace is installed with MoSi2 to ensure uniform temperature field and long service life.

5.**Leakage protection function**:the furnace is installed with leakage air switch, it will cut off power Automatically when electricity leak or current exceed rated current.

6.**Software controlling system**:this furnace can control every parameter directly and observe PV and SV on the computer by communication interface and software, computer can draw and save actual heating curve, it is convenient to call these dates at any time.

7.**Controlling system**:
Power control: Chint; Controlled silicon:Germany Semikron 106/16E; Trigger:Phase-shift trigger

8.**Vacuum system**: Vacuum level can be 10^{-1} or 10^{-4} with German molecular pump. TW-1.5 vacuum pump is for option.

9.**Gas system**:floating flow meter or digital flow meter is for option to control gas Speed.

10.**Flange**: with double ring sealing flanges, there are many adapter of the flanges to connect digital vacuum gauge,K25 vacuum Bellow. It can be made as hinge for removing conveniently.

Technical Parameter

Item No.	TL1600-I	TL1600-II	TL1600-III	TL1600-IV
Chamber size	60X1000mm	80X1000mm	100X1000mm	120X1000mm
Overall Dimensions	610X480X758	610X480X758	610X530X826	
Power	4KW	4KW	6KW	8KW
Voltage	220V			
Phase	Single			
Max. Temperature	1600℃			
Constant temperature	1550℃			
Thermocouple	Type B			
Heating Element	MoSi2			
Heating Rate	≤30℃/min			
Recommended Heating Rate	≤15℃/min			
Temperature Accuracy	+/- 1°C			
Heating length	260mm			
Temperature Controller	Shimaden fp93 (imported from Japan) with 4 programs and 40 segments (ie. 4 x 10 segments or 2 x 20 segments)			
Chamber Material	Polycrystalline 98% alumina fibre.Imported from Japan,			
Trigger	Phase-shift trigger			

—— TL1700 Tube Furnace ——

TL1700 series furnace has many advantages of uniform temperature field,low surface temperature,heating or cooling promptly,energy saving and so on. It is the ideal muffle furnace for high temperature atmosphere sintering,atmosphere reducing,CVD experiment,vacuum annealing in Industry,Scientific research institutes,Universities, which offer Heating element of 1800 MoSi2 and double layer structure with air cooling system between the double walled housing to help the furnace heat or cool promptly. There are stainless steel flanges seal both ends of the imported high quality ceramic tube, flow meter control gas inlet.Temperature controller is Shimaden 40-segments digital controller imported from Japan,Phase-shift trigger,Controlled silicon. The chamber is made of Polycrystalline alumina fibre imported from Japan.

Features:

1.**Temperature controller: Shimaden FP93**

- 40 programmable segments (Shimaden fp93 made in Japan), It can separate into 4,2,1 programs, ie. 4x10 segments.
- FP93 have 6 PID controls, different PID are used for low,middle,high temperature for precise control.
- Over-temperature and over-current protection, shutdown automatically when thermocouple is broken(it will shut down power when temperature is higher than 1720□ or thermocouples is broken, "ON" on the board is off and "OFF" is on)
- There is Fahrenheit (F) and Celsius (C) for option.
- With 485 communication interface: which can stop the furnace automatically.

2.**Cover opening protection system**: overtravel-limit switch is installed to protect user, it will cut off power when the cover open.

3.**Chamber**:it is imported from Japan, good performance of heat preservation, high reflectivity, uniform temperature field, good ability of anti thermal expansion and cold contraction.

4.**Heating elements**This furnace is installed with MoSi2 to ensure uniform temperature field and long service life.

5.**Leakage protection function**:the furnace is installed with leakage air switch, it will cut off power Automatically when electricity leak or current exceed rated current.

6.**Software controlling system**:this furnace can control every parameter directly and observe PV and SV on the computer by communication interface and software, computer can draw and save actual heating curve, it is convenient to call these dates at any time.

7.**Controlling system**:
Power control: Chint; Controlled silicon:Germany Semikron 106/16E; Trigger:Phase-shift trigger

8.**Vacuum system**: Vacuum level can be 10^{-1} or 10^{-4} with German molecular pump. TW-1.5 vacuum pump is for option.

9.**Gas system**:floating flow meter or digital flow meter is for option to control gas Speed.

10.**Flange**:with double ring sealing flanges, there are many adapter of the flanges to connect digital vacuum gauge,K25 vacuum Bellow. It can be made as hinge for removing conveniently.

Technical Parameter

Item No.	TL1700-I	TL1700-II	TL1700-III
Chamber size	60X1000mm	80X1000mm	100X1000mm
Overall Dimensions	610X480X758	610X480X758	610X530X826
Power	5KW	5KW	6KW
Voltage	220V		
Phase	Single		
Max. Temperature	1700℃		
Constant temperature	1650℃		
Thermocouple	Type B		
Heating Element	MoSi2		
Heating Rate	≤30℃/min		
Recommended Heating Rate	≤15℃/min		
Temperature Accuracy	+/- 1°C		
Heating length	300mm		
Temperature Controller	Shimaden fp93 (imported from Japan) with 4 programs and 40 segments (ie. 4 x 10 segments or 2 x 20 segments)		
Chamber Material	Polycrystalline 98% alumina fibre.Imported from Japan		
Trigger	Phase-shift trigger		

—— TL1800 Tube Furnace ——

TL1800 series furnace has many advantages of uniform temperature field,low surface temperature,heating or cooling promptly,energy saving and so on. It is the ideal muffle furnace for high temperature atmosphere sintering,atmosphere reducing,CVD experiment,vacuum annealing in Industry,Scientific research institutes,Universities, which offer Heating element of 1900 MoSi2 and double layer structure with air cooling system between the double walled housing to help the furnace heat or cool promptly. There are stainless steel flanges seal both ends of the imported high quality ceramic tube, flow meter control gas inlet.Temperature controller is Shimaden 40-segments digital controller imported from Japan,Phase-shift trigger,Controlled silicon. The chamber is made of 1900 Polycrystalline alumina fibre imported from Japan.

Features:

1.**Temperature controller: Shimaden FP93**
- 40 programmable segments (Shimaden fp93 made in Japan), It can separate into 4,2,1 programs, ie. 4x10 segments.
- FP93 have 6 PID controls, different PID are used for low,middle,high temperature for precise control.
- Over-temperature and over-current protection, shutdown automatically when thermocouple is broken(it will shut down power when temperature is higher than 1720□ or thermocouples is broken, "ON" on the board is off and "OFF" is on)
- There is Fahrenheit (F) and Celsius (C) for option.
- With 485 communication interface: which can stop the furnace automatically.

2.**Cover opening protection system**: overtravel-limit switch is installed to protect user, it will cut off power when the cover open.

3.**Chamber**:it is imported from Japan, good performance of heat preservation, high reflectivity, even temperature field, good ability of anti thermal expansion and cold contraction.

4.**Heating elements**:This furnace is installed with MoSi2 to ensure uniform temperature field and long service life.

5.**Leakage protection function**:the furnace is installed with leakage air switch, it will cut off power Automatically when electricity leak or current exceed rated current.

6.**Software controlling system**:this furnace can control every parameter directly and observe PV and SV on the computer by communication interface and software, computer can draw and save actual heating curve, it is convenient to call these dates at any time.

7.**Controlling system**:
Power control: Chint; Controlled silicon:Germany Semikron 106/16E; Trigger:Phase-shift trigger

8.**Vacuum system**: Vacuum level can be 10^{-1} or 10^{-4} with German molecular pump. TW-1.5 vacuum pump is for option.

9.**Gas system**:floating flow meter or digital flow meter is for option to control gas Speed.

10.**Flange**: with double ring sealing flanges, there are many adapter of the flanges to connect digital vacuum gauge,K25 vacuum Bellow. It can be made as hinge for removing conveniently.

Technical Parameter:

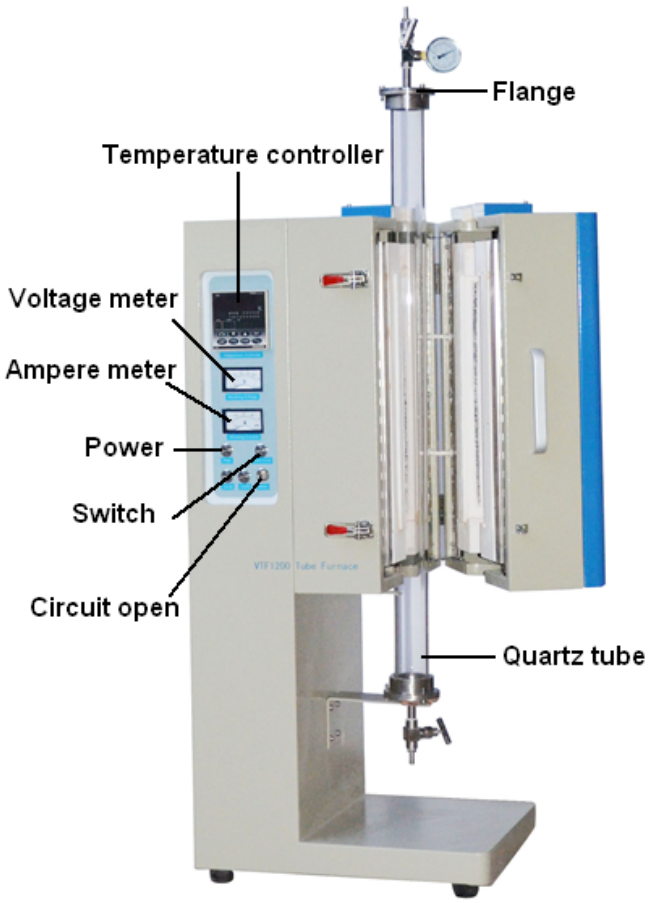
Item No.	TL1800-I	TL1800-II
Chamber size	60X1000mm	80X1000mm
Overall Dimensions		
Power	5.5KW	5.5KW
Voltage	220V	
Phase	Single	
Max. Temperature	1800℃	
Constant temperature	1750℃	
Thermocouple	B Type	
Heating Element	1900 MoSi2	
Heating Rate	≤30℃/min	
Recommended Heating Rate	≤15℃/min	
Temperature Accuracy	+/- 1°C	
Heating length	300mm	
Temperature Controller	Shimaden fp93 (imported from Japan) with 4 programs and 40 segments (ie. 4 x 10 segments or 2 x 20 segments)	
Chamber Material	Polycrystalline 98% alumina fibre.Imported from Japan,	
Trigger	Phase-shift trigger	

TL Series Furnace Standard Specification

Part Name	Quantity	Picture
TL Series tube furnace	1pc	
TL1200: Alumina tube TL1400: Ceramic tube TL1600: Ceramic tube TL1700: Ceramic tube TL1800: Ceramic tube	1pc	 OR 
Stainless steel vacuum flange set	1set	
Stainless steel hook	1pc	
Alumina ceramic thermal block	2pairs	
Thermal gloves	1pair	
Alumina crucible	5pcs	
Spare fuse	2pcs	
485 computer interface port	1set	
Owner manual	1pc	
Shimaden fp93 temperature controller software and owner manual	1pc	

Vertical Tube Furnace

VTL Series





VTL1200-S



VTL1200



VTL1400 VTL1600 VTL1700

—— VTL1200 Vertical Tube Furnace ——

VTL1200 series has many advantages of uniform temperature field,low surface temperature, heating or cooling promptly,energy saving and so on. it is the ideal muffle furnace for high temperature atmosphere sintering,atmosphere reducing,CVD experiment,vacuum annealing in Industry,Scientific research institutes and Universities, which offer heating element of Kanthal resistance wire and double walled housing,Phase-shift trigger,Controlled silicon.Temperature controller is Shimaden 40-segments digital controller imported from Japan. The chamber is made of Polycrystalline alumina fibre, split Into two half sphere. The chamber can be opened from the side when you need to cool the furnace immediately or change the tube. Stainless steel flanges seal are connected with both ends of the tube, the flanges are equipped with gas fitting,valve and pressure gauge, with these accessories, vacuum level can be 10-3 Pa when vacuum. This furnace is vertical and split furnace, the body is fixed on the brace, there are supports to fix the tube and flanges, it is convenient and simple to operate the furnace.

Features:

1.**Temperature controller: Shimaden FP93**
- 40 programmable segments (Shimaden fp93 made in Japan), It can separate into 4,2,1 programs, ie. 4x10 segments.
- FP93 have 6 PID controls, different PID are used for low,middle,high temperature for precise control.
- Over-temperature and over-current protection, shutdown automatically when thermocouple is broken(it will shut down power when temperature is higher than 1200□ or thermocouples is broken, "ON" on the board is off and "OFF" is on)
- There is Fahrenheit (F) and Celsius (C) for option.
- With 485 communication interface: which can stop the furnace automatically.

2.**Cover opening protection system**: overtravel-limit switch is installed to protect user, it will cut off power when the cover open.

3.**Chamber**:it is imported from Japan, good performance of heat preservation, high reflectivity,even temperature field, good ability of anti thermal expansion and cold contraction.

4.**Heating elements**:This furnace is installed with Sweden Kanthal resistance wire to ensure uniform temperature field and long service life.

5.**Leakage protection function**:the furnace is installed with leakage air switch, it will cut off power Automatically when electricity leak or current exceed rated current.

6.**Software controlling system**:this furnace can control every parameter directly and observe PV and SV on the computer by communication interface and software, computer can draw and save actual heating curve, it is convenient to call these dates at any time.

7.**Controlling system**:
Power control: Chint; Controlled silicon:Germany Semikron 106/16E; Trigger:Phase-shift trigger

8.**Vacuum system**: Vacuum level can be 10^{-1} or 10^{-4} with German molecular pump. TW-1.5 vacuum pump is for option.

9.**Gas system**:floating flow meter or digital flow meter is for option to control gas Speed.

10.**Flange**: with double ring sealing flanges, there are many adapter of the flanges to connect digital vacuum gauge,K25 vacuum Bellow. It can be made as hinge for removing conveniently.

Technical Parameter

Item No.	VTL1200-S-I	VTL1200-S-II	VTL1200-I	VTL1200-II	VTL1200-III
Chamber size	25X1000mm	50X1000mm	60X1000mm	80X1000mm	100X1000mm
Overall Dimensions	490X250X1100	490X250X1100	495X370X1070	545X420X1070	545X420X1070
Power	1.5KW	1.5KW	2.5KW	2.5KW	3.5KW
Voltage	220V				
Phase	Single				
Max. Temperature	1200℃				
Constant temperature	1100℃				
Thermocouple	K Type				
Heating Element	Kanthal resistance wire				
Heating Rate	≤30℃/min				
Recommended Heating Rate	≤15℃/min				
Temperature Accuracy	+/- 1°C				
Heating length	205mm		420mm		
Temperature Controller	Shimaden fp93 (imported from Japan) with 4 programs and 40 segments (ie. 4 x 10 segments or 2 x 20 segments)				
Chamber Material	Polycrystalline 98% alumina fibre.Imported from Japan				
Trigger	Phase-shift trigger				

—— VTL1400 Vertical Tube Furnace ——

VTL1400 series has many advantages of uniform temperature field,low surface temperature, heating or cooling promptly,energy saving and so on. it is the ideal muffle furnace for high temperature atmosphere sintering,atmosphere reducing,CVD experiment,vacuum annealing in Industry,Scientific research institutes and Universities, which offer heating element of Sic and double walled housing,Phase-shift trigger,Controlled silicon.Temperature controller is Shimaden 40-segments digital controller imported from Japan. The chamber is made of Polycrystalline alumina fibre, split Into two half sphere. The chamber can be opened from the side when you need to cool the furnace immediately or change the tube. Stainless steel flanges seal are connected with both ends of the tube, the flanges are equipped with gas fitting,valve and pressure gauge, with these accessories, vacuum level can be 10-3 Pa when vacuum. This furnace is vertical and split furnace, the body is fixed on the brace, there are supports to fix the tube and flanges, it is convenient and simple to operate the furnace.

Features:

1.**Temperature controller: Shimaden FP93**
- 40 programmable segments (Shimaden fp93 made in Japan), It can separate into 4,2,1 programs, ie. 4x10 segments.
- FP93 have 6 PID controls, different PID are used for low,middle,high temperature for precise control.
- Over-temperature and over-current protection, shutdown automatically when thermocouple is broken(it will shut down power when temperature is higher than 1420□ or thermocouples is broken, "ON" on the board is off and "OFF" is on)
- There is Fahrenheit (F) and Celsius (C) for option.
- With 485 communication interface: which can stop the furnace automatically.

2.**Cover opening protection system**: overtravel-limit switch is installed to protect user, it will cut off power when the cover open.

3.**Chamber**:it is imported from Japan, good performance of heat preservation, high reflectivity,even temperature field, good ability of anti thermal expansion and cold contraction.

4.**Heating elements**:This furnace is installed with Sic to ensure uniform temperature field and long service life.

5.**Leakage protection function**:the furnace is installed with leakage air switch, it will cut off power Automatically when electricity leak or current exceed rated current.

6.**Software controlling system**:this furnace can control every parameter directly and observe PV and SV on the computer by communication interface and software, computer can draw and save actual heating curve, it is convenient to call these dates at any time.

7.**Controlling system**:
Power control: Chint; Controlled silicon:Germany Semikron 106/16E; Trigger:Phase-shift trigger

8.**Vacuum system**: Vacuum level can be 10^{-1} or 10^{-4} with German molecular pump. TW-1.5 vacuum pump is for option.

9.**Gas system**:floating flow meter or digital flow meter is for option to control gas Speed.

10.**Flange**: with double ring sealing flanges, there are many adapter of the flanges to connect digital vacuum gauge,K25 vacuum Bellow. It can be made as hinge for removing conveniently.

Technical Parameter

Item No.	VTL1400-Ⅰ	VTL1400-Ⅱ	VTL1400-Ⅲ
Chamber size	60X1000 mm	80X1000 mm	100X1000 mm
Overall Dimensions			
Power	2.5KW	2.5KW	3.5KW
Voltage	220V		
Phase	Single		
Max. Temperature	1400℃		
Constant temperature	1300℃		
Thermocouple	S Type		
Heating Element	Sic		
Heating Rate	≤30℃/min		
Recommended Heating Rate	≤15℃/min		
Temperature Accuracy	+/- 1°C		
Heating length	300mm		
Temperature Controller	Shimaden fp93 (imported from Japan) with 4 programs and 40 segments (ie. 4 x 10 segments or 2 x 20 segments)		
Chamber Material	Polycrystalline 98% alumina fibre. Imported from Japan		
Trigger	Phase-shift trigger		

—— VTL1600 Vertical Tube Furnace ——

VTL1600 series has many advantages of uniform temperature field,low surface temperature, heating or cooling promptly,energy saving and so on. it is the ideal muffle furnace for high temperature atmosphere sintering,atmosphere reducing,CVD experiment,vacuum annealing in Industry,Scientific research institutes and Universities, which offer heating element of MoSi2 and double walled housing,Phase-shift trigger,Controlled silicon.Temperature controller is Shimaden 40-segments digital controller imported from Japan. Stainless steel flanges seal are connected with both ends of the tube, the flanges are equipped with gas fitting,valve and pressure gauge, with these accessories, vacuum level can be 10-3 Pa when vacuum. This furnace is vertical and split furnace, the body is fixed on the brace, there are supports to fix the tube and flanges, it is convenient and simple to operate the furnace.

Features:

1.**Temperature controller: Shimaden FP93**
- 40 programmable segments (Shimaden fp93 made in Japan), It can separate into 4,2,1 programs, ie. 4x10 segments.
- FP93 have 6 PID controls, different PID are used for low,middle,high temperature for precise control.
- Over-temperature and over-current protection, shutdown automatically when thermocouple is broken(it will shut down power when temperature is higher than 1620□ or thermocouples is broken, "ON" on the board is off and "OFF" is on)
- There is Fahrenheit (F) and Celsius (C) for option.
- With 485 communication interface: which can stop the furnace automatically.

2.**Cover opening protection system**: overtravel-limit switch is installed to protect user, it will cut off power when the cover open.

3.**Chamber**:it is imported from Japan, good performance of heat preservation, high reflectivity,even temperature field, good ability of anti thermal expansion and cold contraction.

4.**Heating elements**:This furnace is installed with MoSi2 to ensure uniform temperature field and long service life.

5.**Leakage protection function**:the furnace is installed with leakage air switch, it will cut off power Automatically when electricity leak or current exceed rated current.

6.**Software controlling system**:this furnace can control every parameter directly and observe PV and SV on the computer by communication interface and software, computer can draw and save actual heating curve, it is convenient to call these dates at any time.

7.**Controlling system**:
Power control: Chint; Controlled silicon:Germany Semikron 106/16E; Trigger:Phase-shift trigger

8.**Vacuum system**: Vacuum level can be 10^{-1} or 10^{-4} with German molecular pump. TW-1.5 vacuum pump is for option.

9.**Gas system**:floating flow meter or digital flow meter is for option to control gas Speed.

10.**Flange**: with double ring sealing flanges, there are many adapter of the flanges to connect digital vacuum gauge,K25 vacuum Bellow. It can be made as hinge for removing conveniently.

Technical Parameter

Item No.	VTL1600-I	VTL1600-II	VTL1600-III
Chamber size	60X1000mm	80X1000mm	100X1000mm
Overall Dimensions			
Power	5.5KW	5.5KW	6KW
Voltage	220V		
Phase	Single		
Max. Temperature	1600℃		
Constant temperature	1550℃		
Thermocouple	Type B		
Heating Element	MoSi2		
Heating Rate	≤30℃/min		
Recommended Heating Rate	≤15℃/min		
Temperature Accuracy	+/- 1°C		
Heating length	300mm		
Temperature Controller	Shimaden fp93 (imported from Japan) with 4 programs and 40 segments (ie. 4 x 10 segments or 2 x 20 segments)		
Chamber Material	Polycrystalline 98% alumina fibre. Imported from Japan		
Trigger	Phase-shift trigger		

—— VTL1700 Vertical Tube Furnace ——

VTL1700 series has many advantages of uniform temperature field,low surface temperature, heating or cooling promptly,energy saving and so on. it is the ideal muffle furnace for high temperature atmosphere sintering,atmosphere reducing,CVD experiment,vacuum annealing in Industry,Scientific research institutes and Universities, which offer heating element of MoSi2 and double walled housing,Phase-shift trigger,Controlled silicon.Temperature controller is Shimaden 40-segments digital controller imported from Japan. Stainless steel flanges seal are connected with both ends of the tube, the flanges are equipped with gas fitting,valve and pressure gauge, with these accessories, vacuum level can be 10-3 Pa when vacuum. This furnace is vertical and split furnace, the body is fixed on the brace, there are supports to fix the tube and flanges, it is convenient and simple to operate the furnace.

Features:

1.**Temperature controller: Shimaden FP93**

- 40 programmable segments (Shimaden fp93 made in Japan), It can separate into 4,2,1 programs, ie. 4x10 segments.
- FP93 have 6 PID controls, different PID are used for low,middle,high temperature for precise control.
- Over-temperature and over-current protection, shutdown automatically when thermocouple is broken(it will shut down power when temperature is higher than 1620□ or thermocouples is broken, "ON" on the board is off and "OFF" is on)
- There is Fahrenheit (F) and Celsius (C) for option.
- With 485 communication interface: which can stop the furnace automatically.

2.**Cover opening protection system**: overtravel-limit switch is installed to protect user, it will cut off power when the cover open.

3.**Chamber**:it is imported from Japan, good performance of heat preservation, high reflectivity,even temperature field, good ability of anti thermal expansion and cold contraction.

4.**Heating elements**:This furnace is installed with MoSi2 to ensure uniform temperature field and long service life.

5.**Leakage protection function**:the furnace is installed with leakage air switch, it will cut off power Automatically when electricity leak or current exceed rated current.

6.**Software controlling system**:this furnace can control every parameter directly and observe PV and SV on the computer by communication interface and software, computer can draw and save actual heating curve, it is convenient to call these dates at any time.

7.**Controlling system**:
Power control: Chint; Controlled silicon:Germany Semikron 106/16E; Trigger:Phase-shift trigger

8.**Vacuum system**: Vacuum level can be 10^{-1} or 10^{-4} with German molecular pump. TW-1.5 vacuum pump is for option.

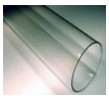
9.**Gas system**:floating flow meter or digital flow meter is for option to control gas Speed.

10.**Flange**: with double ring sealing flanges, there are many adapter of the flanges to connect digital vacuum gauge,K25 vacuum Bellow. It can be made as hinge for removing conveniently.

Technical Parameter

Item No.	VTL1700-I	VTL1700-II	VTL1700-III
Chamber size	60X1000 mm	80X1000 mm	100X1000 mm
Overall Dimensions			
Power	KW	KW	KW
Voltage	220V		
Phase	Single		
Max. Temperature	1600℃		
Constant temperature	1550℃		
Thermocouple	B Type		
Heating Element	MoSi2		
Heating Rate	≤30℃/min		
Recommended Heating Rate	≤15℃/min		
Temperature Accuracy	+/- 1°C		
Heating length	300mm		
Temperature Controller	Shimaden fp93 (imported from Japan) with 4 programs and 40 segments (ie. 4 x 10 segments or 2 x 20 segments)		
Chamber Material	Polycrystalline 98% alumina fibre. Imported from Japan		
Trigger	Phase-shift trigger		

VTL Series Vertical Tube Furnace Standard Specification

Part description	Quantity	Picture
VTL vertical tube furnace	1pc	
VTL1200-S: Quartz tube VTL1200: Quartz tube VTL1400: Alumina tube VTL1600: Alumina tube VTL1700: Alumina tube	1pc	 OR 
Stainless steel vacuum flange set	1set	
Stainless steel hook	1pc	
Alumina ceramic thermal block	2pairs	
Thermal gloves	1pair	
Alumina crucible	5pcs	
Thermocouple VTL1200-S: Type K VTL1200: Type K VTL1400: Type S VTL1600: Type B VTL1700: Type B	1pc	
Heating elements (it have be installed in the furnace)	1pc	
Spare fuse	2pcs	
485 computer interface port	1set	
Owner manual	1pc	
Shimaden fp93 temperature controller software and manual	1pc	

Double Zone Tube Furnace

TL1200-1200 Series
TL1400-1400 Series





—— TL1200-1200 Double Zone Tube Furnace ——

TL1200-1200 series has many advantages of uniform temperature field,low surface temperature, heating or cooling promptly,energy saving and so on. it is the ideal muffle furnace for high temperature atmosphere sintering,atmosphere reducing,CVD experiment,vacuum annealing in Industry,Scientific research institutes and Universities, which offer heating element of Kanthal resistance wire and double walled housing,Phase-shift trigger,Controlled silicon.Temperature controller is Shimaden 40-segments digital controller imported from Japan. The chamber is made of Polycrystalline alumina fibre, split Into two half sphere. The chamber can be opened when you need to cool the furnace immediately or change the tube. Stainless steel flanges seal are connected with both ends of the tube, the flanges are equipped with gas fitting,valve and pressure gauge, with these accessories, vacuum level can be 10-3 Pa when vacuum. This furnace is split furnace, there are 2 zones separated, each zone can be set under different temperature, it is convenient and simple to operate the furnace.

Features:

1.**Temperature controller: Shimaden FP93**

- 40 programmable segments (Shimaden fp93 made in Japan), It can separate into 4,2,1 programs, ie. 4x10 segments.
- FP93 have 6 PID controls, different PID are used for low,middle,high temperature for precise control.
- Over-temperature and over-current protection, shutdown automatically when thermocouple is broken(it will shut down power when temperature is higher than 1200□ or thermocouples is broken, "ON" on the board is off and "OFF" is on)
- There is Fahrenheit (F) and Celsius (C) for option.
- With 485 communication interface: which can stop the furnace automatically.

2.**Cover opening protection system**: overtravel-limit switch is installed to protect user, it will cut off power when the cover open.

3.**Chamber**:it is imported from Japan, good performance of heat preservation, high reflectivity, even temperature field, good ability of anti thermal expansion and cold contraction.

4.**Heating elements**:This furnace is installed with excellent Kanthal A1 resistance wire to ensure uniform temperature field and long service life.

5.**Leakage protection function**:the furnace is installed with leakage air switch, it will cut off power Automatically when electricity leak or current exceed rated current.

6.**Software controlling system**:this furnace can control every parameter directly and observe PV and SV on the computer by communication interface and software, computer can draw and save actual heating curve, it is convenient to call these dates at any time.

7.**Controlling system**:
Power control: Chint; Controlled silicon:Germany Semikron 106/16E; Trigger:Phase-shift trigger

8.**Vacuum system**: Vacuum level can be 10^{-1} or 10^{-4} with German molecular pump. TW-1.5 vacuum pump is for option.

9.**Gas system**:floating flow meter or digital flow meter is for option to control gas Speed.

10.**Flange**: with double ring sealing flanges, there are many adapter of the flanges to connect digital vacuum gauge,K25 vacuum Bellow. It can be made as hinge for removing conveniently.

11.**Cover**: it is more safe and convenient to open the cover because of hydraulic lifter.

Technical Parameter

Item No.	TL1200-1200-I	TL1200-1200-II	TL1200-1200-III
Chamber size	60X1000mm	80X1000mm	100X1000mm
Overall Dimensions			
Power	2.5KW	2.5KW	3.5KW
Voltage	220V		
Phase	Single		
Max. Temperature	1200℃		
Constant temperature	1100℃		
Thermocouple	Type K		
Heating Element	Kanthal A1 resistance wire		
Heating Rate	≤30℃ /min		
Recommended Heating Rate	≤15℃ /min		
Temperature Accuracy	+/- 1°C		
Heating length	Zone 1, Zone 2: 205mm		
Constant temperature length	Zone 1, Zone 2: 80mm		
Temperature Controller	Shimaden fp93 (imported from Japan) with 4 programs and 40 segments (ie. 4 x 10 segments or 2 x 20 segments)		
Chamber Material	Polycrystalline 98% alumina fibre.Imported from Japan		
Trigger	Phase-shift trigger		

—— TL1400-1400 Double Zone Tube Furnace ——

TL1400-1400 series has many advantages of uniform temperature field,low surface temperature, heating or cooling promptly,energy saving and so on. it is the ideal muffle furnace for high temperature atmosphere sintering,atmosphere reducing,CVD experiment,vacuum annealing in Industry,Scientific research institutes and Universities, which offer heating element of Sic and double walled housing,Phase-shift trigger,Controlled silicon.Temperature controller is Shimaden 40-segments digital controller imported from Japan. The chamber is made of Polycrystalline alumina fibre, split Into two half sphere. The chamber can be opened when you need to cool the furnace immediately or change the tube. Stainless steel flanges seal are connected with both ends of the tube, the flanges are equipped with gas fitting,valve and pressure gauge, with these accessories, vacuum level can be 10-3 Pa when vacuum. This furnace is split furnace, there are 2 zones separated, each zone can be set under different temperature, it is convenient and simple to operate the furnace.

Features:

1.**Temperature controller: Shimaden FP93**

- 40 programmable segments (Shimaden fp93 made in Japan), It can separate into 4,2,1 programs, ie. 4x10 segments.
- FP93 have 6 PID controls, different PID are used for low,middle,high temperature for precise control.
- Over-temperature and over-current protection, shutdown automatically when thermocouple is broken(it will shut down power when temperature is higher than 1420□ or thermocouples is broken, "ON" on the board is off and "OFF" is on)
- There is Fahrenheit (F) and Celsius (C) for option.
- With 485 communication interface: which can stop the furnace automatically.

3.**Cover opening protection system**: overtravel-limit switch is installed to protect user, it will cut off power when the cover open.

3.**Chamber**:it is imported from Japan, good performance of heat preservation, high reflectivity, even temperature field, good ability of anti thermal expansion and cold contraction.

4.**Heating elements**:This furnace is installed with Sic to ensure uniform temperature field and long service life.

5.**Leakage protection function**:the furnace is installed with leakage air switch, it will cut off power Automatically when electricity leak or current exceed rated current.

6.**Software controlling system**:this furnace can control every parameter directly and observe PV and SV on the computer by communication interface and software, computer can draw and save actual heating curve, it is convenient to call these dates at any time.

7.**Controlling system**:
Power control: Chint; Controlled silicon:Germany Semikron 106/16E; Trigger:Phase-shift trigger

8.**Vacuum system**: Vacuum level can be 10^{-1} or 10^{-4} with German molecular pump. TW-1.5 vacuum pump is for option.

9.**Gas system**:floating flow meter or digital flow meter is for option to control gas Speed.

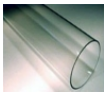
10.**Flange**: with double ring sealing flanges, there are many adapter of the flanges to connect digital vacuum gauge,K25 vacuum Bellow. It can be made as hinge for removing conveniently.

11.**Cover**: it is more safe and convenient to open the cover because of hydraulic lifter.

Technical Parameter

Item No.	TL1400-1400-I	TL1400-1400-II	TL1400-1400-III
Chamber size	60X1000mm	80X1000mm	100X1000mm
Overall Dimensions			
Power	KW	KW	KW
Voltage	V		
Phase			
Max. Temperature	1400℃		
Constant temperature	1350℃		
Thermocouple	Type S		
Heating Element	Sic		
Heating Rate	≤30℃ /min		
Recommended Heating Rate	≤30℃ /min		
Temperature Accuracy	+/- 1°C		
Heating length	Zone 1, Zone 2: 260mm		
Constant temperature length	Zone 1, Zone 2: 100mm		
Temperature Controller	Shimaden fp93 (imported from Japan) with 4 programs and 40 segments (ie. 4 x 10 segments or 2 x 20 segments)		
Chamber Material	Polycrystalline 98% alumina fibre.Imported from Japan		
Trigger	Phase-shift trigger		

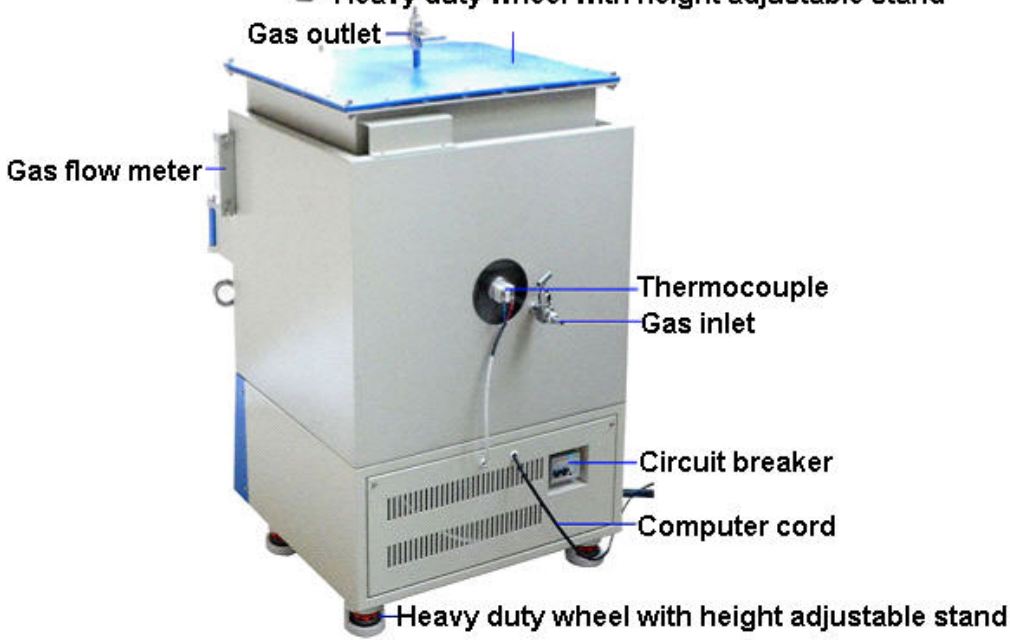
TL Series Double Zone Tube Furnace Standard Specification

Part name	Quantity	Picture
Tube furnace	1pc	
Stainless steel vacuum flange set	1set	
TL1200-1200: Quartz tube TL1400-1400: Alumina tube	1pc	 OR 
Stainless steel hook	1pc	
Alumina ceramic thermal block	2pairs	
Thermal gloves	1pair	
Alumina crucible	5pcs	
Thermocouple TL1200-1200: Type K TL1400-1400: Type S	2pcs	
Spare fuse	2pcs	
485 computer interface port	1set	
Owner manual	1pc	
Shimaden fp93 temperature controller software and manual	1pc	

Atmosphere Muffle Furnace

GF Series







GF11Q-B



GF11Q GF14Q GF16Q GF17Q

—— GF11Q Atmosphere Muffle Furnace ——

GF11Q series has many advantages of uniform temperature field,low surface temperature,heating or cooling promptly and so on. it is the ideal atmosphere muffle furnace for atmosphere protection sintering,atmosphere reducing in Industry, Scientific research institutes, Universities, which offer Heating element of Kantal resistance wire and double layer housing,phase-shift trigger,controlled silicon. Operation system is Shimaden 40-segments digital controller imported from Japan. The chamber is made of Polycrystalline alumina fibre. There is wind cooling system between the double walled housing to help the furnace heat or cool promptly. Sealed housing,silicon gel sealed cover,sealed door with silicon gel gasket and water cooling system,gas float through flow meter,then come out from back side, there are many gas inlets and gas outlets on the furnace with burning mouth,which can pre-vacuum and pass H2,Ar,N2,O2,CO,NH3 and so on.

Features:

1.**Temperature controller: Shimaden FP93**
- 40 programmable segments (Shimaden fp93 made in Japan), It can separate into 4,2,1 programs, ie. 4x10 segments.
- FP93 have 6 PID controls, different PID are used for low,middle,high temperature for precise control.
- Over-temperature and over-current protection, shutdown automatically when thermocouple is broken(it will shut down power when temperature is higher than 1120□ or thermocouples is broken, "ON" on the board is off and "OFF" is on)
- There is Fahrenheit (F) and Celsius (C) for option.
- With 485 communication interface: which can stop the furnace automatically.

2.**Cover opening protection system**: overtravel-limit switch is installed to protect user, it will cut off power when the cover open.

3.**Chamber**:it is imported from Japan, good performance of heat preservation, high reflectivity, even temperature field, good ability of anti thermal expansion and cold contraction.

4.**Heating elements**:This furnace is installed with excellent Kanthal A1 resistance wire to ensure uniform temperature field and long service life.

5.**Leakage protection function**:the furnace is installed with leakage air switch, it will cut off power Automatically when electricity leak or current exceed rated current.

6.**Software controlling system**:this furnace can control every parameter directly and observe PV and SV on the computer by communication interface and software, computer can draw and save actual heating curve, it is convenient to call these dates at any time.

7.**Controlling system**:
Power control: Chint; Controlled silicon:Germany Semikron 106/16E; Trigger:Phase-shift trigger

8.**Gas system**:floating flow meter or digital flow meter is for option to control gas Speed.

9.**Vacuum system**: Vacuum level can be 10^{-1} or 10^{-4} with German molecular pump. TW-1.5 vacuum pump is for option.Pre-vacuuming can help remove air in the chamber quickly.

Technical Parameter

Item No.	GF11Q-I	GF11Q-II	GF11Q-III	GF11Q-IV	GF11Q-V
Chamber size（DxWxH）	300X200X120mm	300X200X200mm	300X250X250mm	400X300X300mm	500X400X300mm
Overall Dimensions(DxWxH）	500X 540X665 mm	520X610X765 mm	580X610X 885 mm	700X 700X880 mm	810X 850X1060 mm
Power	2.5KW	4KW	5KW	9KW	16KW
Voltage	220V			380V	
Phase	Single			Three	
Max. Temperature	1100℃				
Constant temperature	1000℃				
Thermocouple	Type K				
Heating Element	Kanthal resistance wire				
Heating Rate	≤30℃ /min				
Recommended Heating Rate	≤15℃ /min				
Temperature Accuracy	+/- 1°C				
Temperature Controller	Shimaden fp93 (imported from Japan) with 4 programs and 40 segments (ie. 4 x 10 segments or 2 x 20 segments)				
Chamber Material	Polycrystalline 98% alumina fibre.Imported from Japan				
Trigger	Phase-shift trigger				

—— GF11Q-B Atmosphere Muffle Furnace with Stainless Steel interior ——

GF11Q-B series furnace has many advantages of uniform temperature field,low surface temperature,heating or cooling promptly and so on. it is the ideal atmosphere muffle furnace for atmosphere protection sintering,atmosphere reducing in Industry, Scientific research institutes, Universities, which offer Heating element of Kantal resistance wire and double layer housing,phase-shift trigger,controlled silicon. Operation system is Shimaden 40-segments digital controller imported from Japan. The chamber is made of Polycrystalline alumina fibre, with stainless steel interior. There is wind cooling system between the double walled housing to help the furnace heat or cool promptly, it can rise to 1000℃ in 40 minutes. Sealed housing,silicon gel sealed cover,sealed door with silicon gel gasket and water cooling system,gas float through flow meter,then come out from back side, there are many gas inlets and gas outlets on the furnace with burning mouth,which can pre-vacuum and pass H2,Ar,N2,O2,CO,NH3 and so on.

Features:

1.**Temperature controller: Shimaden FP93**
- 40 programmable segments (Shimaden fp93 made in Japan), It can separate into 4,2,1 programs, ie. 4x10 segments.
- FP93 have 6 PID controls, different PID are used for low,middle,high temperature for precise control.
- Over-temperature and over-current protection, shutdown automatically when thermocouple is broken(it will shut down power when temperature is higher than 1120□ or thermocouples is broken, "ON" on the board is off and "OFF" is on)
- There is Fahrenheit (F) and Celsius (C) for option.
- With 485 communication interface: which can stop the furnace automatically.

2.**Cover opening protection system**: overtravel-limit switch is installed to protect user, it will cut off power when the cover open.

3.**Chamber**:it is imported from Japan, good performance of heat preservation, high reflectivity, even temperature field, good ability of anti thermal expansion and cold contraction.

4.**Heating elements**:This furnace is installed with excellent Kanthal A1 resistance wire to ensure uniform temperature field and long service life.

5.**Leakage protection function**:the furnace is installed with leakage air switch, it will cut off power Automatically when electricity leak or current exceed rated current.

6.**Software controlling system**:this furnace can control every parameter directly and observe PV and SV on the computer by communication interface and software, computer can draw and save actual heating curve, it is convenient to call these dates at any time.

7.**Controlling system**:
Power control: Chint; Controlled silicon:Germany Semikron 106/16E; Trigger:Phase-shift trigger

8.**Gas system**:floating flow meter or digital flow meter is for option to control gas Speed.

9.**Vacuum system**: Vacuum level can be 10^{-1} or 10^{-4} with German molecular pump. TW-1.5 vacuum pump is for option.Pre-vacuuming can help remove air in the chamber quickly.

10.**Stainless steel interior**: it is made of 310S stainless steel,the chamber is suitable for degreasing or sintering in clean chamber.

Technical Parameter

Item No.	GF11Q-B-I	GF11Q-B-II	GF11Q-B-III	GF11Q-B-IV
Chamber size（DxWxH）	280X180X100mm	280X180X180mm	280X230X230mm	380X280X280mm
Overall Dimensions(DxWxH）	480X590X632mm	480X590X 712mm	530 X590X782mm	580X 690X832mm
Power	2.5KW	4KW	5KW	9KW
Voltage	220V			380V
Phase	Single			Three
Max. Temperature	1100℃			
Constant temperature	1000℃			
Thermocouple	K Type			
Heating Element	Kanthal resistance wire			
Heating Rate	≤30℃ /min			
Recommended Heating Rate	≤15℃ /min			
Temperature Accuracy	+/- 1°C			
Temperature Controller	Shimaden fp93 (imported from Japan) with 4 programs and 40 segments (ie. 4 x 10 segments or 2 x 20 segments)			
Chamber Material	Polycrystalline 98% alumina fibre. Imported from Japan			
Trigger	Phase-shift trigger			

—— GF14Q Atmosphere Muffle Furnace ——

GF14Q series has many advantages of uniform temperature field,low surface temperature,heating or cooling promptly and so on. it is the ideal atmosphere muffle furnace for atmosphere protection sintering,atmosphere reducing in Industry, Scientific research institutes, Universities, which offer Heating element of Sic and double layer housing,phase-shift trigger,controlled silicon. Operation system is Shimaden 40-segments digital controller imported from Japan. The chamber is made of Polycrystalline alumina fibre. There is wind cooling system between the double walled housing to help the furnace heat or cool promptly. Sealed housing,silicon gel sealed cover,sealed door with silicon gel gasket and water cooling system,gas float through flow meter,then come out from back side, there are many gas inlets and gas outlets on the furnace with burning mouth,which can pre-vacuum and pass H2,Ar,N2,O2,CO,NH3 and so on.

Features:

1.**Temperature controller: Shimaden FP93**

- 40 programmable segments (Shimaden fp93 made in Japan), It can separate into 4,2,1 programs, ie. 4x10 segments.
- FP93 have 6 PID controls, different PID are used for low,middle,high temperature for precise control.
- Over-temperature and over-current protection, shutdown automatically when thermocouple is broken(it will shut down power when temperature is higher than 1420□ or thermocouples is broken, "ON" on the board is off and "OFF" is on)
- There is Fahrenheit (F) and Celsius (C) for option.
- With 485 communication interface: which can stop the furnace automatically.

2.**Cover opening protection system**: overtravel-limit switch is installed to protect user, it will cut off power when the cover is opened.

3.**Chamber**:it is imported from Japan, good performance of heat preservation, high reflectivity, even temperature field, good ability of anti thermal expansion and cold contraction.

4.**Heating elements**:This furnace is installed with Sic to ensure uniform temperature field and long service life.

5.**Leakage protection function**:the furnace is installed with leakage air switch, it will cut off power Automatically when electricity leak or current exceed rated current.

6.**Software controlling system**:this furnace can control every parameter directly and observe PV and SV on the computer by communication interface and software, computer can draw and save actual heating curve, it is convenient to call these dates at any time.

7.**Controlling system**:
Power control: Chint; Controlled silicon:Germany Semikron 106/16E; Trigger:Phase-shift trigger

8.**Gas system**:floating flow meter or digital flow meter is for option to control gas Speed.

9.**Vacuum system**: Vacuum level can be 10^{-1} or 10^{-4} with German molecular pump. TW-1.5 vacuum pump is for option.Pre-vacuuming can help remove air in the chamber quickly.

Technical Parameter

Item No.	GF14Q-I	GF14Q-II	GF14Q--III	GF14Q--IV	GF14Q-V	GF14Q-VI
Chamber size (DxWxH)	150X160X160mm	200X200X200mm	300X200X200mm	300X250X250mm	400X300X300mm	500X400X400mm
Overall Dimensions (DxWxH)						
Power	3KW	5KW	7KW	9KW	13KW	18KW
Voltage	220V			380V		
Phase						
Max. Temperature	1400℃					
Constant temperature	1350℃					
Thermocouple	S Type					
Heating Element	Sic					
Heating Rate	≤30℃ /min					
Recommended Heating Rate	≤15℃ /min					
Temperature Accuracy	+/- 1°C					
Temperature Controller	Shimaden fp93 (imported from Japan) with 4 programs and 40 segments (ie. 4 x 10 segments or 2 x 20 segments)					
Chamber Material	Polycrystalline 98% alumina fibre.Imported from Japan					
Trigger	Phase-shift trigger					

—— GF16Q Atmosphere Muffle Furnace ——

GF16Q series has many advantages of uniform temperature field,low surface temperature,heating or cooling promptly and so on. it is the ideal atmosphere muffle furnace for atmosphere protection sintering,atmosphere reducing in Industry, Scientific research institutes, Universities, which offer Heating element of MoSi2 and double layer housing,phase-shift trigger,controlled silicon. Operation system is Shimaden 40-segments digital controller imported from Japan. The chamber is made of Polycrystalline alumina fibre. There is wind cooling system between the double walled housing to help the furnace heat or cool promptly. Sealed housing,silicon gel sealed cover,sealed door with silicon gel gasket and water cooling system,gas float through flow meter,then come out from back side, there are many gas inlets and gas outlets on the furnace with burning mouth,which can pre-vacuum and pass H2,Ar,N2,O2,CO,NH3 and so on.

Features:

1.**Temperature controller: Shimaden FP93**

- 40 programmable segments (Shimaden fp93 made in Japan), It can separate into 4,2,1 programs, ie. 4x10 segments.
- FP93 have 6 PID controls, different PID are used for low,middle,high temperature for precise control.
- Over-temperature and over-current protection, shutdown automatically when thermocouple is broken(it will shut down power when temperature is higher than 1420□ or thermocouples is broken, "ON" on the board is off and "OFF" is on)
- There is Fahrenheit (F) and Celsius (C) for option.
- With 485 communication interface: which can stop the furnace automatically.

2.**Cover opening protection system**: overtravel-limit switch is installed to protect user, it will cut off power when the cover is opened.

3.**Chamber**:it is imported from Japan, good performance of heat preservation, high reflectivity, even temperature field, good ability of anti thermal expansion and cold contraction.

4.**Heating elements**:This furnace is installed with MoSi2 to ensure uniform temperature field and long service life.

5.**Leakage protection function**:the furnace is installed with leakage air switch, it will cut off power Automatically when electricity leak or current exceed rated current.

6.**Software controlling system**:this furnace can control every parameter directly and observe PV and SV on the computer by communication interface and software, computer can draw and save actual heating curve, it is convenient to call these dates at any time.

7.**Controlling system**:
Power control: Chint; Controlled silicon:Germany Semikron 106/16E; Trigger:Phase-shift trigger

8.**Gas system**:floating flow meter or digital flow meter is for option to control gas Speed.

9.**Vacuum system**: Vacuum level can be 10^{-1} or 10^{-4} with German molecular pump. TW-1.5 vacuum pump is for option.Pre-vacuuming can help remove air in the chamber quickly.

Technical Parameter

Item No.	GF16Q-I	GF16Q-II	GF16Q--III	GF16Q--IV	GF16Q-V	GF16Q-VI
Chamber size （DxWxH）	150X160X160 mm	200X200X200 mm	300X200X200 mm	300X250X250 mm	400X300X300 mm	500X400X400 mm
Overall Dimensions (DxWxH）						
Power	3KW	5KW	7KW	9KW	13KW	18KW
Voltage	220V			380V		
Phase						
Max. Temperature	1600℃					
Constant temperature	1550℃					
Thermocouple	B Type					
Heating Element	MoSi2					
Heating Rate	≤30℃ /min					
Recommended Heating Rate	≤15℃ /min					
Temperature Accuracy	+/- 1°C					
Temperature Controller	Shimaden fp93 (imported from Japan) with 4 programs and 40 segments (ie. 4 x 10 segments or 2 x 20 segments)					
Chamber Material	Polycrystalline 98% alumina fibre. Imported from Japan,					
Trigger	Phase-shift trigger					

—— GF17Q Atmosphere Muffle Furnace ——

GF17Q series has many advantages of uniform temperature field,low surface temperature,heating or cooling promptly and so on. it is the ideal atmosphere muffle furnace for atmosphere protection sintering,atmosphere reducing in Industry, Scientific research institutes, Universities, which offer Heating element of MoSi2 and double layer housing,phase-shift trigger,controlled silicon. Operation system is Shimaden 40-segments digital controller imported from Japan. The chamber is made of Polycrystalline alumina fibre. There is wind cooling system between the double walled housing to help the furnace heat or cool promptly. Sealed housing,silicon gel sealed cover,sealed door with silicon gel gasket and water cooling system,gas float through flow meter,then come out from back side, there are many gas inlets and gas outlets on the furnace with burning mouth,which can pre-vacuum and pass H2,Ar,N2,O2,CO,NH3 and so on.

Features:

1.**Temperature controller: Shimaden FP93**

- 40 programmable segments (Shimaden fp93 made in Japan), It can separate into 4,2,1 programs, ie. 4x10 segments.
- FP93 have 6 PID controls, different PID are used for low,middle,high temperature for precise control.
- Over-temperature and over-current protection, shutdown automatically when thermocouple is broken(it will shut down power when temperature is higher than 1420□ or thermocouples is broken, "ON" on the board is off and "OFF" is on)
- There is Fahrenheit (F) and Celsius (C) for option.
- With 485 communication interface: which can stop the furnace automatically.

2.**Cover opening protection system**: overtravel-limit switch is installed to protect user, it will cut off power when the cover is opened.

3.**Chamber**:it is imported from Japan, good performance of heat preservation, high reflectivity, even temperature field, good ability of anti thermal expansion and cold contraction.

4.**Heating elements**:This furnace is installed with MoSi2 to ensure uniform temperature field and long service life.

5.**Leakage protection function**:the furnace is installed with leakage air switch, it will cut off power Automatically when electricity leak or current exceed rated current.

6.**Software controlling system**:this furnace can control every parameter directly and observe PV and SV on the computer by communication interface and software, computer can draw and save actual heating curve, it is convenient to call these dates at any time.

7.**Controlling system**:
Power control: Chint; Controlled silicon:Germany Semikron 106/16E; Trigger:Phase-shift trigger

8.**Gas system**:floating flow meter or digital flow meter is for option to control gas Speed.

9.**Vacuum system**: Vacuum level can be 10^{-1} or 10^{-4} with German molecular pump. TW-1.5 vacuum pump is for option.Pre-vacuuming can help remove air in the chamber quickly.

Technical Parameter

Item No.	GF17Q-I	GF17Q-II	GF17Q--III	GF17Q--IV	GF17Q-V
Chamber size （DxWxH）	150X160X160 mm	200X200X200 mm	300X200X200 mm	300X250X250 mm	400X300X300 mm
Overall Dimensions (DxWxH）					
Power	3KW	5KW	7KW	9KW	13KW
Voltage	220V			380V	
Phase					
Max. Temperature	1700℃				
Constant temperature	1650℃				
Thermocouple	Type B				
Heating Element	MoSi2				
Heating Rate	≤30℃ /min				
Recommended Heating Rate	≤15℃ /min				
Temperature Accuracy	+/- 1°C				
Temperature Controller	Shimaden fp93 (imported from Japan) with 4 programs and 40 segments (ie. 4 x 10 segments or 2 x 20 segments)				
Chamber Material	Polycrystalline 98% alumina fibre. Imported from Japan				
Trigger	Phase-shift trigger				

GF14Q Maximum temperatures

Air	1400℃
Vacuum	900-1100℃
Nitrogen(N2)	1270℃
Hydrogen(H2)	1100℃
Hydrocarbon	1150℃
Argon(Ar)	1300℃

GF16Q Maximum temperatures

NO2,CO2,O2,Air	1600℃
He,Ar,Ne	1550℃
SO2	1500℃
CO,N2	1500℃
Wet Hydrogen(H2)	1300℃
Dry Hydrogen (H2)	1250℃

GF17Q Maximum temperatures

NO2,CO2,O2,Air	1700℃
He,Ar,Ne	1650℃
SO2	1600℃
CO,N2	1500℃
Wet Hydrogen(H2)	1400℃
Dry Hydrogen (H2)	1350℃

Standard Specification

Part name	Quantity	Picture
GF Series atmosphere furnace	1pc	
Thermocouple GF11Q-B: Type K GF11Q: Type K GF14Q: Type S GF16Q: Type B GF17Q: Type B	1pc	
Alumina cushion block	1pc	
Furnace door block	1pc	
Stainless steel clamp	1pc	
Thermal gloves	1pair	
Alumina crucible	5pcs	
Heating element GF11Q-B: Kanthal resistance wire GF11Q: Kanthal resistance wire GF14Q: Sic GF16Q: MoSi2 GF17Q: MoSi2	2pcs	
Spare fuse	2pcs	
485 computer interface port	1set	
Water pump	1pc	
Owner manual	1pc	
Shimaden fp93 temperature controller software and manual	1pc	

—— GX Series Gas System ——

1. Gas come out of steel cylinder,then come through pressure reducing valve, to the inlet of gas system through PTFE tube, then come through floating flow meter which control gas flow, then pass mixed gas cylinder to gas inlet of the furnace, gas come out of gas outlet pipe to three-way valve, one end connect with vacuum pump, the other end is with gas outlet.
2. Pressure gauge is on the mix gas cylinder, fixed with floating flow meter on the same board.
3. There is high pressure stop valve for every gas pipe to ensure safety.
4. It use high precision floating flow meter and the inside of the gas pipe is PTFE pipe which has good corrosion resistance.
5. All adaptors use collar joint, which has good sealing and good pressure resistance.



GX-F-3



GX-Z-3

Technical Parameter

Model	**GX-F-3**
Channel	3
Gas flow controller	Floating flow meter
Floating flow meter parameter:	
Adapter	Φ6 double collar adapter
Display	Scale
Working environment temperature	5-45℃
Measurement range	10-100ml/min 2ml/grid (customer can choose)
Pipe	PTFE or stainless steel Φ6(outer）XΦ4（inner）
Pressure vacuum gauge	-0.1~0.15Mpa, 0.01Mpa/grid
Stop valve(stainless steel needle valve)	Φ6 double collar adapter

Model	**GX-Z-3**
Channel	3
Gas flow controller	Digital flow meter
Digital flow meter parameter:	
Measurement range	5,10,20,30,50,100,200,300, 500SCCM,1,2,3,5,10SLM (for optional)
Accuracy	±1.5% F.S
Linearity	±0.5～1.5% F.S
Repeat precision	±0.2% F.S
Respond time	10S
Pressure	<0.01MPa
Working environment temperature	5～45℃
Input/output signature	0～+5.00V
Power	+15V 50mA -15V 50mA
Overall measurement	158*30*110
Weight	0.9 Kg

Elevator Furnace

SJF Series



—— SJF1400 Elevator Furnace ——

SJF1400 series elevator furnace has many advantages of uniform temperature field,low surface temperature,heating or cooling promptly,energy saving and so on. it is convenient to take material under high temperature. It is the ideal muffle furnace for power sintering,ceramic sintering,glass melting,high temperature experiment and quality inspection in Industry,Scientific research institutes,Universities, which offer Heating element of Sic and double layer structure with air cooling system between the double walled housing to help the furnace heat or cool promptly.Temperature controller is Shimaden 40-segments digital controller imported from Japan. The chamber is made of 1600 Polycrystalline alumina fibre imported from Japan.This furnace is the best choice for small mass production and sintering in high temperature.

Features:

1.**Temperature controller: Shimaden FP93**

- 40 programmable segments (Shimaden fp93 made in Japan), It can separate into 4,2,1 programs, ie. 4x10 segments.
- FP93 have 6 PID controls, different PID are used for low,middle,high temperature for precise control.
- Over-temperature and over-current protection, shutdown automatically when thermocouple is broken(it will shut down power when temperature is higher than 1420□ or thermocouples is broken, "ON" on the board is off and "OFF" is on)
- There is Fahrenheit (F) and Celsius (C) for option.
- With 485 communication interface: which can stop the furnace automatically.

2.**Cover opening protection system**: overtravel-limit switch is installed to protect user, it will cut off power when the cover is opened.

3.**Chamber**:it is imported from Japan, good performance of heat preservation, high reflectivity, even temperature field, good ability of anti thermal expansion and cold contraction.

4.**Heating elements**:This furnace is installed with Sic to ensure uniform temperature field and long service life.

5.**Leakage protection function**:the furnace is installed with leakage air switch, it will cut off power Automatically when electricity leak or current exceed rated current.

6.**Software controlling system**:this furnace can control every parameter directly and observe PV and SV on the computer by communication interface and software, computer can draw and save actual heating curve, it is convenient to call these dates at any time.

7.**Controlling system**:
Power control: Chint; Controlled silicon:Germany Semikron 106/16E; Trigger:Phase-shift trigger

8.**Elevator system**:automatic elevator stainless steel electric push pole, push UP or DOWN button, the material will go up or down on the tray automatic.

9.**Overtravel-limit switch**: when the elevator pole go up or down to the limit point, the switch will cut off power to stop overtravel.

10.**Advantage:**

1) rod can be fixed round the chamber to ensure even temperature field.
2) it is convenient to take the material, specially under high temperature, to avoid burning user.
3) there are four poles to support the tray stably.

Technical Parameter:

Item No.	SJF1400-I	SJF1400-II	SJF1400-III
Chamber size（DxWxH）	200X200X200mm	250X250X250mm	300X300X300mm
Overall Dimensions (DxWxH）	660X675X1380	660X675X1430	710X725X1480
Power	5.2KW	9KW	12KW
Voltage	220V		380V
Phase	Single		
Max. Temperature	1400℃		
Constant temperature	1350℃		
Thermocouple	Type B		
Heating Element	Sic		
Heating Rate	≤30℃ /min		
Recommended Heating Rate	≤15℃ /min		
Temperature Accuracy	+/- 1°C		
Temperature Controller	Shimaden fp93 (imported from Japan) with 4 programs and 40 segments (ie. 4 x 10 segments or 2 x 20 segments)		
Chamber Material	Polycrystalline alumina fibre.Imported from Japan		
Trigger	Phase-shift trigger		
Electric push pole power	150W		
Elevator rate of electric push pole	420mm/ Min		

—— SJF1600 Elevator Furnace ——

SJF1600 series elevator furnace has many advantages of uniform temperature field,low surface temperature,heating or cooling promptly,energy saving and so on. it is convenient to take material under high temperature. It is the ideal muffle furnace for power sintering,ceramic sintering,glass melting,high temperature experiment and quality inspection in Industry,Scientific research institutes,Universities, which offer Heating element of MoSi2 and double layer structure with air cooling system between the double walled housing to help the furnace heat or cool promptly.Temperature controller is Shimaden 40-segments digital controller imported from Japan. The chamber is made of 1600 Polycrystalline alumina fibre imported from Japan.This furnace is the best choice for small mass production and sintering in high temperature.

Features:

1.**Temperature controller: Shimaden FP93**

- 40 programmable segments (Shimaden fp93 made in Japan), It can separate into 4,2,1 programs, ie. 4x10 segments.
- FP93 have 6 PID controls, different PID are used for low,middle,high temperature for precise control.
- Over-temperature and over-current protection, shutdown automatically when thermocouple is broken(it will shut down power when temperature is higher than 1420□ or thermocouples is broken, "ON" on the board is off and "OFF" is on)
- There is Fahrenheit (F) and Celsius (C) for option.
- With 485 communication interface: which can stop the furnace automatically.

2.**Cover opening protection system**: overtravel-limit switch is installed to protect user, it will cut off power when the cover is opened.

3.**Chamber**:it is imported from Japan, good performance of heat preservation, high reflectivity, even temperature field, good ability of anti thermal expansion and cold contraction.

4.**Heating elements**:This furnace is installed with MoSi2 to ensure uniform temperature field and long service life.

5.**Leakage protection function**:the furnace is installed with leakage air switch, it will cut off power Automatically when electricity leak or current exceed rated current.

6.**Software controlling system**:this furnace can control every parameter directly and observe PV and SV on the computer by communication interface and software, computer can draw and save actual heating curve, it is convenient to call these dates at any time.

7.**Controlling system**:
Power control: Chint; Controlled silicon:Germany Semikron 106/16E; Trigger:Phase-shift trigger

9.**Elevator system**:automatic elevator stainless steel electric push pole, push UP or DOWN button, the material will go up or down on the tray automatic.

10.**Overtravel-limit switch**: when the elevator pole go up or down to the limit point, the switch will cut off power to stop overtravel.

10.**Advantage:**

1) rod can be fixed round the chamber to ensure even temperature field.
2) it is convenient to take the material, specially under high temperature, to avoid burning user.
3) there are four poles to support the tray stably.

Technical Parameter

Item No.	SJF1600-I	SJF1600-II	SJF1600-III
Chamber size (DxWxH)	200X200X200mm	250X250X250mm	300X300X300mm
Overall Dimensions (DxWxH)	660X675X1380mm	660X675X1430mm	710X725X1480mm
Net Wight	265KG	280KG	310KG
Power	5.2KW	9KW	12KW
Voltage	220V		380V
Phase	Single		
Max. Temperature	1600℃		
Constant temperature	1550℃		
Thermocouple	B Type		
Heating Element	MoSi2		
Heating Rate	≤30℃ /min		
Recommended Heating Rate	≤15℃ /min		
Temperature Accuracy	+/- 1°C		
Temperature Controller	Shimaden fp93 (imported from Japan) with 4 programs and 40 segments (ie. 4 x 10 segments or 2 x 20 segments)		
Chamber Material	Polycrystalline 98% alumina fibre.Imported from Japan,		
Trigger	Phase-shift trigger		
Electric push pole power	150W		
Elevator rate of electric push pole	420mm/ Min		

—— SJF1700 Elevator Furnace ——

SJF1700 series elevator furnace has many advantages of uniform temperature field,low surface temperature,heating or cooling promptly,energy saving and so on. it is convenient to take material under high temperature. It is the ideal muffle furnace for power sintering,ceramic sintering,glass melting,high temperature experiment and quality inspection in Industry,Scientific research institutes,Universities, which offer Heating element of MoSi2 and double layer structure with air cooling system between the double walled housing to help the furnace heat or cool promptly.Temperature controller is Shimaden 40-segments digital controller imported from Japan. The chamber is made of 1600 Polycrystalline alumina fibre imported from Japan.This furnace is the best choice for small mass production and sintering in high temperature.

Features:

1.**Temperature controller: Shimaden FP93**

- 40 programmable segments (Shimaden fp93 made in Japan), It can separate into 4,2,1 programs, ie. 4x10 segments.
- FP93 have 6 PID controls, different PID are used for low,middle,high temperature for precise control.
- Over-temperature and over-current protection, shutdown automatically when thermocouple is broken(it will shut down power when temperature is higher than 1420□ or thermocouples is broken, "ON" on the board is off and "OFF" is on)
- There is Fahrenheit (F) and Celsius (C) for option.
- With 485 communication interface: which can stop the furnace automatically.

2.**Cover opening protection system**: overtravel-limit switch is installed to protect user, it will cut off power when the cover is opened.

3.**Chamber**:it is imported from Japan, good performance of heat preservation, high reflectivity, even temperature field, good ability of anti thermal expansion and cold contraction.

4.**Heating elements**:This furnace is installed with MoSi2 to ensure uniform temperature field and long service life.

5.**Leakage protection function**:the furnace is installed with leakage air switch, it will cut off power Automatically when electricity leak or current exceed rated current.

6.**Software controlling system**:this furnace can control every parameter directly and observe PV and SV on the computer by communication interface and software, computer can draw and save actual heating curve, it is convenient to call these dates at any time.

7.**Controlling system**:
Power control: Chint; Controlled silicon:Germany Semikron 106/16E; Trigger:Phase-shift trigger

8.**Elevator system**:automatic elevator stainless steel electric push pole, push UP or DOWN button, the material will go up or down on the tray automatic.

9.**Overtravel-limit switch**: when the elevator pole go up or down to the limit point, the switch will cut off power to stop overtravel.

10.**Advantage:**
1) rod can be fixed round the chamber to ensure even temperature field.
2) it is convenient to take the material, specially under high temperature, to avoid burning user.
3) there are four poles to support the tray stably.

Technical Parameter

Item No.	SJF1700-I	SJF1700-II	SJF1700-III
Chamber size (DxWxH)	200X200X200mm	250X250X250mm	300X300X300mm
Overall Dimensions (DxWxH)	660X675X1380mm	660X675X1430mm	710X725X1480mm
Net Wight	265KG	280KG	310KG
Power	5.2KW	9KW	12KW
Voltage	220V		380V
Phase	Single		
Max. Temperature	1700℃		
Constant temperature	1650℃		
Thermocouple	Type B		
Heating Element	MoSi2		
Heating Rate	≤30℃ /min		
Recommended Heating Rate	≤15℃ /min		
Temperature Accuracy	+/- 1°C		
Temperature Controller	Shimaden fp93 (imported from Japan) with 4 programs and 40 segments (ie. 4 x 10 segments or 2 x 20 segments)		
Chamber Material	Polycrystalline 98% alumina fibre.Imported from Japanthermal expansion and cold contraction.		
Trigger	Phase-shift trigger		
Electric push pole power	150W		
Elevator rate of electric push pole	420mm/ Min		

—— ZRL-20 Vacuum Melting Furnace ——

Feature:

Stainless steel, horizontal type body, the door can be opened from the side to take material conveniently, compact body for saving space, IGBT module power, this melting furnace is widely used for metal melting (ie stainless steel,nickel alloy,copper,alloy steel,Nickel cobalt alloy,rare earth Neodymium Iron Peng)in vacuum or protected atmosphere in industry,Scientific research institutes and Universities, it is also ideal furnace for vacuum refining and casting of alloy steel.

Structure：

This furnace is made up of cover,body,slewing mechanism,gating system,vacuum system and high frequency power controller. The body is made of stainless steel. The house is made of double water cooling system. slewing mechanism connect with body and flange, inductance coil is coiled to spiral type by copper tube from the body, it is sealed very well.

Vacuum system: two stage pump, oil diffusion pump and unit construction pump, vacuum level can be 10-3 Pa.

There is deflation valve,inflation valve in the vacuum unit.

Power: imported IGBT power unit, which is Integrated and compact, effective output is more than 90% which can save 60% power and energy than traditional controlled silicon middle frequency, overpower and overpressure feedback and protective circuit is setted for electrical system.





Technical parameter

Cold limit vacuum level	5×10﹣3Pa
Constant temperature	1700℃
Constant power	20KW
Capacity of Crucibles	1000g（liquid）
Rate of pressure rise	≤2Pa／h
Medium frequency power	IGBT

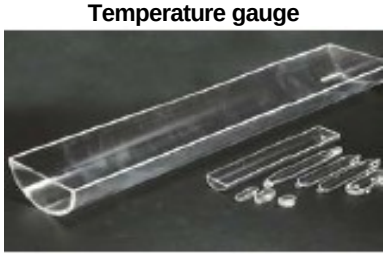
Accessory



Temperature gauge



High temperature O-ring



Quartz boat



Alumina Tube



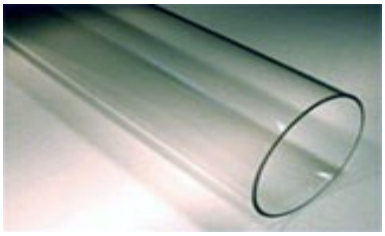
Thermocouple



MoSi2



Flange



Quartz tube



Cylindrical Alumina Crucible



Rectangular Alumina Crucible

—— XGB Series Planetary Ball Mill ——

Description:

XGB series planetary ball mills can be used for wet or dry mixing,solid grain of different material,suspension,paste. Vacuum grinding jar can be used for grinding in vacuum or inert gases. It is the ideal ball mill for Geology,metallurgy,soil,building materials,chemical industry,light industry,medicine,electronics,ceramics,battery,environment protection.

Gear-drive is used to ensure high uniformity and excellent repeatability in experiment.

Fast rotational speed, high efficiency and fine granularity

Four or two different samples can be got in one experiment

Low center of gravity, good rigidity, compact structure,easy operation, safe and reliable operation, low noise, non-pollution, small loss

Features:

Changeable frequency, program-controlled stepless speed regulation, it can choose speed as you need. Timing shutdown,timing positive and negative rotation automatically, it can be setted as you need conveniently.

Working principle：

XGB planetary ball mills have four grinding jars installed on the turning plate. When the plate rotates（revolution）, the jar axis makes planetary rotation and the jars grind and mix samples in high speed movement. Transmission ratio of revolution and rotation is 1:2. The balls and samples in the jars smash and grind various products of different materials.





Specification：

Item No.	Specification	Jars	Vacuum jars
XGB04	0.4L	50ml / 100ml *4	50ml *4
XGB2	2L	100ml / 250ml / 500ml *4	100ml / 250ml *4
XGB4	4L	250ml / 500ml / 1000ml *4	250ml / 500ml *4
XGB12	12L	1L / 2L / 3L *4	1L / 2L *4
XGB20	20L	1L / 2L / 4L / 5L *4	3.5L *4

Technical parameter

Rotation method	Gear rotation
Grinding method	Two or four jars working simultaneously
Max Sample volume	2/3 capacity of per Jar
Max feeding capacity	Soil material≤10mm , others materials≤3mm
Discharging granularity	It can achieve 0.1um
Rotation rato (revolution：rotation)	0.4L,2L,4L:1:2 12L:1:1:1.9 20L,60L,100L:1:1.5
Rotation speed(rotation)	0.4L:0～600 rpm/min 2L:0～580 rpm/min 4L:0～530 rpm/min 12L:0～440 rpm/min 20L:0～280 rpm/min
Controlling method	Changeable frequency, program-controlled Stepless speed regulation,Timing shutdown,timing positive and negative rotation automatically and Manually.
Max continuous operating time (at full load)	48 hours

—— LGB Series 3D Planetary Ball Mill ——

Description：

LGB series ball mill is the necessary equipment for mixing,fine grinding,wet grinding,small lot production. This ball mill is the ideal equipment of studying sample for Scientific Research Institute,university,laboratory of enterprise with these advantages of small size,full function,high efficiency,low noise. (two or four sample can be obtained in one experiment simultaneously, the grinding jars should be placed symmetrically). This ball mill can be placed with various grinding jar, it can grind materials in vacuum or inert gas with vacuum grind jar.

Features:

3-dimension all-round rotation,it have no died corner, so the sample can be got more even and fine.
Gear-drive is used to ensure high uniformity and excellent repeatability in experiment.
Four or two different samples can be got in one experiment
Changeable frequency, program-controlled stepless speed regulation
All jars can rotate 360 degree on plane, and also can rotate 360 degree in 3-dimension space, which can solve the problem of deposition and adhering.

Working principle:

LGB 3D planetary ball mills have four grinding jars installed on the turning plate. When the plate rotates（revolution）, the jar axis makes planetary rotation and rotate 360 degree in 3-dimension at the same time, the jars can rotate and stop at any angle. This movement can make more fine material and solve the problem of deposition and adhering.



Specification:

Item No.	Volume	jars	Vacuum jars
LGB04	0.4L	50ml / 100ml *4	50ml*4
LGB2	2L	50ml /100ml / 250ml / 500ml *4	50ml /100ml / 250ml*4
LGB4	4L	250ml / 500ml / 1000ml *4	50ml /100ml / 250ml / 500ml *4
LGB12	12L	1L / 2L / 3 L *4	1L / 2L *4
LGB20	20L	3L / 4L / 5 L *4	3.5 L *4

Technical parameter

Rotation method	Gear rotation
Grinding method	Two or four jars working simultaneously
Max Sample volume	2/3 capacity of per Jar
Max feeding capacity	Soil material≤10mm, others materials≤3mm
Discharging granularity	It can achieve 0.1um
Rotation rato （revolution:rotation）	0.4L,2L,4L:1:2 12L:1:1.9 20L,60L,100L:1:1.5
Rotation speed(rotation)	0.4L:0～600 rpm/min 2L:0～580 rpm/min 4L:0～530 rpm/min 12L:0～440 rpm/min 20L:0～280 rpm/min
Controlling method	Changeable frequency, program-controlled Stepless speed regulation, Timing shutdown,timing positive and negative rotation automatically and Manually.
Max continuous operating time (at full load)	48 hours

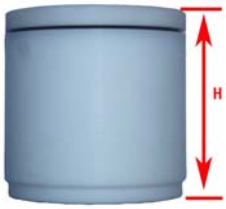
Planetary ball mill Standard specification:

Part name	Quantity	Picture
XGB Series: XGB ball mill LGB Series: LGB ball mill	1pc	
Jar clamping device	4pcs	
Rubber gasket	4pc	
Motor belt Type A 1981	1pc	
Bolt M12×85	2pcs	
Hex key M12	1pc	
Ball mill height adjuster	1pc	
Stainless steel sieve	1pc	
Spare fuse	1pc	
Power cord	1pc	
Owner manual	1pc	

—— Grinding Jars for Planetary Ball Mill ——

Jars			
			
Stainless steel jar	Zirconia jar	Agate jar	Ceramic jar
			
Nylon jar	Polyurethane jar	PTFE jar	Tungsten carbide jar
Balls			
			
Stainless steel ball	Agate ball	Zirconia ball	Ceramic ball
			
Tungsten carbide ball			





Ball configuration

Jars capacity		50ml	100ml	150ml	250ml	300ml	400ml	500ml	1L	2L	3L	4L	5L
Ball size /Qty (pcs)	Ø6mm	50	100	150	280	330	420	500	1000	2000	3000	4000	5000
	Ø10mm	8	16	24	40	48	80	100	200	400	600	800	1000
	Ø20mm						2	2	3	5	7	10	12

1. Stainless Steel Grinding Jar

unit：mm

Capacity(ml)	50ml	100ml	250ml	500ml	1000ml	2000ml	3000ml	4000ml	5000ml
Inner diameter (ID)	45	52	73	90	119	139	152	172	184
Depth(D)	40	54	72	87	100	160	190	221	209
Outer diameter (OD)	65	65	89	106	135	135	168	188	202
Total height(H)	55	67	87	103	116	116	206	226	230

2. Agate Grinding Jar

unit：mm

Capacity(ml)	50ml	100ml	250ml	500ml	1000ml	2000ml	5000ml
Inner diameter (ID)	45	53	75	90	107	130	178
Depth(D)	40	52	70	84	114	170	203
Outer diameter (OD)	65	75	94	116	133	155	203
Total height(H)	58	71	93	105	141	205	228

3. Zirconia grinding jar

unit：mm

Capacity(ml)	50ml	100ml	250ml	500 ml	1L
Outer diameter (OD)	65	65	91	106	130
Inner diameter (ID)	53	53	74.5	90	108
Total height(H)	47	71	90	105	160
Depth(D)	35	55	72	87	108

4.Polyurethane grinding jar

unit：mm

Capacity(ml)	50ml	250 ml	500 ml	1L
Outer diameter (OD)	65	95	106	134
Inner diameter (ID)	45	76	91	105
Total height(H)	60	93	104	138
Depth(D)	35	65	80	109

5. Nylon grinding jar

unit：mm

Capacity(ml)	50ml	100ml	250ml	500ml	1L	2L	3L
Outer diameter (OD)	65	69	98	107	135	170	170
Inner diameter (ID)	45	53	75	90	107	130	145
Total height(H)	61	67	98	110	145	195	220
Depth(D)	42	50	70	85	115	170	190

6. Ceramic grinding jar

unit：mm

Capacity(ml)	50ml	100ml	250ml	500 ml	1L	2L	3L	4L
Outer diameter (OD)	65	68	95	107	131	165	165	180
Inner diameter (ID)	51	52	80	87	115	145	145	160
Total height(H)	63	70	86	110	127	185	210	240
Depth(D)	49	52	70	85	107	160	185	215

7. PTFE grinding jar

unit：mm

Capacity(ml)	50ml	100ml	250ml	500ml	1L	3L
Outer diameter (OD)	65	68	95	106	133	170
Inner diameter (ID)	45	52	73	90	115	145
Total height(H)	68	68	93	104	136	220
Depth(D)	46	50	68	80	110	190

8. Tungsten carbide grinding jar

unit：mm

Capacity(ml)	100ml	250ml
Inner diameter(ID)	63	85
Outer diameter (OD)	51	74
Outer diameter (OD)	63	73
Total height(H)	50	60

9. Stainless steel vacuum grinding jar

unit：mm

Capacity(ml)	50ml	100ml	250ml	500 ml
Outer diameter (OD)	80	89	107	135
Inner diameter (ID)	48	53	75	89
Total height(H)	55	65	86	145
Depth(D)	42	45	70	85

—— GB-80 Series High Speed Vibratory Ball Mill ——

Description:

GB-80 series is the ideal ball mill for preparing small batches of sample efficiently in laboratory.
This ball mill can rotate-swing and vibrate in 3-dimension space, which produce more collision energy than other ball mills do.
Compact, light weight, high efficiency and cheap.
Vibratory mill can be used for wet or dry mixing,solid grain of different material,suspension,paste. It is the ideal ball mill for grinding and mixing material and mechanical alloying.



Technical parameter:

Item No.	**GB-80**
Grinding jar	80ml
Max capacity	2/3 capacity of jar
Max feeding capacity	<1mm
Discharging granularity	0.1μm
Vibration frequency	1200 circuit/min
Timing range	0～999 seconds
Motor	220V 180W single
Power input	220V 50Hz single
Measurement	405×365×260（mm）
Feature	There is eccentric shaft in the GB-80 vibratory mill, when the motor run in high speed, the jars make eccentric vibration, driving whole holder to vibrate up and down, then grinding the material in high speed swing and vibration in 3-dimension space, which improve the speed and efficiency of grinding greatly.

Standard specification

Part name	Quantity	Picture
GB-80 vibratory ball mill	1pc	
80ml stainless steel jar with balls	1pc	
Belt	1pc	
Hex key	1pc	
O-ring	2pc	
Spring	2pc	
Owner manual		

Grinding gars for Vibration Ball Mill

Jars				
				
Stainless steel jar	Zirconium oxide jar	Agate jar	Ceramic jar	Nylon jar
				
Polyurethane jar	PTFE jar	Tungsten carbide jar	stainless steel jacket （50ml All jars except stainless steel jar need to add this jacket）	Vacuum stainless steel jacket（it can be used in vacuum or inert gas）
Balls				
				
Stainless steel ball	Agate ball	Zirconium oxide ball	Ceramic ball	Tungsten carbide ball

Specification：unit mm

Capacity	80ml Stainless steel jar	80ml Vacuum stainless steel jar	50ml Tungsten carbide jar	50ml Nylon jar	50ml Vacuum stainless steel jar	50ml Agate jar	50ml Zirconium oxide jar	50ml Ceramic jar	50ml Vacuum stainless steel jacket
OD（Outer diameter）	65	65	48	48	65	48	48	48	65
ID（Inner diameter）			36	35		35	35	35	
H（Total height）	70	125	67	70	110	70	70	70	70
D（Depth）			58	60		60	60	60	

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