

Chamber furnace, ceramic fibre insulation - HTK KE

General Information

Chamber furnaces of type HTK KE furnaces are insulated with ceramic fibre.

The rectangular design with a front door allows for easy loading and unloading. The HTK range is available in up to six different sizes. The smallest designs with a capacity of 8 litres and 25 litres are typically employed by laboratories for research and development. The 80 litre, 220 litre, 400 litre or 600 litre furnaces are predominantly used as pilot manufacturing systems or large scale production.

The furnaces can be used under a defined Oxygen mixture or 100 % pure Oxygen. The heating elements are CrFeAl, allowing temperatures of up to 1350 °C, or MoSi2 that allow temperatures up to 1800 °C. Inert gas atmospheres are possible; however, poor atmospheric quality must be accepted. Due to the porous nature of the insulation, vacuum operation is limited to a rough vacuum range for short durations.



Standard features

- Hydrogen partial pressure operation if requested
- Operation under air or with 100 % Oxygen in the HTK KE
- Precisely controlled vacuum pumping speeds appropriate for powders
- Data recording for quality management

Technical Specifications

HTK 8 KE/13-1G

Insulation material	Ceramic fibre
Volume (l)	8
Tmax vacuum (°C)	1100
Dimensions: External H x W x D (mm)	2100 x 1300 x 1100
Transport weight (kg)	1200
Usable space	
H x W x D, usable space without retort (mm)	200 x 200 x 200
H x W x D, usable space with retort (mm)	180 x 180 x 200
Thermal values	
Tmax atmospheric pressure (°C)	1350
-Delta-T, between 500 and 1500°C (K) according to DIN 17052	± 10
Max. heat-up rate (K/min)	10
Cooling time (h)	6
Connecting values	
Power (kW)	8

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Voltage (V)	400
Current (A)	20
Series fuse (A)	3 x 63
Vacuum (option)	
Leakage rate - clean, cold and empty (mbar l/s)	5x10 ⁻³
Vacuum range depending on the pumping unit	rough or fine vacuum
Cooling water required	
Flow (l/min)	15
Max. inlet temperature (°C)	23
Gas supply	
Nitrogen or Argon flow, others on request (l/h)	200-2000
Controller	on request

HTK 25 KE/13-1G

Insulation material	Ceramic fibre
Volume (l)	25
Tmax vacuum (°C)	1100
Dimensions: External H x W x D (mm)	2200 x 1900 x 1800
Transport weight (kg)	1700
Usable space	
H x W x D, usable space without retort (mm)	250 x 250 x 400
H x W x D, usable space with retort (mm)	230 x 230 x 400
Thermal values	
Tmax atmospheric pressure (°C)	1350
-Delta-T, between 500 and 1500°C (K) according to DIN 17052	± 10
Max. heat-up rate (K/min)	10
Cooling time (h)	6
Cooling water required	
Power (kW)	16
Voltage (V)	400
Current (A)	40
Series fuse (A)	3 x 63
Vacuum (option)	
Leakage rate - clean, cold and empty (mbar l/s)	5x10 ⁻³
Vacuum range depending on the pumping unit	rough or fine vacuum

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Flow (l/min)	20
Max. inlet temperature (°C)	23
Gas supply	
Nitrogen or Argon flow, others on request (l/h)	200-2000
Controller	on request

HTK 80 KE/13-1G

Insulation material	Ceramic fibre
Volume (l)	80
Tmax vacuum (°C)	1100
Dimensions: External H x W x D (mm)	2300 x 2100 x 2200
Transport weight (kg)	2000
Usable space	
H x W x D, usable space without retort (mm)	400 x 400 x 500
H x W x D, usable space with retort (mm)	380 x 380 x 400
Thermal values	
Tmax atmospheric pressure (°C)	1350
-Delta-T, between 500 and 1500°C (K) according to DIN 17052	± 10
Max. heat-up rate (K/min)	10
Cooling time (h)	8
Connecting values	
Power (kW)	45
Voltage (V)	400
Current (A)	3 x 65
Series fuse (A)	3 x 80
Vacuum (option)	
Leakage rate - clean, cold and empty (mbar l/s)	5x10 ⁻³
Vacuum range depending on the pumping unit	rough or fine vacuum
Cooling water required	
Flow (l/min)	40
Max. inlet temperature (°C)	23
Gas supply	
Nitrogen or Argon flow, others on request (l/h)	200-2000
Controller	on request

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HTK 220 KE/13-1G

Insulation material	Ceramic fibre
Volume (l)	220
Tmax vacuum (°C)	1100
Dimensions: External H x W x D (mm)	2500 x 2300 x 2600
Transport weight (kg)	3000
Usable space	
H x W x D, usable space without retort (mm)	600 x 600 x 600
H x W x D, usable space with retort (mm)	560 x 560 x 560
Thermal values	
Tmax atmospheric pressure (°C)	1350
-Delta-T, between 500 and 1500°C (K) according to DIN 17052	± 10
Max. heat-up rate (K/min)	10
Cooling time (h)	10
Connecting values	
Power (kW)	80
Voltage (V)	400
Current (A)	3 x 120
Series fuse (A)	3 x 160
Vacuum (option)	
Leakage rate - clean, cold and empty (mbar l/s)	5x10 ⁻³
Vacuum range depending on the pumping unit	rough or fine vacuum
Cooling water required	
Flow (l/min)	60
Max. inlet temperature (°C)	23
Gas supply	
Nitrogen or Argon flow, others on request (l/h)	1000-10000
Controller	on request

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HTK 400 KE/13-1G

Insulation material	Ceramic fibre
Volume (l)	400
Tmax vacuum (°C)	1100
Dimensions: External H x W x D (mm)	2500 x 2300 x 2600
Transport weight (kg)	3800
Usable space	
H x W x D, usable space without retort (mm)	650 x 700 x 900
H x W x D, usable space with retort (mm)	630 x 680 x 900
Thermal values	
Tmax atmospheric pressure (°C)	1350
-Delta-T, between 500 and 1500°C (K) according to DIN 17052	± 10
Max. heat-up rate (K/min)	10
Cooling time (h)	12
Connecting values	
Power (kW)	120
Voltage (V)	400
Current (A)	3 x 180
Series fuse (A)	3 x 250
Vacuum (option)	
Leakage rate - clean, cold and empty (mbar l/s)	5x10 ⁻³
Vacuum range depending on the pumping unit	rough or fine vacuum
Cooling water required	
Flow (l/min)	100
Max. inlet temperature (°C)	23
Gas supply	
Nitrogen or Argon flow, others on request (l/h)	1000-10000
Controller	on request

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HTK 600 KE/13-1G

Insulation material	Ceramic fibre
Volume (l)	600
Tmax vacuum (°C)	1100
Dimensions: External H x W x D (mm)	2500 x 2500 x 2900
Transport weight (kg)	4500
Usable space	
H x W x D, usable space without retort (mm)	650 x 750 x 1200
H x W x D, usable space with retort (mm)	630 x 730 x 1200
Thermal values	
Tmax atmospheric pressure (°C)	1350
-Delta-T, between 500 and 1500°C (K) according to DIN 17052	± 10
Max. heat-up rate (K/min)	10
Cooling time (h)	12-16
Connecting values	
Power (kW)	200
Voltage (V)	400
Current (A)	3 x 290
Series fuse (A)	3 x 315
Vacuum (option)	
Leakage rate - clean, cold and empty (mbar l/s)	5x10 ⁻³
Vacuum range depending on the pumping unit	rough or fine vacuum
Cooling water required	
Flow (l/min)	175
Max. inlet temperature (°C)	23
Gas supply	
Nitrogen or Argon flow, others on request (l/h)	1000-10000
Controller	on request