Modern
Equipment Company

High Efficiency Aluminum Melting Systems

thinkmodern

dependability. think**modern.**

3 Billion and Counting

3 billion pounds of aluminum. That's the annual melting capacity of the installed base of Modern Equipment Jet Melters® installed in the past 30 years.

Our customers trust us to provide a dependable supply of high quality metal at the lowest total cost per pound. We deliver on the promise day after day. System by system. Pound after dependable pound.

Put our decades worth of foundry service and experience to work for you.

Trust the dependable leader in Stack Melter technology. **think modern.**

profitability. think**modern.**

We take pride in our performance – for you. When you replace a primitive reverb furnace with a Modern Jet Melter®, you'll reduce your melt losses by up to 80%. That's a bankable profit on raw materials. You'll increase your energy efficiency by 50% or more while producing a higher quality end product. **Dramatically Improved Profits.**

Convert from a reverb to a Jet Melter® today. **think modern.**

The data's here for you to think about:

- 700-1000 Btus per pound melted and held
- Less than 75 Btus per pound/per hour when holding (25% of a comparable wet bath holding section)
- 0.5 -1% gross melt loss is typical
- Tapped metal temperature control to ± 10°F
- Higher quality metal with lower gas inclusion levels

Melt Comparison of Reverberatory vs. Jet Melter®

Melting Characteristics	Reverberatory Furnace	Jet Melter®
Melt Loss	5.50%	0.90%
Energy Consumption (1350° F)	1975 Btu/lb	955 Btu/lb
Makeup Alloy Additions: Strontium Magnesium	 – –	 64% less than reverb. 43% less than reverb.
Tap Temperature Ranges	± 32° F	± 10° F

Micro Jet Melter (MJM) Series Aluminum Melting Furnace

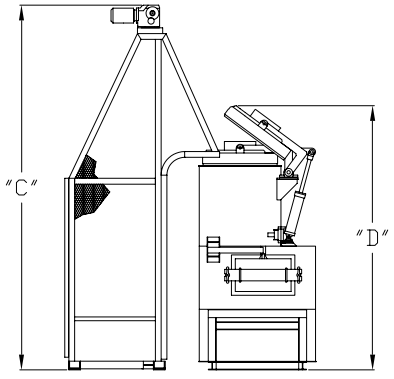
Features:

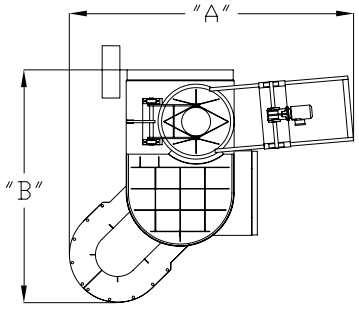
- Smaller Bath Size Than Comparable Reverb Furnaces
- High Energy Efficiency – The highest of any gas-fired furnace
- High Metal Quality – Low gas and inclusion levels, minimum hydrogen gas pick-up
- Low Melt Loss – The lowest dross formation of any gas-fired furnace
- Low Temperature Variations – ± 10°F
- Refractory Lined – No crucible to replace
- Convenient Access - Easy to clean and maintain
- Short Payback Period – Pays for itself in one to two years versus a conventional reverb

MJM-1100

Model	Melt Rate	Capacity	A	B	C	D
MJM-500	500 lbs/hr	1,200 lbs	11′-9″	12′-9″	14′-10″	12′-5″
MJM-800	800 lbs/hr	2,000 lbs	14′-6″	13′-9″	15′-1″	13′-0″
MJM-1100	1,100 lbs/hr	2,650 lbs	14′-10″	14′-4″	16′-1″	14′- 0″

MJM-500 with Charge System





AL Series Aluminum Melting Furnace

Features:

- Compact Size – Versus reverb furnaces
- PLC/HMI Operator Controls
- Maximum Control – State-of-the-art programmable consoles with graphic display
- Maximum Efficiency – Achieved by preheating of charge material in stack
- Flexible Metal Delivery – Dip well pump or gravity tap available
- Heavy-Duty Construction – Oxide resistant refractory materials
- Convenient Maintenance – Uses off-the-shelf spare parts
- Increased Safety
- High Energy Efficiency – 1,000 Btu per pound or less
- Reduced Melt Loss – Less than 1%
- High Metal Quality – Low gas and inclusion levels
- Temperature Control – ± 10°F
- Wide Capacity Range – From 1,000 to 20,000 pounds per hour
- Reduced Manpower – Fully automated material handling, batching and charging systems available
- Custom Design Available – Complete system design and engineering services
- Turnkey Installation Service Available

AL-3000 System with Charging Station

flexibility. thinkmodern.

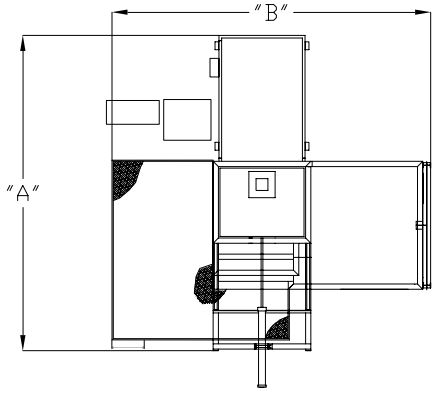
Tell us what you need. Modern's capability to design systems that answer your biggest challenges is unique. Custom systems designed for specific sites and uses.

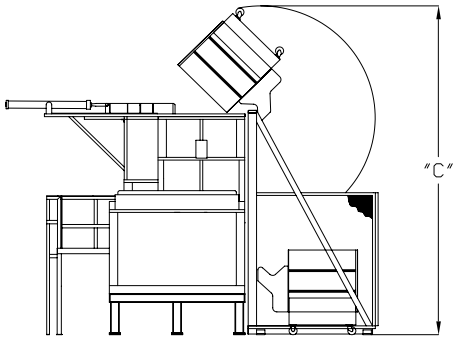
Call us with your problem, we'll help you to **thinkmodern.**

AL-4000 System

Model	Melt Rate	Capacity	A	B	C
AL-1000	1,000 lbs/hr	2,500 lbs	18′-4″	16′-10″	17′-0″
AL-1500	1,500 lbs/hr	3,750 lbs	18′-4″	16′-10″	17′-4″
AL-2000	2,000 lbs/hr	5,000 lbs	18′-9″	18′-11″	17′-5″
AL-2500	2,500 lbs/hr	6,250 lbs	18′-9″	19′-8″	18′-3″
AL-3000	3,000 lbs/hr	7,550 lbs	18′-9″	20′-5″	19′-1″
AL-3500	3,500 lbs/hr	8,750 lbs	18′-9″	21′-2″	19′-11″
AL-4000	4,000 lbs/hr	10,000 lbs	18′-9″	21′-11″	20′-9″
AL-5000	5,000 lbs/hr	12,500 lbs	19′-3″	25′-11″	20′-10″
AL-6000	6,000 lbs/hr	15,000 lbs	19′-3″	27′-5″	22′-5″
AL-8000	8,000 lbs/hr	20,000 lbs	Custom Systems Available. Contact us to begin design of your specific furnace solution.		
JM-10000	10,000 lbs/hr	25,000 lbs			
JM-12000	12,000 lbs/hr	30,000 lbs			
JM-15000	15,000 lbs/hr	37,500 lbs			
JM-17000	17,000 lbs/hr	40,000 lbs			

All dimensions are approximate. Dimension “C” is based on a 40” tap height. Other tap heights and higher melt rates are available. Platforms and charging equipment are not included in the dimensions provided.





efficiency.
thinkmodern.

Increase efficiency and safety, and reduce labor, with one of the industry's widest and most advanced line of material handling equipment. Whether you're retrofitting or building a new facility, we have a system that's compatible with your melting system capacities and delivery needs.

Bottom Drop Charging System

Ingot Destacking System

End Dump Bucket Charging System

Features:

- High Capacity – Up to 1,200 pounds per charge and 8,000 pounds per hour
- Reduced Manpower – Fully automated charging
- Integrated Control System – Allows "on-demand" charging
- Hydraulic Operation – Provides smooth and reliable performance
- Position Limit Switches – Offers control and safety
- Interlocked Access Gate – Provides safety during charger operation
- Uses Non-flammable Hydraulic Fluid – Ensures added safety

End Dump Systems

Automated Bucket Conveying System

Features:

- Automatic Delivery – Assures steady production and maximum efficiency
- Multiple Bucket Staging – Keeps pace with the furnace melt rate
- Reduced Manpower – An hour's production is staged in a few minutes
- Reduced Material Handling – Buckets placed at trim machines for easy collection of drop-offs and scrap
- System Compatibility – Can be integrated with an automatic scrap return system
- PLC Ready – Includes all necessary controls and interlocks

Scrap and ingot buckets on automated material handling conveyor

engineering, service, and support. thinkmodern.

Get a free analysis of your aluminum melting efficiency.
Just fill out this questionnaire and return it to us.

We'll help you **think modern.**

Customer Contact Information

Contact Name _____

Company Name _____

Address _____

Phone Number _____

Fax Number _____

Email _____

Type of Casting Process (check all that apply):

❍ Permanent Mold ❍ Die Cast ❍ Sand ❍ Other (specify) _____

Information For Required Melt Production

Alloy(s): (only specify alloys to be melted for this specific Jet Melter application)

❍ 356 ❍ 357 ❍ 380 ❍ 319 ❍ Other (specify) _____

Melt Rate (pounds per hour): _____

Number of Shifts per Day (melting production): _____

Number of Days per Week (melting): _____

Metal Pouring Temperature: _____

❍ Dip-Well required Dip-Well Size: _____ ❍ Degass required

❍ Tap Spout required Tap Spout Ht. (if required): _____

Charge Material:

❍ Ingot _____ % ❍ Remelt _____ % ❍ Other _____

Remelt Size & Weight (Avg): _____

Current Natural Gas Price: _____

Current Aluminum Cost: _____

Notes and Special Requirements: _____

_____

_____

Fax to: Modern Equipment, (262) 284-9433 or email to: sales@moderneq.com

Modern Equipment Company

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Engineered and Manufactured in the U.S.A.