



# MAC Engraver

## Quick, Efficient and Permanent Battery Marking

- ◆ **Accurate and Compact Marking System**
- ◆ **Plastic and stainless Conveyor**
- ◆ **Easy Access Control**
- ◆ **Rugged Tubular Frame Construction**
- ◆ **Built-in Safety Features**

***Have you tired of hand stamping or "branding" your batteries? MAC has the answer to clean up and automate your present coding system. The MAC Engraver is capable of printing one line of up to twelve 0.187 inch (4.75 mm) high, dot-matrix characters. The engraving of 12 characters is completed in 2.5 seconds, and it is fully automatic! Included with the MAC Engraver is a tubular support frame, a 52" (1320 mm) long conveyor, a complete dot-matrix marking system (including the keyboard), an operator control panel and the PLC controller.***

The MAC Engraver has a small, lightweight marking head. The unit features a marking pin that moves through a small X-Y platform, resulting in an extremely fast marking cycle. The engraver features a marking head that is capable of up to 12 characters on a single line for either date coding and/or numerical encoding. The engraver can engrave the code in the "X" direction (lengthwise on the battery) or in the "Y" direction (across the battery).

A 52" (1320 mm) long flow-through conveyor is standard. The conveyor belting is 15 inches (381 mm) wide and is driven by an electric motor drive. Positioning rails and the "battery stop system" is mounted to the conveyor. The rear rail is stationary, and all "battery stops" are fastened to the rear rail. The stops are easily adjustable and are powered by pneumatic valves and cylinders. The front rail is adjustable from the full conveyor width to 4" (102 mm) minimum. The rails are steel and acid-proof plastic. All of the "stop" parts are a combination of plastic and steel. One "stop" is provided as standard equipment that prevents additional batteries from entering the machine while a battery is already "in-process". The conveyor feed direction can be either left to right or right to left, when facing the operator controls. This must be specified at the time of order placement.

The MAC Engraver features a "user-friendly" control panel, which is readily accessible on the front side of the machine.

The controller/keyboard for controlling the marking head is mounted directly to the engraver support frame.

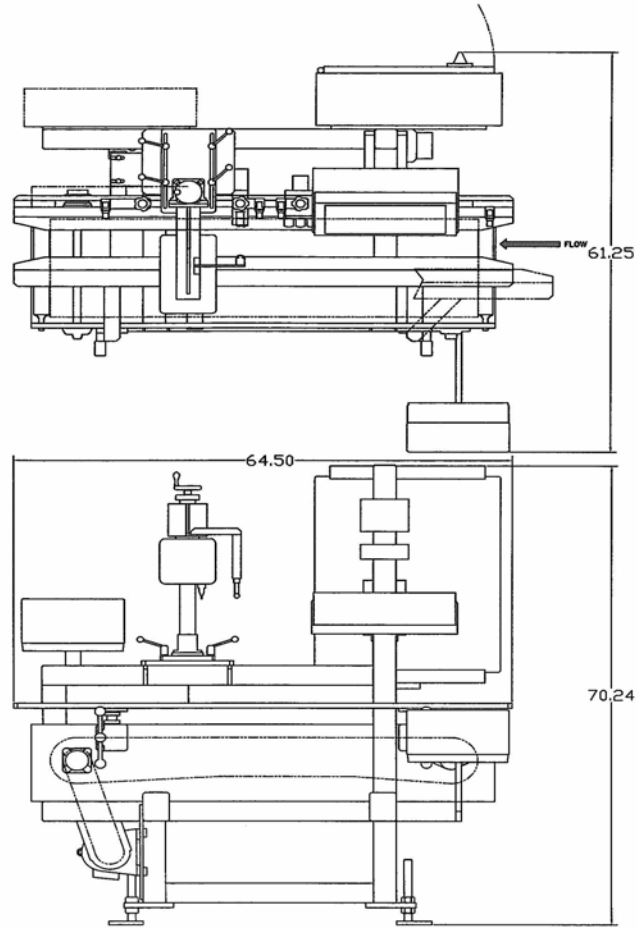
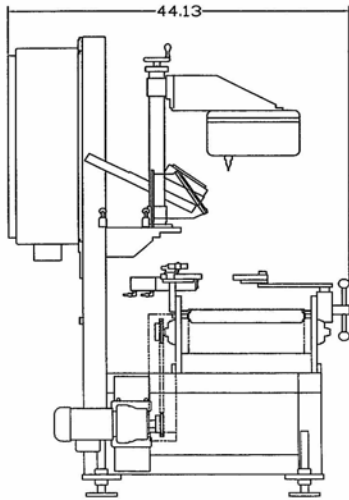
A sturdy 3-inch X 3-inch tubular frame support is standard. The frame features a mounting pad for the tool post and marking head, which is used in positioning the marking head in relation to the conveyor. This feature allows the cover engraving to be positioned in the proper location (within the marking head limits) on the battery. The frame also holds the conveyor, the operator control panel, the marking head keyboard, and the electrical panel. The support frame is painted with safety blue, industrial grade, epoxy based paint.

Photo eyes are provided to control the battery flow through the machine on the conveyor. A safety limit switch for "over-set" height protection for the engraving head is provided. This feature detects "over-height" products and automatically shuts down the machine before the marking head is damaged. An alarm (located on the electrical enclosure) sounds when this condition exists, alerting the operator of a fault condition.



# MAC Engraver

## Technical Specifications



### Required User Data:

- Specify directional flow of the batteries left to right or right to left when facing the operator control panel side of the engraver)
- Specify electrical requirement

### Installation:

- Normally mounts in line with your flow-through production conveyor
- Mounted on a standard 4-inch (102 mm) thick reinforced concrete floor or pad. Holes for lag bolting to the floor are provided.

### Production Rate:

10-20 automotive size batteries per minute.

### Programmable Controller:

"State of the art" controller is standard equipment to operate the workstation. Separate control keyboard for the marking system.

### Construction:

Steel tubular frame painted with safety blue, industrial grade, epoxy based paint, a combination PVC, UHMW, steel, and stainless steel conveyor, a complete marking head and system, and miscellaneous electrical components.

### Operational Requirements:

*Personnel:* One for set-up only  
*Operation:* None

**Standard Electrical:** 3.3 KVA, 3-Phase

**Hydraulics:** None

**Water:** None

**Compressed Air:** 0.9 SCFM @ 80 psi (.03 cu meters @ 5.5 bar)

**Ventilation:** Customer supplied as needed to meet local requirements.

### Approximate weights and dimensions:

Weight: 1425 lbs (646 kgs)

Dimensions: 52x76x44 inches (1321x1930x1118 mm)



*Helping to make the best batteries...yours.*

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

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