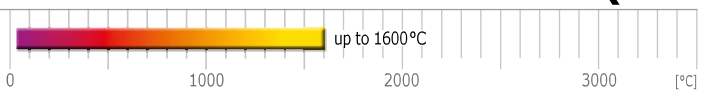


RHF – High Temperature Chamber Furnaces

The RHF range of silicon carbide heated high temperature chamber furnaces comprises four chamber sizes, each available with three maximum operating temperatures of 1400 °C, 1500 °C and 1600 °C.

Robust construction and high quality elements provide rapid heating rates (typically reaching 1400 °C in under 40 minutes) and a long reliable working life.

Standard features

- 1400 °C, 1500 °C or 1600 °C maximum operating temperature
- Carbolite Gero 301 PID controller with single ramp to setpoint & process timer
- 3, 8, 15 or 35 litre chamber volumes
- Soft closing vertical lift door (3 & 8 litre models only)
- Silicon carbide heating elements provide long life and are able to withstand the stresses of intermittent operation
- RHF 3 & 8 litre have a cast alumina hearth
  RHF 15 & 35 have silicon carbide hearth
- Low thermal mass insulation for energy efficiency & rapid heating & cooling

RHF 15/3 with 3508P1 programmer option

RHF 16/35 with 3216P1 programmer and over-temperature options

Options (specify these at time of order)

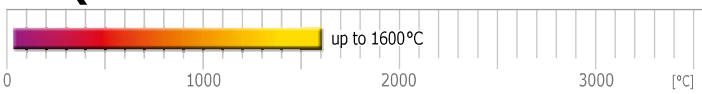
- A range of sophisticated digital controllers, multi-segment programmers and data loggers is available. These can be fitted with RS232, RS485 or Ethernet communications (see pages 106 – 111)
- Over-temperature protection (recommended to protect valuable contents & for unattended operation)
- Silicon carbide protection tiles (see details on the opposite page)

Power supplies for RHF furnaces

A characteristic of the control systems used with silicon carbide elements results in a power supply which will be larger than expected e.g. RHF 14/3 at 4500 W =

- Single phase / 200 – 240 V / 30 A or
- 2 phase / 380 – 415 V / 15 A per phase.

See pages 122 – 125 for power supply information.



NEW SiC protection tile option

The RHF chamber furnace range is available with optional heating element protection tiles. When this option is specified, silicon carbide (SiC) tiles are added to the insulation assembly, positioned on both sides of the chamber to create a barrier between the working chamber and the heating elements. This will protect the heating elements from potentially harmful contaminants that might be placed in the chamber.

The addition of the heating element protection tiles option reduces the width of the internal chamber and the maximum operating temperature. The table below shows the amended technical data.

Application examples

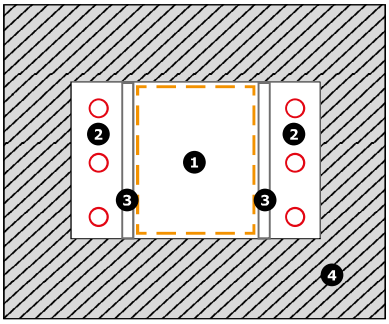
- If the process creates small amounts of acid, NOx or water.
- Burn-off processes which create a lot of fumes.
- Melting different kinds of glass which emit aggressive gases.
- This option can also be specified in combination with a gas inlet where the user requires reduced oxygen content in the chamber. The protection tiles prevent gases leaking out of the chamber through the double spiral heating elements.

Note: The additional protection tiles reduce the width of the standard chamber, and reduce the maximum temperature achievable in the chamber.

Technical data (SiC option)

Model	Max. temp. [°C]	Dimensions: Usable chamber H x W x D [mm]	Volume [litres]
RHF 14/3	1300	120 x 80 x 205	2
RHF 14/8	1300	170 x 130 x 270	6
RHF 14/15	1300	220 x 180 x 310	12
RHF 14/35	1300	250 x 260 x 465	30
RHF 15/3	1400	120 x 80 x 205	2
RHF 15/8	1400	170 x 130 x 270	6
RHF 15/15	1400	220 x 180 x 310	12
RHF 15/35	1400	250 x 260 x 465	30
RHF 16/3	1500	120 x 80 x 205	2
RHF 16/8	1500	170 x 130 x 270	6
RHF 16/15	1500	220 x 180 x 310	12

RHF chamber with SiC protection tiles



1) Working chamber
2) Heating elements
3) SiC protection tiles
4) Thermal insulation

Technical data

CGH Model	Max. temp. [°C]	Heat-up time [mins]	Dimensions: Usable chamber H x W x D [mm]	Dimensions: External with door open H x W x D [mm]	Volume [litres]	Holding power [W]	Max. power [W]	Thermo-couple type	Weight [kg]
RHF 14/3	1400	33	120 x 120 x 205	655 x 435 x 610 (905) (Bench-top)	3	1900	4500	R	42
RHF 14/8	1400	22	170 x 170 x 270	705 x 505 x 675 (990) (Bench-top)	8	3200	8000	R	64
RHF 14/15	1400	35	220 x 220 x 310	810 x 690 x 780 (1105) (Bench-top)	15	2900	10000	R	125
RHF 14/35	1400	38	250 x 300 x 465	885 x 780 x 945 (1245) (Bench-top)	35	6000	16000	R	179
RHF 15/3	1500	45	120 x 120 x 205	655 x 435 x 610 (905) (Bench-top)	3	2000	4500	R	46
RHF 15/8	1500	40	170 x 170 x 270	705 x 505 x 675 (990) (Bench-top)	8	3500	8000	R	61
RHF 15/15	1500	46	220 x 220 x 310	810 x 690 x 780 (1105) (Bench-top)	15	3000	10000	R	125
RHF 15/35	1500	46	250 x 300 x 465	885 x 780 x 945 (1245) (Bench-top)	35	6200	16000	R	178
RHF 16/3	1600	42	120 x 120 x 205	655 x 435 x 610 (905) (Bench-top)	3	2300	4500	R	42
RHF 16/8	1600	35	170 x 170 x 270	705 x 505 x 675 (990) (Bench-top)	8	4000	8000	R	61
RHF 16/15	1600	58	220 x 220 x 310	810 x 690 x 780 (1105) (Bench-top)	15	3500	10000	R	140
RHF 16/35	1600	113	250 x 300 x 465	1530 x 900 x 1020 (1885) (Floor-standing)	35	7000	16000	R	270

Please note:
- Maximum continuous operating temperature is 100 °C below maximum temperature
- Heat up time is measured to 100 °C below max, using an empty chamber
- Holding power is measured at continuous operating temperature
* when the SiC protection tile option is applied