PTE Mk.II energy saving holding electric furnaces

These furnaces are used as holding units for various aluminium alloys up to Tmax 900 ° C in the furnace chamber. They are designed in an octagonal design with an emphasis on saving energy and with the aim to reduce the dimensions of the equipment and heated furnace chamber.

These benefits of the unit have been achieved thanks to our modern insulation materials and an innovated system for affixing the heating coils. Thy are installed in grooves of refractory castable shaped blocks which prevent in their overheating.

PTE Mk.II furnace

Type	Capacity	Tmax in furnace chamber	Recommended operating temperature range (in crucible)	Crucible type Noltina or equivalent	Crucible capacity	Loading height	External dimensions (w×h×d)	Heating power	Weight	Voltage	Protection
	Kg Al	°C	°C	Type	l	mm	mm	kW	kg	V	A
PTE 100/09 Mk.II	105	900	650-850	A 300	40	780	950×1125×950	15	440	400	32/3
PTE 200/09 Mk.II	185	900	650-850	BU 200	70	840	1035×1185×1035	15	545	400	32/3
PTE 300/09 Mk.II	275	900	650-850	BU 300	110	940	1125×1285×1125	22	775	400	40/3
PTE 400/09 Mk.II	320	900	650-850	BU 350	135	1040	1125×1485×1125	22	660	400	40/3
PTE 500/09 Mk.II	480	900	650-850	BU 500	180	1090	1285×1635×1285	27	880	400	50/3
PTE 650/09 Mk.II	590	900	650-850	BU 600	220	1290	1285×1835×1285	27	1115	400	50/3
PTE 800/09 Mk.II	970	900	650-850	BN 800	300	1390	1400×1935×1400	38	1200	400	63/3
PTE 900/09 Mk.II	1080	900	650-850	BN 900	370	1490	1400×2035×1400	38	1300	400	63/3
PTE 1200/09 Mk.II	1250	900	650-850	BN 1200	470	1640	1400×2235×1400	40	1450	400	80/3

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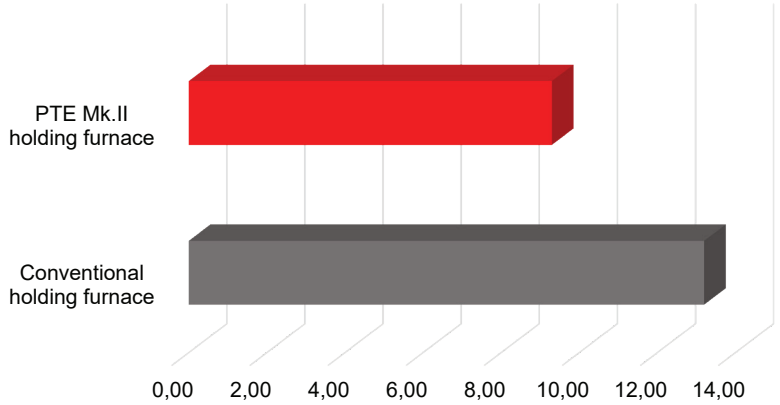
PTE Mk.II energy saving holding electric furnaces will save you up to a third of your energy costs

We know from the measurements we have taken in the past that the current holding furnaces installed in the aluminium foundries show about by 20–80 % higher electric power consumption (kWh) than the PTE Mk.II holding furnaces offered by us.

Average hourly power consumption (kWh) of the PTE 500/09 Mk.II holding furnace and a standard holding furnace



As an example, we present the PTE Mk.II 500/09 furnace consumption measurement when holding 500 kg of aluminium when compared with a standard available holding furnace:

We select the price of electric power in the amount of EUR 0.16/kWh, 24 working hours a day, 320 working days a year (7,680 hours).

PTE 500/09 Mk.II holding furnace

Furnace's hourly consumption in the stabilised condition
9.30 kWh

Expected furnace consumption for 1 year
71,424 kWh

Standard holding furnace

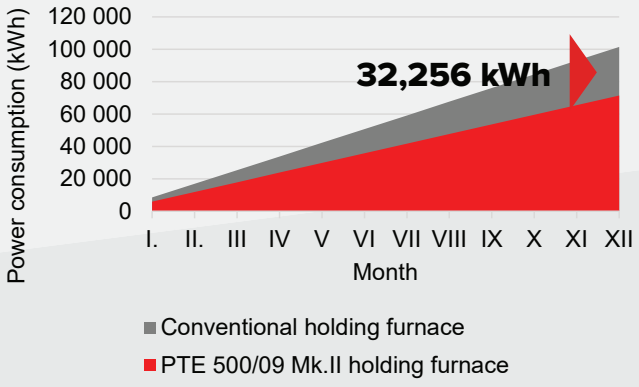
Furnace's hourly consumption in the stabilised condition
13.50 kWh

Expected furnace consumption for 1 year
103,680 kWh

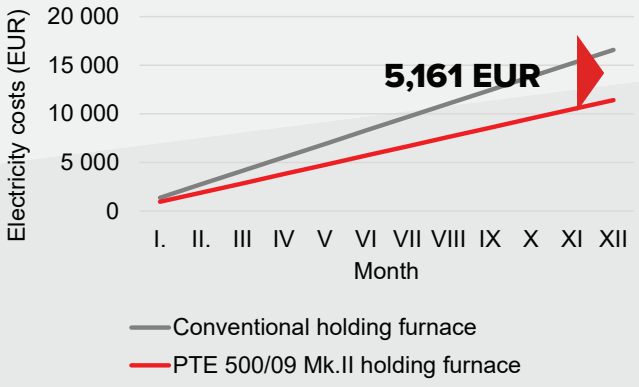
By mere furnace replacement, it is possible to achieve:

- Savings of 4.20 kWh electric power for every hour which means 100.80 kWh for every day and **32,256 kWh** for every year
- Annual savings in the amount of **5,161 EUR**

Annual electricity savings



Annual savings of electricity costs



Return on the investment in the PTE 500/09 Mk.II holding furnace:	Furnace price: EUR 16,000 / Annual savings: EUR 5,161	=	Return on the investment: **3 years**

The carbon footprint is an indirect indicator of energy consumption. By operating the PTE 500/09 Mk.II energy saving holding electric furnace for holding 500 kg of melted aluminium, you will reduce emissions of carbon dioxide by up to 13,900 kg per year.

The estimate is calculated on the basis of an greenhouse gas emission intensity of electricity generation in the Czech Republic (431 g CO_2/kWh) for 2019.
Source: Greenhouse gas emission intensity of electricity generation. European Environment Agency (EEA).