Air Re-circulating Furnaces — 750°C Maximum

BAF7/15

BAF 750°C - The BAF air re-circulating furnace provides good temperature uniformity and rapid thermal transfer to the load at lower temperatures.

Applications include annealing, stress relieving, tempering and normalising.

Standard Features:

- Available in 15, 31 & 45 litre capacities as standard, with larger units made to customer specifications
- Stainless steel liner
- MI heating elements, which are isolated from the liner
- The external case depth dimensions include the rear-mounted motor

Technical Data:

Model	Max Temp (°C)	Max Cont (°C)	Max Chamber Dims (mm) H x W x D	External Case Dims (mm) H x W x D	Chamber Capacity (Litres)	Nominal Power (Kw)	Volts	Phase	Net Wt. (kg)
BAF7/15	750	700	220 x 220 x 305	730 x 585 x 810	15	3.0	230V	1	88
BAF7/31	750	700	250 x 250 x 500	780 x 635 x 990	31	6.0	230V	1	130
BAF7/45	750	700	300 x 300 x 500	890 x 805 x 1020	45	6.0	230V	1	135

Economy Chamber Furnaces — 1100°C Maximum

BCF11-VRP has been developed to meet the basic laboratory needs at economical prices

BCF11/5-VRP

Standard Features:

- BCF11 is suitable for light-duty general laboratory work and provides satisfactory performance for many heating applications
- 5 & 8 litres are available chamber volumes
- Vertically lifting door keeps the hot surface away from the user
- A small ceramic chimney & hard ceramic hearth tile are fitted as standard
- All furnace models are provided with Positive break door safety switch that isolates chamber from power supply when door is open
- These furnaces are equipped with an Elite VRP controller, which includes 8 programs, each with 8 segments as standard. In addition, furnaces with Eurotherm controllers are also available. Other multi-segment, multi-program storage controllers are available as an option

Options:

- Over temperature protection controller

Technical Data:

Model	Max Temp (°C)	Max Cont (°C)	Max Chamber Dims (mm) H x W x D	External Case Dims (mm) H x W x D	Chamber Capacity (Litres)	Nominal Power (Kw)	Volts	Phase	Net Wt. (kg)
BCF11/5-VRP	1100	1050	150 x 150 x 225	593 x 400 x 505	5	2.0	230	1	36
BCF11/8-VRP	1100	1050	180 x 190 x 235	680 x 535 x 520	8	2.0	230	1	41

Custom Designed For all Chamber furnaces, Elite Thermal manufactures custom-built furnaces. Please contact us with your requirement .

weights and dimensions given are indicative only

General Purpose Chamber Furnaces — 1200°C Maximum

BCF12-VRP has been developed for general purpose applications

BCF12/8-VRP

Standard Features:

- BCF12 is suitable for light-duty general laboratory work and provides satisfactory performance for many firing applications
- 5, 8, 12, 25, 42 & 45 litre are available chamber volumes
- A small ceramic chimney & hard ceramic hearth tile are fitted as standard
- Vertically lifting door keeps the hot surface away from the user
- Positive break door safety switch isolates chamber from power supply when door is open
- These furnaces are equipped with an Elite VRP controller, which includes 8 programs, each with 8 segments as standard. In addition, furnaces with Eurotherm controllers are also available. Other multi-segment, multi-program storage controllers are available as an option

Options:

- Over temperature protection controller

Technical Data:

Model	Max Temp (°C)	Max Cont (°C)	Max Chamber Dims (mm) H x W x D	External Case Dims (mm) H x W x D	Chamber Capacity (Litres)	Nominal Power (Kw)	Volts	Phase	Net Wt. (kg)
BCF12/5-VRP	1200	1150	150 x 150 x 225	593 x 400 x 505	5	2.0	230	1	36
BCF12/8-VRP	1200	1150	180 x 190 x 235	680 x 535 x 520	8	2.0	230	1	41
BCF12/12-VRP	1200	1150	200 x 200 x 300	730 x 585 x 645	12	3.0	230	1	54
BCF12/25-VRP	1200	1150	250 x 250 x 400	780 x 635 x 695	25	6.0	230	1	67
BCF12/42-VRP	1200	1150	305 x 305 x 450	890 x 805 x 765	42	6.0	230	1	117
BCF12/45-VRP	1200	1150	300 x 300 x 500	890 x 805 x 765	45	6.0	230	1	120

General Purpose Chamber Furnaces — 1300° C Maximum

BCF13-VRP is a fast heating furnace designed for general purpose use, where clean operating conditions prevail. Good temperature uniformity is achieved by the use of open heating elements retained in low thermal mass chamber wall panels.

BCF13/8-VRP

Standard Features:

- Vertically lifting door keeps the hot surface away from the user
- Positive break door safety switch isolates chamber from power supply when door is open
- A small ceramic chimney & hard ceramic hearth tile are fitted as standard
- These furnaces are equipped with an Elite VRP controller, which includes 8 programs, each with 8 segments as standard. In addition, furnaces with Eurotherm controllers are also available. Other multi-segment, multi-program storage controllers are available as an option

Options:

- Over temperature protection controller

Technical Data:

Model	Max Temp (°C)	Max Cont (°C)	Max Chamber Dims (mm) H x W x D	External Case Dims (mm) H x W x D	Chamber Capacity (Litres)	Nominal Power (Kw)	Volts	Phase	Net Wt. (kg)
BCF13/5-VRP	1300	1250	150 x 150 x 225	593 x 400 x 505	5	2.0	230	1	36
BCF13/8-VRP	1300	1250	180 x 190 x 235	680 x 535 x 520	8	2.0	230	1	41
BCF13/12-VRP	1300	1250	200 x 200 x 300	730 x 585 x 645	12	3.0	230	1	54
BCF13/25-VRP	1300	1250	250 x 250 x 400	780 x 635 x 695	25	6.0	230	1	67
BCF13/42-VRP	1300	1250	305 x 305 x 450	890 x 805 x 765	42	6.0	400	3	117
BCF13/45-VRP	1300	1250	300 x 300 x 500	890 x 805 x 765	45	6.0	400	3	120

weights and dimensions given are indicative only

Rapid Heating Chamber Furnaces — 1200°C Maximum

BCFR12/15-VRP

BCFR12-VRP has been developed for applications when rapid heating/cooling are required. This design is ideal for light/medium duty applications, but is not suitable for applications where the sample is large with a high mass.

Standard Features:

- Available in 5,15 & 25 litre capacities as standard, with larger units made to customer specifications
- Heating is by free radiating wire elements located on 2 sides and roof of the chamber
- A small ceramic chimney is fitted as standard
- Vertically lifting door keeps the hot surface away from the user
- These furnaces are equipped with an Elite VRP controller, which includes 8 programs, each with 8 segments as standard. In addition, furnaces with Eurotherm controllers are also available. Other multi-segment, multi-program storage controllers are available as an option
- Rapid thermal response from free radiating coiled wire elements

Options:

- Over temperature protection controller

Technical Data:

Model	Max Temp (°C)	Max Cont (°C)	Max Chamber Dims (mm) H x W x D	External Case Dims (mm) H x W x D	Chamber Capacity (Litres)	Nominal Power (Kw)	Volts	Phase	Net Wt. (kg)
BCFR12/5-VRP	1200	1100	150 x 150 x 150	680 x 535 x 520	5	2.75	230	1	45
BCFR12/15-VRP	1200	1100	230 x 230 x 300	730x 585 x 645	15	5.0	230	1	58
BCFR12/25-VRP	1200	1100	250 x 250 x 400	780 x 635 x 695	25	9.0	400	1	72

Rapid Heating Chamber Furnaces — 1300°C Maximum

BCFR13/15-VRP

BCFR13-VRP has been developed for applications when rapid heating/cooling is required. This design is ideal for light/medium duty applications, but is not suitable for applications where the sample is large with a high mass.

Standard Features:

- Available in 5,15 & 25 litre capacities as standard, with larger units made to customer specifications
- Heating is by free radiating wire elements located on 2 sides and roof of the chamber
- A small ceramic chimney is fitted as standard
- Vertically lifting door keeps the hot surface away from the user
- These furnaces are equipped with an Elite VRP controller, which includes 8 programs, each with 8 segments as standard. In addition, furnaces with Eurotherm controllers are also available. Other multi-segment, multi-program storage controllers are available as an option
- Rapid thermal response from free radiating coiled wire elements

Options:

- Over temperature protection controller

Technical Data:

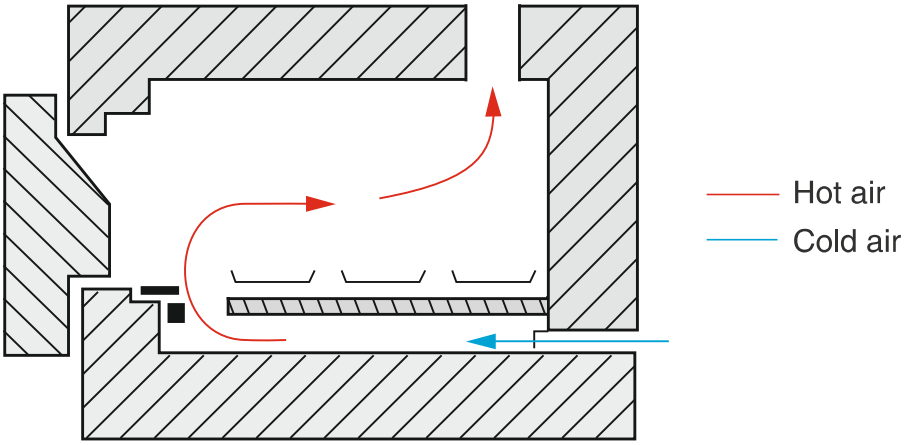
Model	Max Temp (°C)	Max Cont (°C)	Max Chamber Dims (mm) H x W x D	External Case Dims (mm) H x W x D	Chamber Capacity (Litres)	Nominal Power (Kw)	Volts	Phase	Net Wt. (kg)
BCFR13/5-VRP	1300	1200	150 x 150 x 150	680 x 535 x 520	5	2.75	230	1	45
BCFR13/15-VRP	1300	1200	230 x 230 x 300	730x 585 x 645	15	5.0	230	1	58
BCFR13/25-VRP	1300	1200	250 x 250 x 400	780 x 635 x 695	25	9.0	400	1	72

Product Quality All Elite Thermal Chamber Furnaces are designed and manufactured to meet the highest standards of Quality, Reliability and Operator Safety.

weights and dimensions given are indicative only

Pre-heated airflow feature in Elite Ashing Furnaces (BMF11 & BSF12/A)

For Ashing of samples, the furnace is designed with a pre-heated airflow system and a large chimney to ensure good combustion conditions within the chamber while facilitating adequate air exchange.



The chamber's airflow management system relies on natural convection to regulate air movement, promoting uniform temperature distribution. Hot air rises while cooler air descends, facilitated by a tall chimney that ensures effective circulation.

The system achieves 4-5 air volume changes per minute, maintaining steady airflow essential for consistent heat treatment. Incoming air is preheated to prevent localized cooling, particularly near the inlet, ensuring consistent temperature throughout the chamber. This stable airflow is crucial for ashing, where precise and uniform heating is required for accurate and repeatable results. The chamber is designed for high-precision applications needing reliable temperature control.

Laboratory Ashing Furnaces 1100°C Maximum

BMF11-VRP is designed for general purpose as well as ashing applications and features a pre-heated airflow system and large chimney to ensure good combustion conditions within the chamber

Standard Features:

- 3 & 7 litre chamber volumes are available
- Vertically lifting door keeps the hot surface away from the user
- Positive break door safety switch that isolates chamber from power supply when door is open

Options:

- Over temperature protection controller

- These furnaces are equipped with an Elite VRP controller, which includes 8 programs, each with 8 segments as standard. In addition, furnaces with Eurotherm controllers are also available. Other multi-segment, multi-program storage controllers are available as an option
- Its design makes it ideal for Ashing of Coal & coke samples
- A large metal chimney is fitted as standard

BMF11/3-VRP

Technical Data:

Model	Max Temp (°C)	Max Cont (°C)	Max Chamber Dims (mm) H x W x D	External Case Dims (mm) H x W x D	Chamber Capacity (Litres)	Nominal Power (Kw)	Volts	Phase	Net Wt. (kg)
BMF11/3-VRP	1100	1050	90 x 150 x 235	593 x 400 x 505	3	2.0	230	1	36
BMF11/7-VRP	1100	1050	130 x 180 x 310	680 x 535 x 520	7	3.0	230	1	39

Custom Designed For all Chamber furnaces, Elite Thermal manufactures custom-built furnaces. Please contact us with your requirement .

weights and dimensions given are indicative only

Laboratory Ashing Furnaces — 1200°C Maximum

BSF12/A – The BSF12/A furnace is designed for ashing applications. Its design makes it ideal for treating heavier loads, and the processing of material that could contaminate floor mounted heating elements through spillage

Standard Features:

- An ashing feature which provides combustion conditions within the chamber, and improved process fume removal from the chamber
- Vertically lifting door keeps the hot surface away from the user
- Positive break door safety switch isolates chamber from power supply when door is open
- A large metal chimney is fitted as standard
- BSF models use slabs with embedded heating elements
- 2 sided heating
- Replaceable ceramic hearth tile
- Ideal for ashing foods, plastics, coal, coke & other hydrocarbon materials
- This furnace comes with a controller having single ramp & set point and process timer

BSF12/6A

Options:

- 4 side heating elements option is available for when heavier loads or metal retorts are fitted
- Over temperature protection controller
- Multi segment, multi program storage controllers

Technical Data:

Model	Max Temp (°C)	Max Cont (°C)	Max Chamber Dims (mm) H x W x D	External Case Dims (mm) H x W x D	Chamber Capacity (Litres)	Nominal Power (Kw)	Volts	Phase	Net Wt. (kg)
BSF12/4A	1200	1150	101 x 152 x 254	680 x 535 x 520	4	1.5	230	1	55
BSF12/6A	1200	1150	127 x 152 x 305	730 x 585 x 645	6	2.0	230	1	62
BSF12/10A	1200	1150	127 x 178 x 406	730 x 585 x 645	10	2.5	230	1	73
BSF12/15A	1200	1150	220 x 220 x 310	730 x 585 x 645	15	3.0	230	1	75
BSF12/22A	1200	1150	203 x 228 x 454	780 x 635 x 695	30	5.0	230	1	137
BSF12/45A	1200	1150	300 x 300 x 500	890 x 805 x 765	45	6.0	230	1	148

Product Quality All Elite Thermal Chamber Furnaces are designed and manufactured to meet the highest standards of Quality, Reliability and Operator Safety.

weights and dimensions given are indicative only

Chamber Furnaces with Slab Heating Elements — 1200°C Maximum

BSF – The BSF furnace is designed for general laboratory use, its design makes it ideal for treating heavier loads, and the processing of material that could contaminate floor mounted heating elements through spillage

BSF12/6

Standard Features:

- Vertically lifting door keeps the hot surface away from the user
- Positive break door safety switch isolates chamber from power supply when door is open
- This furnace comes with a controller having single ramp & set point and process timer
- BSF models use heating elements embedded in slabs
- 2 sided heating
- Replaceable ceramic hearth tile
- A small ceramic chimney is fitted as standard

Options:

- 4 side heating elements option is available for when heavier loads or metal retorts are fitted
- Over temperature protection controller
- Multi segment, multi program storage controllers

Technical Data:

Model	Max Temp (°C)	Max Cont (°C)	Max Chamber Dims (mm) H x W x D	External Case Dims (mm) H x W x D	Chamber Capacity (Litres)	Nominal Power (Kw)	Volts	Phase	Net Wt. (kg)
BSF12/4	1200	1150	101 x 152 x 254	680 x 535 x 520	4	1.5	230	1	55
BSF12/6	1200	1150	127 x 152 x 305	730 x 585 x 645	6	2.0	230	1	62
BSF12/10	1200	1150	127 x 178 x 406	730 x 585 x 645	10	2.5	230	1	73
BSF12/15	1200	1150	220 x 220 x 310	730 x 585 x 645	15	3.0	230	1	75
BSF12/22	1200	1150	203 x 228 x 454	780 x 635 x 695	30	5.0	230	1	137
BSF12/45	1200	1150	300 x 300 x 500	890 x 805 x 765	45	6.0	230	1	148

Top Loading Chamber Furnaces — 1200°C Maximum

TLCF – This is suited to applications which involves heavy loads, where samples are contained in tall crucibles, or where there is a danger of spillage onto the base of the chamber

TLCF12/5

Standard Features:

- Relative ease and safety for the operator
- These heating elements are robust cast refractory panels mounted on all sides
- Exhaust port to assist fumes removal is fitted to the furnace door
- A lever allows the operator to open and close top opening door safely and conveniently

Options:

- Over temperature protection controller
- Monitoring probes
- Multi segment, multi program storage controllers

Technical Data:

Model	Max Temp (°C)	Max Cont (°C)	Max Chamber Dims (mm) H x W x D	External Case Dims (mm) H x W x D	Chamber Capacity (Litres)	Nominal Power (Kw)	Volts	Phase	Net Wt. (kg)
TLCF12/5	1200	1150	260 x 155 x 130	670 x 550 x 425	5	2.5	230	1	88
TLCF12/10	1200	1150	365 x 185 x 155	770 x 575 x 450	10	3.0	230	1	130
TLCF12/25	1200	1150	450 x 250 x 225	875 x 625 x 550	25	6.0	230	1	UR
TLCF12/125	1200	1150	620 x 450 x 450	1175 x 950 x 950	125	18.0	400	3	UR

Custom Designed For all Chamber furnaces, Elite Thermal manufactures custom-built furnaces. Please contact us with your requirement .

weights and dimensions given are indicative only

Cupellation furnace, BRF12-CF24 — 1200°C Maximum

BRF12-CF24 Cupellation furnaces are specifically designed for the fire assay process, a standard method used to determine the purity of precious metals.

The design of the cupellation furnace range safeguards it from corrosive environments that could cause a conventional furnace to deteriorate.

This Cupellation furnace accommodates 24 cupels of size No.8 or 32 cupels of size No.6. We also offer a bigger chamber furnace that can hold 47 cupels of size no.8 or 70 cupels of size no.6.

We also provide cupellation furnaces with other capacities upon request.

Standard Features:

- Maximum Temperature: 1200°C
- Maximum Continuous Temperature: 1200°C
- Chamber (mm) - H x W x D -200 x 250 x 340. (Bigger chamber furnaces are also available and can be offered upon request)
- Combination dense refractory for durability, load bearing and corrosion resistance with low thermal mass remainder for economical running
- The working chamber is lined with silicon carbide slabs to withstand the lead fumes evolved during the process
- A variable airflow system allows preheated air into the chamber and out of a large insulated chimney to evacuate process fumes as quickly as possible
- R-type Thermocouples
- Over Temperature protection is fitted as standard
- A removable container attached to the chimney to collect condensed lead
- Vertically lifting door keeps the hot surface away from the user
- Positive break door safety switch isolates heating elements from power supply when door is opened
- High-end micro-processor PID controller

BRF12-CF24

Cupellation furnace capable of accommodating 47 cupels of size No.8 or 70 cupels of size No.6 is also available.

Cupellation furnace of other capacities are also available on request.

Optional Features:

- Multi segment, multi program storage controllers
- Magnesia refractory cupels of various standard sizes

Product Quality All Elite Thermal Chamber Furnaces are designed and manufactured to meet the highest standards of Quality, Reliability and Operator Safety.

weights and dimensions given are indicative only

High Temperature Chamber Furnaces 1400°C, 1500°C and 1600°C Maximum

BRF – The BRF14, 15 & 16 models form a comprehensive range of high thermal efficiency, rapid heating chamber furnaces with operating temperatures up to 1400°C, 1500°C and 1600°C.

Standard Features:

- The BRF14, BRF15 & BRF16 models are heated by silicon carbide rod elements
- Silicon carbide heating elements provide long life and are able to withstand the stress of intermittent operation
- Vertically lifting door keeps the hot surface away from the user
- A door switch isolates power from the heating elements whenever door is opened for operator safety
- A small ceramic chimney is fitted as standard

Options:

- Electrically operated doors are available as chargeable option (E)
- Multi segment, multi program storage controllers
- Over temperature protection controller is optional

BRF15/5

BRF16/35
with electrically operated door option

Technical Data:

Model	Max Temp (°C)	Max Cont (°C)	Max Chamber Dims (mm) H x W x D	External Case Dims (mm) H x W x D	Chamber Capacity (Litres)	Nominal Power (Kw)	Volts	Phase	Net Wt. (kg)
BRF14/5	1400	1350	150 x 140 x 250	730 x 585 x 645	5	4.5	230	1	58
BRF14/10	1400	1350	190 x 180 x 310	780 x 635 x 715	10	7.5	230	1	74
BRF14/15	1400	1350	225 x 225 x 300	890 x 805 x 765	15	8.5	230	3	100
BRF14/27	1400	1350	290 x 270 x 340	890 x 805 x 765	27	12.0	400	3	110
BRF15/5	1500	1450	150 x 140 x 250	730 x 585 x 670	5	4.5	400	3	58
BRF15/10	1500	1450	190 x 180 x 310	780 x 635 x 715	10	7.5	400	3	74
BRF15/15	1500	1450	225 x 225 x 300	890 x 805 x 765	15	8.5	400	3	100
BRF15/27	1500	1450	290 x 270 x 340	890 x 805 x 765	27	12.0	400	3	110
BRF16/5	1600	1550	150 x 140 x 250	730 x 585 x 670	5	5.0	400	3	59
BRF16/10	1600	1550	190 x 180 x 310	780 x 635 x 715	10	10.0	400	3	74
BRF16/15	1600	1550	225 x 225 x 300	1050 x 950 x 823	15	11.0	400	3	100
BRF16/26	1600	1550	255 x 300 x 340	1050 x 950 x 823	26	14.0	400	3	110
BRF16/35	1600	1550	255 x 300 x 465	1475 x 1100 x 1000	35	16.0	400	3	380

Custom Designed For all Chamber furnaces, Elite Thermal manufactures custom-built furnaces. Please contact us with your requirement.

weights and dimensions given are indicative only

High Temperature Chamber Furnaces 1700°C and 1800°C Maximum

BRF – The BRF17 & 18 models form a comprehensive range of high thermal efficiency, rapid heating chamber furnaces with operating temperatures up to 1700°C and 1800°C.


BRF/17

Standard Features:

- The BRF17 models are heated by Molybdenum Disilicide elements
- The BRF18 models are heated by Molybdenum Tungsten Disilicide elements
- Molybdenum Disilicide and Molybdenum Tungsten Disilicide provide long life and are the preferred heating elements for 1700°C and 1800°C
- Over temperature protection is included in the standard specification for 1700 & 1800 models
- Vertically lifting door keeps the hot surface away from the user
- A door switch isolates power from the heating elements whenever door is opened for operator safety
- A small ceramic chimney is fitted as standard


BRF18/5M

Options:

- Multi segment, multi program storage controllers

Technical Data:

Model	Max Temp (°C)	Max Cont (°C)	Max Chamber Dims (mm) H x W x D	External Case Dims (mm) H x W x D	Chamber Capacity (Litres)	Nominal Power (Kw)	Volts	Phase	Net Wt. (kg)
BRF17/5M	1700	1650	160 x 150 x 215	635 x 900 x 695	5	4.4	230	1	128
BRF17/5E	1700	1650	160 x 150 x 215	635 x 900 x 695	5	4.4	230	1	128
BRF17/12M & E	1700	1650	230 x 230 x 230	1550 x 850 x 740	12	7.6	230	1	230
BRF17/27E	1700	1650	300 x 300 x 300	1600 x 880 x 800	27	12.0	400	3	316
BRF18/5M	1800	1750	170 x 150 x 200	635 x 900 x 785	5	4.7	230	1	170
BRF18/5E	1800	1750	170 x 150 x 200	635 x 900 x 785	5	4.7	230	1	170
BRF18/13M/E	1800	1750	220 x 200 x 300	1600 x 880 x 800	13	9.0	230	1	287
BRF18/18E	1800	1750	220 x 200 x 400	1600 x 880 x 800	18	11.6	230	1	365
BRF18/27E	1800	1750	300 x 300 x 300	1600 x 1050 x 880	27	15.0	400	3	494

M: Manually operated door option E: Electrically operated door option

Product Quality All Elite Thermal Chamber Furnaces are designed and manufactured to meet the highest standards of Quality, Reliability and Operator Safety.

weights and dimensions given are indicative only

Bottom Loading Chamber Furnaces 1700°C and 1800°C Maximum

BEB – The electrically operated elevator hearth facilitates smooth loading/unloading of the sample/crucible.
The design provides a fast hearth ascent/descent, therefore making it ideal for rapid load transfer applications such as glass melting and firing of advanced ceramics. All instrumentation and control gear is housed in a separate free standing console.

Standard Features:

- Rapid heating & cooling cycles can be achieved through raising and lowering the hearth
- DC Motor with UP and DOWN controls. Upper and lower limit switches are fitted for safety
- Elevator Travel is 400mm nominal with 8 seconds travel time
- Molybdenum Disilicide / Molybdenum Tungsten Disilicide elements on all 4 sides of chamber for good uniform heating
- Graded premium quality ceramic fibre insulation
- High end Microprocessor PID controller
- Overtemperature Protection System as standard
- A small ceramic chimney is fitted as standard

BEB17 & 18

Options:

- Compatible crucibles
- Multi segment, multi program storage controllers
- Flow meters for Air and inert gasses
- Ceramic liners are available for use where corrosive fumes are generated or for use with protective atmospheres

Technical Data:

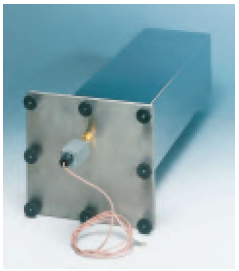
Model	Max Temp (°C)	Max Cont (°C)	Max Chamber Dims (mm) H x W x D	External Case Dims (mm) H x W x D	External Dimensions Controller (mm)	Chamber Capacity (Litres)	Nominal Power (Kw)	Volts	Phase	Net Wt. (kg)
BEB17/5	1700	1650	170 x 170 x 170	1125 x 800 x 763	610 x 530 x 602	5	5.0	230	1	188
BEB18/5	1800	1750	170 x 170 x 170	1125 x 800 x 763	610 x 530 x 602	5	6.0	230	1	188

Note: Other temperatures (1100°C to 1600°C) and chamber capacities/volumes are offered in custom-built models.

Custom Designed For all Chamber furnaces, Elite Thermal manufactures custom-built furnaces. Please contact us with your requirement.

weights and dimensions given are indicative only

Metal Atmosphere Retorts



- For use up to 1100°C when controlled atmosphere conditions are required and to protect the furnace insulation & heating elements from chemical attack (it may be necessary to update the furnace power when this option is selected)

Hearth Tiles

- Hearth tiles provide protection for the furnace from spillage. Removable hearth tiles are offered at extra cost.
- They are available in variety of materials such as Silicon Carbide, Cordierite, Fibre Board, Alumina and Zirconia

Ceramic Liners

- These are made of silicon carbide, alumina, and other ceramic materials, and are designed to protect heating elements from chemicals or fumes produced during sample analysis. These liners help maintain an inert environment during processes, ensuring minimal contamination. However, they are not completely gas-tight.

Solenoid valves

- An electric valve can be fitted to either start or stop a gas flow
- This can be activated manually by a panel mounted switch, but more typically it is controlled automatically through a program controller

Flammable Gas control/Safety system

- A full safety system for use with Hydrogen and other combustible gases is available providing timed purging and gas monitoring

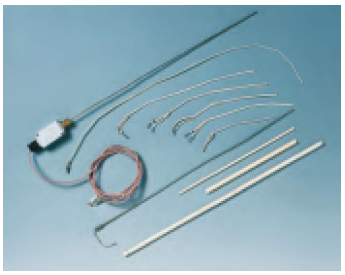
Powered Exhaust/chimney

- A “Venturi – action” chimney system to improve the rate of fume/binder removal

Temperature Indicator

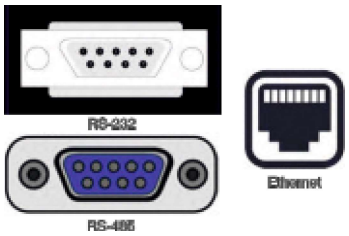
- An independent digital temperature indicator is built into the furnace control panel and wired to a panel mounted thermocouple socket. (for use with an independent monitor thermocouple)

Monitor thermocouple



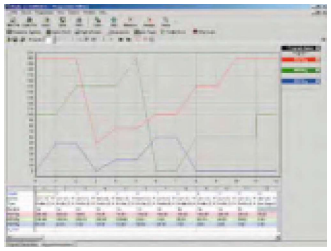
- An independent thermocouple for use in conjunction with a digital temperature indicator

Digital communications



- Digital Communications ports can be fitted to furnaces for external programming or data logging from the temperature controller/programmer(s)
- Connections provided for single instrument RS232 or RS485 standards
- Multi instrument RS485 standard
- Ethernet connections available on certain temperature controllers

Digital communications Software



- We offer the i-Tools software package for communication between a computer and control instruments
- This software allows setting of instrument control parameters and time/temperature programs from a computer plus starting & stopping of programs and data logging from one or more controllers

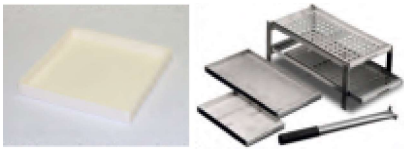
Chart recorders

- Various chart recorders can be supplied ranging from simple single pen with 100mm wide chart paper or multipoint paperless models

Time Switch

- A digital 7day / 24 hour time switch for programmed switch on / off when using basic temperature controllers. A time switch may not be necessary if more sophisticated controllers are fitted

Tiles and trays



- A broad range of shapes and sizes are available in various grades of ceramics and metals

Crucibles, Boats, Ignition Dishes & Plates

- A wide variety of shapes and sizes are available in various grades of ceramics and metals

Retort Chamber Furnace

- Temperature: 1100°C
- Capacity: 32 litres
- Application: For treatments of magnetic steels

Double Furnaces Rig

- Temperature: 1200°C
- Application: For optoelectronics material research

2 Zone Precision Controlled Furnace

- Temperature: 1700°C
- Capacity: 122 litres
- Application: For R&D in precision ceramics

Multi Chamber Gradient Furnace

- Temperature: 1200°C
- Application: For Production of YBCO super conducting magnets

3 Zone Temperature Control Furnace

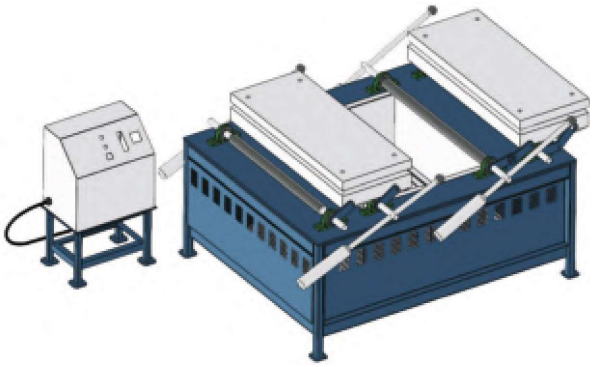
- Temperature: 1700°C
- Capacity: 72 litres
- Application: For processing ceramic fuel cell parts

Precision in ceramics

- Temperature: 1800°C
- Capacity: 11 litres
- Application: For precision in ceramics

Precious Metals Treatment

- Temperature: 1400°C
- Capacity: 350 litres
- Application: For heat treatment of Precious metals in protective atmosphere



Top Loading Double Chamber Furnace

- Temperature: 1200°C
- Capacity: 144 litres
- Application: For Fusion applications

Miniature Furnace

- Temperature: 1800°C
- Application: For rapid sintering of tungsten electrodes

Special Elevator Retort Sintering Furnace

- Application: Sintering of specially lined “Heat Pipe” devices

General R & D Furnace

- Temperature: 1800°C
- Capacity: 27 litres
- Application: For general R&D work on ceramics & cements

Ceramic Electronic Components Processing

- Temperature: 1600°C
- Capacity: 122 litres
- Application: For processing ceramic electronic components

Retort Furnaces

- Temperature: 1000°C
- Capacity: 340 litres
- Application: For debinding of metals and ceramics injection moulded parts prior to sintering

Rapid Loading / Unloading Furnaces

- Temperature: 1200°C
- Capacity: 45 litres
- Application: With powered doors for batch heat treatment of springs

High Temperature Mechanical Testing Furnaces

- Temperature: 1200°C
- Capacity: 250 litres
- Application: For heating large concrete beams under high temperature mechanical testing

Ceramic Medical Implants Processing

- Temperature: 1700°C
- Capacity: 50 litres
- Application: For processing of ceramic medical implants

Trolley Loading Elevator Hearth Furnaces

- Temperature: 1700°C
- Capacity: 270 litres
- Application: For sintering high precision technical ceramics

Split Chamber Furnace

- Temperature: 1200°C
- Application: For heating racing car parts under fatigue test conditions