

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. Outstanding 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 29/17

Standard Equipment

- Tmax 1600 °C, 1750 °C, or 1800 °C
- Recommended maximum working temperature approx. 50 °C below Tmax of the furnace. Higher working temperatures will increase wear and tear.
- Heating from both sides via molybdenum disilicide heating elements
- High-quality fiber insulation backed by special insulation
- Long-life roof insulation with special suspension
- Temperature uniformity at 1450 °C up to ± 6 °C according to DIN 17052-1 see page 77
- Chain-guided parallel swivel door for precise 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/dm²)
- Vapor vent in the furnace roof with motorized exhaust air flaps, controlled via the extra function of the controller
- Stainless steel exhaust hood as interface to customer's exhaust system
- Controller with touch operation P570 (50 programs with each 40 segments), controls description see page 84

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.
- Thermocouple inlet with screw cap
- Thermocouple for the heating control with calibration certificate
- Protective gas connection to purge with non-flammable process gases (not completely gas-tight)
- Automatic gas supply system with solenoid valve and rotameter, controlled by the extra function of the controller
- Refractory brick floor insulation for a higher floor load (Tmax 1700 °C)
- Lift door
- Automatic door lock incl. door contact switch
- Heating elements protected against mechanical damage
- Special heating element qualities e. g. for zircon oxide applications
- Ethernet interface



High temperature chamber furnace HT 450/16 with two locking devices per door



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



High-temperature furnace HT 64/17 with PLC controls and additional options

Model	Tmax °C	Inner dimensions in mm			Volume in l	Outer dimensions ¹ in mm			Connected load ³ kW	Electrical connection*	Weight in kg
		w	d	h		W	D	H			
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	350
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	2260	21.5	3-phase	760
HT 276/16	1600	500	1000	550	276	1340	1600	2290	43.5	3-phase	1270
HT 450/16	1600	500	1150	780	450	1380	1820	2570	65.0	3-phase	1570
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	350
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	2260	21.5	3-phase	760
HT 276/17	1750	500	1000	550	276	1340	1600	2290	43.5	3-phase	1270
HT 450/17	1750	500	1150	780	450	1380	1820	2570	65.0	3-phase	1570
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	350
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
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HT 276/18	1800	500	1000	550	276	1340	1600	2290	43.5	3-phase	1270
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¹External dimensions vary when furnace is equipped with additional equipment. Dimensions on request.

²Heating only between two phases

³The connected load refers to the standard furnace and may increase for a furnace with additional equipment. For furnaces with connection options for multi-range voltages, the connected load applies to the highest permissible connected voltage.

*Please see page 84 for more information about supply voltage



Automatic gas supply system with solenoid valve and rotameter



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



High-temperature furnace HT 160/18 DB200-3 with lift door