

NEW CENTURY HEATERS

MOLTEN HEATERS FOR ALUMINUM
AND ZINC CASTING INDUSTRIES

TECHNICAL PRODUCT CATALOG



THE HOTTEST NAME IN IMMERSION HEATERS

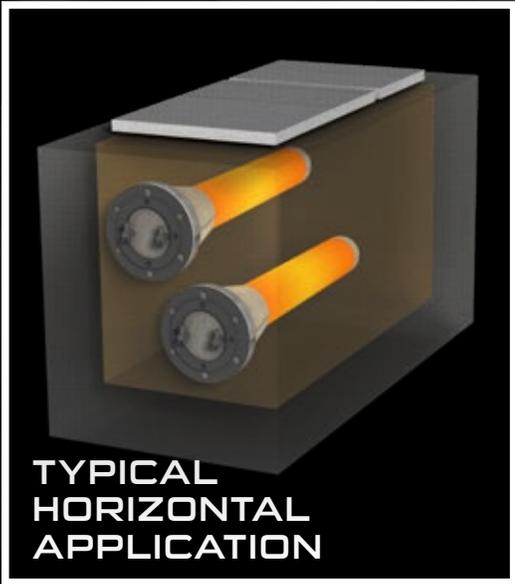
NewCenturyHeaters.com

A Division of Senasys

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Eau Claire, WI

HEATER SELECTIONS: HORIZONTAL

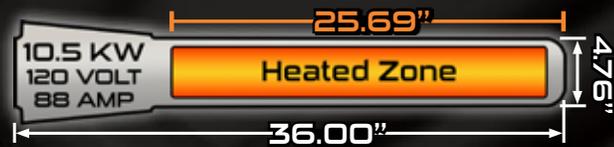


**TYPICAL
HORIZONTAL
APPLICATION**

IMMERSION HEATERS

Immersion heaters do not super-heat the surface of molten metal as glow bar and gas fired reverb furnaces do. Super-heating the surface of molten aluminum greatly increases the absorption of hydrogen into the aluminum and the creation of aluminum oxides at the surface, many of which become suspended in the melt or sink, only to be riled up from time to time.

When used in holding furnaces, immersion heaters more efficiently transfer heat into dip wells and degassers. The heat does not have to pass through an insulating layer of oxides on the surface of the melt. The heat source is beneath any separating refractory arch, and is in close proximity to the dip-well or degassing head.



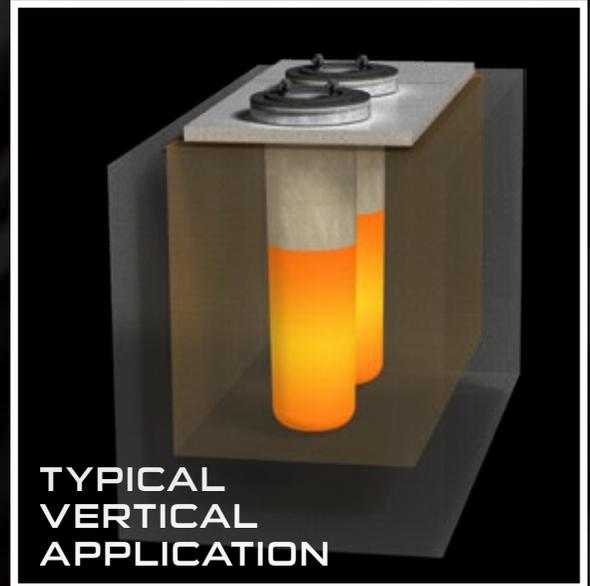
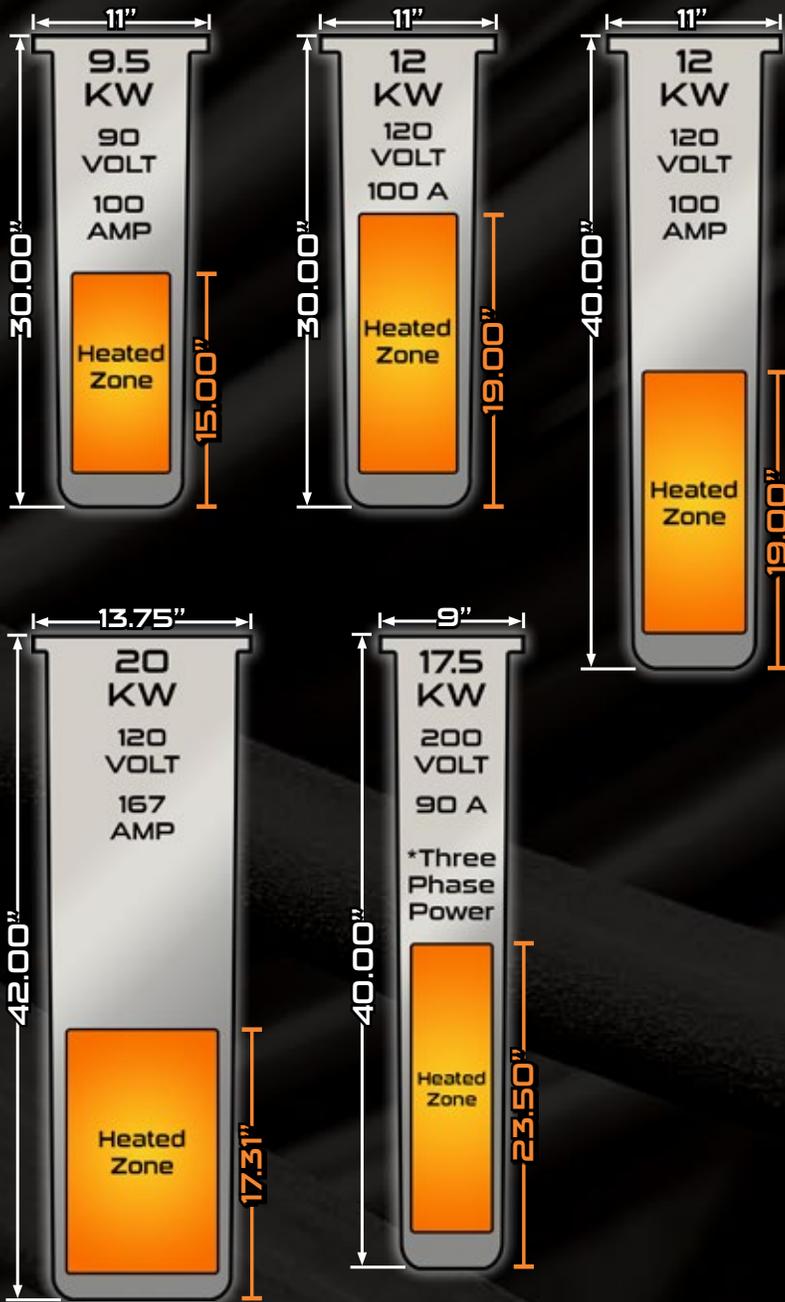
NEW CENTURY HEATERS - IMMERSION HEATER HIGHLIGHTS

Our immersion heating elements are made of heavy gauge ICA wire on cast ceramic cores that guarantee wire spacing to evenly distribute the heat through protection tubes that are high density, high conductivity, and non-wetting.

We use the heaviest gauge wire in the industry to provide robust, long-lived heaters that can be operated up to 2,000° Fahrenheit. The wire is recessed in separating grooves that are precision cast in a ceramic core that is engineered to compliment the mating protection tube.

Because of this, the coils can never touch each other and short out. Extra heavy leads are brought out and insulated away from the heater core to provide trouble free connections.

HEATER SELECTIONS: VERTICAL



IDEAL SOLUTIONS FOR:

- Holding Furnaces (*inline and free-standing*)
- Degassing Stations (*inline and free-standing*)
- Low-Pressure Furnaces
- Molten Metal Filter Boxes
- High Purity Melters
- Automatic Pouring Systems
- Ladle Melting Furnaces (*crucible and refractory-lined*)
- Temperature Boosters in Dip-Wells

New Century Heaters has engineered our immersion heaters specifically for molten metal. These heaters coupled with specially designed protection tubes provide the most robust and efficient molten metal heat source in the industry.

Power requirements are typically 25-30% less than glow bar furnaces. The reduction in melt loss and improved metal quality over glow bar and gas fired reverb furnaces is significant. Pairing these advantages with extended refractory life provides cost savings for the user.

Immersion heaters virtually eliminate melt loss in melters and since the refractory is never super-heated, the refractory life over glow bar and gas fired reverb holding and melting furnaces is typically at least doubled. Corundum is eliminated in properly designed immersion heated furnaces.

CONSTRUCTION SPECIFICATIONS

HEATING WIRES

New Century Heaters employs only the thickest, high-performance wire available per the specific heater design criteria.

This works to ensure even-heating, and contributes to a longer heater lifespan.



**HORIZONTAL
EXAMPLE**



**VERTICAL
EXAMPLE**



MOUNTING HARDWARE

Our immersion heaters can accommodate a variety of project-specific mounting systems that are supplied by the furnace manufacturer.

Additionally, we also offer heavy duty mounting hardware, facilitating a quick and convenient heater installation.



THERMOCOUPLES

Immersion heater thermocouples are integrated into the design of our heaters, and are available in various lengths to accommodate your specific application.



CONSTRUCTION SPECIFICATIONS

CERAMIC INSERTS

Our ceramic components are specifically engineered to withstand the demands of immersion heating, and must pass a rigorous in-house QC process.



PROTECTION TUBES

Our protection tubes are constructed of heavy duty materials to provide a long lifespan once installed, and resist possible damage during installation and furnace operation.

Vertical heaters are shipped installed within the protection tube, and with mounting hardware attached if requested by the customer.



SEAL CONES

New Century Heaters offers an economical seal cone rated at temperatures up to 2300° F, as well as an enhanced option rated up to 3000° F.

All items are stocked in-house, available for quick shipment if any additional stock is required.



PACKING & SHIPPING

New Century Heaters has customers throughout North America and Europe. Our shipping procedures include securely packaging each heater in expanding foam prior to boxing/crating to minimize damage possibility. Crates are equipped with damage sensors to ensure that unnoticed damage is avoided in transit.



CONTROL SYSTEMS

We can work with you to determine an optimal control system for your immersion heating project and can offer an array of solutions based on your specific criteria.

Reach out to us if you have a specific control system requirement and we would be happy to discuss the options available.



ABOUT NEW CENTURY HEATERS

OUR HISTORY

New Century Heaters was founded over 25 years ago in Bay City, Michigan, quickly becoming a major player in the immersion heating industry, and acquiring several large customers along the way throughout North American and Europe.

Product line offerings were increased on a continual basis, including our first three-phase heater (pictured below).

New Century Heaters was acquired in 2020 by Senasys, our parent company, and has continued to grow by leaps and bounds.

Becoming a part of Senasys has provided New Century Heaters with several competitive advantages including additionally engineering and design support, enhanced in-house manufacturing expertise and capability, and the resources of a comprehensive sales and customer-support team.



**THREE PHASE
IMMERSION
HEATER
(TOP VIEW)**



Founded in 1999 with three employees in a few hundred square feet, Senasys today has 50,000 sq ft. of space and continues to add additional product lines and services. Senasys lines of pressure, vacuum and air switches, thermostats, sensors, and controls are manufactured at our Eau Claire, WI headquarters.

Additionally, Senasys also employs a machine fabrication shop which serves customers in several manufacturing industries. Machining services include lathe work, milling, welding, small piece fabrication, and plasma cutting.

NEW CENTURY HEATER GALLERY



12 KW - VERTICAL HEATER



19 KW - HORIZONTAL HEATER



NEW CENTURY HEATERS

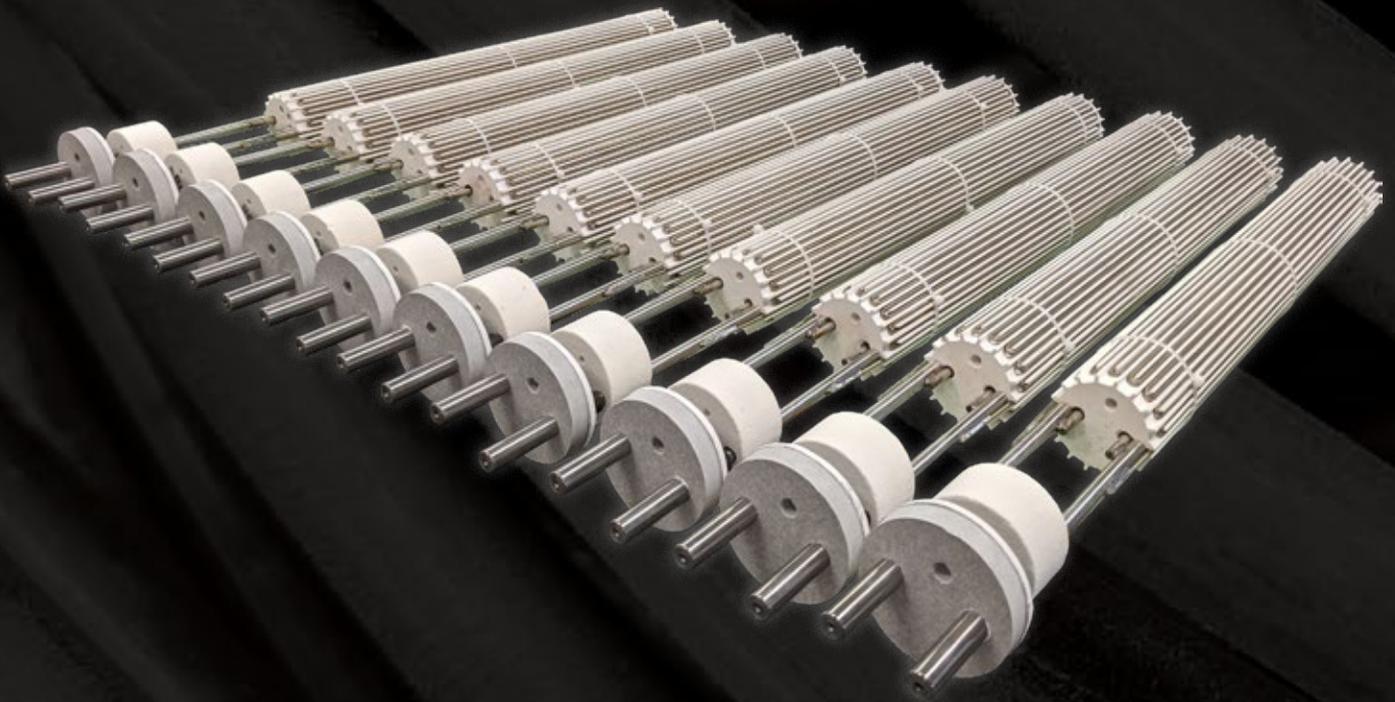
FOR MOLTEN ALUMINUM & ZINC

**REDUCE ENERGY CONSUMPTION,
LESS DROSS, CLEANER METAL,
QUICKER TEMPERATURE RECOVERY.**

We will work with you and your furnace builder to find the optimal solution for your furnace heating requirements.

We offer single & three phase heaters, and also have the ability to provide heater control systems. Accessories & heaters are stocked in-house for quick shipment.

- Drop Shipping to Installation Facilities is Available
- Dedicated Customer Service Representatives Per Customer
- Industry-Leading Manufacturing Timelines, Expedites Also Available



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