



# HIGH TEMPERATURE SYSTEMS

High Temperature Systems provide best-in-class solutions for the aluminum recycling work cell with an emphasis on overall system efficiency and reducing carbon footprint. Capabilities include low loss, low-dross chip submergence, efficiency boosting furnace circulation, degassing/flux-injection systems, and compact molten metal transfer solutions.

## MELT IT

The Coriolis® Chip Melting System is a continuous scrap submergence system with the added benefit of forced circulation. The attached pump generates a strong vortex, coating and submerging aluminum chips in the metal bath, allowing for easily automated furnace filling. When transfers are necessary, use a Chameleon® series pump to go from melt to ingot with the press of a button!



## ALLOY IT

High Temperature Systems high-efficiency circulation pumps are designed for your application requirements and carefully constructed to ensure optimal reverberatory melting and alloying furnace operation. Ideal circulation rates not only help maximize metal quality but also improve furnace efficiency and reduce maintenance costs.



## REFINE IT

The Trident™ system ensures ideal outcomes every time through repeatable dosing, precise mixing dynamics, and PLC controlled sequencing - bringing the ease of “one-button operation” and touch-panel programming to your plant floor!



## MOVE IT

Our pumps are proven to operate better than traditional tap-out configurations because they minimize oxidation and dross generation during the transfer and allow the option of remotely controlling the transfer start, stop, and rate. These functions give operators the ability to complete the transfer operation securely, while cutting labor and time consumption.



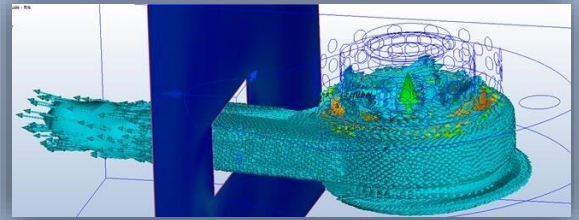


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High Temperature Systems is always seeking new strategic and technological developments - partnering with research teams to develop new technologies, processes, and alloys. With unique industry experience, engineering resources, and IP management, let us support your project while maintaining and upholding any necessary confidentiality.

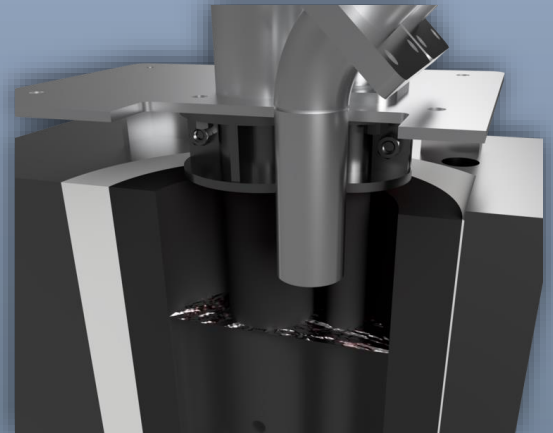
## Advanced Design Resources

- Multi-physics modeling, fluid dynamics and full CAD/CAM capabilities
- Motor/Pump dynamics and control system expertise
- Over 50 years of industry experience in developing customized molten metal transport and treatment solutions



## Customized Solutions

With the use of precise modeling and fluid dynamics software, we can predict flow rates and expected results before the first billet is formed; while considering fluid density, alloy composition, operating temperature, expected lifetime, production requirements, etc.



## Historical Foundation

We have a long history as a solution provider in the melt department by developing, manufacturing, and providing installation guidance for molten metal circulation and transfer pumps.

## Intelligent Control Systems

The more you know about your pump system, the more confident you can be in your metal quality and - ultimately - the quality of your parts. Each pump design is rigorously tested in both physical and digital models to ensure a repeatable outcome.





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High Temperature Systems provide a range of circulation and transfer pumps specifically designed to maximize metal quality for aluminum and zinc casting operations, as well as rotary degas and flux injection solutions. These capabilities, combined with our refractory lined pipe and intelligent controller options, provide the highest production quality with minimal operator interaction.

## Transfer Pumps

We sell transfer pumps in a wide range of sizes and flow rates to meet your production requirements. Applications include transfer from melting to holding furnaces, filling transport ladles, alloying and pump-out operations, etc. Each pump is designed for the smallest possible footprint with the most efficient and reliable impeller technology.

## Circulation Pumps

High Temperature Systems high-efficiency circulation pumps are designed for your application requirements and carefully constructed to ensure optimal reverberatory melting furnace operation. Ideal circulation rates not only help maximize metal quality, but also improve furnace efficiency and reduce maintenance costs.

## Treatment

We design and manufacture a range of rotary degas and flux injection systems for aluminum treatment. From portable rotary degas to fully automated treatment systems for degassing and fluxing bull ladles, each system is optimized for the application. A high-efficiency rotor option is also available for total degassing advantage.

## Chameleon®

The Chameleon® is a transfer pump combined with the features of a circulation pump in a single package! Our patented dual-volute design provides high reliability and circulates metal continuously while providing transfer-on-demand capabilities without the cost and complexity of installing two pumps in the pump well. This unique design is only available from HTS.





### High Temperature Systems, Inc.

have been a global leader in molten metal circulation, transfer, treatment, and chip submergence solutions for over 50 years, thanks to their innovative designs.

**Our Mission** — High Temperature Systems, Inc. designs, develops, manufactures, delivers, and supports application-specific molten metal handling solutions worldwide.

**Product Quality** — Graphite components are most critical for high-performance molten metal pump products. By starting with high-grade materials, our products have a significant market advantage. To ensure the longest possible product lifetimes, we use a proprietary oxidation inhibitor impregnation process that substantially increases oxidation resistance and improves atmospheric moisture resistance for maximum shelf life.

**Our Method** — We take the time to understand your unique challenges and design a solution that provides maximum value.

**Design** — Since 1971, High Temperature Systems has understood your challenges and designed solutions to meet your needs.

**Develop** — High Temperature Systems continuously innovate, develop and refine a wide range of molten metal pumping solutions to meet a changing industry.

**Deliver** — With an outstanding record for on-time delivery, High Temperature Systems put customer priorities first every time.

**Service** — High Temperature Systems offer comprehensive, turnkey field support and factory repair and rebuild services.



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