

**AUTOMATICALLY CONTROL CRITICAL PARAMETERS TO
INSURE PRECISION RESULTS EVERY TIME WITH THE**



ELECTRO-VAC® CASTING SYSTEM

**Now LA
Approved!**



ELECTRO-VAC ECONOMICS

- The advanced electrical and thermal designs insure low power consumption (less than most common hair dryers).
- The Electro-Vac is a complete system with self contained vacuum pump.
- The space saving design and light weight permit the unit to be easily placed practically anywhere.
- The Electro-Vac may be plugged into ordinary electric outlets and does not require water cooling
- The MEMCO Electro-Vac introduces advanced process control techniques that can help you continually improve your casting quality.
- Our casting system design insures accurate casting temperatures and also eliminates any contamination caused by the use of certain types of crucibles.

SIMPLE, RAPID OPERATION

- Our on board computer system makes the operation of the Electro-Vac simple and automatic.
- The simple operation of the MEMCO Electro-Vac can be quickly learned.
- The power control system eliminates complex adjustments and guesswork.
- There are few controls and they are clearly labeled.
- The large liquid crystal display provides direct readings of actual temperatures, settings, cycle times operator instructions and status messages.

Technological advances have enabled MEMCO to produce this new system at a price that is quite affordable for high quality smaller scale casting operations.



CERAMIC CRUCIBLES

MEMCO has used bottom pour ceramic crucibles in our machines for over 25 years. The unique MEMCO ceramic crucible offers many advantages over common casting crucibles, all of which can help you make more profit.

- Completely inert to prevent chemical interaction and contamination of the molten metal.
- Durable ceramic crucibles have a much longer life than carbon crucibles because they do not oxidize, or crumble and fall into the flask.
- Bottom pour arrangement helps insure that clean metal enters the flask. Residue is floated away.
- The precision pour hole design does not enlarge or change shape with age. This feature carefully controls the pour rate to minimize turbulence and reduce defects in the casting.

GAS SYSTEM

- Our unique cover gas system assures the melt is protected at all times.
- A controlled flow of reducing gas removes oxides from the molten metal.
- This feature reduces fluxing requirements while protecting your metal quality.



FLEXIBLE FLASK OPTIONS

- No need to retool your shop and your casting process to accommodate this machine.

Perforated Flask

- Excellent form filling of even the most challenging designs is achieved in larger flasks without special techniques.
- Our flask chamber accommodates most popular sizes of perforated flasks.
- The precision design of the flask chamber and gasket engineering provide superior sealing and vacuum.

Ingots

- Strip and wire ingots can also be easily poured using standard molds.

SAFETY

- The Electro-Vac is the safest machine on the market.
- Accidents due to high speed moving parts or exposed high voltage work coils is eliminated. The operator is not exposed to molten metal during the casting process.
- Because of our well engineered design, the cabinet stays at about room temperature.

TEMPERATURE CONTROL

Accurate, reliable casting temperature is very important to the process. Some alloys can tolerate only a few degrees error. MEMCO has developed a pyrometer specifically for casting in the Electro-Vac. Other casting machines use common commercial thermocouple units that are not designed specifically for casting' unique needs and can result in errors.

- Thermocouple design and placement gives accurate temperature measurement regardless of the amount of metal.
- Accurate metal temperature control prevents overheated metal that causes gas porosity and damaged metal.
- Precise casting temperature minimizes metal loss from zinc liberation and the resultant over-karating in gold alloys.

PRODUCTION QUALITY

- Precision vacuum casting provides superior casting density and quality.
- Vacuum exerts a uniform force in all directions ensuring evacuation of gases and enhanced form filling.
- Casting accuracy is enhanced because the metal flows directly into the flask at the exact set temperature.
- The short distance to the flask minimizes temperature change and increases safety.

EASE OF OPERATION

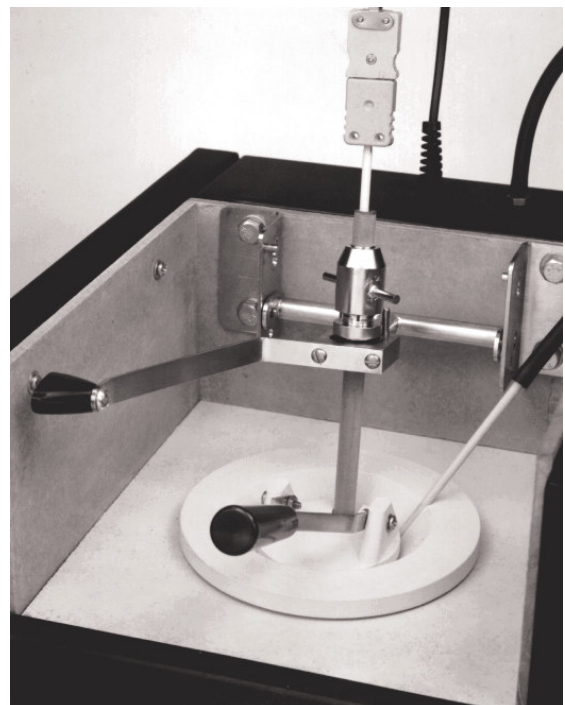
- Our automatic monitoring and control features enhance quality by freeing the operator from minor details of the melting process and allowing them to focus on their whole process.
- A signal from the Electro-Vac alerts the operator to have the flask ready to receive metal as it approaches the pre-selected casting temperature.
- The Electro-Vac will hold the set temperature until it is convenient for your operator to complete the casting procedure.

SUMMARY

This synergistic combination of the high quality and low cost features of the Electro-Vac provides far better results than the individual features themselves. The time and money created and saved eliminating rejects and repair cost as well as increasing production speed, quickly pays for the system.

CYCLE TIME

- The Electro-Vac is the fastest machine in it's class. Advanced thermal design enhances rapid heating.
- The average flask cycle time is about 5-7 minutes.
- Cycle time is enhanced by the ability to load and melt the metal for the next flask while the previous flask is still under vacuum and cooling.
- The Electro-Vac is designed so that the operator can easily load metal and flasks.
- Crucibles for different alloys can be changed in less than a minute.
- Electrical power components are UL recognized and the Electro-Vac is constructed in accordance with the National Electrical Code of



SERVICE

- Our staff is always ready to help you in all phases of your investment casting process. The Electro-Vac uses standardized parts for quick replacement.
- Parts are often available in your area since the machine is made with many standard components.
- All parts and supplies are available overnight from our factory.

ELECTRO-VAC® CASTING SYSTEM

SPECIFICATIONS

MEASUREMENTS

Table Top: 22½" H x 25½" W x 17" D (57cm H x 65cm W x 43cm D)
Floor: 50" H x 25½" W x 17" D (127cm H x 65cm W x 43cm D)

NET WEIGHTS

Table Top: 186 lbs. (84 kgs.)
Floor: 258 lbs. (117 kgs.)

POWER REQUIREMENTS

- North American: 120V, 12A, 50/60Hz, 1Ø
- International: 230V, 6A, 50/60Hz, 1Ø
- (Equipped with 8 ft. power cord & plug)

MAXIMUM CASTING TEMPERATURE (With Digital Pyrometer Accuracy of +/- 2°C)

- 2190°F (1200°C) Standard

CRUCIBLE - (Long Life, Ceramic, Bottom Pour)

- Volumetric Capacity - 13.2 cu in, 218 cc
- Molten Fine Gold - 136 tr oz, 4.27 Kg, 2736 dwt
- Molten Sterling Silver - 75 tr oz, 2.32 Kg, 1494 dwt

FLASKS

- Perforated for use with adapter rings in vacuum chamber - Maximum Height is 9 in.
- Adapters furnished for 3½", 4", & 5" diameters.

VACUUM PUMP

5 cfm, 29"Hg, Internal Mounted
(other specifications are available upon request)

COOLING SYSTEM

Forced Air

WARRANTY

ONE YEAR on all machine parts and additional warranty of 500 casts on heater element.
This warranty excludes refractory items.

NOTE: All options should be specified when ordering.



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