



The CWF laboratory chamber furnace range of general purpose furnaces is supplied in three sizes, each available with a maximum operating temperature of either 1100°C, 1200°C or 1300°C.

Standard features

- 1100°C, 1200°C or 1300°C maximum operating temperature
- Carbolite Gero 301 controller with single ramp to setpoint and process timer
- 5, 13 or 23 litre chamber volumes
- **NEW** Soft closing parallel action door keeps heated surface away from the user
- Delayed start / process timer function as standard
- Hard wearing alumina element carriers, furnace entrance & hearth
- Energy efficient low thermal mass insulation
- Free radiating wire wound elements for optimum uniformity
- Easy access to elements & controls simplifies maintenance & servicing



CWF 11/13

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 (see pages 94–97)
- Over-temperature protection (recommended to protect valuable contents & for unattended operation)
- A variety of retorts & modifications are available for working with modified atmospheres (see page 104)

Technical data

CGH Model	Max. temp. [°C]	Heat-up time [mins]	Max. continuous operating temperature [°C]	Dimensions: Internal H x W x D [mm]	Dimensions: External H x W x D [mm]	Dimensions: External with door open H x W x D [mm]	Temperature uniformity of ±5°C within H x W x D [mm]	Volume [litres]	Max. power [W]	Weight [kg]
CWF 11/5	1100	47	1000	135 x 140 x 250	585 x 375 x 485	800 x 375 x 485	85 x 90 x 110	5	2400	30
CWF 11/13	1100	90	1000	200 x 200 x 325	655 x 435 x 610	905 x 435 x 610	120 x 120 x 185	13	3100	47
CWF 11/23	1100	36	1000	235 x 245 x 400	705 x 505 x 675	990 x 505 x 675	155 x 165 x 285	23	7000	68
CWF 12/5	1200	51	1100	135 x 140 x 250	585 x 375 x 485	800 x 375 x 485	85 x 90 x 125	5	2400	30
CWF 12/13	1200	80	1100	200 x 200 x 325	655 x 435 x 610	905 x 435 x 610	120 x 120 x 200	13	3100	47
CWF 12/23	1200	45	1100	235 x 245 x 400	705 x 505 x 675	990 x 505 x 675	155 x 165 x 325	23	7000	68
CWF 13/5	1300	75	1200	135 x 140 x 250	585 x 375 x 485	800 x 375 x 485	85 x 90 x 150	5	2400	30
CWF 13/13	1300	115	1200	200 x 200 x 325	655 x 435 x 610	905 x 435 x 610	120 x 120 x 225	13	3100	47
CWF 13/23	1300	55	1200	235 x 245 x 400	705 x 505 x 675	990 x 505 x 675	155 x 165 x 340	23	7000	68

i Please note:
 - Heat up time is measured to 100°C below max, using an empty chamber
 - Holding power is measured at continuous operating temperature

- Maximum power and heat up time based on a 240 V supply
 - The uniform volume is smaller than the total chamber volume

Order data

Item Number	Price (\$)	Description	Standard voltages					
			-120SN	-208SN	-208TX	-230SN	-230TX	-400TN
			110 - 120 V single phase	200 - 210 V single phase	200 - 210 V three phase no N	220 - 240 V single phase	220 - 240 V three phase no N	380 - 415 V three phase + N
CWF range - front loading chamber furnaces								
9	CWF1105-volts	2820 CWF 11/5 1100°C, 5 litre, Chamber Furnace	0	0	-	0	-	-
	CWF1113-volts	3410 CWF 11/13 1100°C, 13 litre, Chamber Furnace	0	0	-	0	-	0
	CWF1123-volts	4700 CWF 11/23 1100°C, 23 litre, Chamber Furnace	-	0	0	0	0	0
9	CWF1205-volts	3120 CWF 12/5 1200°C, 5 litre, Chamber Furnace	0	0	-	0	-	-
	CWF1213-volts	3780 CWF 12/13 1200°C, 13 litre, Chamber Furnace	0	0	-	0	-	0
	CWF1223-volts	5230 CWF 12/23 1200°C, 23 litre, Chamber Furnace	-	0	0	0	0	0
	CWF1305-volts	3770 CWF 13/5 1300°C, 5 litre, Chamber Furnace	0	0	-	0	-	-
	CWF1313-volts	4830 CWF 13/13 1300°C, 13 litre, Chamber Furnace	0	0	-	0	-	-
	CWF1323-volts	7130 CWF 13/23 1300°C, 23 litre, Chamber Furnace	-	0	0	0	0	0

More options are available than are listed on these product specific pages. - page 104.1 for probe thermocouples, gas safety system, temperature indicators and iTools software

Key
 • = Default
 O = Option available
 - = Not available

Models

CWF 11/5	CWF 11/13	CWF 11/23	CWF 12/5	CWF 12/13	CWF 12/23	CWF 13/5	CWF 13/13	CWF 13/23
↓	↓	↓	↓	↓	↓	↓	↓	↓

Temperature controller options			CWF 11/5	CWF 11/13	CWF 11/23	CWF 12/5	CWF 12/13	CWF 12/23	CWF 13/5	CWF 13/13	CWF 13/23
	&02-301	0 301 single ramp PID controller	•	•	•	•	•	•	•	•	•
	&02-2416	720 Upgrade to 2416CG PID controller	O	O	O	O	O	O	O	O	O
	&02-3216P1	540 Upgrade to 3216P1	O	O	O	O	O	O	O	O	O
	&02-3216P5	760 Upgrade to 3216P5	O	O	O	O	O	O	O	O	O
	&02-3508P1	1260 Upgrade to 3508P1	O	O	O	O	O	O	O	O	O
	&02-3508P10	1520 Upgrade to 3508P10	O	O	O	O	O	O	O	O	O
	&02-3508P25	1610 Upgrade to 3508P25	O	O	O	O	O	O	O	O	O
	&02-NanoCR	1030 Upgrade to Nanodac CR	O	O	O	O	O	O	O	O	O
	&02-NanoPR	2450 Upgrade to Nanodac PR	O	O	O	O	O	O	O	O	O

Built in features and options - control options			CWF 11/5	CWF 11/13	CWF 11/23	CWF 12/5	CWF 12/13	CWF 12/23	CWF 13/5	CWF 13/13	CWF 13/23
	TMP-DIGOT-F	740 Digital over-temperature protection	O	O	O	O	O	O	O	O	O
1	&06-CS	1100 Cascade control: chamber furnaces up to 1200°C (includes flexible type N thermocouple in chamber)	O	O	O	O	O	O	-	-	-
1	TMP-&06-CS2	1110 Cascade control: chamber furnaces with retort (includes external flexible type N thermocouple and connection socket)	O	O	O	O	O	O	O	O	O
1	TMP-&06-CS3	1110 Cascade control: chamber furnaces over 1200°C (requires an appropriate probe thermocouple & sheath)	-	-	-	-	-	-	O	O	O
2,3	&08-232	250 RS232 Communications	O	O	O	O	O	O	O	O	O
4	&08-485	320 RS485 Communications	O	O	O	O	O	O	O	O	O
	TMP-CALIB	1090 Thermocouple and controller calibration certificate (UKAS)	O	O	O	O	O	O	O	O	O
	&07-04-01	280 24 hour analogue timeswitch	O	O	O	O	O	O	O	O	O
	&07-04-02	450 7 day 24 hour digital timeswitch	O	O	O	O	O	O	O	O	O
5	&08-06-01	120 Temperature alarm relay connection	O	O	O	O	O	O	O	O	O
1	&08-06-02	120 Program segment output	O	O	O	O	O	O	O	O	O
6	&08-06-04	230 Audible alarm with separate cancel button	O	O	O	O	O	O	O	O	O
	&08-06-05	230 Audible alarm on over temperature with separate cancel button	O	O	O	O	O	O	O	O	O

Please note:

- 1 Only available with 3508 or Nanodac series instruments
- 2 For 301 controller - only available when ordered with digital over-temperature option
- 3 Not available on R38 or Nanodac instruments
- 4 Not available on R38, 301 or Nanodac instruments
- 5 Not available on R38 or 301 instruments
- 6 Can only be ordered with &08-06-01 or &08-06-02
- 9 Uses 2 phases of a 3 phase and neutral power supply (extra cost option)

Order data

Item Number	Price (\$)	Description	Models								
			CFW 11/5	CFW 11/13	CFW 11/23	CFW 12/5	CFW 12/13	CFW 12/23	CFW 13/5	CFW 13/13	CFW 13/23
Built in features and options - control options			<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="width: 45%;"> <p>Key ● = Default ○ = Option available - = Not available</p> </div> <div style="width: 45%;"> <p>↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓</p> </div> </div>								
&14-K-2132	530	Built in digital temperature indicator (2132 series) for Type K thermocouples	○	○	○	-	-	-	-	-	-
&14-N-2132	530	Built in digital temperature indicator (2132 series) for Type N thermocouples	-	-	-	○	○	○	-	-	-
&14-R-2132	530	Built in digital temperature indicator (2132 series) for Type R thermocouples	-	-	-	-	-	-	○	○	○
&14-06-63	360	Remote setpoint input for 3508 controller	○	○	○	○	○	○	○	○	○
&14-06-62	440	Retransmission of setpoint for 3508 controller	○	○	○	○	○	○	○	○	○
²⁷ &08-TYPE-X	120	Panel mounted thermocouple socket for connection to spare Nanodac recording channel (please specify thermocouple type: X = K, N, R, B, 2)	○	○	○	○	○	○	○	○	○
Built in features and options - voltage options											
TMP-2PH-CWF	220	2 phase	-	○	-	-	○	-	-	-	-
Built in features and options - gas options											
&11-33	210	6mm inert gas inlet for chamber furnaces and ovens	○	○	○	○	○	○	○	○	○
41-30-21	800	100mm Flowmeter for chamber furnaces or ovens with gas inlets or retorts (Ar 2-22 l/min)	○	○	○	○	○	○	○	○	○
41-30-22	800	100mm Flowmeter for chamber furnaces or ovens with gas inlets or retorts (CO2 2-20 l/min)	○	○	○	○	○	○	○	○	○
41-30-24	800	100mm Flowmeter for chamber furnaces or ovens with gas inlets or retorts (N2 2-25 l/min)	○	○	○	○	○	○	○	○	○
41-30-25	800	100mm Flowmeter for chamber furnaces or ovens with gas inlets or retorts (O2 2-25 l/min)	○	○	○	○	○	○	○	○	○
41-31-1	250	Solenoid valve with manual switch	○	○	○	○	○	○	○	○	○
⁶ 41-31-2	250	Solenoid valve with automatic switch	○	○	○	○	○	○	○	○	○
¹³ -00206-0001	5110	A105 retort for CWF --/13, 135/150H x 150W x 275D (mm), with 3mm Thermocouple gland in door	-	○	-	-	○	-	-	○	-
¹³ -00207-0001	5930	A105 retort for CWF --/23, 170/185H x 195W x 350D (mm), with 3mm Thermocouple gland in door	-	-	○	-	-	○	-	-	○
¹³ -00206-0004	2250	A107 retort for CWF --/13, 130H x 140W x 255D (mm), with 3mm Thermocouple gland in front	-	○	-	-	○	-	-	○	-
¹³ 00207-3-4013	2490	A107 retort for CWF --/23, 155H x 160W x 330D (mm), with 3mm Thermocouple gland in front	-	-	○	-	-	○	-	-	○
Built in features and options - build options											
&11-18-01	200	Unglazed viewport	○	○	○	○	○	○	○	○	○
&11-18-02	370	Glazed viewport	○	○	○	○	○	○	○	○	○
&11-28-01	130	Sheathed thermocouple calibration port (up to 1300°C)	○	○	○	○	○	○	○	○	○
&11-28-03	150	Unsheathed thermocouple calibration port (12mm diameter)	○	○	○	○	○	○	○	○	○
Optional Accessories											
40-013-480-0020	100	Hearth protection tile for 5 litre CWFs	○	-	-	○	-	-	○	-	-
40-013-480-0050	100	Hearth protection tile for 13 litre CWFs	-	○	-	-	○	-	-	○	-
S-00207	120	Hearth protection tile for 23 litre CWFs	-	-	○	-	-	○	-	-	○

Please note:
⁶ Can only be ordered with &08-06-01 or &08-06-02
¹³ Retorts suitable for use up to 1100°C only

²⁷ Nanodac instruments have 3 spare thermocouple input channels which can be configured to record temperature data from additional thermocouples (or 2 spare channels if cascade option is ordered)

Notes
