LABORATORY CHAMBER FURNACE - CWF

CWF 11/13 with CC-T1 programmer option

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
- Vertical lift door keeps heated surface away from the user
- Soft closing door on 5, 13, 21 & 23 litre models
- 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)

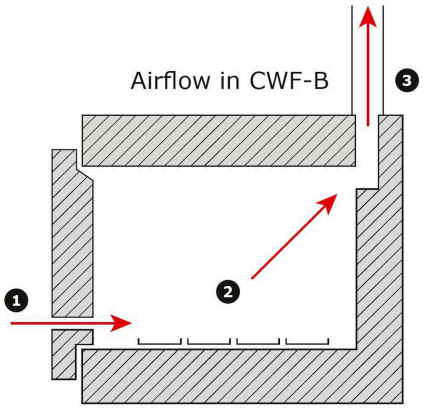
OPTIONS (*SPECIFY THESE AT TIME OF ORDER*)

- A range of sophisticated digital controllers, multi-segment programmers and data loggers is available. These can be fitted with RS232, RS485 or Ethernet communications - more information
- Over-temperature protection (recommended to protect valuable contents & for unattended operation)
- 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

TECHNICAL DETAILS

Airflow in CWF-B

1. Air inlets through the door plug
2. Airflow through the chamber promotes burning of the samples
3. Chimney pulls air through the chamber



EXAMPLES

CWF 11/13 with CC-T1 programmer option

CWF 12/36 with 3216P1 programmer option

TECHNICAL DETAILS (MODELS)

	CWF 11/5	CWF 11/13	CWF 11/23
Max temp (°C)	1100	1100	1100
Heat-up time (mins)	47	90	36
Max continuous operating temp (°C)	1000	1000	1000
Dimensions: Internal H x W x D (mm)	135 x 140 x 250	200 x 200 x 325	235 x 245 x 400
Dimensions: External H x W x D (mm)	585 x 375 x 485	655 x 435 x 610	705 x 505 x 675
Dimensions: External with door open H x W x D (mm)	800 x 375 x 485	905 x 435 x 610	990 x 505 x 675
Temperature uniformity of ± 5°C within H x W x D (mm)	85 x 90 x 110	120 x 120 x 185	155 x 165 x 285
Volume (litres)	5	13	23
Max power (W)	2400	3100	7000
Holding power (W)	790	1500	1900
Thermocouple type	R	R	R
Weight (kg)	30	47	68

	CWF 12/5	CWF 12/13	CWF 12/23
Max temp (°C)	1200	1200	1200
Heat-up time (mins)	51	80	45
Max continuous operating temp (°C)	1100	1100	1100
Dimensions: Internal H x W x D (mm)	135 x 140 x 250	200 x 200 x 325	235 x 245 x 400
Dimensions: External H x W x D (mm)	585 x 375 x 485	655 x 435 x 610	705 x 505 x 675
Dimensions: External with door open H x W x D (mm)	800 x 375 x 485	905 x 435 x 610	990 x 505 x 675
Temperature uniformity of ± 5°C within H x W x D (mm)	85 x 90 x 125	120 x 120 x 200	155 x 165 x 325
Volume (litres)	5	13	23
Max power (W)	2400	3100	7000
Holding power (W)	850	1550	2250
Thermocouple type	R	R	R
Weight (kg)	30	47	68

	CWF 12/36	CWF 12/65	CWF 13/5
Max temp (°C)	1200	1200	1300
Heat-up time (mins)	37	40	75
Max continuous operating temp (°C)	1100	1100	1200
Dimensions: Internal H x W x D (mm)	250 x 320 x 450	278 x 388 x 595	135 x 140 x 250
Dimensions: External H x W x D (mm)	810 x 690 x 780	885 x 780 x 945	585 x 375 x 485
Dimensions: External with door open H x W x D (mm)	1105 x 690 x 780	1245 x 780 x 945	800 x 375 x 485
Temperature uniformity of ± 5°C within H x W x D (mm)	170 x 240 x 357	178 x 288 x 455	85 x 90 x 150
Volume (litres)	36	65	5
Max power (W)	9000	14000	2400
Holding power (W)	--	--	1000
Thermocouple type	R	R	R
Weight (kg)	100	165	30

	CWF 13/13	CWF 13/23	CWF 13/36
Max temp (°C)	1300	1300	1300
Heat-up time (mins)	115	55	47
Max continuous operating temp (°C)	1200	1200	1200
Dimensions: Internal H x W x D (mm)	200 x 200 x 325	235 x 245 x 400	250 x 320 x 450
Dimensions: External H x W x D (mm)	655 x 435 x 610	705 x 505 x 675	810 x 690 x 780
Dimensions: External with door open H x W x D (mm)	905 x 435 x 610	990 x 505 x 675	1105 x 690 x 780
Temperature uniformity of ± 5°C within H x W x D (mm)	120 x 120 x 225	155 x 165 x 340	170 x 240 x 400
Volume (litres)	13	23	36
Max power (W)	3100	7000	9000
Holding power (W)	1800	2500	--
Thermocouple type	R	R	R
Weight (kg)	47	68	100

	CWF 13/65	CWF-B 11/13	CWF-B 12/13
Max temp (°C)	1300	1100	1200
Heat-up time (mins)	55	60	130
Max continuous operating temp (°C)	1200	1000	1100
Dimensions: Internal H x W x D (mm)	278 x 388 x 595	200 x 200 x 325	200 x 200 x 325
Dimensions: External H x W x D (mm)	885 x 780 x 945	655 x 435 x 610	655 x 435 x 610
Dimensions: External with door open H x W x D (mm)	1245 x 780 x 945	905 x 435 x 610	905 x 435 x 610
Temperature uniformity of ± 5°C within H x W x D (mm)	178 x 288 x 255	n/a	n/a
Volume (litres)	65	13	13
Max power (W)	14000	3100	3100
Holding power (W)	--	1600	1900
Thermocouple type	R	K	R
Weight (kg)	165	47	47

	CWF-BAL 11/21
Max temp (°C)	1100
Heat-up time (mins)	60
Max continuous operating temp (°C)	1000
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
Volume (litres)	21
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

www.carbolite-gero.com/cwf