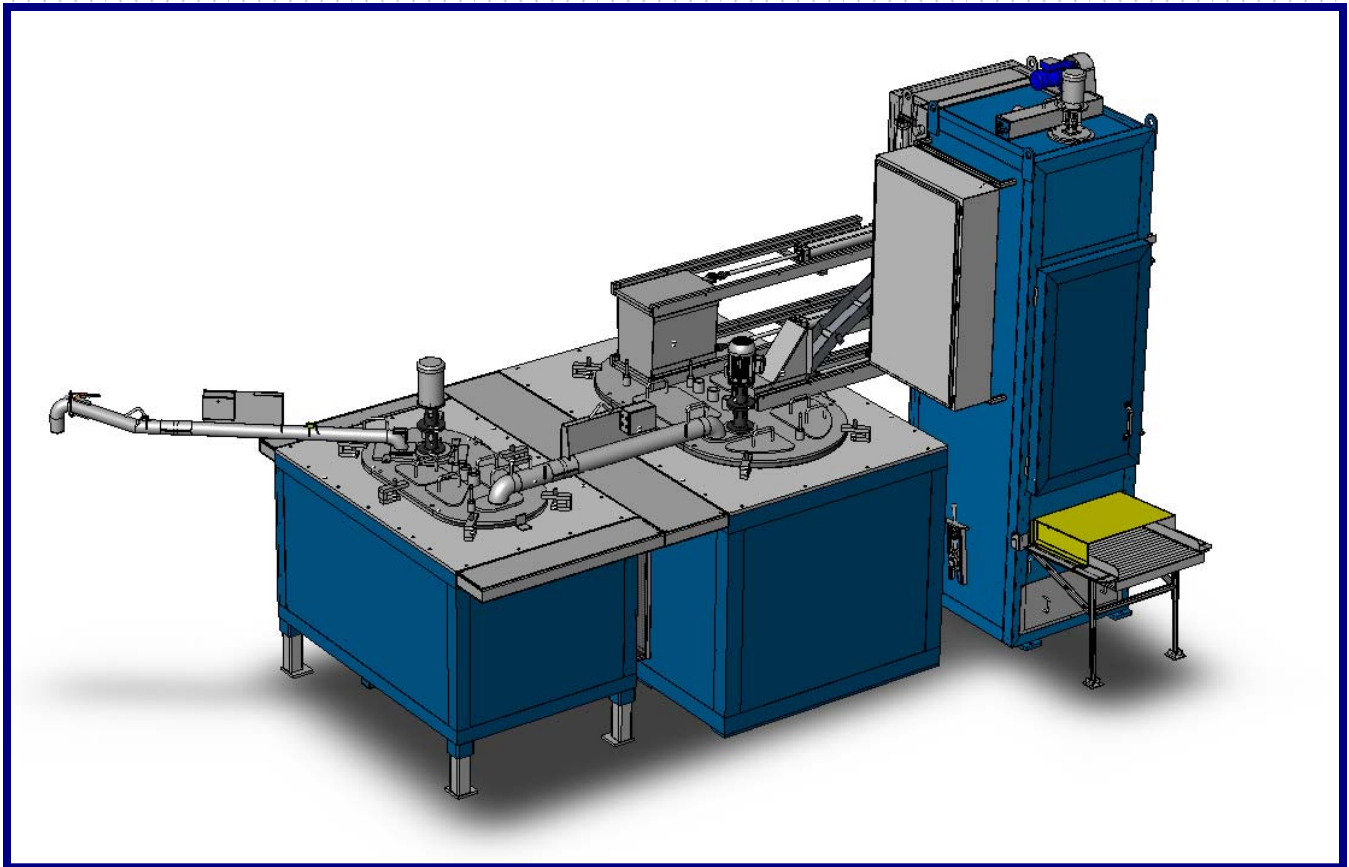




Magnesium Melting Solutions

Metamag Magnesium Melting Furnaces



Metamag Inc.
770 Wright St. Strathroy ,Ontario, Canada, N7G 3H8
Tel: 519 245 0404 Fax: 519 245 4306
www.metamag.com info@metamag.com



Magnesium Melting Solutions

Gas Fired or Electric



Many size and many shapes



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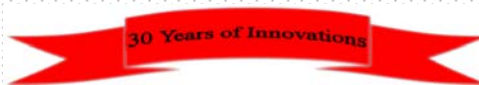
Magnesium Melting Solutions

Contoured heating element design



Above, thermal heating system distributes heat evenly along the walls and the bottom of crucible

Bellow, the heating is applied where it is needed the most, the bottom of the crucible first



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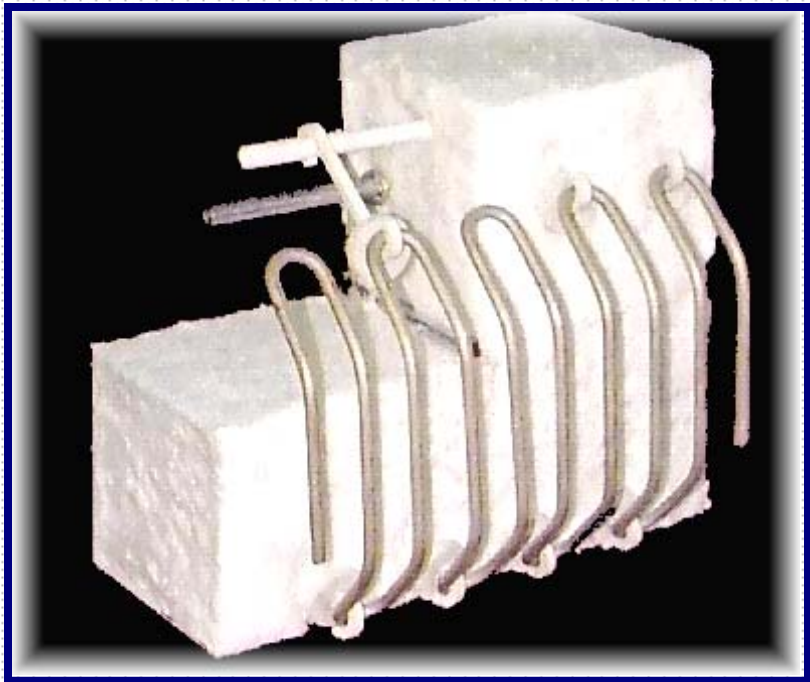


Magnesium melting Solutions

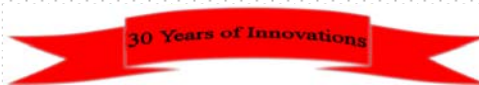
Metamag Thermal Heating System

Metamag Insulating and Heating as One

The ceramic insulation module construction is unique in two ways, the insulation module is manufactured from very high-density ceramic material for maximum heat retention and combines the element mounting system. This compact design allows us to install the proper kilowatt rated heating system to match the melt rate requirement, while minimizing the box size.



This system is well liked by maintenance people for its ease and simplicity. The rugged design of the elements require only minor welding repairs if needed and there is hardly ever a need to change elements.



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Magnesium melting Solutions

Controlling thermal excursions through reduced time base

- Minimizing temperature extremes results in less expansion and contraction of the heater element and extends heater life

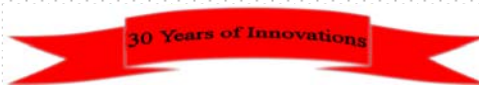
Dramatically increase element life

- As time base cycling increases past one second, they become more damaging to the heater element.
- SCR's cycling at less than one second stabilizes temperature and increases heater life.
- Reduced time base firing extends element life. SCR's extend element life up to 20



SCR's provide years of outstanding reliability

- The SCR power controller is a solid state device and there are no moving parts to wear out or replace.
- While operating at the fastest time base, the SCR's are capable of many years of service. The SCR's virtually limitless life eliminates the maintenance time and cost in replacing mechanical contactors found in many other furnaces.



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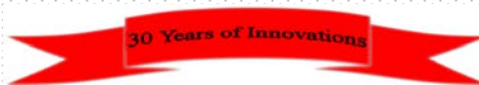


Magnesium Melting Solutions

Metamag Hot and Cold Chamber Furnaces Selection Chart

Long lasting element system 2 year warranty
 Furnace technology is improved to reflect higher temperature required to melt magnesium specialty alloys
 Contoured elements heat around the length, as well as the bottom of the crucible

Cold Chamber						
Model	MFC 135	MFC 200	MFC 300	MFC 400	MFC 500	MFC 600
Kw Rating	135 Kw	200 Kw	300 Kw	400 Kw	500 Kw	600 Kw
Melt rate per hour	275 Kg	450 Kg	680 Kg	750 Kg	875 Kg	1000 Kg
Die Cast Machine Size	800 Ton	1200 Ton	1600 Ton	2000 Ton	3000 Ton	4000 Ton
Crucible Capacity	800 Kg	1360 Kg	1800 Kg	2200 Kg	2600 Kg	2800 Kg
Hot Chamber						
Model	MFH 60	MFH 90	MFH 120	MFH 150		
Kw Rating	60 Kw	90 Kw	120 Kw	150 Kw		
Melt rate per hour	12-0 Kg	140 Kg	220 Kg	300 Kg		
Die Cast Machine Size	110 Ton	200 Ton	350 Ton	500 Ton		
Crucible Capacity	300 Kg	350 Kg	450 Kg	650 Kg		
Power	380 V	480 V	575 V			



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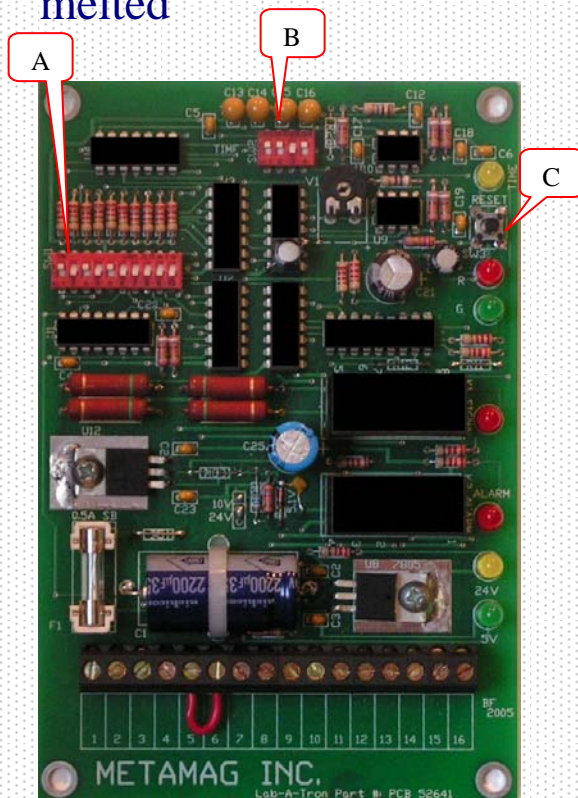


Metamag Furnace Controls

Proprietary Feed Forward PCB Board

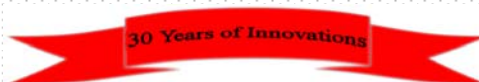
Advantages:

- Speeds up reaction time of melting process
- Shortens temperature swings at start of production
- Fully adjustable to suit small or large melt rate
- Boosts furnace performance
- Increases melt rate
- Maximize power consumption per Kilogram of magnesium melted



LED Color	Function
Amber	- Timing Circuit Is Active
Red	- PCB Output Is On
Green	- PCB Output Is Off
Red	- PCB Enable Signal Is Active (<i>PCB Controlling the heating Process</i>)
Red	- PCB Run Time Has timed out and has locked out
Amber	- Internal 24Vdc Power Supply Is Ok
Green	- Internal 5Vdc Power Supply Is Ok.

See following page for technical information



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Metamag Furnace Controls

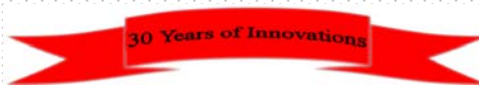
FEED FORWARD PCB BOARD TECHNICAL INFORMATION

A)-10 dip switches adjustment represent 0% to 100% of output current PULSE which is applied to the heating control SCR. The switches can be set to allow soak time of heat output

B)-Safety:

4 dip switches of 10 minute each. The heating process is determined by these four dip switches. When one switch or a combination of the four are on the bath or furnace wall temperature will be monitored. If wall or bath temperature set point has not been reached within the switch selection time, the system will shut off all heating and give an alarm condition. The alarm can be triggered by a faulty thermal couple or not enough time selected by switches. To reset

C)-Reset push button



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