

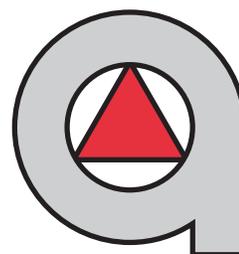
# Circulation Pumps

**MOLTAR**

**THOR**

**WORKHORSE High Flow**

**MINI High Flow**



**Molten  
Metal  
Equipment  
Innovations**



## Description

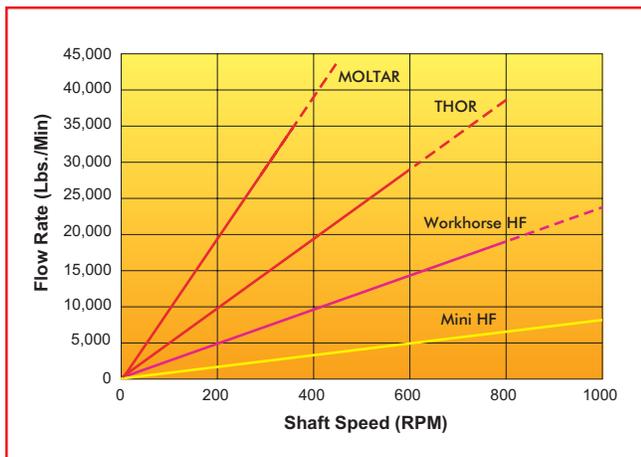
MMEI circulation pumps are one of the easiest and best ways to dramatically improve the productivity and efficiency of your furnace. Proven performers in even the toughest applications, our circulation pumps will increase your rate of melting while reducing the energy needed to melt each pound of metal. As a result, you will get more productivity out of your furnace while lowering your melting costs.

Our Circulation Pumps are offered in four different sizes to meet your requirements. We offer the MOLTAR (the world's highest flow pump), the THOR, Workhorse HF and the Mini HF. All of our pumps are designed to generate the highest metal flow possible. Higher metal flow allows our pumps to provide maximum circulation of the furnace and to bring more hot metal from the main bath to the charge well for improved melting. And with higher flow rates, you can operate our pumps at lower RPM's for improved service life while still generating all the metal flow you need.

All of MMEI's circulation pumps are engineered and built tough to provide superior service life. Our pumps are designed to be easy to assemble and repair - they can be assembled in less than an hour! In addition, our pumps are the only ones in the industry which are self-aligning. Thus, it doesn't require an alignment fixture for assembly or repairs, allowing you to rebuild our pumps faster and easier.

Rugged design, higher metal flow, and longer service life make MMEI Circulation Pumps a great choice for improving the production and efficiency of your operation. With our pumps, you'll see why we say "Go with the Flow!" Please contact us for more information.

## Flow Chart



## Product HighLights

- ◆ Proven performers in even the toughest applications.
- ◆ Higher flow rate generated by large, dual flow rotor.
  - Achieve higher flow rates with lower RPM's.
  - Non-clogging design
  - Less breakage, longer service life.
- ◆ Maximize your productivity.
  - Higher melt rates, lower energy consumption.
  - Lower melt losses, less dross.
  - Increased metal circulation, better mixing, eliminates hot spots for longer refractory life.
  - Fast & easy alloy homogenization of the melt.
- ◆ Larger, more robust parts improves reliability for less downtime and more uptime!
- ◆ Full ceramic sleeve protection on shaft and posts for extended service life.
- ◆ Pumps assemble in less than one hour!
- ◆ No alignment fixture required, simplifies assembly and repair.
- ◆ Thru-drilled post holes for fast, easy replacement of posts.
- ◆ Open top pump inlet, no baffle plates to clean out.
- ◆ Gas injection capability can be added with our unique Foot & Tube design.



One of the advantages of the MMEI Circulation Pumps is that gas injection can be added to most models with our unique Foot & Tube method. The Foot & Tube is held in place by a clamp which bolts to the motor mount. Placed at the outlet of the pump, the gas is injected directly into the flow of metal for faster, more efficient metal treatment. It can be used to demag or degas. Contact us for more information.



## Circulation Pumps

### Features and Benefits

All of our circulation pumps share the same advanced design and construction features. The features and benefits of our circulation pumps are shown below for a THOR and also apply to our MOLTAR, Workhorse HF and Mini HF pumps.

Electrically driven for maximum performance and reliability. Uses a premium, energy efficient, totally enclosed, extra tuff, severe duty motor. Engineered to provide long service life even in harsh environments.

Posts attached at motor mount with thru bolt and compression post clamp, eliminates cement for easier assembly and replacement.

Shaft is protected with a full ceramic sleeve for maximum protection against oxidation and wear. Large diameter offers superior strength and life.

Posts are cemented into through-holes in the base for secure fit with easier assembly and replacement.

Non-volute pumping chamber provides superior flow rates while eliminating internal pinch points which can prematurely damage a rotor.

External blower supplies cooling air through shroud to cool motor and coupling from exterior. Prevents dirt from getting into motor while eliminating need for filtered air.

Shaft coupling (hidden from view) allows fast, easy replacement of the shaft while providing accurate, secure spinning of the shaft.

Large diameter posts provide stable structure and are protected with a ceramic sleeve for superior service life.

Features a large diameter rotor for maximum flow to move more metal at lower RPM's. Available with our 2000 Series Rotors for even higher flow and rock deflection capability.





## Pump Specifications

### MOLTAR



### THOR



### Workhorse HF



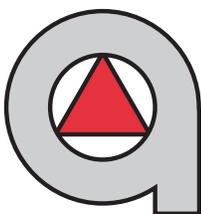
### MINI HF



Pump Size	MOLTAR	THOR	Workhorse HF	Mini HF
Furnace Capacity (Lbs.)	100,000 to 300,000 lbs.	100,000 to 200,000 lbs.	40,000 to 125,000 lbs.	10,000 to 50,000 lbs.
Recommended Well Size	48" x 48"	48" x 48"	36" x 36"	24" x 24"
Approx. Weight	2,500 lbs.	2000 lbs.	1000 lbs.	500 lbs.
Maximum Metal Depth*	48"	48"	48"	42"
Minimum Metal Depth	14"	14"	12"	8"
Rotor Diameter	16"	12"	10"	7"
Electric Motor (HP)	25 HP	25 HP	15 HP	5 HP

\*for 6" longer than standard pump

## Who to Contact for More Information



**Molten  
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