

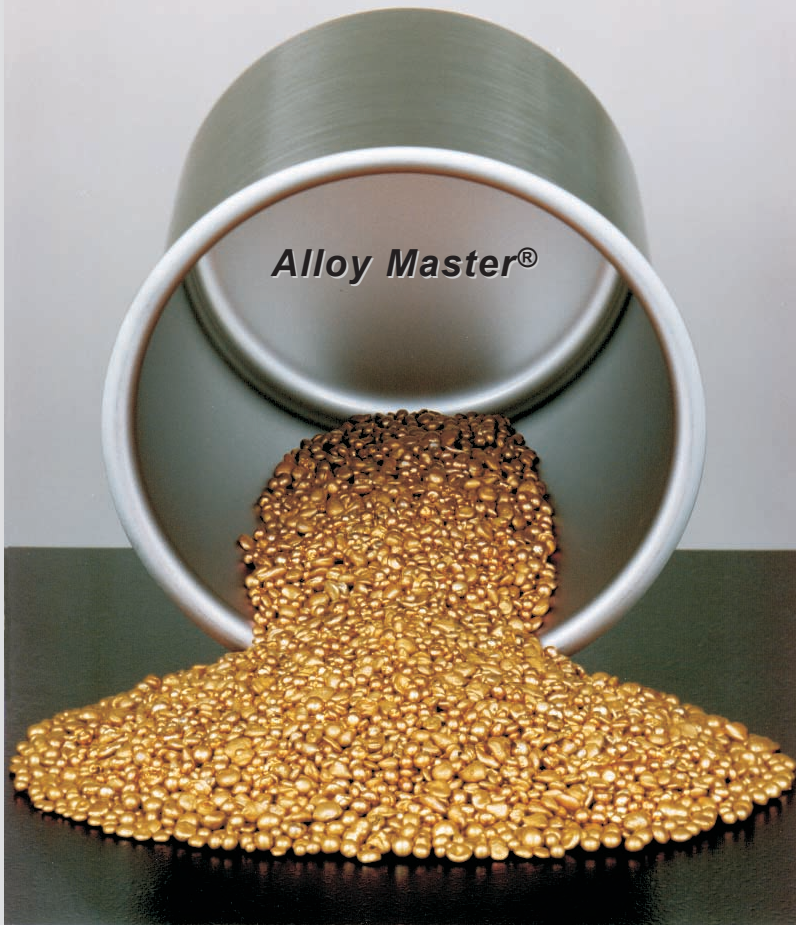
PRODUCE YOUR OWN ALLOYS UNDER CAREFULLY CONTROLLED CONDITIONS

The **MEMCO ALLOY MASTER** gives you precision control of the melting, alloying and shotting process.



Alloy Master[®] **Advantages**

- Rapid induction melting
- Large ceramic crucible
- Accurate alloying temperature
- Deoxidizing atmosphere
- Powerful blender
- Clean, uniform shot
- Cool, quite, safe
- Reliable



CERAMIC CRUCIBLES

The unique MEMCO ceramic crucible offers many advantages over common graphite crucibles:

- Completely inert to prevent chemical interaction and contamination of the melt.
- Durable ceramic also has much longer life because it does not oxidize, crumble and fall into melt. It does not leak.
- Bottom pour arrangement assures maximum operator safety in pouring molten metal.



- Precision orifice controls pour rate to control shot size.
- Electrically transparent ceramic allows metal to be constantly stirred.
- Off center mounting of the valve rod provides unobstructed area to load large metal pieces and stir the metal.

ACCURATE METAL TEMPERATURE

Accurate, reliable alloying temperature is very important to the process. Some alloys can tolerate only a few degrees error. MEMCO uses an immersion thermocouple in the bottom of the valve rod to directly measure the metal's temperature. This bottom location gives accurate measurement regardless of the amount of metal. This pyrometer is made specifically for use in the Alloy Master by MEMCO. A horn alerts the operator as it approaches the preselected temperature.

HEATING UNIT

Indirect heating of the unique ceramic crucible/susceptor arrangement eliminates burning metal.

Powerful, low frequency currents stir the metal to insure a homogeneous alloy and assist in removing oxides trapped in the metal.

Solid state generator provides excellent reliability and long life contrasted to short lived, expensive vacuum tubes.

GAS SYSTEM

Automatic gas control system assures the melt is protected at all times. Reducing gas will remove oxides from the molten metal as it is stirred by the low frequency currents. Gas system is not pressurized thereby eliminating the gas tight melting chamber and attendant problems.

BLENDER

The powerful blender uses a motor driven propeller immersed into the liquid metal that completely mixes all the components.

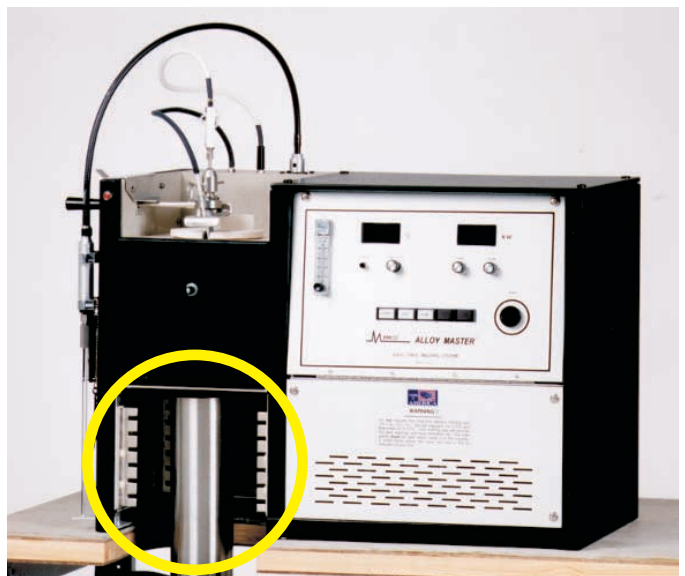
The speed and direction is controlled by the operator to insure a homogenous mix. The propeller is a high temperature ceramic that does not contaminate the alloy. All mixing is done under a shield for operator safety.

SHOTTING SYSTEM

The shottling system rapidly converts the molten metal into clean, uniform shot. The molten metal stream is safely contained within the stainless steel shot tube. When shottling is finished, the pump drains the tube and tank. The tank is rolled out, the tube is removed, and the shot bucket is removed. This insures quick and complete recovery of all shot.

PRACTICAL - LOWER OPERATING COST

ALLOY MASTER quietly heats the alloy, not the casting room! Gone is the heat, roar and discomfort of the blast furnace. Wire, plate and ingot molds can be filled on the adjustable mold platform.

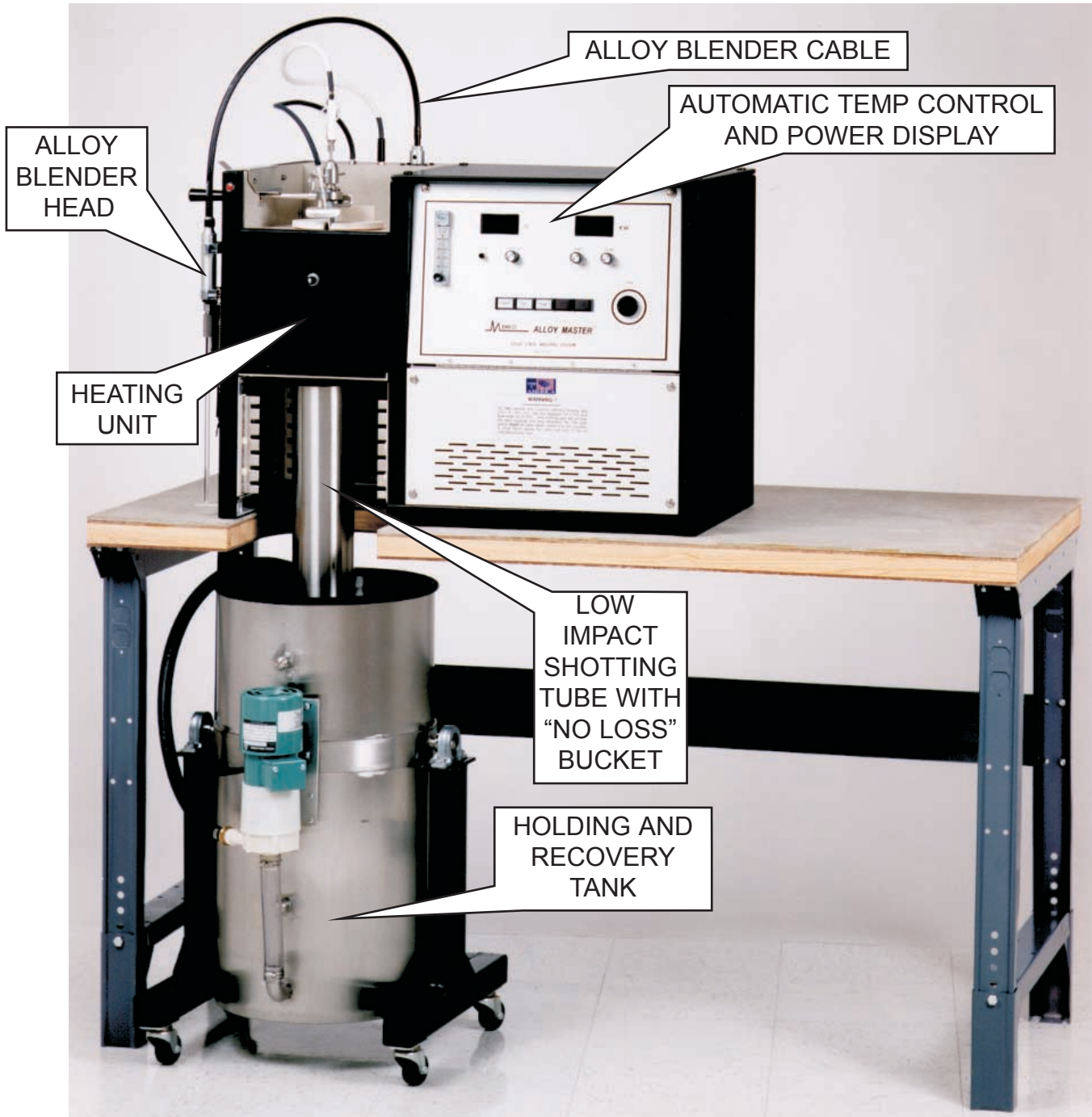


Provision for platform for wire, plate, and ingots.

The ALLOY MASTER uses standardized parts for quick replacement. Many parts are available locally since the machine is made in the USA with domestic parts. All parts and supplies are available overnight from the factory.

The ALLOY MASTER is designed for safety. High voltage coils are not exposed, and molten metal is kept safely away from the operator. Electrical power components are UL recognized and it is constructed in accordance with the National Electrical Code of the USA.

Alloy Master Features



ALLOY MASTER MELTING SYSTEM SPECIFICATIONS

CRUCIBLE

- Type Ceramic bottom pour
- Volume Capacity 61 cu in., 1000cc
- Molten Fine Gold Capacity 19.3 Kg, 630 Tr. Oz.
- Molten Sterling Silver Capacity 344 Tr. Oz.

POURING CHAMBER DIMENSIONS

- 8½" x 8" x 9" (22cm x 20cm x 23cm)

PROTECTIVE GAS

- Connection 1/4 in. hose
- Flow meter 20 CFH (10 lpm)
- Gas recommendation Forming (75% Nitrogen / 25% Hydrogen)

TEMPERATURE CONTROL

- Accuracy 3°C
- Resolution 1°C
- Medium Temperature Refractories 1250°C
- High Temperature Refractories 1700°C

COOLING REQUIREMENTS

- Alloy Master® requires 1 gpm @ 50psi (4 lpm @ 3.3 bar)
- Shotting system requires 1 gpm @ 50psi (4 lpm @ 3.3 bar)

POWER

- Output 10KW
- Requirements 230V, 30A, 3Ø, 50/60Hz.
Furnished with 5ft. cord, plug and receptacle. (NEMA L15-30R)

DIMENSIONS: (in inches)

	ACTUAL	CRATED	NET WEIGHT	SHIP WEIGHT
Alloy Master				
	23H x 32W x 17D	28H x 36W x 21D	155 lbs.	252 lbs.
Shot System				
	30H x 22W x 24D	35H x 25W x 26D	130 lbs.	200 lbs.
Table				
	48H x 24W x 30D	49H x 25W x 8D	72lbs.	85 lbs.



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