Laboratory Chamber Furnace - CWF

General Information

The CWF range of general purpose laboratory chamber furnaces is bench mounted. Models are available in five sizes with a maximum operating temperature up to 1300 °C.

The airflow in the CWF-B furnaces is enhanced by the addition of air inlet holes in the door and a tall chimney which rapidly removes the fumes from the furnace.

The CWF-BAL furnace with integral balance can be used for thermogravimetric analysis (TGA) and loss on ignition (LOI) applications, where weight change of the sample must be monitored during the heating process. This is required, for example, in the determination of inorganic matter content in materials such as cement, lime, calcinated bauxite and refractories. For applications involving organic matter content, please refer to the AAF-BAL.

Standard features

- 1100°C, 1200°C or 1300°C maximum operating temperature
- 5, 13, 23, 36 or 65 litre chamber volumes
- Carbolite Gero 301 controller, with single ramp to set-point & process timer
- Soft closing door on 5, 13, 21 & 23 litre models
- Parallel action door keeps heated surface away from the user
- Delayed start / process timer function as standard
- Hard wearing alumina element carrier, furnace entrance and hearth
- Energy efficient low thermal mass insulation
- Free radiating wire wound elements for optimum uniformity
- Easy access to elements & controls simplifies maintenance & servicing
- CWF-B: Enhanced airflow from tall chimney & door vents for full combustion
- CWF-BAL: With integrated balance that runs independently of the furnace control system
- CWF-BAL: Software supplied with the balance may be used to monitor the balance reading via a computer
- CWF-BAL: Maximum capacity of balance is 3 kg with a resolution of 0.01 g (other capacities available)

Options (specify these at time of order)

- Over-temperature protection (recommended to protect valuable contents & for unattended operation)
- A range of sophisticated digital controllers, multi-segment programmers and data loggers is available. These can be fitted with RS232, RS485 or Ethernet communications
- A range of metallic retorts to work with modified atmospheres up to 1150°C
- AMS2750E Nadcap compatible models are available for aerospace applications
- CWF-BAL: 8 kg balance with a resolution of 0.1 g

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Technical Specifications

CWF 11/5	
Max temp (°C)	1100
Max continuous operating temp (°C)	1000
Volume (litres)	5
Heat-up time (mins)	47
Dimensions: Internal H x W x D (mm)	135 x 140 x 250
Dimensions: External H x W x D (mm)	585 x 375 x 485
Dimensions: External with door open H x W x D (mm)	800 x 375 x 485
Temperature uniformity of ± 5°C within H x W x D (mm)	85 x 90 x 110
Max power (W)	2400
Holding power (W)	790
Thermocouple type	R
Weight (kg)	30

CWF 11/13	
Max temp (°C)	1100
Max continuous operating temp (°C)	1000
Volume (litres)	13
Heat-up time (mins)	90
Dimensions: Internal H x W x D (mm)	200 x 200 x 325
Dimensions: External H x W x D (mm)	655 x 435 x 610
Dimensions: External with door open H x W x D (mm)	905 x 435 x 610
Temperature uniformity of ± 5°C within H x W x D (mm)	120 x 120 x 185
Max power (W)	3100
Holding power (W)	1500
Thermocouple type	R
Weight (kg)	47

Laboratory Chamber Furnace - CWF

CWF 11/23	
Max temp (°C)	1100
Max continuous operating temp (°C)	1000
Volume (litres)	23
Heat-up time (mins)	36
Dimensions: Internal H x W x D (mm)	235 x 245 x 400
Dimensions: External H x W x D (mm)	705 x 505 x 675
Dimensions: External with door open H x W x D (mm)	990 x 505 x 675
Temperature uniformity of ± 5°C within H x W x D (mm)	155 x 165 x 285
Max power (W)	7000
Holding power (W)	1900
Thermocouple type	R
Weight (kg)	68

CWF 12/5	
Max temp (°C)	1200
Max continuous operating temp (°C)	1100
Volume (litres)	5
Heat-up time (mins)	51
Dimensions: Internal H x W x D (mm)	135 x 140 x 250
Dimensions: External H x W x D (mm)	585 x 375 x 485
Dimensions: External with door open H x W x D (mm)	800 x 375 x 485
Temperature uniformity of ± 5°C within H x W x D (mm)	85 x 90 x 125
Max power (W)	2400
Holding power (W)	850
Thermocouple type	R
Weight (kg)	30

Laboratory Chamber Furnace - CWF

CWF 12/13	
Max temp (°C)	1200
Max continuous operating temp (°C)	1100
Volume (litres)	13
Heat-up time (mins)	80
Dimensions: Internal H x W x D (mm)	200 x 200 x 325
Dimensions: External H x W x D (mm)	655 x 435 x 610
Dimensions: External with door open H x W x D (mm)	905 x 435 x 610
Temperature uniformity of ± 5°C within H x W x D (mm)	120 x 120 x 200
Max power (W)	3100
Holding power (W)	1550
Thermocouple type	R
Weight (kg)	47

CWF 12/23	
Max temp (°C)	1200
Max continuous operating temp (°C)	1100
Volume (litres)	23
Heat-up time (mins)	45
Dimensions: Internal H x W x D (mm)	235 x 245 x 400
Dimensions: External H x W x D (mm)	705 x 505 x 675
Dimensions: External with door open H x W x D (mm)	990 x 505 x 675
Temperature uniformity of ± 5°C within H x W x D (mm)	155 x 165 x 325
Max power (W)	7000
Holding power (W)	2250
Thermocouple type	R
Weight (kg)	68

Laboratory Chamber Furnace - CWF

CWF 12/36	
Max temp (°C)	1200
Max continuous operating temp (°C)	1100
Volume (litres)	36
Heat-up time (mins)	37
Dimensions: Internal H x W x D (mm)	250 x 320 x 450
Dimensions: External H x W x D (mm)	810 x 690 x 780
Dimensions: External with door open H x W x D (mm)	1105 x 690 x 780
Temperature uniformity of ± 5°C within H x W x D (mm)	170 x 240 x 357
Max power (W)	9000
Holding power (W)	--
Thermocouple type	R
Weight (kg)	100

CWF 12/65	
Max temp (°C)	1200
Max continuous operating temp (°C)	1100
Volume (litres)	65
Heat-up time (mins)	40
Dimensions: Internal H x W x D (mm)	278 x 388 x 595
Dimensions: External H x W x D (mm)	885 x 780 x 945
Dimensions: External with door open H x W x D (mm)	1245 x 780 x 945
Temperature uniformity of ± 5°C within H x W x D (mm)	178 x 288 x 455
Max power (W)	14000
Holding power (W)	--
Thermocouple type	R
Weight (kg)	165

Laboratory Chamber Furnace - CWF

CWF 13/5	
Max temp (°C)	1300
Max continuous operating temp (°C)	1200
Volume (litres)	5
Heat-up time (mins)	75
Dimensions: Internal H x W x D (mm)	135 x 140 x 250
Dimensions: External H x W x D (mm)	585 x 375 x 485
Dimensions: External with door open H x W x D (mm)	800 x 375 x 485
Temperature uniformity of ± 5°C within H x W x D (mm)	85 x 90 x 150
Max power (W)	2400
Holding power (W)	1000
Thermocouple type	R
Weight (kg)	30

CWF 13/13	
Max temp (°C)	1300
Max continuous operating temp (°C)	1200
Volume (litres)	13
Heat-up time (mins)	115
Dimensions: Internal H x W x D (mm)	200 x 200 x 325
Dimensions: External H x W x D (mm)	655 x 435 x 610
Dimensions: External with door open H x W x D (mm)	905 x 435 x 610
Temperature uniformity of ± 5°C within H x W x D (mm)	120 x 120 x 225
Max power (W)	3100
Holding power (W)	1800
Thermocouple type	R
Weight (kg)	47

Laboratory Chamber Furnace - CWF

CWF 13/23	
Max temp (°C)	1300
Max continuous operating temp (°C)	1200
Volume (litres)	23
Heat-up time (mins)	55
Dimensions: Internal H x W x D (mm)	235 x 245 x 400
Dimensions: External H x W x D (mm)	705 x 505 x 675
Dimensions: External with door open H x W x D (mm)	990 x 505 x 675
Temperature uniformity of ± 5°C within H x W x D (mm)	155 x 165 x 340
Max power (W)	7000
Holding power (W)	2500
Thermocouple type	R
Weight (kg)	68

CWF 13/36	
Max temp (°C)	1300
Max continuous operating temp (°C)	1200
Volume (litres)	36
Heat-up time (mins)	47
Dimensions: Internal H x W x D (mm)	250 x 320 x 450
Dimensions: External H x W x D (mm)	810 x 690 x 780
Dimensions: External with door open H x W x D (mm)	1105 x 690 x 780
Temperature uniformity of ± 5°C within H x W x D (mm)	170 x 240 x 400
Max power (W)	9000
Holding power (W)	--
Thermocouple type	R
Weight (kg)	100

Laboratory Chamber Furnace - CWF

CWF 13/65	
Max temp (°C)	1300
Max continuous operating temp (°C)	1200
Volume (litres)	65
Heat-up time (mins)	55
Dimensions: Internal H x W x D (mm)	278 x 388 x 595
Dimensions: External H x W x D (mm)	885 x 780 x 945
Dimensions: External with door open H x W x D (mm)	1245 x 780 x 945
Temperature uniformity of ± 5°C within H x W x D (mm)	178 x 288 x 255
Max power (W)	14000
Holding power (W)	--
Thermocouple type	R
Weight (kg)	165

CWF-B 11/13	
Max temp (°C)	1100
Max continuous operating temp (°C)	1000
Volume (litres)	13
Heat-up time (mins)	60
Dimensions: Internal H x W x D (mm)	200 x 200 x 325
Dimensions: External H x W x D (mm)	655 x 435 x 610
Dimensions: External with door open H x W x D (mm)	905 x 435 x 610
Temperature uniformity of ± 5°C within H x W x D (mm)	n/a
Max power (W)	3100
Holding power (W)	1600
Thermocouple type	K
Weight (kg)	47

Laboratory Chamber Furnace - CWF

CWF-B 12/13	
Max temp (°C)	1200
Max continuous operating temp (°C)	1100
Volume (litres)	13
Heat-up time (mins)	130
Dimensions: Internal H x W x D (mm)	200 x 200 x 325
Dimensions: External H x W x D (mm)	655 x 435 x 610
Dimensions: External with door open H x W x D (mm)	905 x 435 x 610
Temperature uniformity of ± 5°C within H x W x D (mm)	n/a
Max power (W)	3100
Holding power (W)	1900
Thermocouple type	R
Weight (kg)	47

CWF-BAL 11/21	
Max temp (°C)	1100
Max continuous operating temp (°C)	1000
Volume (litres)	21
Heat-up time (mins)	60
Dimensions: Internal H x W x D (mm)	215 x 245 x 400
Dimensions: External H x W x D (mm)	705 x 505 x 675 (400 x 170 x 500)*
Dimensions: External with door open H x W x D (mm)	990 x 505 x 675
Temperature uniformity of ± 5°C within H x W x D (mm)	n/a
Max power (W)	7000
Holding power (W)	--
Thermocouple type	K
Weight (kg)	80

Please note:

- Heat up rate is measured to 100°C below max, using an empty chamber
- Holding power is measured at continuous operating temperature
- Maximum power and heat up times based on a 240V supply
- The uniform volume is smaller than the total chamber volume

* Dimensions of control box