

## *Quality...Flexibility...Speed...Price... Unbeatable Combination*

- ◆ **Fast production speed**
- ◆ **One or two batteries per cycle**
- ◆ **Produce complete large batteries in one cycle**
- ◆ **Uses value-priced, long-lasting, lead-saving molds**
- ◆ **Flexible operation**

With the **dynaMAC/C.O.S.**, the operator loads the elements into the group holder, lugs are aligned and the group holder is turned over (automatic turn over and carriage push/pull are options). As an option, the lugs can be automatically aligned. Then the machine takes over brushing, fluxing and casting operations while the operator unloads the previously cast elements into the battery containers and loads new elements for the next cycle.

The user friendly operator control panel includes a Visual Information Center. The VIC on-screen display conveniently summarizes actual readings and compares this data to the desired parameters.

Universal size group holders make the machine changeovers easier, faster and much less expensive. There is no need to replace these group holders when similar battery types are changed.

The built-in lug aligner includes an element vibrating table. The lug aligner lines up the lugs of each cell element. This equipment eases lug entry into the mold cavities and permits you to use smaller size straps. This saves lead costs.

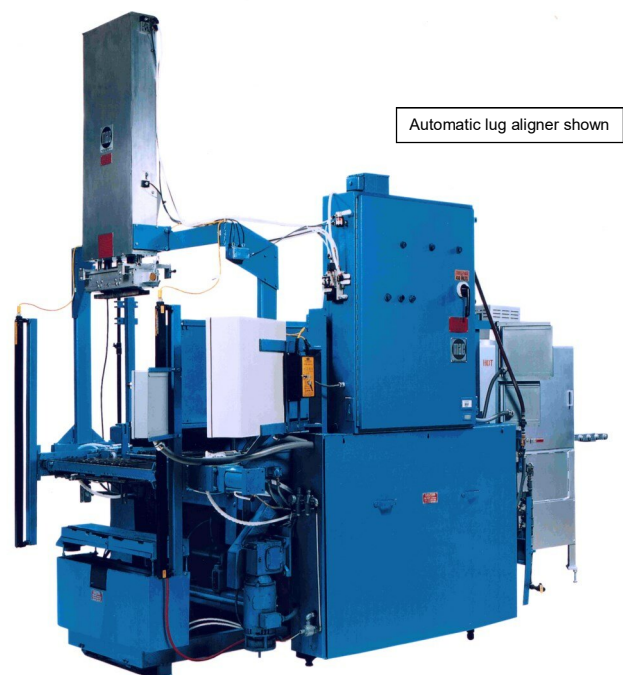
To properly prepare the lugs for better strap adhesion, brushing and fluxing are automatic operations. Lug surfaces and edges are brushed not once, but twice. The brush is specially selected for its fine wire bristles which remove oxide without reducing the lug's thickness or creating deep grooves that could retain wet flux. After brushing, the lugs are dipped in a flux tray. To dry the flux, heated air is forced across the lugs.

*batteries per shift.*

- *With one operator, you can produce over 500 batteries per shift (depending on materials used).*
- *Complete commercial type large size batteries are produced in one machine cycle.*

MAC molds are long-lasting and value priced. Each trouble-free mold is a hardened block with precision-machined strap cavities. Cavity mold inserts are designed to save lead. For greater production flexibility single automotive size molds are interchangeable with the MAC/COS machine.

All molds are designed to customer specifications. Mold water cooling is controlled at the Visual Information Center. This increases bond quality because you have closer control over cooling rates. Mold pours are quick and accurate. A unique gravity lead leveling system from the lead pot to the mold ensures equal lead flow to each strap cavity. Quick release water line connectors are standard items. Battery type changeovers are extremely fast.



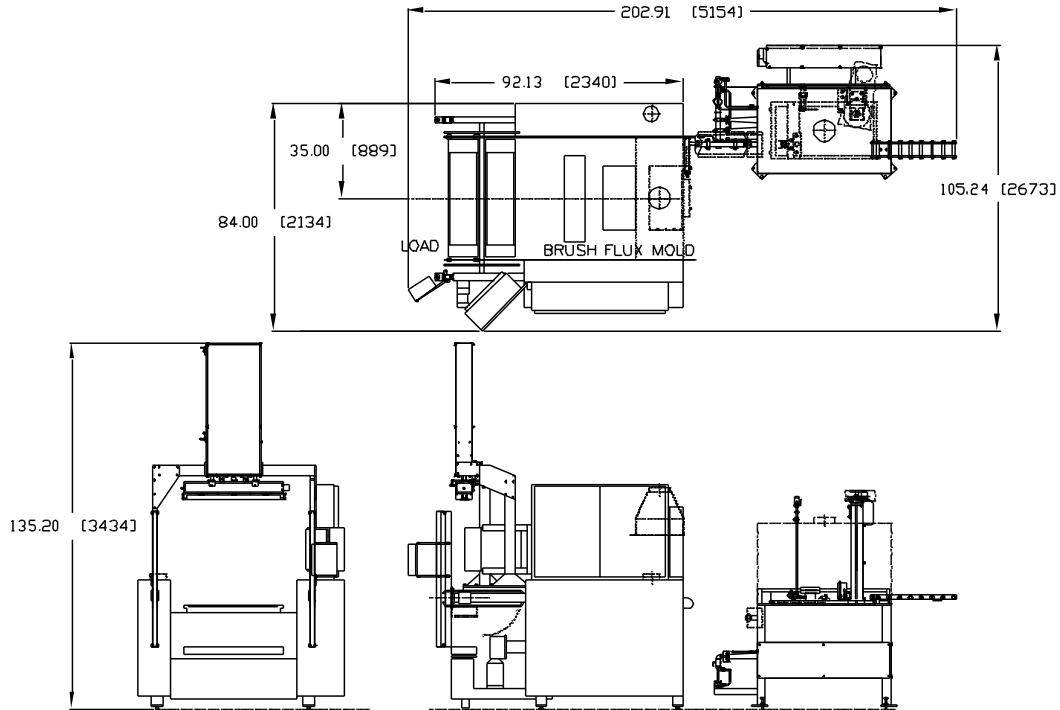
Automatic lug aligner shown

- *With double molds for standard size automotive batteries and 2 operators, you can produce over 1000*

*Also available in AGM Version*

# dynaMAC/C.O.S.

## TECHNICAL SPECIFICATIONS



### Required User Data:

Specify electrical requirements. Provide drawings of element, element casing, post and straps for use in designing molds.

### Production Cycle Rate:

Operator and battery design dependent (300—1200/Shift)

### Operation Personnel Require:

One (With double-mold, two operators can increase production)

### Cell Element Size Capability:

(using universal group holder handling 6-cell elements)

	MM	Inches
Height	294	11.6 maximum
	90	3.5 minimum
Width	175	7 maximum
	90	3.5 minimum
Stack Thickness	114	4.50 maximum
	13	0.50 minimum
Terminal post height:	99	3.9 maximum

### dynaMAC/C.O.S. Machine Requirements:

**Standard Electrical:** 240/380/480V/3-phase/50-60Hz (other electrics available).

**Control Voltage:** 24 volt D.C.

**Information Center:** PLC interfaced with a color display.

**Tolerance:** +20% of nominal voltage.

**Hydraulics:** None

**Ventilation:** Customer supplied as required by law. A minimum of 2700 CFM is typically used.

Where protection hoods are used, vent openings are provided.

**Water:** Clean water for mold cooling. Five gallons per minute at 40 psi (minimum) at the mold inlet.

**Compressed Air:** 50 SCFM @ 80 psig minimum.

**Ambient Operating Temperature:** 0°– 45°C (32–113°F).

### Lug Brush:

203 mm (8-inch) diameter wire brush driven by 3 HP motor.

### Flux Tray:

2.8 liter capacity (0.75 gallon)

### Lead Pot:

**Natural Gas Requirements:** 5.7 cu. meter/hr. @ 11 mm Hg (200 cu. ft./hr @ 6 in. W.C.)

	Gas Heated	Electric Heated
<b>Lead Capacity:</b>	1361 kg (3,000 lbs)	1361 kg (3,000 lbs)
<b>Heating Capacity:</b>	57.4 kw/hr (196,000 BTU/Hr)	30 KW
<b>Electrical Requirements</b>	240/380/480V 50-60 Hz 24 kVA	240/380/480V 50-60 Hz 54 kVA

**Heat Range:** (gas and elec.) 38° to 538°C (100° to 1000°F)

**Insulation:** 102 mm (4 inches) of masonry fill insulation

**Propane Requirements:** 2.3 cu. meter/hr. @ 11 mm Hg (80 cu. ft./hr @ 6 in. W.C.)

### Safety Features:

Metal protection guards.

Load operator safety light beam (beam interference stops machine). [For automatic lug aligner]

Electrical interlocks.

### Installation Foundation:

Standard 4-inch (102 mm) thick reinforced concrete floor pad required. Holes for lag bolting of equipment to the floor are provided.

### Approximate Shipment Specifications:

Box 1 -	Length:	2,845 mm (112 inches)
	Width:	2,311 mm (91 inches)
	Height:	2,413 mm (95 inches)
Box 2 -	Weight:	2,565 kg (5,654 pounds)
	Length:	2,489 mm (98 inches)
	Width:	2,007 mm (79 inches)
	Height:	2,235 mm (88 inches)
	Weight:	2,248 kg (4,955 pounds)

Helping to make the best batteries...yours.

**MAC Engineering and Equipment Company, Inc.**

2775 Meadowbrook Road, Benton Harbor, Michigan 49022, U.S.A.  
Telephone: (269) 925-3295 or 1-800-756-8608 Fax: (269) 925-3305

e-mail: [maceng@mac-eng.com](mailto:maceng@mac-eng.com)

For a preview of our equipment visit: [www.mac-eng.com](http://www.mac-eng.com)

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