By heating ladles with electricity instead of gas, aluminum producers as well as aluminum and steel foundries can benefit from lower energy costs and increased process control.

Heliothal ladle heater installations offer energy efficient solutions for heating and pre-heating up to ladle temperatures of 1500°C (2732°F) and ladle sizes from ID 500 mm to ID 2100 mm (19.69 – 82.68 inches).

Heliothal electrical ladle heaters are supplied as complete installations, comprising heating elements in a reflector casing, control and regulation equipment, commissioning and technical service. The innovative heater monitoring and control system optimizes performance and prolongs the lifetime of the heater by eliminating overheating. The system ensures maximum and consistent power, which reduces process times.

HELIOTHAL ELECTRICAL LADLE HEATER ADVANTAGES
— More energy efficient. Net efficiency is 70%, compared to only 20% for gas.
— Multi-purpose. Innovative design enables the same heater to be used for both heating and holding
— Reduced process times
— Increased refractory lifetime
— Reduced CO₂ emissions
— Cleaner working environment
— Complete installation

In Heliothal electrical heaters, the heating elements are arranged in a reflector. This allows the radiation to be more accurately directed towards the target area. Optionally, certain models can have the heater automatically raised and lowered hydraulically, and there are attachments on both sides to minimize heat loss from the spouts. This goes together with a timer system that starts preheating automatically at a preset time. Heating is monitored and controlled by PLC.
CONTROL EQUIPMENT
Heliothermal electrical ladle heaters are delivered together with control equipment specially designed by Kanthal® to ensure optimal heater operation. We deliver CE/EN/UL/CSA certified equipment according to your national/company standards.

This innovative control and regulation system optimizes performance and eliminates over-heating in order to prolong the lifetime of the heater. It also ensures maximum and consistent power. More power reduces process times and reductions in time mean cost savings.

INSTALLATION AND COMMISSIONING
Heliothermal electrical ladle heaters are supplied as complete installations, comprising heating elements in a reflector casing, and control and regulation equipment. Commissioning and technical support are provided on site by Kanthal® heating experts.

TECHNICAL SERVICE
Once the system is installed, we will support you with preventive maintenance, repairs, replacements, service and refurbishment. We offer service agreements and technical team efforts on a global scale in order to keep your ladle heaters productive for a long time.

ACCESSORIES
The Kanthal® program includes the following accessories for ladle dryers and heaters:
- Add-on for ladle pouring spout
- RHH cable set (5 m / 197 inches)
- Thermocouples
- Lifting device

The control system can handle most of today’s common communication protocols such as Modbus, Profibus, Profinet and Ethernet IP.
<table>
<thead>
<tr>
<th>MODEL</th>
<th>MAX ELEMENT TEMP °C/F</th>
<th>MAX CHAMBER TEMP °C/°F</th>
<th>HEAT SOURCE</th>
<th>MAX POWER KW</th>
<th>SUPPLY PHASES</th>
<th>LADLE MIN A, MM/INCH</th>
<th>LADLE MAX A, MM/INCH</th>
<th>LADLE MIN B, MM/INCH</th>
<th>LADLE MAX B, MM/INCH</th>
<th>HEATER OD MM/INCH</th>
<th>HEATER H OD MM/INCH</th>
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</tbody>
</table>

* Maximum design power for 1150°C chamber temperature. At 1450°C chamber temperature stated values reduces to 35% of maximum design power.

** Free space allowance inside ladle for all heating modes.
CONTROL SYSTEMS

Features according to customer requirements
— Manufactured using components from global industry leaders
— Advanced PLC or budget equipment
— Thermocouple free control available
— Full documentation
— CE certification
— Multiple com protocols
  - Modbus
  - Profibus
  - Ethernet IP (AB)

LIFTING SYSTEMS

Standardized for each system
— Multiple solutions available
— Electrically controlled motion
— Classified as lifting devices
— CE approved

Heat shields
“Up-down” sensors
Safety sensors
RHHcabling

KEY ADVANTAGES

7 GOOD REASONS FOR CHOOSING HELIOTHAL LADLE HEATERS

- MUCH HIGHER ENERGY EFFICIENCY
- EXTENDED LADLE LIFETIME
- MULTIPURPOSE OPERATION
- REDUCED PROCESSING TIME
- ZERO CO, CO₂ OR NO X EMISSIONS
- SAFE & QUIET WORK ENVIRONMENT
- UNMANNED & TIMED OPERATION