

## Top Hat Furnaces or Bottom Loading Furnaces with Molybdenum Disilicide Heating Elements up to 1800 °C



High-temperature top hat furnace HT 2600/16 LT DB200 for production



Top hat furnace HT 750/18 LTS

Model	Tmax	Inner dimensions in mm			Volume in l	Outer dimensions in mm			Heating power in kW <sup>1</sup>	Electrical connection*	Weight in kg
	°C	w	d	h		W	D	H			
HT 64/16 LB, LT	1600	400	400	400	64	1100	1750	2400	36	3-phase	1100
HT 166/16 LB, LT	1600	550	550	550	166	1350	2060	2600	42	3-phase	1500
HT 276/16 LB, LT	1600	1000	500	550	276	1800	2100	2600	69	3-phase	1850
HT 400/16 LB, LT	1600	1200	600	550	400	1900	2200	2680	69	3-phase	2600
HT 500/16 LB, LT	1600	1550	600	550	500	2100	2200	2680	69	3-phase	2700
HT 1000/16 LB, LT	1600	1000	1000	1000	1000	1800	2900	3450	140	3-phase	3000
HT 1030/16 LB, LT	1600	2200	600	780	1030	2950	2500	3050	160	3-phase	3200
HT 64/17 LB, LT	1750	400	400	400	64	1100	1750	2400	36	3-phase	1100
HT 166/17 LB, LT	1750	550	550	550	166	1350	2060	2600	42	3-phase	1500
HT 276/17 LB, LT	1750	1000	500	550	276	1800	2100	2600	69	3-phase	1850
HT 400/17 LB, LT	1750	1200	600	550	400	1900	2200	2680	69	3-phase	2600
HT 500/17 LB, LT	1750	1550	600	550	500	2100	2200	2680	69	3-phase	2700
HT 1000/17 LB, LT	1750	1000	1000	1000	1000	1800	2900	3450	140	3-phase	3000
HT 1030/17 LB, LT	1750	2200	600	780	1030	2950	2500	3050	160	3-phase	3200
HT 64/18 LB, LT	1800	400	400	400	64	1100	1750	2400	36	3-phase	1100
HT 166/18 LB, LT	1800	550	550	550	166	1350	2060	2600	42	3-phase	1500
HT 276/18 LB, LT	1800	1000	500	550	276	1800	2100	2600	69	3-phase	1850
HT 400/18 LB, LT	1800	1200	600	550	400	1900	2200	2680	69	3-phase	2600
HT 500/18 LB, LT	1800	1550	600	550	500	2100	2200	2680	69	3-phase	2700
HT 1000/18 LB, LT	1800	1000	1000	1000	1000	1800	2900	3450	140	3-phase	3000
HT 1030/18 LB, LT	1800	2200	600	780	1030	2950	2500	3050	160	3-phase	3200

<sup>1</sup>Depending on furnace design connected load might be higher

\*Please see page 73 for more information about supply voltage



High-temperature furnace HT 273/17S with table by transportable fork lift



Production system consisting of a bogie hearth furnace for debinding and a high-temperature furnace for residual debinding and sintering with shared catalytic post combustion

## Continuous Furnaces

Electrically Heated or Gas-Fired



Continuous furnace plant for working temperatures up to 260 °C with integrated cooling station



Continuous furnace D 1500/3000/300/14 for thermal ageing with mesh belt transport system and subsequent cooling station



Continuous furnaces are the right choice for processes with fixed cycle times such as drying or preheating, curing, aging, vulcanisation or degassing. The furnaces are available for various temperatures up to a maximum of 1400 °C. The furnace design depends on the required throughput, the process requirements for heat treatment and the required cycle time.



Continuous furnace for bulk materials in baskets

The conveyor technology is tailored to the required working temperature, geometry and weight of the charge and to the requirements regarding available space and integration into the process chain. The conveyor speed and the number of control zones are defined by the process specifications.



Roller continuous furnace N 650/45 AS for heat treatment of heavy workparts

# Continuous Furnaces

## Electrically Heated or Gas-Fired



Conveyor plant D 1600/3100/1200/55, consisting of solution annealing furnace, cooling station and conveyor system



Mesh belt drive in a continuous furnace

### Conveyor concepts

- Conveyor belt
- Metal conveyor belt with adjusted mesh gauges
- Drive chain
- Roller conveyors
- Paternoster
- Pusher-type
- Rotary hearth

### Heating systems

- Electric heating, radiation or convection
- Direct or indirect gas-fired
- Infrared heating
- Heating with the use of external heat sources



Continuous furnace D 700/10000/300/45S with chain conveyor for 950 °C, gas-fired



Continuous furnace D 1100/5800/100/50 AS for annealing of springs

#### Temperature cycles

- Control of working temperature across the whole length of the furnace, such as for drying or preheating
- Automatic control of a process curve applying defined heat-up, dwell and cooling time
- Heat treatment including a final quenching of the charge

#### Process atmosphere

- In air
- For processes with organic outgassings incl. mandatory safety technology according to EN 1539 (NFPA 86)
- In non-flammable protective or reactive gases such as nitrogen, argon or forming gas
- In flammable protective or reactive gases such as hydrogen incl. the necessary safety technology

#### Basic configuration criteria

- Conveyor speed
- Temperature uniformity
- Operating temperature
- Process curve
- Work space width
- Charge weights
- Cycle time or throughput
- Length of charge and discharge zone
- Generated exhaust gases
- Specific industry standards such as AMS, CQI-9, FDA etc.
- Other individual customer requirements



Mesh belt drive in continuous furnace D 1100/3600/100/50 AS



Rotary hearth furnace for preheating