

Kanthal® electrical ladle heaters

Controlled heating for increased productivity

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.

Kanthal 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).

Kanthal 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.

KANTHAL 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 Kanthal electrical heaters, the heating elements are arranged in a reflector. This allows the radiation to be more accurately directed towards the target area.



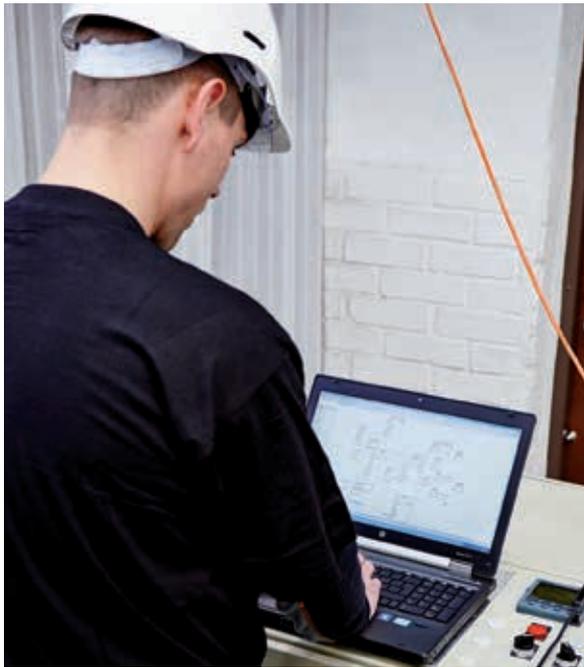
Optionally, certain models can have the heater automatically raised and lowered hydraulically, and there are attachments on both sides to minimize heat loss from the spouts. This goes together with a timer system that starts preheating automatically at a preset time. Heating is monitored and controlled by PLC.



Control equipment

Kanthal electrical ladle heaters are delivered together with control equipment specially designed by Kanthal to ensure optimal heater operation. We deliver 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.



The control system can handle most of today's common communication protocols such as Modbus, Profibus, Profinet and Ethernet IP.

Installation and commissioning

Kanthal 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 Sandvik heating experts.

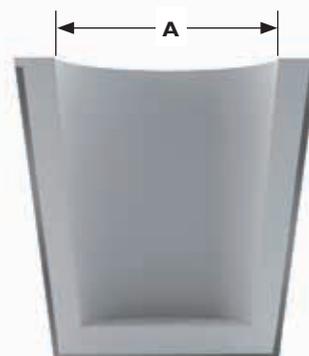
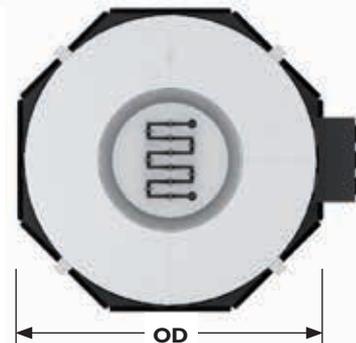
Technical service

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 sprout
- RHH cable set (5 m / 197 inches)
- Thermocouples
- Lifting device





Model	Ladle size		Power [kW] (BTU/h)	Supply voltage [V]	Heater Dimensions	
	A [mm] (inch)	Phases			OD [mm] (inch)	H [mm] (inch)
5-7	500-700 (20"-28")	1-phase	30 (102 400)	230	1150 (45,3")	700 (27,5")
	500-700 (20"-28")	1-phase	45 (153 500)	230		
	500-700 (20"-28")	1-phase	66 (225 200)	400		
7-9	700-900 (28"-35")	1-phase	66 (225 200)	400	1350 (53,1")	700 (27,5")
	700-900 (28"-35")	3-phase	90 (307 000)	400		
9-11	900-1100 (35"-43")	3-phase	90 (307 000)	400	1550 (61")	700 (27,5")
	900-1100 (35"-43")	3-phase	135 (460 600)	400		
11-13	1100-1300 (43"-51")	3-phase	90 (307 000)	400	1750 (68,9")	700 (27,5")
	1100-1300 (43"-51")	3-phase	135 (460 600)	400		
13-15	1300-1500 (51"-59")	3-phase	90 (307 000)	400	1950 (76,8")	700 (27,5")
	1300-1500 (51"-59")	3-phase	135 (460 600)	400		
	1300-1500 (51"-59")	3-phase	200 (682 400)	400		
15-17	1500-1700 (59"-67")	3-phase	135 (460 600)	400	2150 (84,6")	700 (27,5")
	1500-1700 (59"-67")	3-phase	200 (682 400)	400		
17-19	1700-1900 (67"-75")	3-phase	135 (460 600)	400	2350 (92,5")	700 (27,5")
	1700-1900 (67"-75")	3-phase	200 (682 400)	400		
19-21	1900-2100 (75"-83")	3-phase	135 (460 600)	400	2500 (98,4")	700 (27,5")
	1900-2100 (75"-83")	3-phase	200 (682 400)	400		
	1900-2100 (75"-83")	3-phase	270 (921 300)	400		

Sandvik Group

The Sandvik Group is a global high technology enterprise with 47,000 employees in 130 countries. Sandvik's operations are concentrated on three core businesses: Sandvik Tooling, Sandvik Mining and Construction and Sandvik Materials Technology – areas in which the group holds leading global positions in selected niches.

Sandvik Materials Technology

Sandvik Materials Technology is a world-leading manufacturer of high value-added products in advanced stainless steels and special alloys, and of medical implants, steel belt-based systems and industrial heating solutions.

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