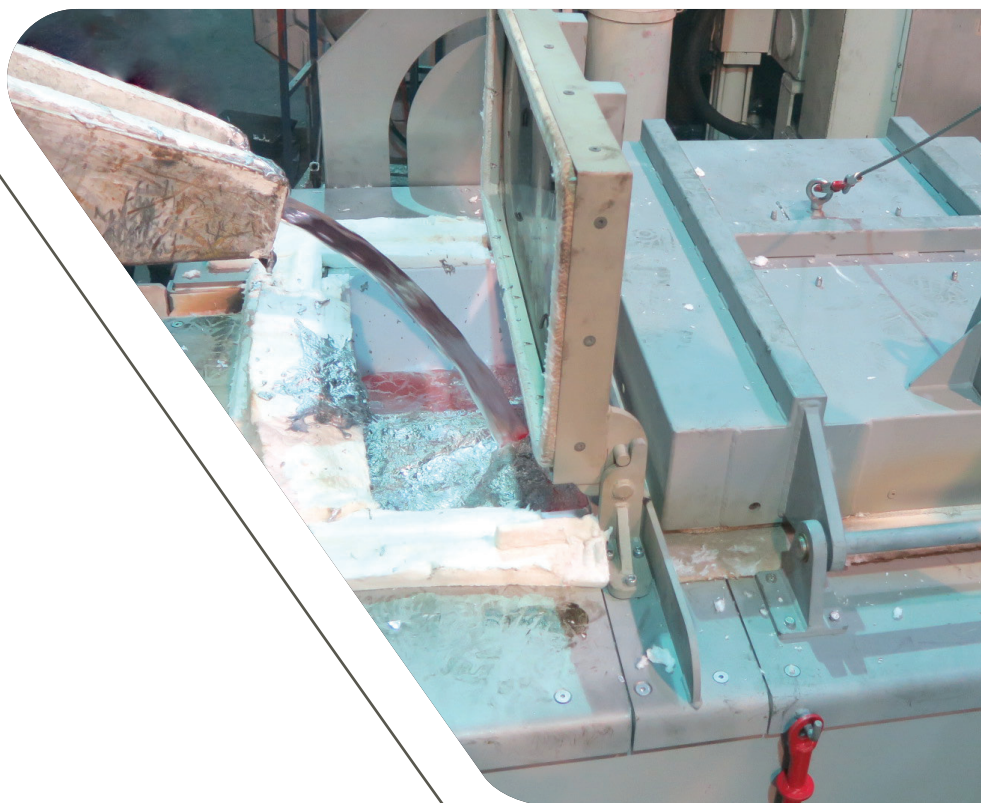




# Underheated Furnace Systems **Solutions**



**Pyrotek**<sup>®</sup>

# Why Pyrotek?

**Pyrotek®** is a global engineering leader and innovator of performance-improving technical solutions, integrated systems, and consulting services for aluminium industry customers. Our products and solutions are used around the world in automotive, aerospace, transportation, and high-tech manufacturing. We have global resources and local support in more than 35 countries and 80 locations.

## A leader in underheated furnace solutions

### Advanced Foundry Services

Building on decades of innovative offerings for aluminium foundries, Pyrotek is promoting its Advanced Foundry Services—integrated capital equipment, a network of experienced technical experts, and industry-leading consumable parts that optimize efficiency and product quality.

This multi-year initiative is based on millions of dollars of research and development at Pyrotek's laboratories around the world, and decades of partnership with our customers.

### The Pyrotek Advantage

- World-class manufacturing facilities
- Patented, long-lasting, efficient heater technology
- Complete, custom turnkey systems from design to installation
- Market leading precast lining technology
- Underheated technology used in over 2000 furnaces worldwide





## Pyrotek Underheated Furnace Features

- Horizontal heater tubes are fully immersed in molten aluminium to maximize conductive heating, and the tubes located near the furnace floor create convection currents
- Convection currents decrease the thermal gradient throughout the bath; temperatures throughout the bath are normally within 5°C (9°F) of each other
- The melt surface is not superheated and reduces oxide formation
- Oxides are not formed at the heat source
- The furnace's bath surface and roof areas are cooler, which reduces cleaning hazards. This also reduces cleaning frequency, cleaning labour costs and melt loss and extends refractory life
- The oxide layer protects the melt from additional oxidation without impeding heating
- 5–8 year product life
- Heater elements are individually and proportionally controlled to maximize element life
- Precast refractory liner surface treatments extend refractory life
- Many lining options are available to fit most foundry configurations. Calcium silicate board construction is also available
- Custom control panels can be added to meet project requirements
- Filtration and degassing furnaces are available
- Furnaces can be incorporated into a larger metal delivery system

- Underheated design can be cleaned with inert gas. Furnaces should be cleaned once every three weeks in normal conditions
- Furnaces will keep the metal in a molten state and prevent leaks if a heating tube breaks

## Related Products

- Coatings
- Degassing equipment and consumables
- Fluxes and flux-injection equipment
- Furnace cleaning tools
- Gaskets and seals
- Heated launders
- Molten metal circulation/transfer pumps
- Molten metal filtration
- Refractory shapes and ceramics
- RFM® AutoPour ladles
- Sialon ceramics
- Thermocouples
- Transfer ladles





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