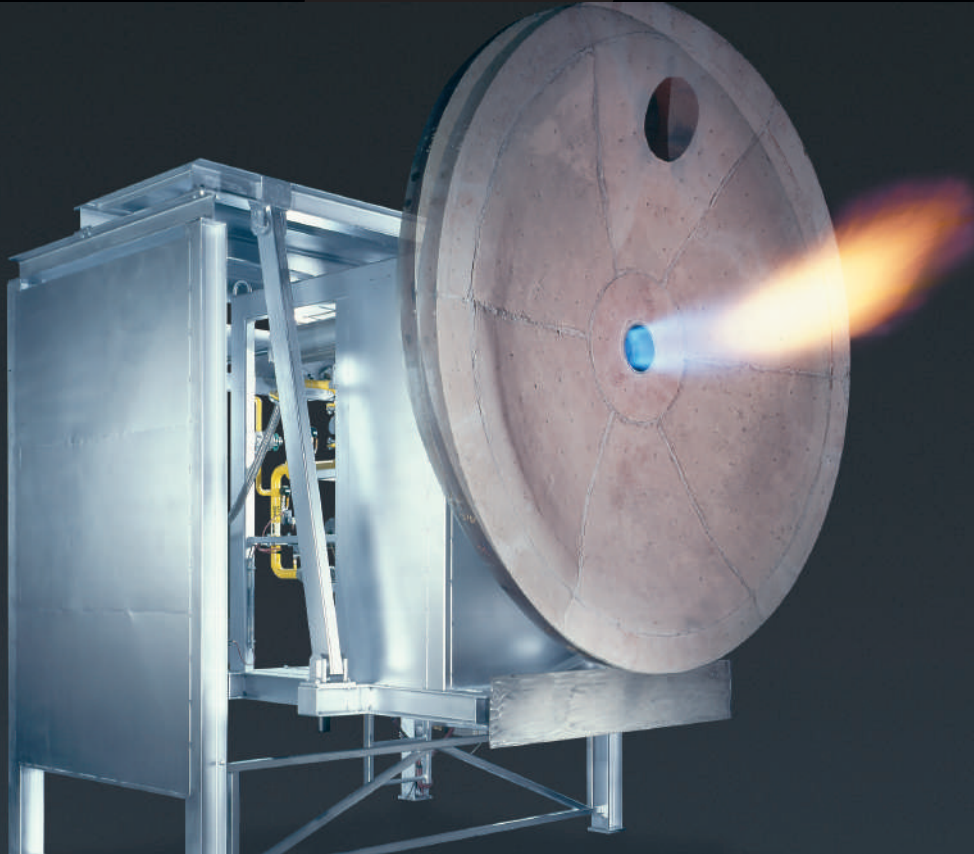


Horizontal ladle heaters

Horizontale Pfannenfeuer



Cardanic suspensions enable a tight seal between heat shield and ladle essential for high efficiencies especially with horizontal burners.

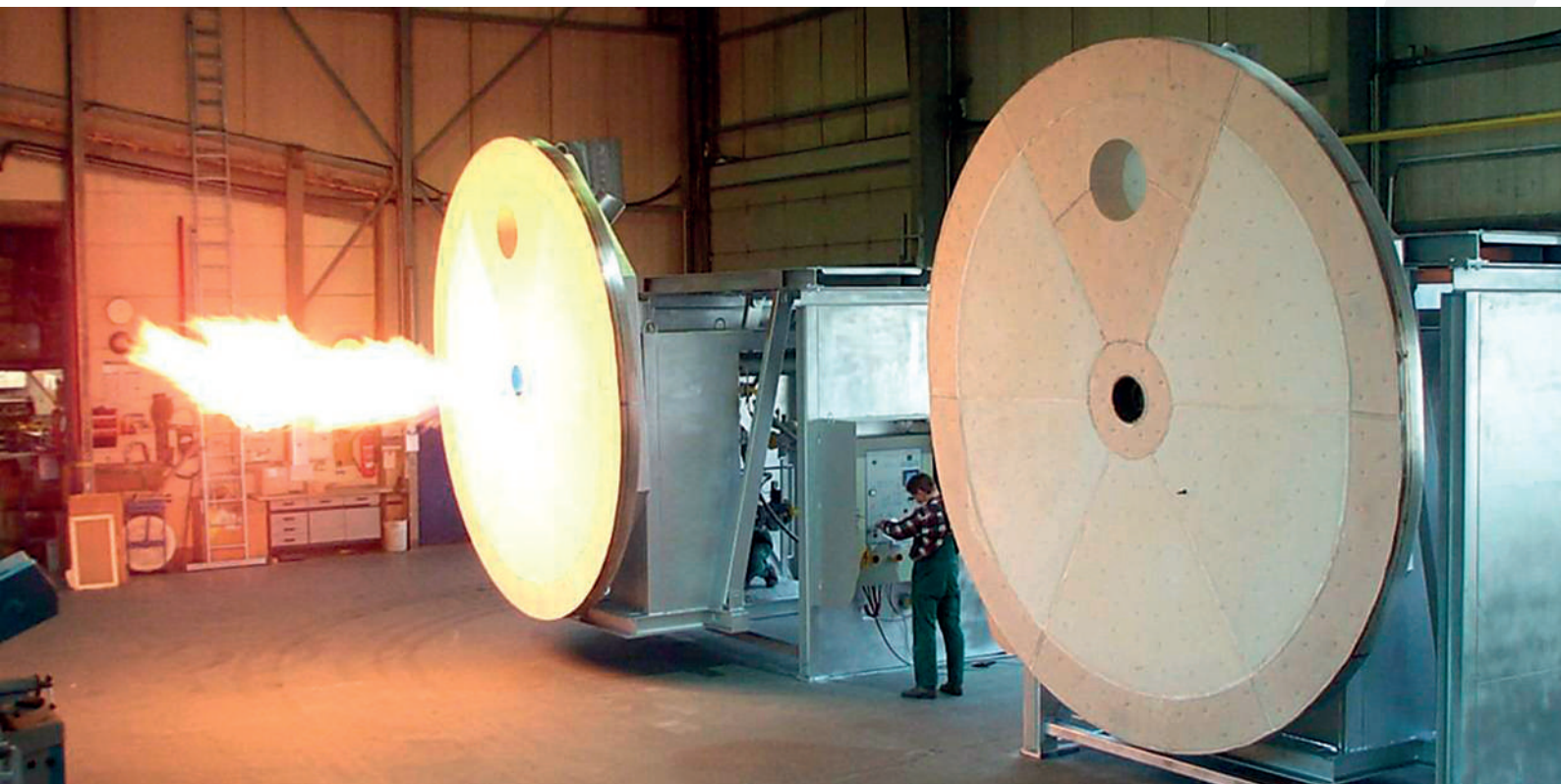
On request pre-heaters can be equipped with an additional door in the heat shield to cater for maintenance needs.

Depending on local conditions, the unit can be designed to move on rails or as a swinging heater – both versions are suitable for single or multiple heating positions (e.g. MAPEKO trolley heater).

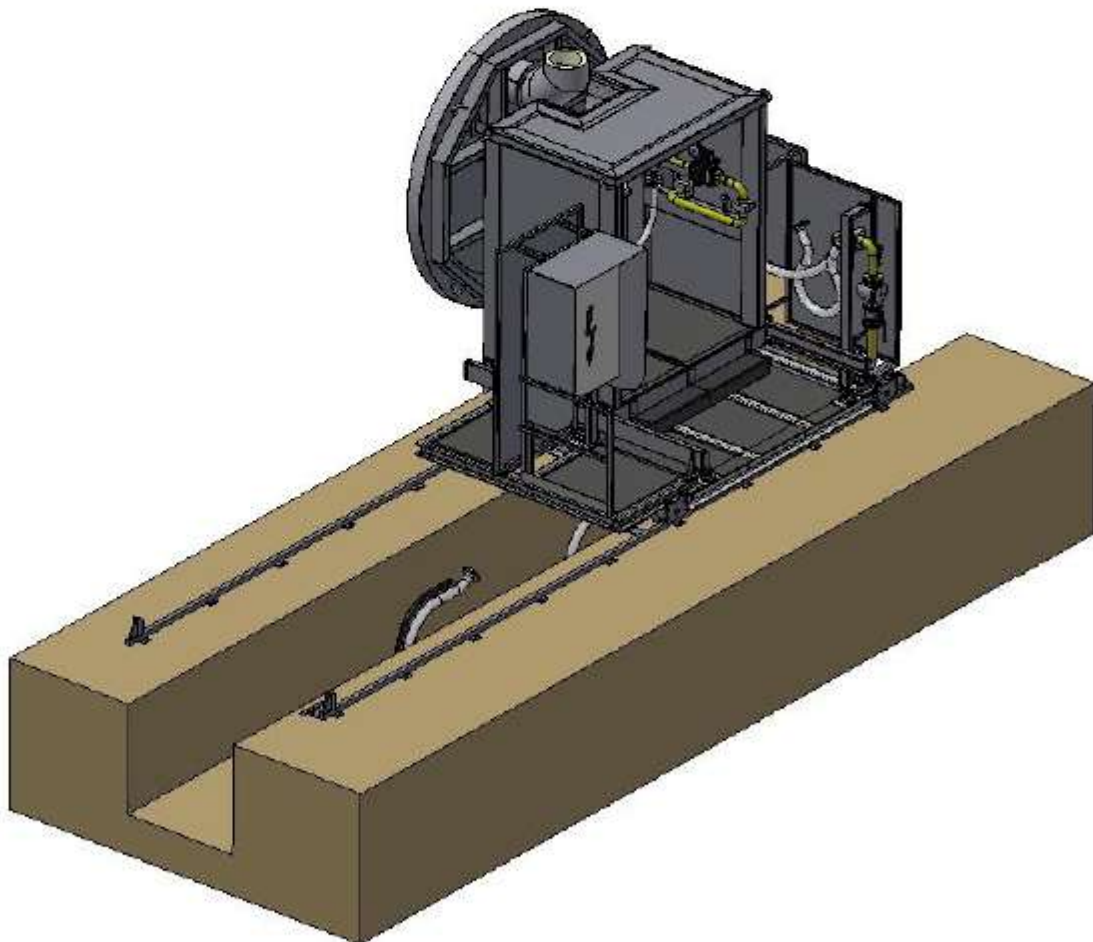
Gerade bei horizontalen Feuern ist die kardanische Deckelaufhängung ein wichtiges Merkmal. Eine optimale Pfannenabdichtung ist hier entscheidend für hohen Wirkungsgrad.

Auf Wunsch ist das Feuer mit einer zusätzlichen Tür im Deckel ausgestattet, um die Anforderung einer Wartungsposition zu erfüllen.

Je nach den Verhältnissen vor Ort kann das Feuer auf Schienen verfahrbar ausgeführt werden oder als MAPEKO Schaukelfeuer. MAPEKO Feuer können für eine oder mehrere Heizpositionen (z. B. als MAPEKO trolley heater) konzipiert werden.



Ignition	directly by ignition electrode without ignition burner!
Supervision of the main flame	UV cell with indication
Additional safety equipment	Two main gas valves Tightness control after every BURNER OFF
Blower data	V = 2.100 m ³ N/h; p = 50 mbar P = 5,5 kW; n = 3.000 rpm
Drive data	Compressed air R ½"; p = 4 – 6 bar 2 cylinder ø 100/25 x 1.100 mm
Longitudinal drive	
Electric data	400 V ±5%, 50 Hz – 4 x 16 mm ² 230 V ±5%, 50 Hz – 3 x 2,5 mm ²
Total weight	~ 5.900 kg



Example picture



**Scope of delivery****2.1 1 pc. horizontal ladle preheater****2.1.1 1 pc. MAPEKO high performance burner, type MGE 3 – 1.500 kW**

~ 80 kg

Burner head completely made of heat- and temperature-change-resistant stainless steel cast.

Incl. ignition electrode, ignition transformer and UV cell for flame supervision.

2.1.2 Energy control line, NG, p_e = 100 mbar

~ 140 kg

All elements are assembled and wired acc. to DIN EN 746-2, 2011!

Checked by DIN/DVGW.

Unit is shop-tested due to complete installation and testing at our works prior to delivery.

2.1.3 Control line - COMBUSTION AIR

~ 300 kg

All elements are assembled and wired. Unit is shop-tested due to complete installation and testing at our works prior to delivery.

**MAPEKO**
economical preheating

~ 1.200 kg

2.1.4 Ladle cover, ceramic insulation - ø 2.700 mm

reinforced steel structure with cardanic suspension and exhaust gas elbow.

Insulation: 150 mm thick, vertically arranged and highly compressed ceramic fibre, $t_{\max} = 1.200^{\circ}\text{C}$, gravity = 300 kg/m³; rim insulated with segments of concrete, already dried at our works and thereby ready for immediate use.

Cardanic suspension at the travelling frame guarantees optimum sealing of the ladle.

All parts coming into contact with flame or exhaust gas are made of heat- and temperature-change resistant stainless steel.

Corrosion protection:

Steel parts de-rusted and double coated with heat resistant paint (250°C). Coating according to RAL 9006 (white aluminium, silver aluminium) with layer thickness of approx. 80µ. The paint fulfils DIN-EN-ISO 12944-6 for all 6 corrosive categories.

2.1.5 Ladle axis drive

320 kg

2 pneumatic cylinder HOERBIGER ø 100 x 1100mm, solenoid valve, throttle, pressure reducer, flexible hose. Roller bearing ø 123 with side thrust roller.

All elements are preassembled and wired.

2.1.6 Steel construction

~ 3.100 kg

Base frame, travelling frame, heat protection plates for all sensitive parts

Corrosion protection:

Steel parts de-rusted and double coated with heat resistant paint (250°C). Coating according to RAL 9006 (white aluminium, silver aluminium) with layer thickness of approx. 80µ. The paint fulfils DIN-EN-ISO 12944-6 for all 6 corrosive categories.



2.2 Operation of horizontal ladle preheater

The offered unit is to heat up empty ladles in horizontal position. The operation of the horizontal heater is simple and clear. The operator chooses the required program number at the **external program selector**

By pressing the button BURNER ON the operation is released. All other functions proceed automatically:

- The travelling frame with ladle cover and burner swivels towards the ladle by means of a pneumatic cylinder. Ladle is completely covered – no gap between.
- The combustion-air blower starts running
- After a pre-ventilation start is released by burner control device and the flame is ignited directly by high voltage - no manually ignition, no ignition burner!
- Then the ladle is heated up according to the selected heating program – no manually adjustment, no survey by eyes!
- After the program has finished, the final temperature is held until the ladle is to be used and the operator presses the button BURNER OFF:

The energy supply is cut and the travelling frame moves backwards.

During the entire heating process the burner is monitored by an UV-diode. In case of a flame disruption the energy supply is cut immediately.

After each heating cycle the tightness of the main gas valves is checked automatically with the tightness control device. In case of a failure the unit cannot be started again unless the failure has been eliminated.

In case of any failure shut-off and following re-start the unit continues at that certain step of program where it stopped (as long there was no power failure).