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PT Indotara Persada

# 1000°C Ceramic Fiber Muffle Furnace

Box-type resistance furnace, also known as muffle furnace, is the laboratory basic heating equipment. It is widely used in industrial and mining enterprises, aviation, aerospace systems, research institutes, universities and other experimental and laboratory. It is an essential instrument for sintering, melting, heat treatment, volatile matter, etc

## Features

- Vacuum forming polycrystalline mullite fiber chamber,
- Special alloy heating wire is heated on three sides.
- Open the door and power off, and the power will be delayed to ensure safety.
- Double shell air insulation, low surface temperature.
- Exhaust device is conducive to ashing.
- PID microcomputer temp controller combined with precision sensor.
- Dedicated function keys realize temperature setting.
- Auxiliary menu realizes over-rise alarm, deviation correction, menu lock, and over-rise preventer




## Specification

| Model | BTL-LB-MF-1000-02L-D | BTL-LB-MF-1000-07L-D | BTL-LB-MF-1000-16L-D | BTL-LB-MF-1000-24L-D | BTL-LB-MF-1000-36L-D |
|---|---|---|---|---|---|
| Volume | 2L | 7L | 16L | 24L | 36L |
| Chamber size | 120*200*80mm | 200*300*120mm | 250*400*160mm | 300*400*200mm | 300*400*300mm |
| Chamber material | polycrystalline mullite fiber | | | | |
| Display | LED digital display | | | | |
| Temperature controller | Microcomputer PID ,Single-segment,Fixed value operation | | | | |
| Temperature Range | Max.1000°C | | | | |
| Temperature Resolution | 1°C | | | | |
| Temperature Uniformity | ±1°C | | | | |
| Heating-up Time | ≤30min | | | | |
| Heat element | 0Cr27Al7Mo2 | | | | |
| Timer | 0~999.9hours | | | | |
| Sensor | K-type thermocouple | | | | |
| Dimension | 440*520*650mm | 520*620*690mm | 590*730*750mm | 610*730*760mm | 610*730*860mm |
| Power Supply | AC220V 50Hz | AC220V 50Hz | AC220V 50Hz | AC380V 50Hz | AC380V 50Hz |

# 1000°C Ceramic Fiber Muffle Furnace With Sliding Door

Box-type resistance furnace, also known as muffle furnace, is the laboratory basic heating equipment. It is widely used in industrial and mining enterprises, aviation, aerospace systems, research institutes, universities and other experimental and laboratory. It is an essential instrument for sintering, melting, heat treatment, volatile matter, etc

## Features

- Vacuum forming polycrystalline mullite fiber chamber,
- Special alloy heating wire is heated on three sides.
- Parallel sliding opening, open power off, power back delay.
- Double shell air insulation, low surface temperature.
- Exhaust device is conducive to ashing.
- PID microcomputer temp controller combined with precision sensor.
- Dedicated function keys realize temperature setting.
- Auxiliary menu realizes over-rise alarm, deviation correction, menu lock, and over-rise preventer.




## Specification

| Model | | | | | | |
|---|---|---|---|---|---|---|
| | D | BTL-LB-MFS-1000-02L-D | BTL-LB-MFS-1000-07L-D | BTL-LB-MFS-1000-16L-D | BTL-LB-MFS-1000-24L-D | BTL-LB-MFS-1000-36L-D |
| | P | BTL-LB-MFS-1000-02L-P | BTL-LB-MFS-1000-07L-P | BTL-LB-MFS-1000-16L-P | BTL-LB-MFS-1000-24L-P | BTL-LB-MFS-1000-36L-P |
| | T | BTL-LB-MFS-1000-02L-T | BTL-LB-MFS-1000-07L-T | BTL-LB-MFS-1000-16L-T | BTL-LB-MFS-1000-24L-T | BTL-LB-MFS-1000-36L-T |
| Volume | | 2L | 7L | 16L | 24L | 36L |
| Chamber size | | 200*120*80mm | 300*200*120mm | 400*250*160mm | 400*300*200mm | 400*300*300mm |
| Chamber material | | polycrystalline mullite fiber | | | | |
| Display | | D/P:LED digital display; T:Color LCD display | | | | |
| Temp controller | | D:Microcomputer PID ,Single-segment,Fixed value operation<br>P:Microcomputer PID ,4-curve,40-segment,Fixed value operation<br>T:Microcomputer PID ,50-segment,Fixed value operation | | | | |
| Temperature range | | 300~1000°C | | | | |
| Temperature resolution | | 1°C | | | | |
| Temperature uniformity | | ±1°C | | | | |
| Heating-up Time | | ≤30min | | | | |
| Heat element | | 0Cr27Al7Mo2 | | | | |
| Timer | | 0~999.9hours | | | | |
| Sensor | | K-type thermocouple | | | | |
| Dimension | | 480*617*683mm | 560*709*723mm | 630*808*783mm | 650*813*818mm | 650*818*918mm |
| NW/GW | | 40/45kg | 60/65kg | 80/86kg | 90/98kg | 100/110kg |
| Power Supply | | AC220V 50Hz | AC220V 50Hz | AC220V 50Hz | AC380V 50Hz | AC380V 50Hz |

# 1200°C Ceramic Fiber Muffle Furnace

Box-type resistance furnace, also known as muffle furnace, is the laboratory basic heating equipment. It is widely used in industrial and mining enterprises, aviation, aerospace systems, research institutes, universities and other experimental and laboratory. It is an essential instrument for sintering, melting, heat treatment, volatile matter, etc

## Features

- Vacuum forming polycrystalline mullite fiber chamber,
- Special alloy heating wire is heated on three sides.
- Open the door and power off, and the power will be delayed to ensure safety.
- Double shell air insulation, low surface temperature.
- Exhaust device is conducive to ashing.
- PID microcomputer temp controller combined with precision sensor.
- Dedicated function keys realize temperature setting.
- Auxiliary menu realizes over-rise alarm, deviation correction, menu lock, and over-rise preventer.




## Specification

| Model | BTL-LB-MF-1200-02L-D | BTL-LB-MF-1200-07L-D | BTL-LB-MF-1200-16L-D | BTL-LB-MF-1200-24L-D | BTL-LB-MF-1200-36L-D |
|---|---|---|---|---|---|
| Volume | 2L | 7L | 16L | 24L | 36L |
| Chamber size | 120*200*80mm | 200*300*120mm | 250*400*160mm | 300*400*200mm | 300*400*300mm |
| Chamber material | polycrystalline mullite fiber | | | | |
| Display | LED digital display | | | | |
| Temperature controller | Microcomputer PID ,Single-segment,Fixed value operation | | | | |
| Temperature range | Max.1200°C | | | | |
| Temperature resolution | 1°C | | | | |
| Temperature uniformity | ±1°C | | | | |
| Heating-up Time | ≤30min | | | | |
| Heat element | 0Cr27Al7Mo2 | | | | |
| Timer | 0-999.9hours | | | | |
| Sensor | K-type thermocouple | | | | |
| Dimension | 440*520*650mm | 520*620*690mm | 590*730*750mm | 610*730*760mm | 610*730*860mm |
| Power Supply | AC220V 50Hz | AC220V 50Hz | AC220V 50Hz | AC380V 50Hz | AC380V 50Hz |

# 1200°C Ceramic Fiber Muffle Furnace With Sliding Door

Box-type resistance furnace, also known as muffle furnace, is the laboratory basic heating equipment. It is widely used in industrial and mining enterprises, aviation, aerospace systems, research institutes, universities and other experimental and laboratory. It is an essential instrument for sintering, melting, heat treatment, volatile matter, etc

## Features

- Vacuum forming polycrystalline mullite fiber chamber,
- Special alloy heating wire is heated on three sides.
- Parallel sliding opening, open power off, power back delay.
- Double shell air insulation, low surface temperature.
- Exhaust device is conducive to ashing.
- PID microcomputer temp controller combined with precision sensor.
- Dedicated function keys realize temperature setting.
- Auxiliary menu realizes over-rise alarm, deviation correction, menu lock, and over-rise preventer.




## Specification

| Model | | | | | | |
|---|---|---|---|---|---|---|
| | D | BTL-LB-MFS-1200-02L-D | BTL-LB-MFS-1200-07L-D | BTL-LB-MFS-1200-16L-D | BTL-LB-MFS-1200-24L-D | BTL-LB-MFS-1200-36L-D |
| | P | BTL-LB-MFS-1200-02L-P | BTL-LB-MFS-1200-07L-P | BTL-LB-MFS-1200-16L-P | BTL-LB-MFS-1200-24L-P | BTL-LB-MFS-1200-36L-P |
| | T | BTL-LB-MFS-1200-02L-T | BTL-LB-MFS-1200-07L-T | BTL-LB-MFS-1200-16L-T | BTL-LB-MFS-1200-24L-T | BTL-LB-MFS-1200-36L-T |
| Volume | | 2L | 7L | 16L | 24L | 36L |
| Chamber size | | 200*120*80mm | 300*200*120mm | 400*250*160mm | 400*300*200mm | 400*300*300mm |
| Chamber material | | polycrystalline mullite fiber | | | | |
| Display | | D/P:LED digital display; T:Color LCD display | | | | |
| Temperature controller | | D:Microcomputer PID ,Single-segment,Fixed value operation<br>P:Microcomputer PID ,4-curve,40-segment,Fixed value operation<br>T:Microcomputer PID ,50-segment,Fixed value operation | | | | |
| Temperature Range | | 300~1200°C | | | | |
| Temperature Resolution | | 1°C | | | | |
| Temperature Uniformity | | ±1°C | | | | |
| Heating-up Time | | ≤30min | | | | |
| Heat element | | 0Cr27Al7Mo2 | | | | |
| Timer | | 0~999.9hours | | | | |
| Sensor | | K-type thermocouple | | | | |
| Dimension | | 480*617*683mm | 560*709*723mm | 630*808*783mm | 650*813*818mm | 650*818*918mm |
| NW/GW | | 40/45kg | 60/65kg | 80/86kg | 90/98kg | 100/110kg |
| Power Supply | | AC220V 50Hz | AC220V 50Hz | AC220V 50Hz | AC380V 50Hz | AC380V 50Hz |

# 1400°C Ceramic Fiber Muffle Furnace

Box-type resistance furnace, also known as muffle furnace, is the laboratory basic heating equipment. It is widely used in industrial and mining enterprises, aviation, aerospace systems, research institutes, universities and other experimental and laboratory. It is an essential instrument for sintering, melting, heat treatment, volatile matter, etc

## Features

- Vacuum forming polycrystalline mullite fiber chamber,
- Parallel sliding opening, open power off, power back delay.
- Double shell air insulation, low surface temperature
- Exhaust device is conducive to ashing
- Silicon carbide rod as heating element,corrosion resistance, fast temp rise
- PID microcomputer temp controller combined with precision sensor.
- Dedicated function keys realize temperature setting.
- Auxiliary menu realizes over-rise alarm, deviation correction, menu lock, and over-rise preventer.




## Specification

| Model | | | | | | | |
|---|---|---|---|---|---|---|---|
| | D | BTL-LB-MFS-1400-03L-D | BTL-LB-MFS-1400-08L-D | BTL-LB-MFS-1400-12L-D | BTL-LB-MFS-1400-18L-D | BTL-LB-MFS-1400-27L-D | BTL-LB-MFS-1400-36L-D |
| | P | BTL-LB-MFS-1400-03L-P | BTL-LB-MFS-1400-08L-P | BTL-LB-MFS-1400-12L-P | BTL-LB-MFS-1400-18L-P | BTL-LB-MFS-1400-27L-P | BTL-LB-MFS-1400-36L-P |
| | T | BTL-LB-MFS-1400-03L-T | BTL-LB-MFS-1400-08L-T | BTL-LB-MFS-1400-12L-T | BTL-LB-MFS-1400-18L-T | BTL-LB-MFS-1400-27L-T | BTL-LB-MFS-1400-36L-T |
| Volume | | 3L | 8L | 12L | 18L | 27L | 36L |
| Chamber size | | 200*150*100mm | 250*180*180mm | 300*200*200mm | 300*250*250mm | 300*300*300mm | 400*300*300mm |
| Chamber material | | polycrystalline mullite fiber | | | | | |
| Display | | D/P:LED digital display; T:Color LCD display | | | | | |
| Temperature controller | | D:Microcomputer PID ,Single-segment,Fixed value operation<br>P:Microcomputer PID ,4-curve,40-segment,Fixed value operation<br>T:Microcomputer PID ,50-segment,Fixed value operation | | | | | |
| Temperature range | | 300~1400°C | | | | | |
| Temperature resolution | | 1°C | | | | | |
| Temperature uniformity | | ±1°C | | | | | |
| Rising time | | ≤35min | | | | | |
| Heat element | | silicon carbide rod | | | | | |
| Timer | | 0-999.9hours | | | | | |
| Sensor | | S-type thermocouple | | | | | |
| Dimension | | 520*660*813mm | 550*698*893mm | 570*749*911mm | 620*749*963mm | 670*760*1031mm | 670*849*1033mm |
| NW/GW | | 40/45kg | 60/70kg | 70/85kg | 80/95kg | 90/105kg | 100/115kg |
| Power supply | | AC220V 50Hz | AC220V 50Hz | AC380V 50Hz | AC380V 50Hz | AC380V 50Hz | AC380V 50Hz |

# 1600°C Ceramic Fiber Muffle Furnace

Box-type resistance furnace, also known as muffle furnace, is the laboratory basic heating equipment. It is widely used in industrial and mining enterprises, aviation, aerospace systems, research institutes, universities and other experimental and laboratory. It is an essential instrument for sintering, melting, heat treatment, volatile matter, etc

## Features

- Vacuum forming polycrystalline mullite fiber chamber,
- Parallel sliding opening, open power off, power back delay.
- Double shell air insulation, low surface temperature
- Exhaust device is conducive to ashing
- MoSi2 as heating element,hi-temp resistance and oxidation resistance.
- PID microcomputer temp controller combined with precision sensor.
- Dedicated function keys realize temperature setting.
- Auxiliary menu realizes over-rise alarm, deviation correction, menu lock, and over-rise preventer.




## Specification

| Model | | | | | | | |
|---|---|---|---|---|---|---|---|
| | D | BTL-LB-MFS-1600-02L-D | BTL-LB-MFS-1600-04L-D | BTL-LB-MFS-1600-08L-D | BTL-LB-MFS-1600-12L-D | BTL-LB-MFS-1600-16L-D | BTL-LB-MFS-1600-20L-D |
| | P | BTL-LB-MFS-1600-02L-P | BTL-LB-MFS-1600-04L-P | BTL-LB-MFS-1600-08L-P | BTL-LB-MFS-1600-12L-P | BTL-LB-MFS-1600-16L-P | BTL-LB-MFS-1600-20L-P |
| | T | BTL-LB-MFS-1600-02L-T | BTL-LB-MFS-1600-04L-T | BTL-LB-MFS-1600-08L-T | BTL-LB-MFS-1600-12L-T | BTL-LB-MFS-1600-16L-T | BTL-LB-MFS-1600-20L-T |
| **Volume** | | 2L | 4L | 8L | 12L | 16L | 20L |
| **Chamber size** | | 150*90*150mm | 150*150*150mm | 300*150*150mm | 300*200*200mm | 300*260*210mm | 300*260*260mm |
| **Chamber material** | | polycrystalline mullite fiber | | | | | |
| **Display** | | D/P:LED digital display; T:Color LCD display | | | | | |
| **Temperature controller** | | D:Microcomputer PID ,Single-segment,Fixed value operation<br>P:Microcomputer PID ,4-curve,40-segment,Fixed value operation<br>T:Microcomputer PID ,50-segment,Fixed value operation | | | | | |
| **Temperature range** | | 300~1600°C | | | | | |
| **Temperature resolution** | | 1°C | | | | | |
| **Temperature uniformity** | | ±1°C | | | | | |
| **Rising time** | | ≤50min | | | | | |
| **Heat element** | | Silicon Molybdenum Bar | | | | | |
| **Timer** | | 0~999.9hours | | | | | |
| **Sensor** | | S-type thermocouple | | | | | |
| **Dimension** | | 600*762*1102mm | 600*762*1102mm | 600*871*1102mm | 680*865*1182mm | 740*860*1182mm | 740*870*1232mm |
| **NW/GW** | | 70/90kg | 80/100kg | 110/130kg | 150/170kg | 175/195kg | 210/230kg |
| **Power supply** | | AC220V 50Hz | AC220V 50Hz | AC380V 50Hz | AC380V 50Hz | AC380V 50Hz | AC380V 50Hz |

# 1700°C Ceramic Fiber Muffle Furnace

Box-type resistance furnace, also known as muffle furnace, is the laboratory basic heating equipment. It is widely used in industrial and mining enterprises, aviation, aerospace systems, research institutes, universities and other experimental and laboratory. It is an essential instrument for sintering, melting, heat treatment, volatile matter, etc

## Features

- Vacuum forming polycrystalline mullite fiber chamber,
- Parallel sliding opening, open power off, power back delay.
- Double shell air insulation, low surface temperature
- Exhaust device is conducive to ashing
- MoSi2 as heating element,hi-temp resistance and oxidation resistance.
- PID microcomputer temp controller combined with precision sensor.
- Dedicated function keys realize temperature setting.
- Auxiliary menu realizes over-rise alarm, deviation correction, menu lock, and over-rise preventer.




## Specification

| Model | | | | | | | |
|---|---|---|---|---|---|---|---|
| | D | BTL-LB-MFS-1700-02L-D | BTL-LB-MFS-1700-04L-D | BTL-LB-MFS-1700-08L-D | BTL-LB-MFS-1700-12L-D | BTL-LB-MFS-1700-16L-D | BTL-LB-MFS-1700-20L-D |
| | P | BTL-LB-MFS-1700-02L-P | BTL-LB-MFS-1700-04L-P | BTL-LB-MFS-1700-08L-P | BTL-LB-MFS-1700-12L-P | BTL-LB-MFS-1700-16L-P | BTL-LB-MFS-1700-20L-P |
| | T | BTL-LB-MFS-1700-02L-T | BTL-LB-MFS-1700-04L-T | BTL-LB-MFS-1700-08L-T | BTL-LB-MFS-1700-12L-T | BTL-LB-MFS-1700-16L-T | BTL-LB-MFS-1700-20L-T |
| Volume | | 2L | 4L | 8L | 12L | 16L | 20L |
| Chamber size | | 150*90*150mm | 150*150*150mm | 300*150*150mm | 300*200*200mm | 300*260*210mm | 300*260*260mm |
| Chamber material | | polycrystalline mullite fiber | | | | | |
| Display | | D/P:LED digital display; T:Color LCD display | | | | | |
| Temperature controller | | D:Microcomputer PID ,Single-segment,Fixed value operation<br>P:Microcomputer PID ,4-curve,40-segment,Fixed value operation<br>T:Microcomputer PID ,50-segment,Fixed value operation | | | | | |
| Temperature range | | 300~1700°C | | | | | |
| Temperature resolution | | 1°C | | | | | |
| Temperature uniformity | | ±1°C | | | | | |
| Rising time | | ≤40min | | | | | |
| Heat element | | Silicon Molybdenum Bar | | | | | |
| Timer | | 0~999.9hours | | | | | |
| Sensor | | S-type thermocouple | | | | | |
| Dimension | | 600*869*1102mm | 600*877*1102mm | 600*875*1102mm | 680*858*1182mm | 740*879*1182mm | 740*920*1232mm |
| NW/GW | | 70/90kg | 80/100kg | 110/130kg | 150/170kg | 175/195kg | 210/230kg |
| Power supply | | AC220V 50Hz | AC220V 50Hz | AC380V 50Hz | AC380V 50Hz | AC380V 50Hz | AC380V 50Hz |

# 1800°C Ceramic Fiber Muffle Furnace

Box-type resistance furnace, also known as muffle furnace, is the laboratory basic heating equipment. It is widely used in industrial and mining enterprises, aviation, aerospace systems, research institutes, universities and other experimental and laboratory. It is an essential instrument for sintering, melting, heat treatment, volatile matter, etc

## Features

- Vacuum forming polycrystalline mullite fiber chamber,
- Parallel sliding opening, open power off, power back delay.
- Double shell air insulation, low surface temperature
- Exhaust device is conducive to ashing
- MoSi2 as heating element,hi-temp resistance and oxidation resistance.
- PID microcomputer temp controller combined with precision sensor.
- Dedicated function keys realize temperature setting.
- Auxiliary menu realizes over-rise alarm, deviation correction, menu lock, and over-rise preventer.




## Specification

| Model | | | | | | | |
|---|---|---|---|---|---|---|---|
| | D | BTL-LB-MFS-1800-02L-D | BTL-LB-MFS-1800-04L-D | BTL-LB-MFS-1800-08L-D | BTL-LB-MFS-1800-12L-D | BTL-LB-MFS-1800-16L-D | BTL-LB-MFS-1800-20L-D |
| | P | BTL-LB-MFS-1800-02L-P | BTL-LB-MFS-1800-04L-P | BTL-LB-MFS-1800-08L-P | BTL-LB-MFS-1800-12L-P | BTL-LB-MFS-1800-16L-P | BTL-LB-MFS-1800-20L-P |
| | T | BTL-LB-MFS-1800-02L-T | BTL-LB-MFS-1800-04L-T | BTL-LB-MFS-1800-08L-T | BTL-LB-MFS-1800-12L-T | BTL-LB-MFS-1800-16L-T | BTL-LB-MFS-1800-20L-T |
| Volume | | 2L | 4L | 8L | 12L | 16L | 20L |
| Chamber size | | 150*90*150mm | 150*150*150mm | 300*150*150mm | 300*200*200mm | 300*260*210mm | 300*260*260mm |
| Chamber material | | polycrystalline mullite fiber | | | | | |
| Display | | D/P:LED digital display; T:Color LCD display | | | | | |
| Temperature controller | | D:Microcomputer PID ,Single-segment,Fixed value operation<br>P:Microcomputer PID ,4-curve,40-segment,Fixed value operation<br>T:Microcomputer PID ,50-segment,Fixed value operation | | | | | |
| Temperature range | | 300~1800°C | | | | | |
| Temperature resolution | | 1°C | | | | | |
| Temperature uniformity | | ±1°C | | | | | |
| Rising time | | ≤60min | | | | | |
| Heat element | | Silicon Molybdenum Bar | | | | | |
| Timer | | 0~999.9hours | | | | | |
| Sensor | | S-type thermocouple | | | | | |
| Dimension | | 600*869*1102mm | 600**877*1102mm | 600*875*1102mm | 680*858*1182mm | 740*879*1182mm | 740*920*1232mm |
| NW/GW | | 70/90kg | 80/100kg | 110/130kg | 150/170kg | 175/195kg | 210/230kg |
| Power supply | | AC220V 50Hz | AC220V 50Hz | AC380V 50Hz | AC380V 50Hz | AC380V 50Hz | AC380V 50Hz |

# Ash Determination Resistance Furnace

For labor and mining enterprises, colleges and universities, research institutes as a chemical element analysis and small steel parts for bonfire, annealing, tempering and other high temperature heat treatment, can also be used for metal, stone, ceramic sintering, dissolution, analysis and other high temperature for heating.

## Features

- The unique furnace door design makes the door opening operation safe and easy, ensuring that the hot air in the furnace is not leaking.
- The microcomputer PID controller is easy to operate, precise in temperature control, reliable and safe.
- Corrosion resistant lightweight grate for durability,
- Excellent door seal minimizes heat loss and increases temperature uniformity in the furnace
- The Bitler series has been equipped with a unique inlet and outlet port and chimney exhaust unit.
- The front and back sides, which can be flushed with inert gas so that the heating device does not oxidize and decarburize.




## Specification

| Model | BTL-LB-AF-1000-C01 | BTL-LB-AF-1000-C02 | BTL-LB-AF-1000-C03 | BTL-LB-AF-1000-C04 | BTL-LB-AF-1200-C01 | BTL-LB-AF-1200-C02 | BTL-LB-AF-1200-C03 | BTL-LB-AF-1200-C04 |
|---|---|---|---|---|---|---|---|---|
| Rated power | 2.5KW | 4KW | 8KW | 12KW | 2.5KW | 5KW | 10KW | 20KW |
| Voltage | 220V | | 380V | | 220V | | 380V | |
| Heating element | Resistance wire | | | | | | | |
| Temperature measuring element | K type thermocouple | | | | | | | |
| Liner size(mm) | 120*200*80 | 200*300*120 | 250*400*160 | 300*500*200 | 120*200*80 | 200*300*120 | 250*400*160 | 300*500*200 |
| Rated temperature | 1000°C | | | | 1200°C | | | |

# Atmosphere Protection Resistance Furnace

For labor and mining enterprises, colleges and universities, research institutes as a chemical element analysis and small steel parts for bonfire, annealing, tempering and other high temperature heat treatment, can also be used for metal, stone, ceramic sintering, dissolution, analysis and other high temperature for heating.

## Features

- The unique furnace door design makes the door opening operation safe and easy, ensuring that the hot air in the furnace is not leaking.
- The microcomputer PID controller is easy to operate, precise in temperature control, reliable and safe.
- Corrosion resistant lightweight grate for durability.
- Excellent door seal minimizes heat loss and increases temperature uniformity in the furnace
- The Bitler series is equipped with inlet and outlet devices on both the front and back sides, which can be flushed with inert gas so that the heating device does not oxidize and decarburize.




## Specification

| Model | BTL-LB-APF-1000-C01 | BTL-LB-APF-1000-C02 | BTL-LB-APF-1000-C03 | BTL-LB-APF-1000-C04 | BTL-LB-APF-1200-C01 | BTL-LB-APF-1200-C02 | BTL-LB-APF-1200-C03 | BTL-LB-APF-1200-C04 |
|---|---|---|---|---|---|---|---|---|
| Rated power | 2.5KW | 4KW | 8KW | 12KW | 2.5KW | 5KW | 10KW | 12KW |
| Voltage | 220V | | 380V | | 220V | | 380V | |
| Heating element | Resistance wire | | | | | | | |
| Temperature measuring element | K type thermocouple | | | | | | | |
| Liner size | 120*200*80 | 200*300*120 | 250*400*160 | 300*500*200 | 120*200*80 | 200*300*120 | 250*400*160 | 300*500*200 |
| Rated temperature | 1000°C | | | | 1200°C | | | |

# 1200°C Open Type Vacuum Atmosphere Tube Furnace

Vacuum or atmosphere tube furnace provide a vacuum, controlled atmosphere and high temperature experimental environment, applied in semiconductor, nanotechnology, fiber and other fields.

## Features

- Quick connection flange structure is adopted for gas path connection, which is convenient for loading and unloading, and can be completed with only one clamp.
- The furnace is divided into upper and lower parts, the upper part of the furnace chamber can be turned back 100 °, It is convenient to take, place and observe materials.
- The furnace is made of polycrystalline mullite fiber by vacuum adsorption, with uniform temperature field and energy saving of more than 50%.
- Independently developed air diversion heat insulation technology ensures the service life and constant temperature effect of all parts in the box• Dedicated function keys realize temperature setting.




## Specification

| Model | Single zone | | | | Double zone | | | |
|---|---|---|---|---|---|---|---|---|
| | BTL-LB-TF-1200-D050-1Z-P | BTL-LB-TF-1200-D050-1Z-T | BTL-LB-TF-1200-D060-1Z-P | BTL-LB-TF-1200-D060-1Z-T | BTL-LB-TF-1200-D080-1Z-P | BTL-LB-TF-1200-D080-1Z-T | BTL-LB-TF-1200-D100-1Z-P | BTL-LB-TF-1200-D100-1Z-T |
| | BTL-LB-TF-1200-D050-2Z-P | BTL-LB-TF-1200-D050-2Z-T | BTL-LB-TF-1200-D060-2Z-P | BTL-LB-TF-1200-D060-2Z-T | BTL-LB-TF-1200-D080-2Z-P | BTL-LB-TF-1200-D080-2Z-T | BTL-LB-TF-1200-D100-2Z-P | BTL-LB-TF-1200-D100-2Z-T |
| Temperature Range | 300-1200°C | | | | | | | |
| Temperature resolution | 1°C | | | | | | | |
| Temperature uniformity | ±1°C | | | | | | | |
| Heating rate | 0-20°C / min | | | | | | | |
| Heating zone | 420mm length | | | | | | | |
| Constant temperature zone | 210 mm length | | | | 280mm length | | | |
| Maximum vacuum | - 0.1MPa | | | | | | | |
| Chamber size | External dimension: Φ240 * 550mm inner size: Φ120*420mm | | | | | | | |
| Tube | quartz tube | | | | | | | |
| Tube size | Φ50*1000mm | Φ60*1000mm | Φ80*1000mm | Φ100*1000mm | Φ50*1000mm | Φ60*1000mm | Φ80*1000mm | Φ100*1000mm |
| Heating Power | 3kw | | | | 3.2kw | | | |
| Control Mode | Microcomputer PID control /S type Separate temp control in double heating zone | | | | | | | |
| Display Mode | P:Double row LED digital display; T: Color LCD display | | | | | | | |
| Dimensions | 1531*440*600mm | | | | | | | |

# 1400°C Vacuum Atmosphere Tube Furnace

Vacuum or atmosphere tube furnace provide a vacuum, controlled atmosphere and high temperature experimental environment, applied in semiconductor, nanotechnology, fiber and other fields.

## Features

- Quick connection flange structure is adopted for gas path connection, which is convenient for loading and unloading.
- The furnace is made of polycrystalline mullite fiber by vacuum adsorption, with uniform temperature field and energy saving of more than 50%.
- Independently developed air diversion heat insulation technology ensures the service life and constant temperature effect of all parts in the box.
- The gas circuit assembly is made of 316 stainless steel of food grade, with good corrosion resistance, atmospheric corrosion resistance, high temperature resistance, and non-magnetic.
- Touch screen is 7 inch screen, built-in 50 formulas, 50 programs, formula name can be set by users, formula can be added, deleted and transferred at will.
- Over rise alarm, menu locking, over rise prevention, power recovery delay.




## Specification

| Model | BTL-LB-TF-1400-D040-1Z-P | BTL-LB-TF-1400-D050-1Z-P | BTL-LB-TF-1400-D060-1Z-P | BTL-LB-TF-1400-D080-1Z-P |
|---|---|---|---|---|
| | BTL-LB-TF-1400-D040-1Z-T | BTL-LB-TF-1400-D050-1Z-T | BTL-LB-TF-1400-D060-1Z-T | BTL-LB-TF-1400-D080-1Z-T |
| Temperature ange | 300~1400°C | | | |
| Temperature resolution | 1°C | | | |
| Temperature Uniformity | ±1°C | | | |
| Heating rate | 0-20°C / min | | | |
| Heating zone | 200mm | | 400mm | |
| Constant temperature zone | 70mm | | 140mm | |
| Maximum vacuum | - 0.1MPa | | | |
| Thermal insulation layer | double-layer forced wind diversion | | | |
| Chamber size | 360*350*350mm | | 560*350*350mm | |
| Tube size | Φ40/34*1000mm | Φ50/44*1000mm | Φ460/50*1000mm | Φ80/70*1000mm |
| Heating Power | 3kw | | 5kw | |
| Control Mode | Microcomputer PID control /S type Separate temp control in double heating zone | | | |
| Display Mode | P:Double row LED digital display; T: Color LCD display | | | |
| Safety Device | over current and leakage protection switch | | | |
| Weight | 95kg | | | |

# 1600°C Vacuum Atmosphere Tube Furnace

Vacuum or atmosphere tube furnace provide a vacuum, controlled atmosphere and high temperature experimental environment, applied in semiconductor, nanotechnology, fiber and other fields.

## Features

- Quick connection flange structure is adopted for gas path connection, which is convenient for loading and unloading, and can be completed with only one clamp.
- The furnace is divided into upper and lower parts, the upper part of the furnace chamber can be turned back 100 °, It is convenient to take, place and observe materials.
- The furnace is made of polycrystalline mullite fiber by vacuum adsorption, with uniform temperature field and energy saving of more than 50%.
- Independently developed air diversion heat insulation technology ensures the service life and constant temperature effect of all parts in the box• Dedicated function keys realize temperature setting.




## Specification

| Model | Single zone | | | | Double zone | | |
|---|---|---|---|---|---|---|---|
| | BTL-LB-TF-1600-D050-1Z-P | BTL-LB-TF-1600-D060-1Z-P | BTL-LB-TF-1600-D080-1Z-P | BTL-LB-TF-1600-D100-1Z-P | BTL-LB-TF-1600-D060-2Z-P | BTL-LB-TF-1600-D080-2Z-P | BTL-LB-TF-1600-D100-2Z-P |
| | BTL-LB-TF-1600-D050-1Z-T | BTL-LB-TF-1600-D060-1Z-T | BTL-LB-TF-1600-D080-1Z-T | BTL-LB-TF-1600-D100-1Z-T | BTL-LB-TF-1600-D060-2Z-T | BTL-LB-TF-1600-D080-2Z-T | BTL-LB-TF-1600-D100-2Z-T |
| Temperature Range | 300~1200°C | | | | | | |
| Temperature resolution | 1°C | | | | | | |
| Temperature uniformity | ±1°C | | | | | | |
| Heating rate | 0-20°C / min | | | | | | |
| Heating zone | 260mm length | | | | 600mm length | | |
| Constant temperature zone | 120mm length | | | | 300mm length | | |
| Maximum vacuum | - 0.1MPa | | | | | | |
| Chamber size | 400*390*330mm | | | | 780*390*330mm | | |
| Tube | quartz tube | | | | | | |
| Tube size | Φ50*1000mm | Φ60*1000mm | Φ80*1000mm | Φ100*1000mm | Φ60*1200mm | Φ80*1200mm | Φ100*1200mm |
| Heating Power | 4kw | | | | 10kw | | |
| Control Mode | Microcomputer PID control /S type Separate temp control in double heating zone | | | | | | |
| Display Mode | P:Double row LED digital display; T: Color LCD display | | | | | | |
| Dimensions | 1531*600*1300 mm | | | | 1730*600*1300mm | | |

# 1200°C Open Vacuum/Atmosphere Tube Furnace CVD System

This CVD growth system is suitable for CVD processes, such as silicon carbide coating, ceramic substrate conductivity testing, controllable growth of ZnO nanostructures, and ceramic capacitor (MLCC) atmosphere sintering experiments.

## Features

- The furnace is made of polycrystalline mullite fiber vacuum adsorption, the temperature field is uniform and energy saving is more than 50%.
- The self-developed air diversion and heat insulation technology ensures the service life and constant temperature effect of each component in the box.
- The furnace door is opened with automatic power-off, over-temperature protection function, and leakage protection function to ensure the safety of use.
- The gas circuit assembly is made of food grade 316 stainless steel, which has corrosion resistance, atmospheric corrosion resistance and high temperature resistance.
- Adopt digital flow display instrument, cooperate with mass flow controller, collect data and control flow.






## Specification

| Model | | | | | |
|---|---|---|---|---|---|
| | Single temperature zone | BTL-LB-CVD-1200-D050-1Z-P | BTL-LB-CVD-1200-D060-1Z-P | BTL-LB-CVD-1200-D080-1Z-P | BTL-LB-CVD-1200-D100-1Z-P |
| | | BTL-LB-CVD-1200-D050-1Z-T | BTL-LB-CVD-1200-D060-1Z-T | BTL-LB-CVD-1200-D080-1Z-T | BTL-LB-CVD-1200-D100-1Z-T |
| | Double temperature zone | BTL-LB-CVD-1200-D050-2Z-P | BTL-LB-CVD-1200-D060-2Z-P | BTL-LB-CVD-1200-D080-2Z-P | BTL-LB-CVD-1200-D100-2Z-P |
| | | BTL-LB-CVD-1200-D050-2Z-T | BTL-LB-CVD-1200-D060-2Z-T | BTL-LB-CVD-1200-D080-2Z-T | BTL-LB-CVD-1200-D100-2Z-T |
| Operating temperature range | | 300-1200°C | | | |
| Temperature resolution | | 1°C | | | |
| Heating rate | | 0-20°C/min | | | |
| Heating zone length | | 420mm | | | |
| Length of constant temperature zone | | Single temperature zone:210mm; Double temperature zone: 280mm | | | |
| Maximum vacuum | | -0.1MPa | | | |
| Empty furnace heating time | | ≤15min | | | |
| Heating rate when configuring furnace tube | | 500°C≤5°C/min; 500-800≤ 10°C/min; 800-1000≤5°C/min; 1000-1200≤2l°C/min | | | |
| Furnace tube size | | φ50/43*1000mm | φ60/53*1000mm | φ80/72*1000mm | φ100/92*1000mm |
| Heating power | | Single temperature zone:3KW; Double temperature zone:3.2KW | | | |
| Work pressure | | Inlet pressure 0.05-0.3MPa (gauge pressure) | | | |
| Dimensions | | 770*580*778mm | | | |
| Weight | | 210kg | | | |

# 1400°C Vacuum/Atmosphere Tube Furnace CVD System

This CVD growth system is suitable for CVD processes, such as silicon carbide coating, ceramic substrate conductivity testing, controllable growth of ZnO nanostructures, and ceramic capacitor (MLCC) atmosphere sintering experiments.

## Features

- The furnace is made of polycrystalline mullite fiber vacuum adsorption, the temperature field is uniform and energy saving is more than 50%.
- The exhaust fan will stop automatically, which effectively protects the surface of the furnace body.
- Automatic power-off, over-temperature protection, and leakage protection to ensure the safety of use.
- Adopt digital flow display instrument, cooperate with mass meteor controller,fast response speed, stability and reliability.
- Solenoid valve slow start technology, so that the solenoid valve is opened 10 seconds after the vacuum pump is turned on, so that the system pressure in the furnace tube is kept accurate.




## Specification

| Model | Single temperature zone | BTL-LB-CVD-1400-D040-1Z-P | BTL-LB-CVD-1400-D050-1Z-P | BTL-LB-CVD-1400-D060-1Z-P | BTL-LB-CVD-1400-D080-1Z-P |
|---|---|---|---|---|---|
| | | BTL-LB-CVD-1400-D040-1Z-T | BTL-LB-CVD-1400-D050-1Z-T | BTL-LB-CVD-1400-D060-1Z-T | BTL-LB-CVD-1400-D080-1Z-T |
| Operating temperature range | | 300-1400°C | | | |
| Temperature resolution | | 1°C | | | |
| Heating rate | | 0-20°C/min | | | |
| Heating zone length | | 200mm | | | |
| Length of constant temperature zone | | 70mm | | 140mm | |
| Maximum vacuum | | -0.1MPa | | | |
| Empty furnace heating time | | ≤15min | | | |
| Heating rate when configuring furnace tube | | 500°C≤5°C/min; 500-1000°C≤ 10°C/min; 1000-1200°C≤5°C/min; 1000-1400°C≤20°C/min | | | |
| Furnace tube size | | φ360/350*350mm | | φ560/350*350mm | |
| Heating power | | 3KW | | 5KW | |
| Work pressure | | Inlet pressure 0.05-0.3MPa (gauge pressure) | | | |
| Thermal insulation layer | | Thermal insulation layer | | | |
| System vacuum range | | 10-100Pa | | | |
| Number of air paths | | 3 channels (the number of air channels can be selected according to specific needs) | | | |
| System connection | | Adopt KF quick connection bellows, high vacuum manual flapper valve and digital display vacuum measuring instrument | | | |

# 1600°C Vacuum/Atmosphere Tube Furnace CVD System

This CVD growth system is suitable for CVD processes, such as silicon carbide coating, ceramic substrate conductivity testing, controllable growth of ZnO nanostructures, and ceramic capacitor (MLCC) atmosphere sintering experiments.

## Features

- Quick connection flange structure is adopted for gas path connection, which is convenient for loading and unloading.
- The furnace is made of polycrystalline mullite fiber by vacuum adsorption, with uniform temperature field and energy saving of more than 50%.
- Independently developed air diversion heat insulation technology ensures the service life and constant temperature effect of all parts in the box.
- The gas circuit assembly is made of 316 stainless steel of food grade, with good corrosion resistance, atmospheric corrosion resistance, high temperature resistance, and non-magnetic.
- Touch screen is 7 inch screen, built-in 50 formulas, 50 programs, formula name can be set by users, formula can be added, deleted and transferred at will.
- Over rise alarm, menu locking, over rise prevention, power recovery delay.






## Specification

| Model | Single temperature zone | | | | Double temperature zone | | |
|---|---|---|---|---|---|---|---|
| | BTL-LB-CVD-1600-D050-1Z-P | BTL-LB-CVD-1600-D060-1Z-P | BTL-LB-CVD-1600-D080-1Z-P | BTL-LB-CVD-1600-D100-1Z-P | BTL-LB-CVD-1600-D060-2Z-P | BTL-LB-CVD-1600-D080-2Z-P | BTL-LB-CVD-1600-D100-2Z-P |
| | BTL-LB-CVD-1600-D050-1Z-T | BTL-LB-CVD-1600-D060-1Z-T | BTL-LB-CVD-1600-D080-1Z-T | BTL-LB-CVD-1600-D100-1Z-T | BTL-LB-CVD-1600-D060-2Z-T | BTL-LB-CVD-1600-D080-2Z-T | BTL-LB-CVD-1600-D100-2Z-T |
| Operating temperature range | 300-1600°C | | | | | | |
| Temperature resolution | 1°C | | | | | | |
| Heating rate | 0-20°C/min | | | | | | |
| Heating zone length | 260mm | | | | 600mm | | |
| Length of constant temperature zone | 120mm | | | | 300mm | | |
| Maximum vacuum | -0.1MPa | | | | | | |
| Empty furnace heating time | ≤15min | | | | | | |
| Furnace size | 440*390*330mm | | | | 780*390*330mm | | |
| Furnace tube size | φ50*1000mm | φ60*1000mm | φ80*1000mm | φ100*1000mm | φ60*1200mm | φ80*1200mm | φ100*1200mm |
| Heating power | 4KW | | | | 10KW | | |
| Work pressure | Inlet pressure 0.05-0.3MPa (gauge pressure) | | | | | | |
| Number of air paths | 3 channels (the number of air channels can be selected according to specific needs) | | | | | | |
| Work pressure | Inlet pressure 0.05-0.3MPa (gauge pressure) | | | | | | |

# 1200°C Ceramic Fiber Muffle Furnace

Sintering, melting, elemental analysis and physical measurement within 1200°C of precise control.

## Characteristics:

- Mirror stainless steel mouth, long-term use will not change color.
- Imported double insulated ceramic liner, stable performance.
- Vacuum forming polycrystalline mullite fiber furnace, high efficiency insulation.
- In the double shell, the air sleeve is insulated, and the double guiding air passage.
- High-precision micro-computer controller and precision sensor are perfectly integrated, and the temperature is accurate.
- Exhaust air outlet in rear wall of furnace.




## SX4 model also has the following characteristics:

- Import time control system and high precise sensor with sensitive response , high precision and good stability .
- Split design, circuit detachable, easy to maintenance and repair.
- P model is program temperature control type, program temperature controller can programme multistage program, Simplifies the experimental process and realizes automatic control and operation .

## Main Technical Parameters:

| Model | | BTL-FF-MF-1200-021-SX3<br>BTL-FF-MF-1200-021-SX4<br>BTL-FF-MF-1200-021-SX4P | BTL-FF-MF-1200-071-SX3<br>BTL-FF-MF-1200-071-SX4<br>BTL-FF-MF-1200-071-SX4P | BTL-FF-MF-1200-121-SX3<br>BTL-FF-MF-1200-121-SX4<br>BTL-FF-MF-1200-121-SX4P | BTL-FF-MF-1200-161-SX3<br>BTL-FF-MF-1200-161-SX4<br>BTL-FF-MF-1200-161-SX4P | BTL-FF-MF-1200-361-SX3<br>BTL-FF-MF-1200-361-SX4<br>BTL-FF-MF-1200-361-SX4P |
|---|---|---|---|---|---|---|
| Function | Heating Mode | Alloy wire heating in three sides left; right; top side. | | | | |
| | Temp. Range | 100-1200°C | | | | |
| | Temp. Resolution Ratio | 1°C | | | | |
| | Temp. motion | ±1°C | | | | |
| | Temp.Rising time to max temp | ≤30min | | | | |
| | Chamber material | Ceramic fiber | | | | |
| Structure | Outer shell | Cold rolling steel electrostatic spraying exterior | | | | |
| | Insulation layer | Ceramic fiber | | | | |
| | Heater | Alloy heating wire | | | | |
| | Power rating | 1.5kw | 3.0kw | 4.5kw | 6.0kw | 9.0kw |
| | Exhaust hole | φ 30mm(chimney size 80*60mm) | | | | |
| Controller | Temp. control mode | SX3 Type : domestic Xiamen Yudian single-stage temperature controller<br>SX4 Type:Japanese scroncurrential single-stage temperature controller<br>SX4-P:Japanese Fuji color LCD 64- segment programmed temperature controller | | | | |
| | Temp. setting mode | Touch button setting | | | | |
| | Temp. display mode | Measuring temperature: the upper row, setting temperature: the lower row | | | | |
| | Timer | Without P: No Timing Function; SX4-P: 0-99 hours and 59 minutes(with Timing Waiting Function) SX3: 01-3200min | | | | |
| | Operation function | Fixed temperature operation, timing function, auto stop. | | | | |
| | Additional function | Sensor deviation correction, Temperature overshoot self-tuning, Internal parameter locked, Power-off parameter memory | | | | |
| | Sensor | High precision K-type sensor | | | | |
| Safety device | | Manual door security lock, over temperature sound-light alarm, door opening electrical outage, over-temperature protection, thermocouple failure | | | | |
| Specification | Inner Chamber size(W*L*H)(mm) | 120*200*80 | 200*300*120 | 200*300*200 | 250*400*160 | 300*400*300 |
| | Exterior size (W*L*H)(mm) | 450*685*600 | 530*785*640 | 530*785*720 | 600*895*700 | 630*885*820 |
| | Packing size (W*L*H)(mm) | 570*770*740 | 650*870*780 | 655*875*865 | 720*980*845 | 750*970*965 |
| | Volume | 2L | 7L | 12L | 16L | 36L |
| | Current rating (50/60HZ) | AC220V/6.6A | AC220V/13.6A | AC220V/20.4A | AC380V/9.9A | AC380V/13.6A |
| | NW/GW (kg) | 33/37 | 45/50 | 62/68 | 77/96 | 87/106 |
| Optional type | | Air port, USB interface, 5.0 inch ture color screen, programmable controller with USB date storage function | | | | |

# 1600°C Ceramic Fiber Muffle Furnace

It is used for sintering, melting and analyzing metal, nonmetal and other compound materials in laboratories of universities, research institutes and industrial and mining enterprises.

## Characteristics:

- Mirror stainless steel furnace mouth, long-term use will not change color.
- Vacuum-forming polycrystalline mullite fiber furnace, high efficiency insulation.
- Double shell, the air sleeve heat insulation, and double air guiding passage.
- High-purity silicon-molybdenum rod heating.
- High precision program controller, with imported sensor and imported voltage regulating module.
- With leakage protection, thermocouple failure, door opening electrical outage, over-temperature protection and sound-light alarm safety device.
- Lockable handle, quick detachable structure,easy to maintenance and repair.
- Standard with insulated gloves, crucible tongs and Alumina load bearing board.




## Main Technical Parameters:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Model | 50 segment Domestic controller | BTL-FF-MF-1600-02L-SX4 | BTL-FF-MF-1600-04L-SX4 | BTL-FF-MF-1600-6P7L-SX4 | BTL-FF-MF-1600-12L-SX4 | BTL-FF-MF-1600-20L-SX4 | BTL-FF-MF-1600-36L-SX4 |
| | 64 Segment Import Controller (Model With P) | BTL-FF-MF-1600-02L-SX4P | BTL-FF-MF-1600-04L-SX4P | BTL-FF-MF-1600-6P7L-SX4P | BTL-FF-MF-1600-12L-SX4P | BTL-FF-MF-1600-20L-SX4P | BTL-FF-MF-1600-36L-SX4P |
| | 30 Segment 70 Inch Touch Screen controller(Model With PL) | BTL-FF-MF-1600-02L-SX4PL | BTL-FF-MF-1600-04L-SX4PL | BTL-FF-MF-1600-6P7L-SX4PL | BTL-FF-MF-1600-12L-SX4PL | BTL-FF-MF-1600-20L-SX4PL | BTL-FF-MF-1600-36L-SX4PL |
| Function | Temp. Range | Max 1600°C（ Long time continuous working temperature 1500°C ） | | | | | |
| | Temp. Accuracy | ±1°C | | | | | |
| | Temp. Resolution Ratio | 1°C | | | | | |
| | Temp. RISING Time To Max Temp | ≤130min | | | | | |
| | Furnace Body | Polycrystalline Mullite Fiber | | | | | |
| Structure | Outer Shell | Cold rolling steel with electrostatic Spraying exterior | | | | | |
| | Chamber Size | 150*90*150 | 150*150*150 | 300*150*150 | 300*200*200 | 300*260*260 | 300*400*300 |
| | Exhaust Hole | OD φ 22, ID φ 18 | | | | | |
| | Heater | Silicon Molybdenum Rod | | | | | |
| | Heating Power | 3KW | 5.5KW | 6KW | 10KW | 12KW | 15KW |
| Controller | Temp. Control | No Letter Model : LED Programmed Controller;<br>P Type: LCD Imported Programmed Controller;<br>PL Type: 7.0-inch touch screen program controller, with curve viewing and USB data storage functions. | | | | | |
| | Temp. Control Mode | Intelligent Microcomputer PID Control | | | | | |
| | Display Mode | No Letter Model: 4 keys Settings P Type: 5 keys Settings PL Type: Touch Type Operation | | | | | |
| | Timer | No Letter Model: 0-9999min P Type: 0-99 hour 59min PL Type: 0-9999min | | | | | |
| | Operation Function | Constant Value Operation Or Program Operation | | | | | |
| | Sensor | S-type Thermocouple | | | | | |
| | Additional Function | Heating Start Stop Button, Sensor Fault Alarm,Temperature Overshoot Self Setting,Temperature Correction | | | | | |
| | Safety Device | Overtemperature Alarm,Leakage Protection, Door Opening Heating | | | | | |
| Specification | Exterior Size (W*L*H)(mm) | 600*755*1100 | 600*815*1100 | 750*815*1100 | 750*865*1150 | 750*925*1210 | 750*1065*1250 |
| | Packing Size (W*L*H)(mm) | 760*925*1310 | 760*985*1310 | 910*985*1310 | 910*1045*1360 | 910*1105*1420 | 910*1265*1460 |
| | Volume | 2L | 4L | 6.7L | 12L | 20L | 36L |
| | Current Rating (50/60HZ) | AC220V 50Hz | | AC220V | | AC380V 50Hz | |
| | Nw/GW (kg ) | 70/90 | 80/100 | 110/130 | 150/170 | 175/195 | 270/320 |
| | Optional Type | Air Inlet | | | | | |

# 1700°C Ceramic Fiber Muffle Furnace

This series of electric furnace is specially developed for sintering, melting and analysis of metal, non-metal and other compound materials in laboratories of universities, research institutes and industrial and mining enterprises.



## Characteristics:

- Mirror stainless steel mouth,long-term use will not change color.Brand door handle with lock, cover quick removal structure to facilitate the replacement of silicon molybdenum rod.
- Vacuum forming high temperature resistant polycrystalline mullite fiber furnace, efficient heat preservation.Air jacket insulation in double housing. Double ventilation channels to ensure good ventilation and low shell temperature rise.
- High temperature and high purity silicon molybdenum rod, long working life, good furnace temperature uniformity.
- A full range of standard program temperature control meter, high-precision B-type sensor. voltage regulator module with all copper core transformer, stable furnace temperature control, high precision.
- Leakage protection, thermo couple failure, open door power off, over-temperature protection, over-temperature sound and light alarm lamp a number of safety protection measures to ensure the safety of the experiment.
- Standard heat insulation gloves, crucible pliers, alumina bearing plate.

## Detail Display:










## Main Technical Parameters:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Model | 30 Segment Domestic Controller | BTL-FF-MF-1700-02L-TX4 | BTL-FF-MF-1700-3P4L-TX4 | BTL-FF-MF-1700-6P7L-TX4 | BTL-FF-MF-1700-12L-TX4 | BTL-FF-MF-1700-20L-TX4 | BTL-FF-MF-1700-36L-TX4 |
| | 64 Segment Import Controller | BTL-FF-MF-1700-02L-TX4P | BTL-FF-MF-1700-3P4L-TX4P | BTL-FF-MF-1700-6P7L-TX4P | BTL-FF-MF-1700-12L-TX4P | BTL-FF-MF-1700-20L-TX4P | BTL-FF-MF-1700-36L-TX4P |
| | 30 Segment 7.0-inch Touch Screen | BTL-FF-MF-1700-02L-TX4PL | BTL-FF-MF-1700-3P4L-TX4PL | BTL-FF-MF-1700-6P7L-TX4PL | BTL-FF-MF-1700-12L-TX4PL | BTL-FF-MF-1700-20L-TX4PL | BTL-FF-MF-1700-36L-TX4PL |
| Function | Temp Range | Max 1700°C(Long-term maximum continuous operating temperature 1650°C) | | | | | |
| | Temp Accuracy | ±1°C | | | | | |
| | Temp Resolution Ratio | 1°C | | | | | |
| | Temperature Rise Time | ≤140 min | | | | | |
| | Variable Hearth Volume | High temperature resistant polycrystalline mullite fibre | | | | | |
| Structure | Exterior | Cold-rolled steel plate, surface spray treatment | | | | | |
| | Chamber Size | 150*90*150 | 150*150*150 | 300*150*150 | 300*200*200 | 300*260*260 | 300*400*300 |
| | Heater | High temperature resistant silicon molybdenum rod | | | | | |
| | Heating Power | 3kW | 5.5kW | 8kW | 10kW | 12kW | 15kW |
| Controller | Temp Control | No letter model: LED Programmed controller<br>P-type: LCD Imported programmed controller<br>PL type: 7.0 inch touch screen program temperature controller, with curve view, U diskdata storage function | | | | | |
| | Temperature Control Mode | Intelligent microcomputer PID control | | | | | |
| | Setting Method | No letters Model: 4 Key Settings P type: 5 key Settings Type PL: touch operation | | | | | |
| | Timer | No letter model: 0-9999 minutes Type P: 0-99 hours 59 minutes PL type: 0-9999 minutes | | | | | |
| | Operation Function | Fixed value running or program running | | | | | |
| | Sensor | Type B thermocouple | | | | | |
| | Additional Function | Heating start and stop button, sensor fault alarm, temperature overshoot self-setting, temperature correction Type PL has U disk data storage function | | | | | |
| | Safety Device | Over temperature alarm, leakage protection, door off heating | | | | | |
| | Exterior Size(W*L*H mm) | 600*755*1100 | 600*815*1100 | 750*815*1100 | 750*865*1150 | 750*925*1210 | 750*1065*1250 |
| | Packing Size(W*L*H mm) | 760*925*1310 | 760*985*1310 | 910*985*1310 | 910*1045*1360 | 910*1105*1420 | 910*1265*1460 |
| | Inner Volume | 2L | 3.4L | 6.7L | 12L | 20L | 36L |
| | Power Supply (50/60 Hz) Rated Current | AC220V/50Hz | | | AC380V/50Hz | | |
| | NW/GW(kg) | 70/90 | 80/100 | 110/130 | 150/170 | 175/195 | 270/320 |
| | Addable configuration | Charging port | | | | | |

# 1200°C Ceramic Fiber Muffle Furnace



## ◎Characteristics:

- Mirror stainless steel mouth,long-term use will not change color.
- Double insulated ceramic liner,stable performance.
- Vacuum forming polycrystalline mullite fiber furnace,high efficiency insulation.
- In the double shell,the air sleeve is insulated,and the double guiding air passage.
- High-precision micro-computer temperature controller and precision sensor are perfectly integrated,and the temperature is accurate.
- Adding exhaust devices is beneficial to ashing.

## ◎TM4 model also has the following characteristics:

- Import time control system and high precise sensor with sensitive response,high precision and good stability.
- Split design, circuit detachable,easy to maintenance and repair.
- P model is program temperature control type. program temperature controller can programme multistage program, simplifies the experimental process and realizes automatic control and operation.

## ◎Main Technical Parameters:

| Model | | BTL-FF-MFSS-1200-02L-TM3 | BTL-FF-MFSS-1200-07L-TM3 | BTL-FF-MFSS-1200-12L-TM3 | BTL-FF-MFSS-1200-16L-TM3 |
|---|---|---|---|---|---|
| | | BTL-FF-MFSS-1200-02L-TM4 | BTL-FF-MFSS-1200-07L-TM4 | BTL-FF-MFSS-1200-12L-TM4 | BTL-FF-MFSS-1200-16L-TM4 |
| | | BTL-FF-MFSS-1200-02L-TM4P | BTL-FF-MFSS-1200-07L-TM4P | BTL-FF-MFSS-1200-12L-TM4P | BTL-FF-MFSS-1200-16L-TM4P |
| Function | Heating Mode | Alloy wire heating in three sides left;right;top side. | | | |
| | Temp.Range | 100-1200°C | | | |
| | Temp.Resolution Ratio | 1°C | | | |
| | Temp.motion | ±1°C | | | |
| | Temp.Rising time to max temp | ≤30min | | | |
| | Chamber material | Ceramic fiber | | | |
| Structure | Outer shell | SUS 304 Embossed stainless steel | | | |
| | Insulation layer | Ceramic fiber | | | |
| | Heater | Alloy heating wire | | | |
| | Power rating | 1.5kw | 3.0kw | 4.5kw | 6.0kw |
| | Exhaust hole | Φ30mm(chimney size 80*60mm) | | | |
| Controller | Temp.control mode | TM3: Type:Chinese Brand single-stage temperature controller<br>TM4 Type:Japanese conduction single-stage temperature controller<br>TM4-P:Japanese Fuji color LCD 64-segment programmed temperature controller | | | |
| | Temp.setting mode | Touch button setting | | | |
| | Temp.display mode | Measuring temperature:the upper row,setting temperature:the lower row | | | |
| | Timer | TM4: No Timing Function;TM4-P:0-99 hours and 59 minutes(with Timing Waiting Function ) TM3: 1-3200mins | | | |
| | Operation Function | Fixed temperature operation,timing function,auto stop. | | | |
| | Additional Function | Sensor deviation correction,temperature overshoot self-tuning,internal parameter locked,<br>power-off parameter memory | | | |
| | Sensor | High precision K-type sensor | | | |
| Safety device | | Manual door security lock,over temperature sound-light alarm,door opening electrical outage,<br>over-temperature protection,thermocouple failure | | | |
| Specification | Inner Chamber Size (W*L*H)(mm) | 120*200*80 | 200*300*120 | 200*300*200 | 250*400*160 |
| | Exterior Size(W*L*H)(mm) | 450*685*600 | 530*785*640 | 530*785*720 | 600*895*700 |
| | Packing Size(W*L*H)(mm) | 570*770*740 | 650*870*780 | 655*875*865 | 720*980*845 |
| | Volume | 2L | 7L | 12L | 16L |
| | Current Rating(50/60hz) | AC220V/6.6A | AC220V/13.6A | AC220V/20.4A | AC380V/9.9A |
| | NW/GW(kg) | 33/37 | 45/50 | 62/68 | 77/96 |
| Optional type | | Air port,USB interface, 5.0 inch ture color screen,programmable controller with USB date storage function | | | |

# Horizontal Tube Furnace

Widely used in universities,scientific research institutes,industrial and mining enterprises to do high temperature sintering metal material processing experiments,quality testing.







## Characteristic

- Adopts high purity quartz tube or high purity alumina tube as the furnace tube;
- Working temperature range of 300°C to 1600°C;
- Can be vacuumed;
- Intelligent 30 segments programmable automatic control.Shell structure,double-layer air-cooled structure;
- Surface temperature below 50°C;
- 304 stainless steel double sealing flange;
- Leakage Protection Auto Power-Off Function;
- Overtemperature protection function;
- Safety protection when the furnace body leakage power off automatically;
- Equipped with molecular pump unit,vacuum degree up to 7*10-4Pa.

## Features:

| | |
|---|---|
| **Max Temperature** | 1200°C(HRE wire heating) |
| | 1400°C(silicon carbide rod heating) |
| | 1600°C(silicon molybdenum rod heating) |
| **Heating rate** | ≤20°C / min |
| **Temperature control accuracy** | ±1°C |
| **Max vacuum degree** | -0.1MPa |
| **Standard Parts** | Tube plug 2pcs;furnace tube 1pc;vacuum pump 1set |
| | Vacuum sealing flange 1set; |
| | Vacuum pressure gauge 1pc. |
| **Optional Parts** | Vacuum system(rotary vane mechanical pump,diffusion pump,molecular pump) |
| | Atmosphere system(float flowmeter,mass flowmeter |
| | Quick discharge flange,tee flange |
| | 7-inch HD touch screen |

# Horizontal Tube Furnace

## Technical Parameters:

| Model | Tube Outer Dia*Heating Zone(mm) | Power(kW) | Max.Temp | Working Temp | Thermocouple | Tube Material | Heating Element |
|---|---|---|---|---|---|---|---|
| BTL-FF-HTF-1200-D040-Z300 | 40*300 | 3 | 1200℃ | 1100℃ | K Type | Quartz Tube | Resistance Wire |
| BTL-FF-HTF-1200-D060-Z300 | 60*300 | 3 | | | | | |
| BTL-FF-HTF-1200-D080-Z300 | 80*300 | 5 | | | | | |
| BTL-FF-HTF-1200-D100-Z300 | 100*300 | 5 | | | | | |
| BTL-FF-HTF-1200-D120-Z300 | 120*300 | 6 | | | | | |
| BTL-FF-HTF-1200-D040-Z450 | 40*450 | 3 | | | | | |
| BTL-FF-HTF-1200-D060-Z450 | 60*450 | 3 | | | | | |
| BTL-FF-HTF-1200-D080-Z450 | 80*450 | 5 | | | | | |
| BTL-FF-HTF-1200-D100-Z450 | 100*450 | 5 | | | | | |
| BTL-FF-HTF-1200-D120-Z450 | 120*450 | 6 | | | | | |

| Model | Tube Outer Dia*Heating Zone(mm) | Power(kW) | Max.Temp | Working Temp | Thermocouple | Tube Material | Heating Element |
|---|---|---|---|---|---|---|---|
| BTL-FF-HTF-1400-D040-Z300 | 40*300 | 4 | 1400℃ | 1300℃ | S Type | Alumina Tube | Sic Heater |
| BTL-FF-HTF-1400-D060-Z300 | 60*300 | 4 | | | | | |
| BTL-FF-HTF-1400-D080-Z300 | 80*300 | 4 | | | | | |
| BTL-FF-HTF-1400-D100-Z300 | 100*300 | 6 | | | | | |
| BTL-FF-HTF-1400-D120-Z300 | 120*300 | 6 | | | | | |
| BTL-FF-HTF-1400-D040-Z450 | 40*450 | 4 | | | | | |
| BTL-FF-HTF-1400-D060-Z450 | 60*450 | 4 | | | | | |
| BTL-FF-HTF-1400-D080-Z450 | 80*450 | 4 | | | | | |
| BTL-FF-HTF-1400-D100-Z450 | 100*450 | 6 | | | | | |
| BTL-FF-HTF-1400-D120-Z450 | 120*450 | 6 | | | | | |

| Model | Tube Outer Dia*Heating Zone(mm) | Power(kW) | Max.Temp | Working Temp | Thermocouple | Tube Material | Heating Element |
|---|---|---|---|---|---|---|---|
| BTL-FF-HTF-1600-D040-Z300 | 40*300 | 4 | 1600℃ | 1500℃ | B Type | Alumina Tube | MoSi2 Heater |
| BTL-FF-HTF-1600-D060-Z300 | 60*300 | 4 | | | | | |
| BTL-FF-HTF-1600-D080-Z300 | 80*300 | 4 | | | | | |
| BTL-FF-HTF-1600-D100-Z300 | 100*300 | 6 | | | | | |
| BTL-FF-HTF-1600-D120-Z300 | 120*300 | 6 | | | | | |
| BTL-FF-HTF-1600-D040-Z450 | 40*450 | 5 | | | | | |
| BTL-FF-HTF-1600-D060-Z450 | 60*450 | 5 | | | | | |
| BTL-FF-HTF-1600-D080-Z450 | 80*450 | 5 | | | | | |
| BTL-FF-HTF-1600-D100-Z450 | 100*450 | 7 | | | | | |
| BTL-FF-HTF-1600-D120-Z450 | 120*450 | 7 | | | | | |

# Vertical Tube Furnace





## Characteristic

- Adopts high purity quartz tube or high purity alumina tube as the furnace tube;
- Can be vacuumed;
- 30 segments programmable and auto control
- Furnace structure, double layer steel dual cooling fan.
- Stainless steel double sealing flange
- Adjustable flange support structure at both ends toextend furnace tube life
- Over-temperature protection function, automaticpower-off when the temperature exceeds the allowable set value
- Safety protection Automatically power off when thefurnace body leaks

## Features:

| | |
|---|---|
| **Max Temperature** | 1200°C (HRE Fe-Cr-Al-Mo wire) |
| | 1400°C (Sic Heater) |
| | 1600°C (MoSi2 Heater) |
| **Heating rate** | ≤20°C/min |
| **Temperature accuracy** | ±1°C |
| **Max vacuum degree** | -0.1MPa |
| **Standard Parts** | Plugging tube 4 pcs |
| | Thermocouple 1pc |
| | Furnace tube 1pc |
| | Vacuum pump 1 set |
| | Vacuum flange 1 pc |
| | Vacuum gauge 1pc |

# Vertical Tube Furnace



## Characteristic

- Adopts high purity quartz tube or high purity alumina tube as the furnace tube;
- Can be vacuuemed;
- 30 segments programmable and auto control
- Furnace structure, double layer steel dual cooling fan.
- Stainless steel double sealing flange
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## Features:

| | |
|---|---|
| Max Temperature | 1200°C (HRE Fe-Cr-Al-Mo wire) |
| | 1400°C (Sic Heater) |
| | 1600°C (MoSi2 Heater) |
| Heating rate | ≤20°C/min |
| Temperature accuracy | ±1°C |
| Max vacuum degree | -0.1MPa |
| Standard Parts | Plugging tube 4 pcs |
| | Thermocouple 1pc |
| | Furnace tube 1pc |
| | Vacuum pump 1 set |
| | Vacuum flange 1 pc |
| | Vacuum gauge 1pc |

## Technical Parameters:

| Model | Tube Outer Dia* Heating Zone(mm) | Power (kW) | Max Temp (°C) | Work Temp(°C) | Thermocouple | Tube Material | Heating Element |
|---|---|---|---|---|---|---|---|
| BTL-FF-VTF-1200-D040-Z300 | 40*300 | 3 | 1200 | 1100 | K Type | Quartz Tube | Resistance Wire |
| BTL-FF-VTF-1200-D060-Z300 | 60*300 | 3 | | | | | |
| BTL-FF-VTF-1200-D080-Z300 | 80*300 | 5 | | | | | |
| BTL-FF-VTF-1200-D100-Z300 | 100*300 | 5 | | | | | |
| BTL-FF-VTF-1200-D120-Z300 | 120*300 | 6 | | | | | |
| BTL-FF-VTF-1200-D040-Z450 | 40*450 | 3 | | | | | |
| BTL-FF-VTF-1200-D060-Z450 | 60*450 | 3 | | | | | |
| BTL-FF-VTF-1200-D080-Z450 | 80*450 | 5 | | | | | |
| BTL-FF-VTF-1200-D100-Z450 | 100*450 | 5 | | | | | |

| Model | Tube Outer Dia* Heating Zone(mm) | Power (kW) | Max Temp (°C) | Work Temp(°C) | Thermocouple | Tube Material | Heating Element |
|---|---|---|---|---|---|---|---|
| BTL-FF-VTF-1400-D040-Z300 | 40*300 | 4 | 1400 | 1300 | S Type | Alumina Tube | SiC Heater |
| BTL-FF-VTF-1400-D060-Z300 | 60*300 | 4 | | | | | |
| BTL-FF-VTF-1400-D080-Z300 | 80*300 | 4 | | | | | |
| BTL-FF-VTF-1400-D100-Z300 | 100*300 | 6 | | | | | |
| BTL-FF-VTF-1400-D120-Z300 | 120*300 | 6 | | | | | |
| BTL-FF-VTF-1400-D040-Z450 | 40*450 | 4 | | | | | |
| BTL-FF-VTF-1400-D060-Z450 | 60*450 | 4 | | | | | |
| BTL-FF-VTF-1400-D080-Z450 | 80*450 | 4 | | | | | |
| BTL-FF-VTF-1400-D100-Z450 | 100*450 | 6 | | | | | |

| Model | Tube Outer Dia* Heating Zone(mm) | Power (kW) | Max Temp (°C) | Work Temp(°C) | Thermocouple | Tube Material | Heating Element |
|---|---|---|---|---|---|---|---|
| BTL-FF-VTF-1600-D040-Z300 | 40*300 | 3 | 1600 | 1500 | B Type | Alumina Tube | MoSi2 Heater |
| BTL-FF-VTF-1600-D060-Z300 | 60*300 | 3 | | | | | |
| BTL-FF-VTF-1600-D080-Z300 | 80*300 | 5 | | | | | |
| BTL-FF-VTF-1600-D100-Z300 | 100*300 | 5 | | | | | |
| BTL-FF-VTF-1600-D120-Z300 | 120*300 | 6 | | | | | |
| BTL-FF-VTF-1600-D040-Z450 | 40*450 | 3 | | | | | |
| BTL-FF-VTF-1600-D060-Z450 | 60*450 | 3 | | | | | |
| BTL-FF-VTF-1600-D080-Z450 | 80*450 | 5 | | | | | |
| BTL-FF-VTF-1600-D100-Z450 | 100*450 | 5 | | | | | |

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