

## Chamber Furnaces to 1100 °C, 1200 °C or 1300 °C - CWF

### General Information

The CWF laboratory chamber furnaces 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
- 5, 13 or 23 litre chamber volumes
- Up & away door keeps heated surface away from the user
- Carbolite Gero 301 controller, with single ramp to set-point & process timer
- 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 pitched for optimum uniformity
- Easy access to elements & controls simplifies maintenance & servicing



### 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 variety of retorts & modifications are available for working with modified atmospheres

### Technical Specifications

#### CWF 11/5

|                                                                         |                 |
|-------------------------------------------------------------------------|-----------------|
| Max temp (°C)                                                           | 1100            |
| Max continuous operating temp (°C)                                      | 1000            |
| Volume (litres)                                                         | 5               |
| Heat-up time (mins)                                                     | 47              |
| Dimensions:                                                             | 135 x 140 x 250 |
| Internal H x W x D (mm)                                                 |                 |
| Dimensions:                                                             | 585 x 375 x 485 |
| External H x W x D (mm)                                                 |                 |
| Dimensions: External with door open                                     | 800 x 375 x 485 |
| H x W x D (mm)                                                          |                 |
| Temperature uniformity of $\pm 5^{\circ}\text{C}$ within H x W x D (mm) | 85 x 90 x 110   |
| Max power (W)                                                           | 2400            |
| Holding power (W)                                                       | 790             |
| Thermocouple type                                                       | K               |
| Weight (kg)                                                             | 30              |

## Chamber Furnaces to 1100°C, 1200°C or 1300°C - CWF

### CWF 11/13

|                                                                            |                 |
|----------------------------------------------------------------------------|-----------------|
| Max temp (°C)                                                              | 1100            |
| Max continuous operating temp (°C)                                         | 1000            |
| Volume (litres)                                                            | 13              |
| Heat-up time (mins)                                                        | 90              |
| Dimensions:<br>Internal H x W x D (mm)                                     | 200 x 200 x 325 |
| Dimensions:<br>External H x W x D (mm)                                     | 655 x 435 x 610 |
| Dimensions: External with door open<br>H x W x D (mm)                      | 905 x 435 x 610 |
| Temperature uniformity of $\pm 5^{\circ}\text{C}$<br>within H x W x D (mm) | 120 x 120 x 185 |
| Max power (W)                                                              | 3100            |
| Holding power (W)                                                          | 1500            |
| Thermocouple type                                                          | K               |
| Weight (kg)                                                                | 47              |

### CWF 11/23

|                                                                            |                 |
|----------------------------------------------------------------------------|-----------------|
| Max temp (°C)                                                              | 1100            |
| Max continuous operating temp (°C)                                         | 1000            |
| Volume (litres)                                                            | 23              |
| Heat-up time (mins)                                                        | 36              |
| Dimensions:<br>Internal H x W x D (mm)                                     | 235 x 245 x 400 |
| Dimensions:<br>External H x W x D (mm)                                     | 705 x 505 x 675 |
| Dimensions: External with door open<br>H x W x D (mm)                      | 990 x 505 x 675 |
| Temperature uniformity of $\pm 5^{\circ}\text{C}$<br>within H x W x D (mm) | 155 x 165 x 285 |
| Max power (W)                                                              | 7000            |
| Holding power (W)                                                          | 1900            |
| Thermocouple type                                                          | K               |
| Weight (kg)                                                                | 68              |

## Chamber Furnaces to 1100°C, 1200°C or 1300°C - CWF

### CWF 12/5

|                                                                            |                 |
|----------------------------------------------------------------------------|-----------------|
| Max temp (°C)                                                              | 1200            |
| Max continuous operating temp (°C)                                         | 1100            |
| Volume (litres)                                                            | 5               |
| Heat-up time (mins)                                                        | 51              |
| Dimensions:<br>Internal H x W x D (mm)                                     | 135 x 140 x 250 |
| Dimensions:<br>External H x W x D (mm)                                     | 585 x 375 x 485 |
| Dimensions: External with door open<br>H x W x D (mm)                      | 800 x 375 x 485 |
| Temperature uniformity of $\pm 5^{\circ}\text{C}$<br>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              |

### CWF 12/13

|                                                                            |                 |
|----------------------------------------------------------------------------|-----------------|
| Max temp (°C)                                                              | 1200            |
| Max continuous operating temp (°C)                                         | 1100            |
| Volume (litres)                                                            | 13              |
| Heat-up time (mins)                                                        | 80              |
| Dimensions:<br>Internal H x W x D (mm)                                     | 200 x 200 x 325 |
| Dimensions:<br>External H x W x D (mm)                                     | 655 x 435 x 610 |
| Dimensions: External with door open<br>H x W x D (mm)                      | 905 x 435 x 610 |
| Temperature uniformity of $\pm 5^{\circ}\text{C}$<br>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              |

## Chamber Furnaces to 1100°C, 1200°C or 1300°C - CWF

### CWF 12/23

|                                                                            |                 |
|----------------------------------------------------------------------------|-----------------|
| Max temp (°C)                                                              | 1200            |
| Max continuous operating temp (°C)                                         | 1100            |
| Volume (litres)                                                            | 23              |
| Heat-up time (mins)                                                        | 45              |
| Dimensions:<br>Internal H x W x D (mm)                                     | 235 x 245 x 400 |
| Dimensions:<br>External H x W x D (mm)                                     | 705 x 505 x 675 |
| Dimensions: External with door open<br>H x W x D (mm)                      | 990 x 505 x 675 |
| Temperature uniformity of $\pm 5^{\circ}\text{C}$<br>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              |

### CWF 13/5

|                                                                            |                 |
|----------------------------------------------------------------------------|-----------------|
| Max temp (°C)                                                              | 1300            |
| Max continuous operating temp (°C)                                         | 1200            |
| Volume (litres)                                                            | 5               |
| Heat-up time (mins)                                                        | 75              |
| Dimensions:<br>Internal H x W x D (mm)                                     | 135 x 140 x 250 |
| Dimensions:<br>External H x W x D (mm)                                     | 585 x 375 x 485 |
| Dimensions: External with door open<br>H x W x D (mm)                      | 800 x 375 x 485 |
| Temperature uniformity of $\pm 5^{\circ}\text{C}$<br>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              |

## Chamber Furnaces to 1100°C, 1200°C or 1300°C - CWF

### CWF 13/13

|                                                                            |                 |
|----------------------------------------------------------------------------|-----------------|
| Max temp (°C)                                                              | 1300            |
| Max continuous operating temp (°C)                                         | 1200            |
| Volume (litres)                                                            | 13              |
| Heat-up time (mins)                                                        | 115             |
| Dimensions:<br>Internal H x W x D (mm)                                     | 200 x 200 x 325 |
| Dimensions:<br>External H x W x D (mm)                                     | 655 x 435 x 610 |
| Dimensions: External with door open<br>H x W x D (mm)                      | 905 x 435 x 610 |
| Temperature uniformity of $\pm 5^{\circ}\text{C}$<br>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              |

### CWF 13/23

|                                                                            |                 |
|----------------------------------------------------------------------------|-----------------|
| Max temp (°C)                                                              | 1300            |
| Max continuous operating temp (°C)                                         | 1200            |
| Volume (litres)                                                            | 23              |
| Heat-up time (mins)                                                        | 55              |
| Dimensions:<br>Internal H x W x D (mm)                                     | 235 x 245 x 400 |
| Dimensions:<br>External H x W x D (mm)                                     | 705 x 505 x 675 |
| Dimensions: External with door open<br>H x W x D (mm)                      | 990 x 505 x 675 |
| Temperature uniformity of $\pm 5^{\circ}\text{C}$<br>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              |

#### 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