

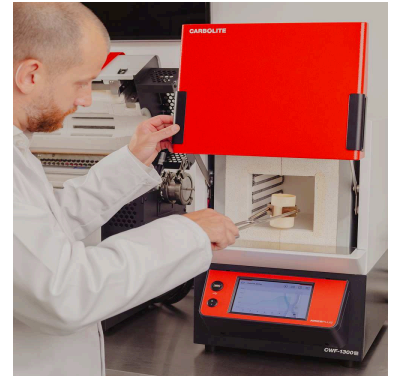


LABORATORY CHAMBER FURNACE - CWF

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.

STANDARD FEATURES

- | 1100°C, 1200°C or 1300°C maximum operating temperature
- | 5, 13, 23, 36 or 65 litre chamber volumes
- | Programmable EPC3016P1 controller
- | Vertical lift door keeps heated surface away from the user
- | Soft closing door on 5, 13 & 23 litre models protects the thermal insulation
- | 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 13/5

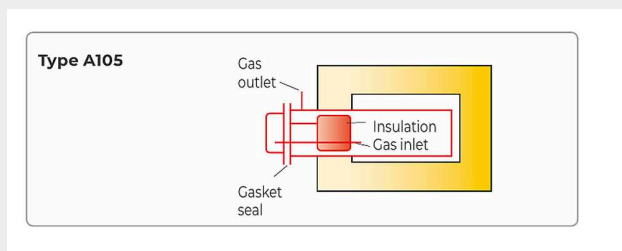
OPTIONS (*SPECIFY THESE AT TIME OF ORDER*)

- | A range of sophisticated digital controllers, multisegment programmers and data loggers with digital communication options is available - more information about controllers
- | Over-temperature protection (recommended to protect valuable contents & for unattended operation)
- | A range of metallic retorts to work with modified atmospheres up to 1100°C
- | Bespoke specifications are available for AMS2750H (Nadcap) compliant applications

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ATMOSPHERE RETORTS FOR CWF FURNACES

A retort can be used for various heat treating processes requiring a controlled inert or reactive atmosphere, e. g. to prevent oxidation or to enhance surface hardness. The A105 retort, which incorporates a silicone rubber seal, can achieve low oxygen levels. Manufactured in either NiCr alloy (Inconel) with a maximum operating temperature of 1100 °C or 314 grade stainless steel with a maximum operating temperature of 1050 °C.

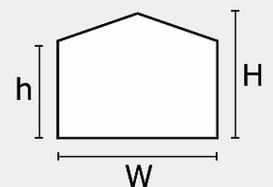


The A105 retort is sealed by a removable front opening insulated door fitted with a silicone rubber seal. Gas inlet and outlet connections are easily accessible at the front. Oxygen levels down to 30 ppm are achievable. A105 retorts for CWF furnaces are fitted with a 3 mm thermocouple gland through the centre of the door. The retort and furnace must be ordered together as the furnace is modified to allow it to be used with, and without, the retort. The A105 retort can be used in combination with the laboratory gas safety system for safe use with hydrogen.



A105 INTERNAL DIMENSIONS

CG H Model	Height h/H [mm]	Width W h/H [mm]	Depth [mm]	Door type
CWF_/13	135/150	150	275	pull out
CWF_/23	170/185	195	350	pull out
CWF 12/36	180/200	270	400	pull out



CWF 12/65	200/225	335	540	pull out
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LABORATORY CHAMBER FURNACE - CWF

EXAMPLES



CWF 13/65 with nanodac temperature controller



CWF 13/36 with AriesPlus temperature controller

TECHNICAL DETAILS (MODELS)

	CWF 11/5	CWF 11/13	CWF 11/23
Max temp (°C)	1100	1100	1100
Heat-up time (mins)	47	76	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)	595 x 375 x 495	670 x 435 x 608	715 x 505 x 680
Dimensions:			
External with door open H x W x D (mm)	810 x 375 x 540	915 x 435 x 675	1000 x 505 x 765
Temperature uniformity of $\pm 5^{\circ}\text{C}$ 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	88	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)	595 x 375 x 495	670 x 435 x 608	715 x 505 x 680
Dimensions: External with door open H x W x D (mm)	810 x 375 x 540	915 x 435 x 675	1000 x 505 x 765
Temperature uniformity of $\pm 5^{\circ}\text{C}$ 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	595 x 375 x 495
Dimensions: External with door open H x W x D (mm)	1105 x 690 x 780	1245 x 780 x 945	810 x 375 x 540
Temperature uniformity of $\pm 5^{\circ}\text{C}$ 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)	121	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)	670 x 435 x 608	715 x 505 x 680	810 x 690 x 780
Dimensions: External with door open H x W x D (mm)	915 x 435 x 675	1000 x 505 x 765	1105 x 690 x 780
Temperature uniformity of $\pm 5^{\circ}\text{C}$ 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

Max temp (°C)	1300
Heat-up time (mins)	55
Max continuous operating temp (°C)	1200
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 $\pm 5^{\circ}\text{C}$ within H x W x D (mm)	178 x 288 x 255
Volume (litres)	65
Max power (W)	14000
Holding power (W)	--
Thermocouple type	R
Weight (kg)	165

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.com/cwf