



*Art of heating*

## HOLDING ELECTRIC RESISTANCE STATIONARY FURNACES PTE Mk.II

These furnaces are used as holding furnaces for aluminum and its alloys. Maximum temperature in the furnace chamber is 900°C (850°C in crucible).

The PTE Mk.II furnace is designed with focus on energy savings and is suitable even for foundries with limited installation space. The PTE Mk.II's high-tech insulating materials and new mounting system of heating coils allow for the smallest possible external furnace dimensions. The coils are placed in refractory castable shape grooves which prevent them from overheating. This placement also protects against splashing aluminum in the case of crucible breakage. The power consumption of the PTE Mk.II is reduced to the minimum necessary. This low consumption, together with the furnace's new insulation system, makes the PTE Mk.II one of the most energy efficient devices for aluminum holding on the market. The PTE Mk.II furnace is designed mostly for holding with limited melting output and therefore is recommended for foundries with central pre-melting furnaces and secured transport of the melt.

- The PTE Mk.II was a winner in the "Gold Medal" competition at the MSV 2012 trade fair in Brno. It won Honorable Mention in the category of Most Innovative Exhibit of an energy-efficient commercial product.

- The PTE Mk.II can significantly contribute to reducing the energy footprint of production processes, and therefore meets the ČSN EN ISO 50001 standard.



PTE 650/09 Mk.II with automatic opening lid

### Benefits:

- minimal energy loss due to the use of hi-tech insulating materials and optimized furnace size
- quick and easy replacement of heating coils which are deposited in refractory castable shapes reduces service costs
- heating elements protected against splattering by castable refractories
- insulation separated from heating elements by castable refractory shapes
- furnace equipped with emergency drain
- PTE MK.II's compact external dimensions and low operating height reduce labor intensity and limit the need for constructional adjustments
- lowered installed power reduces energy drain on electrical mains
- homogeneous temperature field increases crucible lifetime
- 24 month warranty on heating coils



Thermographic analysis of furnace jacket temperature

Hourly energy consumption in steady state [kWh], full furnace, new crucible				
Furnace type	Holding at 700 °C		Holding at 800 °C	
	Closed lid	Opened lid	Closed lid	Opened lid
PTE 100/09 Mk.II	1,9	3,1	2,5	4,7
PTE 200/09 Mk.II	2,3	4,4	2,9	6,8
PTE 300/09 Mk.II	2,9	6,1	3,6	9,5
PTE 400/09 Mk.II	3,0	6,2	3,8	9,6
PTE 500/09 Mk.II	3,6	9,6	4,6	15,2
PTE 650/09 Mk.II	3,9	9,3	5,0	14,7
PTE 800/09 Mk.II	4,7	12,4	5,9	19,6
PTE 900/09 Mk.II	4,9	12,5	6,1	19,8
PTE 1200/09 Mk.II	5,2	12,7	6,5	20,0

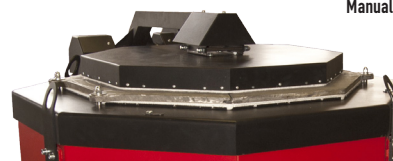
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Furnace dimensions according to lid option (wxhxd)			
Furnace type	Manual lid	Automatic opening lid	Automatic split sliding lid
PTE 100/09 Mk.II	950x1125x950	950x980x1120	950x990x1105
PTE 200/09 Mk.II	1035x1185x1035	1035x1035x1205	1035x1050x1185
PTE 300/09 Mk.II	1125x1285x1125	1125x1135x1295	1125x1150x1275
PTE 400/09 Mk.II	1125x1485x1125	1125x1335x1295	1125x1335x1275
PTE 500/09 Mk.II	1285x1635x1285	1285x1280x1470	1285x1295x1455
PTE 650/09 Mk.II	1285x1835x1285	1285x1480x1470	1285x1495x1455
PTE 800/09 Mk.II	1400x1935x1400	1400x1605x1605	1400x1620x1585
PTE 900/09 Mk.II	1400x2035x1400	1400x1705x1605	1400x1720x1585
PTE 1200/09 Mk.II	1400x2235x1400	1400x2855x1605	1400x1870x1585

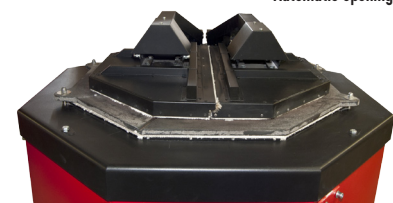
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Manual lid



Automatic opening lid



Automatic split sliding lid

#### Standard design of furnace includes:

- Ht40 T controller
- limit unit
- crucible protective collar
- manual lid
- emergency floor drain with cover
- residual current device
- connection between furnace and switchboard in metal hose with plastic protector
- wall switch board

#### Accessories for additional charge:

- charge thermocouple in protective tube
- crucible pocket thermocouple
- crucible
- working cycle monitoring with USB output
- automatic opening lid controlled by the foot pedal
- automatic split sliding lid controlled by the foot pedal
- preparation for connection to die-casting machine dispenser
- visual indicator of the condition of heating elements
- crucible breakage control system
- calibration of the controller measuring entry
- connection between furnace and switchboard in hose with protective metal sheath

Furnace type	Capacity	Tmax	Crucible type	Crucible volume	Operating height*	Input	Weight	Voltage	Protection
	kg Al	°C	Noltina	l	mm	kW	kg	V	A
PTE 100/09 Mk.II	105	900	A 300	40	780	15	700	400	32
PTE 200/09 Mk.II	185	900	BU 200	70	840	15	800	400	32
PTE 300/09 Mk.II	295	900	BU 300	110	940	22	900	400	40
PTE 400/09 Mk.II	360	900	BU 350	135	1040	22	1000	400	40
PTE 500/09 Mk.II	485	900	BU 500	180	1090	27	1100	400	50
PTE 650/09 Mk.II	590	900	BU 600	220	1290	27	1250	400	50
PTE 800/09 Mk.II	860	900	BU 800	300	1390	38	1450	400	63
PTE 900/09 Mk.II	1020	900	BN 900	370	1490	38	1600	400	63
PTE 1200/09 Mk.II	1250	900	BN 1200	470	1640	40	1850	400	80

\* Distance from floor to top edge of the crucible protective collar

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