

# FLAMELESS PREHEATING FOR **INDUCTION FURNACES**

Efficient

Clean

Combustion



# Opportunity to pre-heat empty induction furnace

Heat generation in induction furnaces is based solely on the electromagnetic coupling of electrical energy into the charge material.

This means: heating an empty furnace is not possible. As a result, several critical processes are difficult to perform efficiently:

- Drying after relining according to a defined temperature curve
- Keeping the refractory warm during production downtime to avoid cracking from thermal stress
- Preheating before production restart

Being able to carry out these processes on an empty furnace offers enormous benefits in energy efficiency, process reliability, and equipment lifetime.



# The promeos® solution evenly (pre-)heats the empty furnace

With the flameless, promeos® heating system, the furnace can be uniformly heated even when empty, enabling:

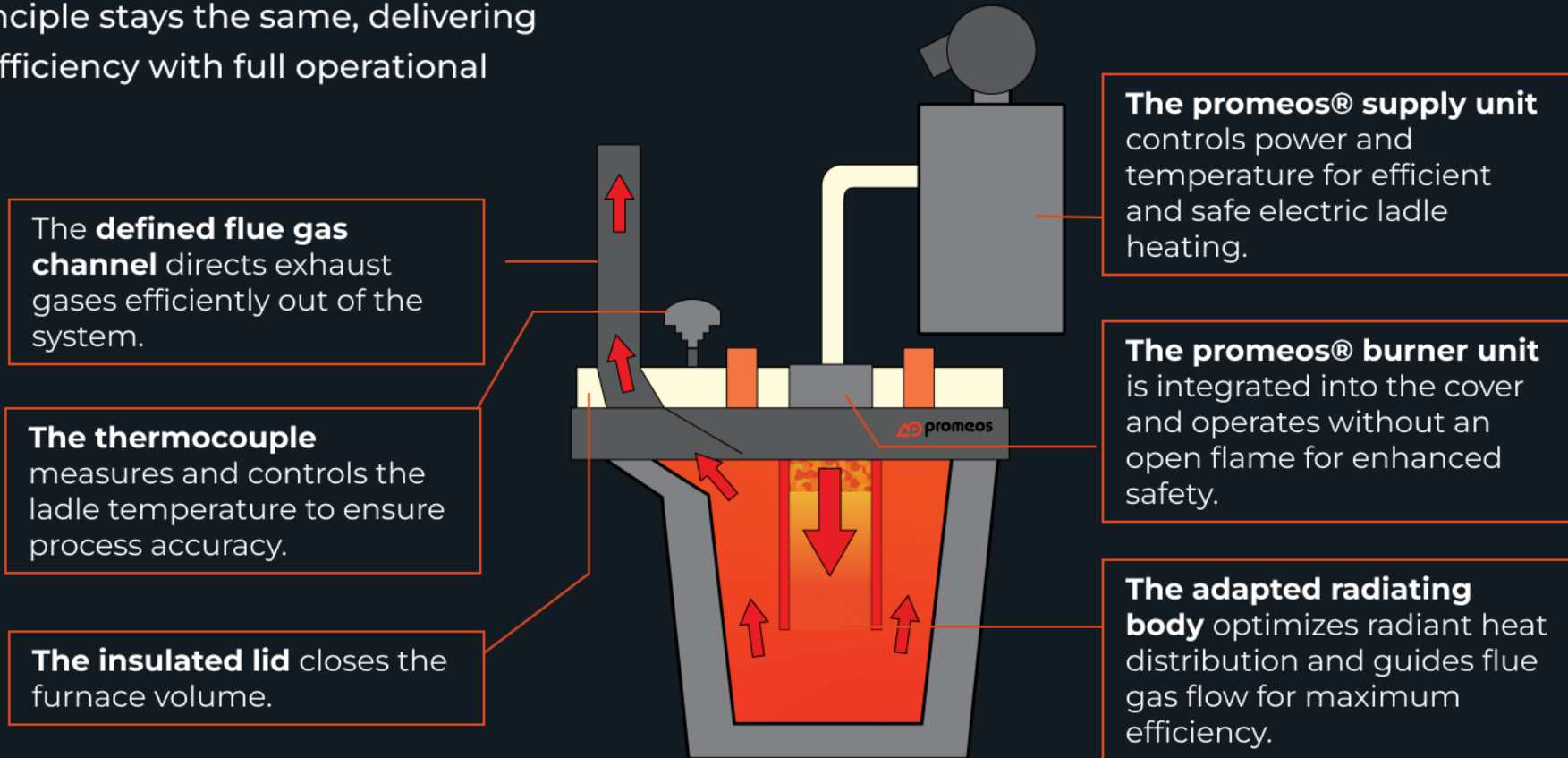
- Heat transfer across the entire inner surface
- Homogeneous, controlled heat
- Energy-efficient heating of the refractory material

This system can also be integrated as a customized furnace lid solution, adapted to the geometry and operating parameters of each installation.









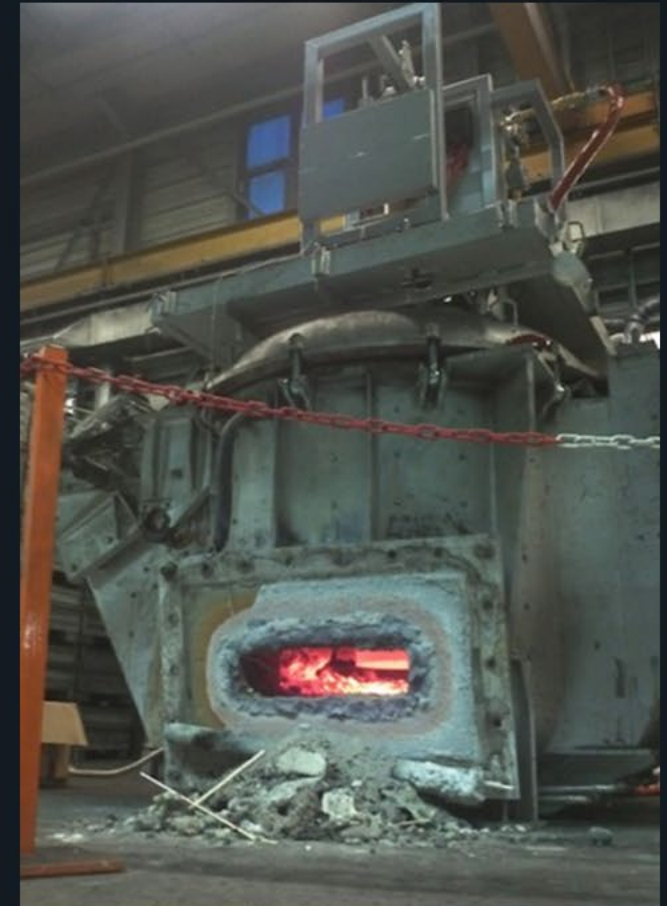
# How it works

While geometries can be customized, the working principle stays the same, delivering maximum efficiency with full operational control.

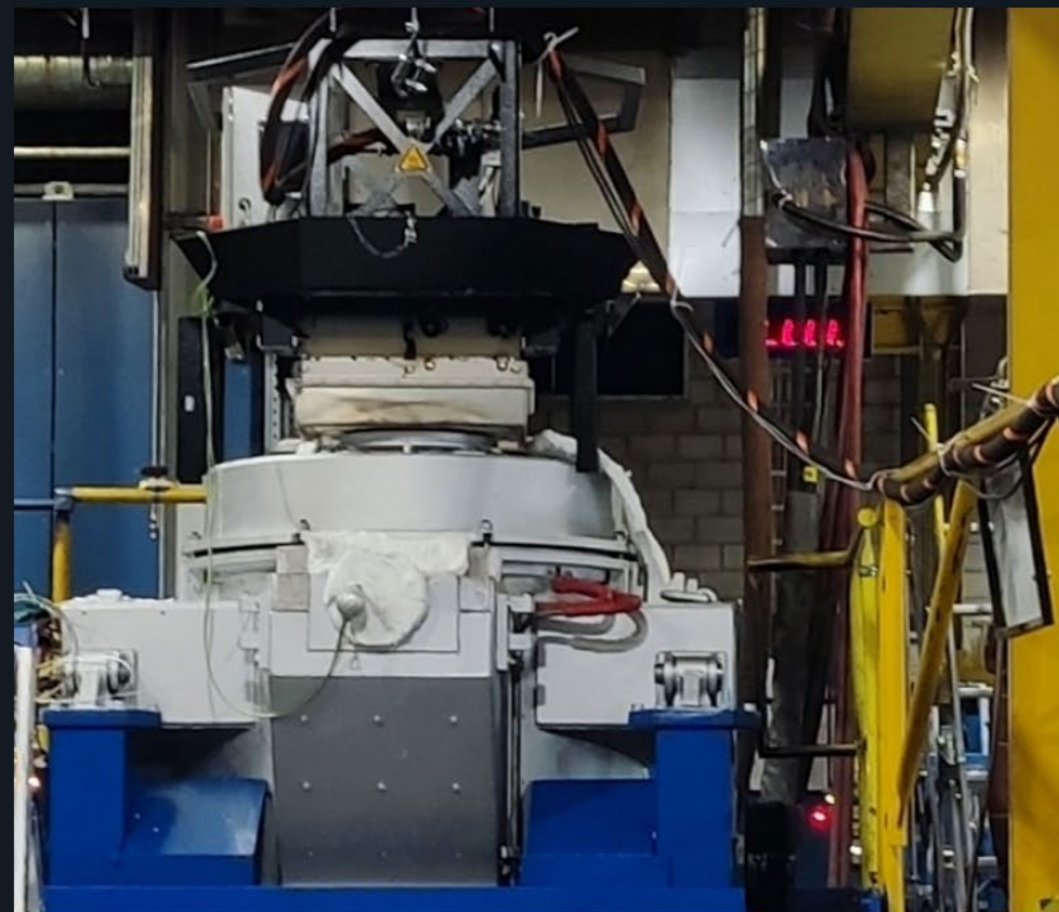
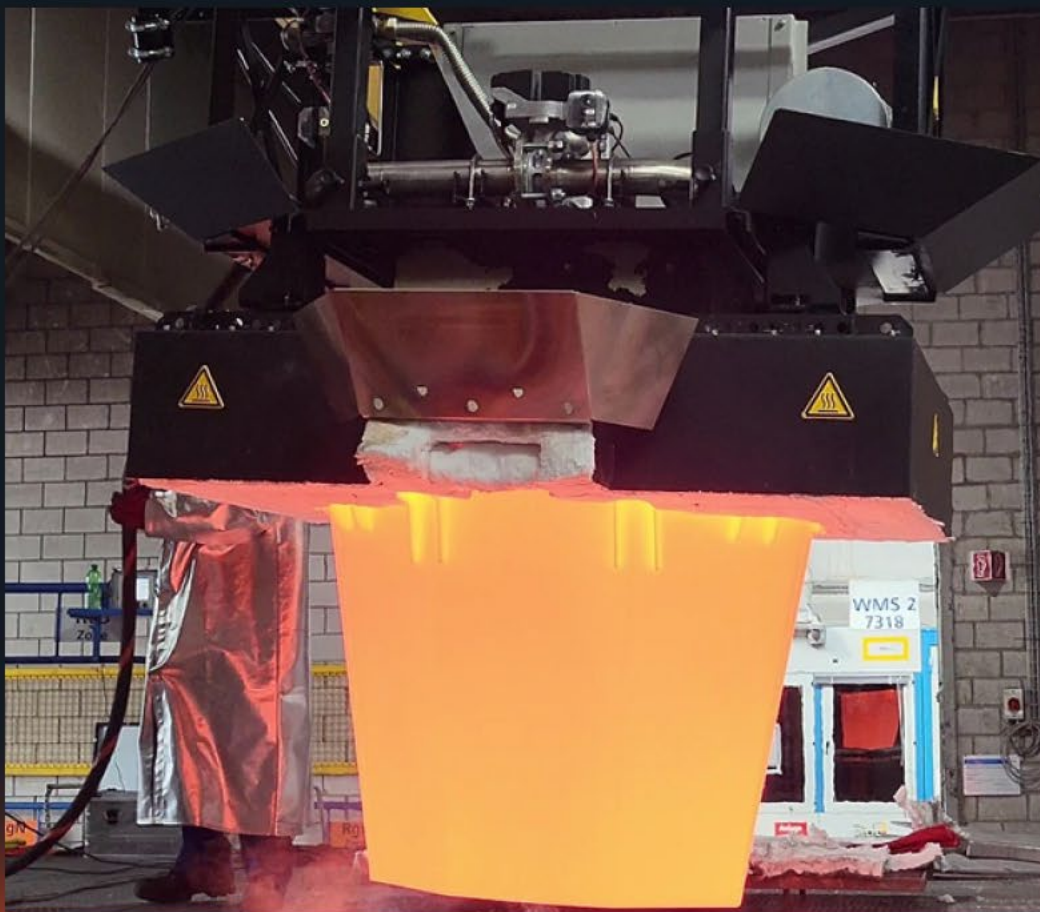


# Key benefits

-  **Up to 50 % increased efficiency**
-  **Significant CO<sub>2</sub> reduction**
-  **Uniform heat distribution**
-  **Clean combustion without harmful emissions**
-  **Low noise levels during operation**
-  **Individually engineered furnace lid design**



# Heatelligence® in action



# Heatelligence® in action with parking frame



# Heatelligence® in action: transportable heater on boom



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