



# TILTABLE CRUCIBLE FURNACE

with the flameless gas burner technology  
of promeos<sup>®</sup>



METAL

Heating solutions  
for metal industry

## MELTING PROCESS

# HIGH ENERGY EFFICIENCY, EXTENDED CRUCIBLE LIFETIME, INCREASED PRODUCTIVITY!

*The tiltable crucible furnace with flameless gas burner technology*

- For Aluminium (light metal) and copper alloys
- Capacity up to 1,200 kg (Al)
- Melting rate from 100 to 450 kg/h (Al)
- By a specific consumption of 0.9-1 kWh/kg (Al)



The promeos® tiltable crucible furnace with flameless gas burner technology stands for a high energy efficiency and increased effectiveness on melting of Aluminium and copper alloys. Flue gases of totally premixed and almost stoichiometric combustion surround crucible without “hot spots” and due to homogeneous and effective heat transfer verifiable energy savings of up to 35 % will be achieved. This leads to extended crucible lifetime and reduces production stops. Reduced velocity and heating without open flame avoid erosion and enable application of light isolation materials with low density.

Thus less mass has to be heated and the furnace is isolated much better. Output is stepless adjustable at constant and ultra low flue gas emissions. The off exhaust gas release of the furnace is located on the lower part of the furnace. In this way space for a working platform is generated and access for charging and cleaning of the furnace is facilitated.



The advantages:	Your benefits:
+ optimized heat transfer, light furnace isolation	+ up to 35 % verifiable energy savings
+ no “hot spots”	+ high crucible lifetime
+ high power density / furnace temperature	+ high melting rate
+ volumetric combustion	+ reduced noise and off exhaust gas emissions (70 dB possible, CO and NO <sub>x</sub> get reduced by 50 %)
+ high turn down ratio	+ effective melting
+ gas heating in quality of electrical heating	+ up to 50 % lower operating costs and up to 65 % CO <sub>2</sub> reduction.

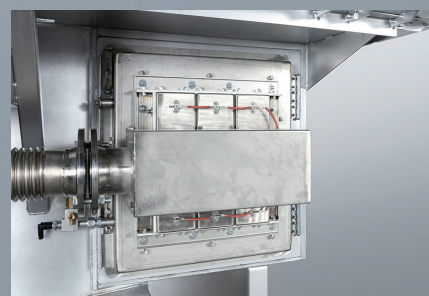
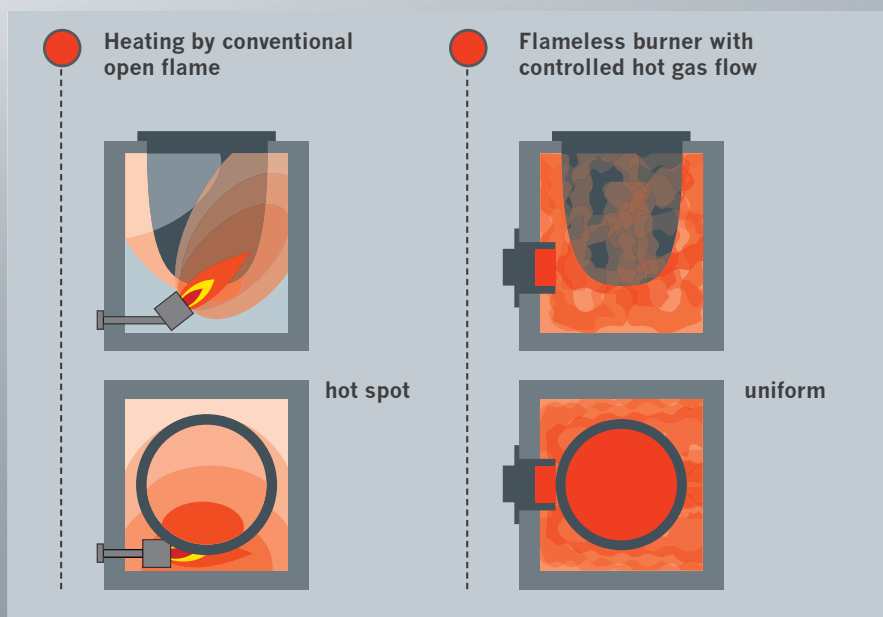


**The tiltable crucible furnace of promeos**  
Simple. Flameless. Better.

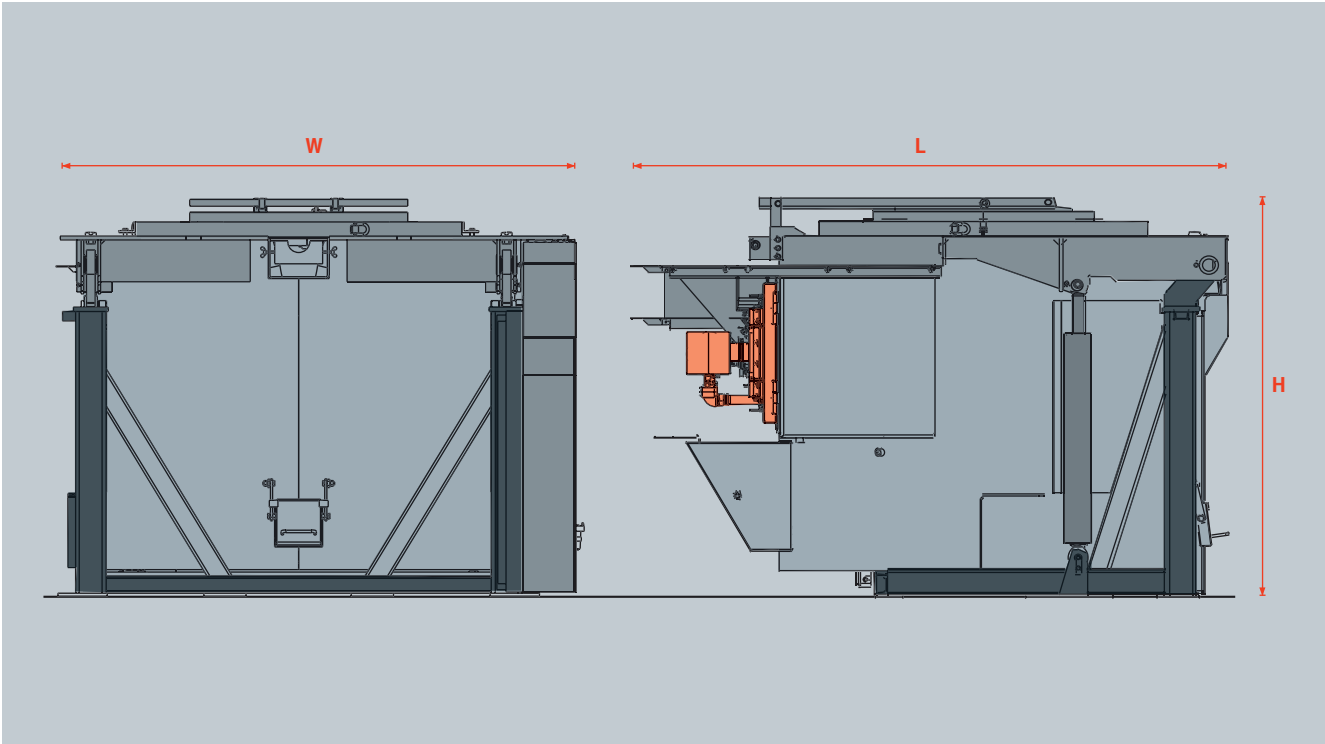


**Uniform heat**

The flameless gas burner technology provides uniform heat



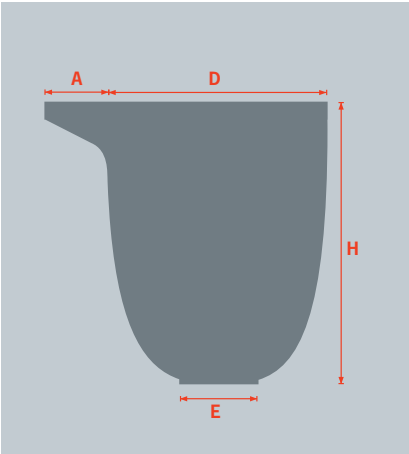
TECHNICAL SPECIFICATION



Technical Specifications*	Capacity	Burner power		Temperature	Melting rate	Consumption	Dimensions in mm		
Type of furnace	kg	min. kW	max. kW	°C	kg/h	kWh/kg	H	W	L
KTO 1400/1200 AI	1.200	130	530	1.200	450	0,9-1,0	1.800	2.400	2.700
KTO 1200 AI	1.200	130	530	1.200	450	0,9-1,0	2.000	2.250	2.700
KTO 1000 AI	1.000	130	450	1.200	430	0,9-1,0	1.900	2.250	2.700
KTO 800 AI	800	130	450	1.200	420	0,9-1,0	1.800	2.250	2.600
KTO 600 AI	587	100	400	1.200	400	0,9-1,0	1.700	2.200	2.500
KTO 600 AI	600	100	400	1.200	400	0,9-1,0	1.700	2.200	2.500
KTO 500 Cu	500	150	400	1.400	200	1,0	1.500	2.000	1.500

Direct temperature control by placing a thermocouple into the molten mass is possible.

Technical specifications* of the crucible (examples**)		Crucible dimension in mm			
Type of furnace	Type of crucible	D	H	E	A
KTO 1400/1200 AL	BUK1.400 cut	1000	1.100	400	300
KTO 1200 AL	BUK 1.200	860	1.300	350	200
KTO 1200 AL	TPX 900 H	950	1.250	440	200
KTO 1000 AL	BUK 1.000	860	1.150	350	200
KTO 800 AL	BUK 800	860	1.000	350	200
KTO 600 AL	TPX 587	780	900	435	200
KTO 600 AL	BUK 600	780	900	440	200
KTO 500 CU	TPXO 12	440	940	295	150



\* State: February 2016  
\*\* furnace can be adapted on any crucible

# SIMPLY. MORE. VALUE.

*Flameless gas burner technology across entire process chain.*

During production and processing of metals heat is applied for melting, holding or liquid metal transfer. Conventional heating systems apply open gas flames or electrical heaters for this. Both are extraordinary energy consuming and uneconomical. Therefore promeos® offers the flameless gas burner technology which is significantly more efficient and more economical, as well as environment friendly and increases productivity in comparison to conventional burners.

## Heating solutions for melting and holding furnaces

The flameless gas burner technology can be applied across entire process chain in foundries – in a furnace for instance, as part of a heating equipment or as individual heating unit. promeos® develops adapted heating solutions for following fields:

- melting and holding
- preheating and drying
- transferring
- molding
- heat treatment



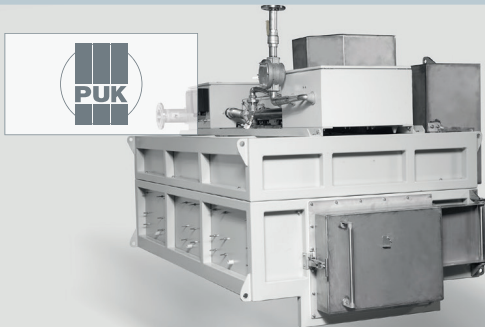
**ALUMINIUM**

Tiltable crucible furnace  
Power: 500kW



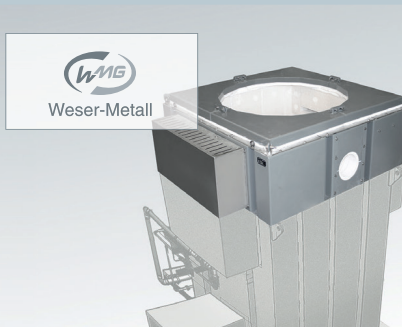
Dosing furnace for zinc high pressure  
die casting. Power: 100kW

**ZINC**



**ZINC**

Holding furnace  
Power: 360kW



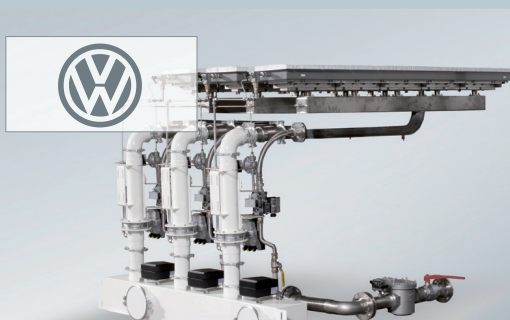
Crucible melting furnace for lead  
Power: 2 x 200kW

**LEAD**



**ALUMINIUM**

Burner system for shaft furnace  
Power: 2 x 500kW



Burner system for a Magnesium-melting  
furnace. Power: 100 - 1.000kW

**MAGNESIUM**



# SIMPLY TOGETHER

*In over 20 countries. Over 500 projects.*

An extract of our references.



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