High-Temperature Furnaces with Molybdenum Disilicide Heating Elements with Fiber Insulation up to 1800 °C

Due to their solid construction and compact stand-alone design, these high-temperature furnaces are perfect for processes in the laboratory where the highest precision is needed. Oustanding temperature uniformity and practical details set very high quality benchmarks. For configuration for your processes, these furnaces can be extended with extras from our extensive option list.

High-temperature furnace HT 16/17

Standard Equipment

- Tmax 1600 °C, 1750 °C, or 1800 °C
- Recommended working temperature 1750 °C (for models HT ../18), increased wear and tear must be expected in case of working at higher temperatures
- Dual shell housing with fan cooling for low shell temperatures
- Heating from both sides via molybdenum disilicide heating elements
- High-quality fiber insulation backed by special insulation
- Side insulation constructed with tongue and groove blocks provides for low heat loss to the outside
- Long-life roof insulation with special suspension
- Chain-guided parallel swivel door for defined opening and closing of the door
- Two-door design (front/back) for high-temperature furnaces from HT 276/..
- Labyrinth sealing ensures the least possible temperature loss in the door area
- Reinforced floor as protection for bottom insulation as standard from models HT 16/16 upwards (distributed load 5 kg/dm^2)
- Vapor vent in the furnace roof with motor-driven exhaust air flap, controlled via the extra function of the controller
- Heating elements switched via thyristors

High-temperature furnace HT 64/16S with lift door

Additional Equipment

- Cooling system to cool the furnace with a defined temperature gradient or with a preset fresh air volume. Both operating modes can be switched on and off for different segments by means of the extra function of the controller.
- Safety package for debinding in air. Debinding technical ceramics is a critical process because of the hydrocarbons that are released. Hydrocarbons are flammable and there is a risk that a flammable mixture could form inside the furnace. Nabertherm offers tailored safety packages with respect to the process and the volume of binder that allow the furnace to be operated safely.
- Special heating elements for zirconia sintering
- Protective gas connection to purge with non-flammable protective or reaction gases
- Automatic gas supply system with solenoid valve and rotameter, controlled by the extra function of the controller
- Inner process box to improve the gas tightness and to protect the furnace chamber against contamination
- Refractory brick floor insulation for a higher floor load (Tmax 1700 °C)
- Lift door
- Automatic door lock incl. door contact switch
- Ethernet interface

High-temperature furnace HT 160/17 with gas supply system

High-temperature furnace HT 64/17 DB100-2 with safety package for debinding

Model	Tmax	Inner dimensions in mm			Volume	Outer dimensions[1] in mm			Connected	Electrical	Weight
	°C	w	d	h	in l	W	D	H	load kW	connection*	in kg
HT 08/16	1600	150	300	150	8	740	640	1755	8.5	3-phase[2]	215
HT 16/16	1600	200	300	260	16	820	690	1860	12.5	3-phase[2]	300
HT 29/16	1600	275	300	350	29	985	740	1990	9.8	3-phase[2]	340
HT 40/16	1600	300	350	350	40	1010	800	1990	12.5	3-phase	420
HT 64/16	1600	400	400	400	64	1140	890	2040	18.5	3-phase	555
HT 128/16	1600	400	800	400	128	1140	1280	2040	26.5	3-phase	820
HT 160/16	1600	500	550	550	160	1250	1040	2240	21.5	3-phase	880
HT 276/16	1600	500	1000	550	276	1310	1600	2290	36.5	3-phase	1300
HT 450/16	1600	500	1150	780	450	1360	1800	2570	65.0	3-phase	1450
HT 08/17	1750	150	300	150	8	740	640	1755	8.5	3-phase[2]	215
HT 16/17	1750	200	300	260	16	820	690	1860	12.5	3-phase[2]	300
HT 29/17	1750	275	300	350	29	985	740	1990	9.8	3-phase[2]	340
HT 40/17	1750	300	350	350	40	1010	800	1990	12.5	3-phase	420
HT 64/17	1750	400	400	400	64	1140	890	2040	18.5	3-phase	555
HT 128/17	1750	400	800	400	128	1140	1280	2040	26.5	3-phase	820
HT 160/17	1750	500	550	550	160	1250	1040	2240	21.5	3-phase	880
HT 276/17	1750	500	1000	550	276	1310	1600	2290	36.5	3-phase	1300
HT 450/17	1750	500	1150	780	450	1360	1800	2570	65.0	3-phase	1450
HT 08/18	1800	150	300	150	8	740	640	1755	8.5	3-phase[2]	215
HT 16/18	1800	200	300	260	16	820	690	1860	12.5	3-phase[2]	300
HT 29/18	1800	275	300	350	29	985	740	1990	9.8	3-phase[2]	340
HT 40/18	1800	300	350	350	40	1010	800	1990	12.5	3-phase	420
HT 64/18	1800	400	400	400	64	1140	890	2040	18.5	3-phase	555
HT 128/18	1800	400	800	400	128	1140	1280	2040	26.5	3-phase	820
HT 160/18	1800	500	550	550	160	1250	1040	2240	21.5	3-phase	880
HT 276/18	1800	500	1000	550	276	1310	1600	2290	36.5	3-phase	1300
HT 450/18	1800	500	1150	780	450	1360	1800	2570	65.0	3-phase	1450

[1]External dimensions vary when furnace is equipped with additional equipment. Dimensions on request.
[2]Heating only between two phases

*Please see page 75 for more information about supply voltage

Automatic gas supply system with solenoid valve and rotameter

Two-door design for high-temperature furnaces > HT 276/..

Reinforced floor as protection for bottom insulation for high-temperature furnace HT 16/16 and higher