



Non-Ferrous Melting Furnace Systems and Foundry Equipment

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Make More with
Your Metal



The SINC Advantage

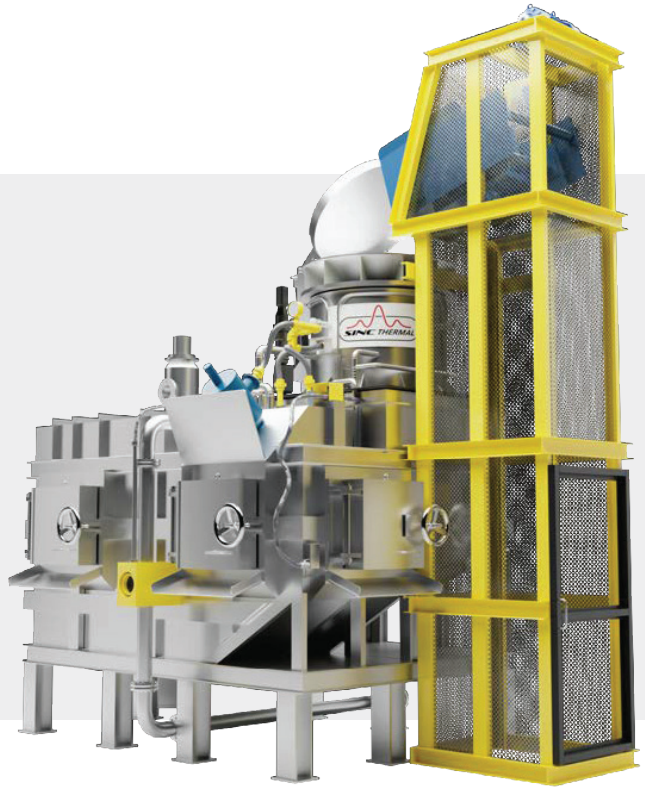
SINC Thermal has become a leading manufacturer of industrial furnaces and equipment for the foundry, die casting, and metal forming industries. SINC's core understanding of melting, holding, and molten metal distribution provides your foundry with efficient, clean, and reliable thermal solutions. A Partner of Gillespie & Powers, SINC Thermal builds on 80+ years of experience supplying furnaces and processing equipment to the aluminum recycling and cast house industry. Together with old-world skills, SINC brings a fresh perspective born out of experience, engineering, and patented technology to the foundry and die-casting industry.

- International industry experience
- Responsive, customer-oriented
- Forward-thinking built on established engineering
- Service support from dedicated engineering teams
- New and innovative technology with traditional quality.



**SINC Thermal
Delivers Cleaner
Metal to Traditional
Molds or HPDC
Systems**

Freedom[®] Furnace



**Maintain Clean
Molten Metal Without
Special Treatment**

Nippon Freedom[®] shaft melter controls residual oxygen in the holding chamber to within 2% or less for months of operation without requiring holding bath cleaning.

Foundries benefit from lower energy consumption, low metal loss from oxidation, cleaner metal and less scrap from inclusions. What's more, Freedom's remarkably long holding bath cleaning cycles translate to longer uptimes and less metal-rich drag out during daily bath cleaning.

- Recuperates thermal energy through the shaft's charge
- Less cleaning, less loss, less flux, more profit
- Extended cleaning cycle reduces manpower
- Reduced inclusions in the melt
- Fewer scrap castings from inclusions
- Less downstream rework
- Built in the US exclusively by SINC Thermal

Jet Melter® Furnace

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**Nippon Performance
Proven Over 40 Years**



The Jet Melter® and Micro Jet Melter® furnaces are high-efficiency, energysaving stack melter-type furnaces that combine melting and holding functions. Ingot and scrap are charged into the stack section and preheated by the exhaust gasses from the melting hearth. This ensures that charge materials are in the ideal condition for rapid melting and low dross creation.

- 3 sizes – from small to large capacity
- High metal quality – molten aluminum has lower gas & inclusion levels.
- Refractory lined – no crucible to replace.
- Low metal loss – high metal quality = low dross formation.
- Easy to clean – convenient access doors make cleaning easy.
- Built-in the US exclusively by SINC Thermal
- Proven efficient during 40+ years of production
- Industry-leading features include SINC's famous build quality and customer support
- Of all shaft-melters on the market, Jet Melters straight-shaft design accepts the largest variety of scrap and returns.
- Scales down to the lower capacities that other shaft-melters struggle with.
- Simple, cost effective, and compact

Infinity Furnace

Choose Static
or Tilting
Configuration



Infinity shaft melting furnace offers sound financial and operational choice for reduced cost of ownership and improved metal quality. Engineered for modern die casting operations, SINC Thermals proprietary design delivers more metal for your money through automated charging, low maintenance requirements, and long service life of the refractory lining.

- High-temperature uniformity of the holding bath.
- Consistent tapping temperatures.
- Simple and safe operation during charging and tapping.
- Accessible cleaning doors for efficient cleaning of bath and hearth.
- Thermalseal doors help mitigate energy loss.
- Intuitive HMI control screen for activity monitoring and maintenance activities.
- Engineered for optimal central-melt applications.
- Widest range of operating temperatures and most inherently customizable.
- Choked shaft design is a proven winner for high-throughput applications to minimize bridging.

Holding•Bale Out Furnace



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**Gas Fired or Electric
Immersion**

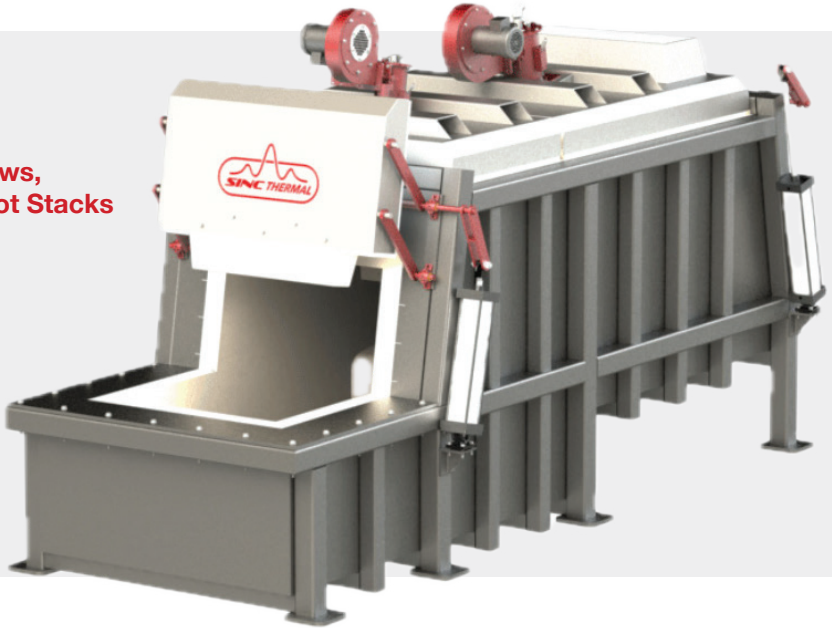
SINC Thermal holding furnaces provide easy molten metal access in a compact installation at the point of use. These furnaces are available with a variety of heating technologies including electric radiant elements, vertical or horizontally mounted immersion heaters or gas-fired units. Design configurations offer different-sized pockets, orientation, and fill systems.

- Point-of-use holding furnace ensures correct casting temperatures and metal availability.
- Heating through gas burners, electric radiant or immersion heaters.
- Non-crucible style for aluminum and with steel crucibles for zinc and magnesium.
- Can be linked to molten metal launders for continuous metal supply.
- Hot chamber versions for zinc and magnesium are available customized to fit your existing die-casting machine.

Reverberatory Furnace



**Accepts Sows,
T-Bars, Ingot Stacks**



SINC Thermal's Reverberatory furnaces are available in sizes from 500 to 4,000 lbs/hr melting capacity on a dry hearth and with holding bath capacities up to 40,000 lbs and above. Choose bale out, tap out, pump and launder systems for safe and efficient transfer of metal to point of use. Positive seal doors for reduced oxidation and corundum growth.

The simpler, optimized design offers improved performance, efficiency and lower maintenance requirements, creating a perfect solution for local central melting in foundry applications.

- Simple robust construction.
- Simplicity of charging with fork truck devices.
- Suitable for large and/or low and high-density scrap charges.
- Larger bath capacities can be equipped with chip-melting submergence pump systems.
- Ability to melt sows and T-bars to reduce feedstock costs.

Laundry Systems

Available With or
Without Heating



These molten aluminum launders form complete distribution systems for supplying hot metal to aluminum casting cells from a central melting/holding furnace. Launders consist of individual bolt-together sections that include inlet, outlet and degassing furnaces, straight launder sections of various lengths, and elbows, wyes, tees and crosses.

- Available with lid-mounted radiant heating elements or “bridge” mounted longitudinal immersion elements.
- The launder system itself creates an enhanced holding system allowing for optimized sizing of outlet furnaces and dip-wells.
- Suitable for connection to transfer pumps providing a high level of level control accuracy and consistency.
- Multiple temperature zones feature both chamber and immersed metal thermocouples for accurate and independent control.

Crucible Furnaces



**Available for Electric,
Natural Gas**



A workhorse in the industry, SINC Thermal crucible furnaces offer a high degree of flexibility and overall efficiency. Whether used as a melting furnace, holding furnace or both, crucibles are a perfect solution for cost-effectiveness and ease of implementation.

Available in static, tilting, or mobile variations and capable of daily cycling from meltdown to fully empty bath, crucible furnaces offer unique flexibility for job shops producing several different alloys in relatively smaller batches. Crucible furnaces are the simplest and most flexible holding furnaces for both large and small melt rooms and allow for quick alloy changes.

- Suitable for Al alloys, Zn alloys, Mg alloys and lead.
- Flexible melting and holding capacities depending on metal and alloys.
- Smallest installation footprint allows for close installation at the point of use.
- Flexible melting and holding capacities depending on metal and alloys.

Ladle Heaters

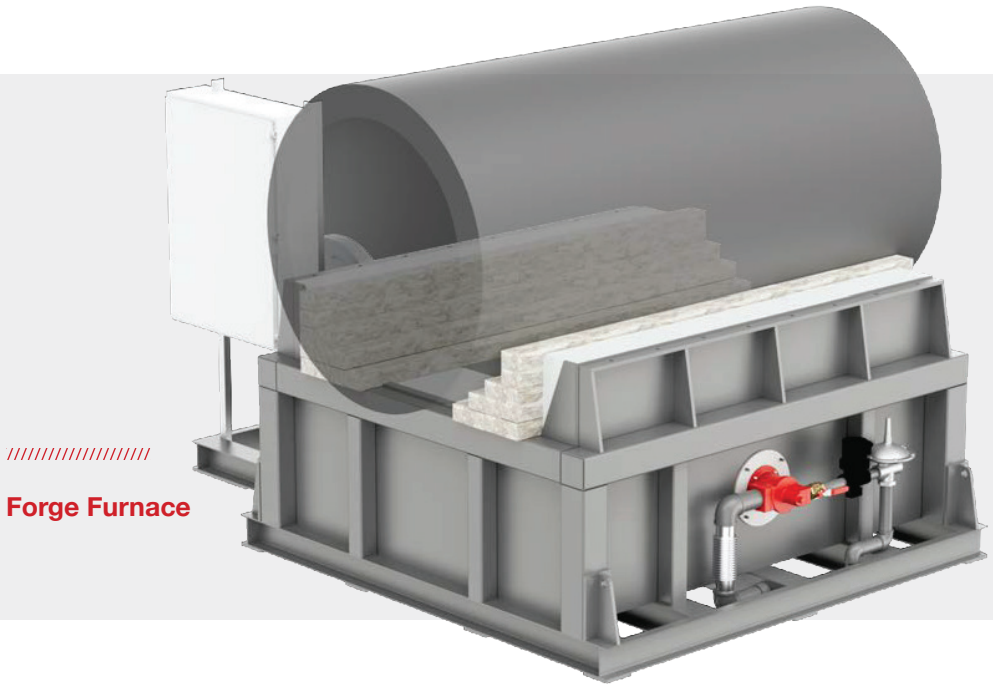
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**Contributes to
Foundry Safety**



SINC Thermal's efficient and compact ladle heater design provides high level of control resulting in precision and consistency during ladle preheating and refractory dry-out processes. Controlled and efficient pre-heating of transfer ladles is imperative for good ladle practices. Constructed with a simple, reliable hood lifting mechanism for safety and easy access.

- Better temperature control of the ladle ensures reduced temperature loss on metal transfer.
- Improved metal quality through less dross creation.
- Improved lining life through accurate temperature control, no flame impingement.
- Programmable heat-up ramps ensure the correct dry-out of new linings and increased life.
- Suitable for most foundry transfer ladles.

Custom Builds

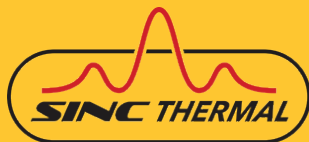


SINC Thermal specializes in creating custom solutions for unique foundry applications. Collaborative approach ensures equipment is tailored to your specific operational requirements, considering factors like material processing, output goals, and production footprint.

Aside from our molten, non-ferrous applications, SINC offers a comprehensive line of non-atmosphere heat treatment options for both ferrous and non-ferrous applications.

- Comprehensive post-delivery support, including installation, operator training, and maintenance services.
- Assurance that custom equipment seamlessly integrates into your operations, delivering long-term value and enhancing your production capabilities.

Make More with Your Metal



In Partnership with Gillespie & Powers

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