Operating Manual
Please Read Before Operating Unit

Model MMC100 Multi-Material Cutter

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MODEL MMC100
MULTI-MATERIAL CUTTER

SPECIFICATIONS

Maximum Cut Length..............9,999,999.00 in./mm

Minimum Cut Length...............0.100” (2.54mm)

Maximum Material Size

- Tubing...........0.625” (5/8”) OD (15.875mmø)
- Flat Material........3.94” (100.076mm) wide
- Wire.............8 AWG (3.25mmø) solid copper

Tolerances..............................1% or better

Feed Rates..............................Three selectable feed rates

- Feed Rate 1........9.5”/sec. (241.3mm/sec.)
- Feed Rate 2.......16.5”/sec. (419.1mm/sec.)
- Feed Rate 3........31”/sec. (787.4mm/sec.)

Production Rates

<table>
<thead>
<tr>
<th>Size</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>4”</td>
<td>4,045</td>
<td>5,900</td>
<td>7,200</td>
</tr>
<tr>
<td>10”</td>
<td>2,365</td>
<td>4,290</td>
<td>5,215</td>
</tr>
<tr>
<td>20”</td>
<td>1,395</td>
<td>3,000</td>
<td>3,530</td>
</tr>
</tbody>
</table>

Representative rates

Batching............Up to 10 programmable batches.

Blades......................Hardened and ground tool steel guillotine and anvil blades.

Decibel Rating........................................65 dB(A)

ORDERING INFORMATION

AR0371 (MMC100)..........Multi-material cutter 115V 60Hz

AR0372 (MMC100)..........Multi-material cutter European plug 220/240V 50Hz

AR0373 (MMC100)..........Multi-material cutter UK plug 220/240V 50Hz

AR3801 (DE400)..........Optional vertical dereeler

AR0170 (DE700)..........Optional compensation dereeler

IR1205...............Replacement guillotine blade

IR1203...............Replacement anvil blade
SET-UP

The MMC100 is supplied with one fixed stationary blade and one moveable blade. Also included are three Allen wrenches; 1/8”, 3/16” & 9/64”.

**Caution:** The MMC100 comes with the blades completely installed. These blades are intended for use on wire and tubing and are extremely sharp. Caution must be used when removing or installing either of these blades.

Place the unit on a sturdy workbench with the right side exit chute even with the right side of the bench. Short and long cut lengths will drop out the right side of the exit chute. Material collection bins can be placed to collect the cut material as it exits. If using the DE700 (or any other tensioning de-reeler) place the de-reeler to the left of the unit at least 24” from the entrance. Refer to the de-reeler’s operating instructions for further set up details.

Insert the power cord into the IEC connector. Plug the unit into the appropriate power supply using the correct plug for the unit purchased. Use a properly grounded mains supply. The American plug is for use on 110/120V 60Hz mains supply. The European and United Kingdom plugs are for 220/240V 50Hz mains supply. Connect clean, dry, compressed air at 90 P.S.I. .

**Caution:** Environmental conditions for proper operation should be 50° F-104° F (10° C-40° C) and 30-75% relative humidity. The MMC100 should be operated in a well-ventilated open workspace. This machine may be effected by outside environmental disturbances. The unit is rated for continuous use and is protected by one fuse located in the IEC connector.

**Caution:** Safety glasses or other suitable eye protection should be worn when operating this unit.

OPERATION

Place the material to be cut on the de-reeler. Turn the MMC100 on using the I/O switch on the side of the unit. Do not turn the unit on and off repeat-edly without waiting 5 seconds for the controller to remove information correctly. Removing the guard during a run is not recommended. It will stop the stepper motor and the piece being processed will not be of the correct length. If cutting long pieces of material and the guard is opened and closed before the end of the cycle the stepper motor will resume feeding material. This piece will not be the correct length and should be discarded.

Open the belt feed by turning the switch counterclockwise to disengage the belt feed. Rotate the knobs on the front of the unit to open the guides wide enough to accommodate the material being cut. Feed the material through the guides until it protrudes past the blades on the right side of the unit. Make certain the material is between the two sets of guides located on the left and right side of the belt feed.

Turn the switch clockwise to close the belt feed and engage the upper belt. Make certain the unit is at the beginning of the batch. Press the cut button twice to zero the machine. **NOTE:** The guillotine blade will cut the material off at the blade.

When using the JOG or CUT keys this will place the operator in the manual mode. In the manual mode “MANUALC” will be displayed in the STATUS area. This is a continuous jog function and the length displayed is the actual length of material moved. Pressing the CUT key will cut off the length of material just transported. Press the ESC/PAUSE key to return to the batch screen. If the material does not feed it can be inserted manually with the belt feed open.

The MMC100 is equipped with an out of material sensor. From the factory this option is disabled. To enable this option, use the following procedure. From the “SELECT BATCH” screen, hit the edit key twice. The display will read “WIRE SENSOR 1=Y 0=N”. Select 1 if you would like to use the sensor and 0 if you would like to disable the sensor. After selecting your option, press the <ENTER> or <ESCAPE> key to return you to the “SELECT BATCH” screen. The unit is now ready for programing.
PROGRAMMING

When the unit is turned on the controller will report that it is initializing and display The Eraser Co. MMC100. The controller will request that you select a batch. Select a batch from 1-10. Numbers other than 1-10 will not be accepted. Inputs that are not recognized will emit a beep. Press ENTER or RUN to continue. The functions in figure 1 will be displayed on the keypad display.

<table>
<thead>
<tr>
<th>BATCH</th>
<th>Units</th>
<th>LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>IN/MM</td>
<td>•</td>
<td>••••••</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STATUS</th>
<th>FEED RATE</th>
<th>QUANTITY</th>
</tr>
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</table>

Figure 1

To begin the run cycle press RUN again only if all the information has been previously inputted for the batch. If a variable is entered with a value of 0 an error will cause the controller to beep. Press ENTER after each inputted value. This will highlight the next variable to be inputted. After pressing ENTER IN/MM will be blinking on the display. Pressing the + or – keys will change the display from IN to MM or MM to IN. Press ENTER and input the length needed. This has a total of 10 characters, one of which is reserved for a decimal and two for zeroes (9999999.00”). After pressing ENTER select a feed rate of 1-3. One is the slowest at 9.5”/sec and 3 is the fastest at 31”/sec.

It is advised to start with the lowest feed rate, check the results and then adjust as necessary. The next variable to be entered is QUANTITY. The maximum allowed is 9999999 pieces. Enter the quantity and press ENTER or RUN. Pressing ENTER will display “READY” in the status and pressing run will start the run cycle immediately. Pressing ENTER will cycle the operator through the variables. During the run cycle the quantity will count down until 0 is reached. After reaching 0 “END” will be displayed. If it is necessary to pause the unit during a run press ESC/PAUSE. After pressing the PAUSE key “PAUSE” will be displayed. The amount of material transported before pausing will be displayed under LENGTH. Pressing ESC again will abort the program. Pressing RUN will display “READY” and pressing RUN again will continue the run. At the end of the run “END” will be displayed. Pressing RUN will put the operator back at the BATCH screen and pressing RUN will start the same batch again or the operator may change the batch at this time.

POWER FAILURE

In case of power failure the MMC100 will be reinitialized and should not start unexpectedly. All parameters stored in a batch program will remain in memory. A fuse and a line filter located in the IEC connector protect the controller.

BLADE REPLACEMENT

Caution: Always remove compressed air supply and unplug electrical supply when replacing blades or servicing the unit.

Note: Whenever a blade or both blades are replaced follow the adjustment procedure.

1. Remove guard and chute assembly by removing the four thumbscrews.

2. Manually raise the moveable blade to its upper most position, if it is not currently there, by forcing the upper blade holders up.

3. Using the 9/64” Allen wrench provided, remove the fixed lower blade by removing the three cap screws securing it to the lower blade holder.

4. Remove the cap screw securing the upper moveable blade to the right upper blade holder using the 3/16” Allen wrench provided. Rotate the upper blade holder block out to reveal the threaded hole in the blade (if the blade holder block does not rotate easily, try sliding it up and down while rotating). Insert the screw that was just removed into the threaded hole about 3 full turns. Use this screw to support the blade while removing the screw from the left upper blade holder (see Specification Photo 1). Rotate the left upper blade holder out and insert the removed screw back into the threaded hole. Caution: the blade is now free and may fall if not supported. Use the screws in the blade as handles to safely remove the blade (see Specification Photo 2). Move the blade back until it disengages from the knuckle key. Then move the blade down and out of the machine.
5. Replace the lower blade by securing it with the three fasteners using the 9/64” Allen wrench provided.

6. Replace the upper blade by inserting the cap screws into the threaded holes and using them as handles to raise the blade up into the machine so that it engages the knuckle key. Remove the left screw and swing the blade holder over the blade and insert the screw into the holder. Snug the screw with the 3/16” Allen wrench. DO NOT TIGHTEN. Remove the screw from the right side of the blade and swing the right blade holder over the blade. Insert the screw into the hole and tighten with the 3/16” Allen wrench provided. Tighten the left side blade holder. Make sure upper blade is centered with the lower blade.

7. Whenever a blade or both blades are replaced follow the adjustment procedure.

**BLADE ADJUSTMENT**

1. Tip the machine onto its backside and loosen the two large screws on the bottom of the machine with the 3/16” Allen wrench (see Specification Photo 4).

2. Tip the machine back onto its feet and loosen the two tension screws in the bottom of the lower blade holder with the 3/16” Allen wrench. Push the lower blade holder towards the center of the machine.

3. Lower the upper blade so that only the leading edge of the upper blade covers the lower blade. **Caution: ensure the upper blade does not hit the top of the lower blade as this will damage the upper blade.**

4. Tighten the tension screw in the lower blade holder so the lower blade comes in contact with the upper blade. Raise the upper blade and slowly lower it down again to ensure the upper blade does not come down on top of the lower blade.

5. Lower the upper blade all the way down and tighten the left tension screw on the lower blade holder until the lower blade is snug against the upper blade.

6. Raise the upper blade and slowly lower it back down. There should be a smooth shearing action like a pair of scissors. If not, repeat steps 3 thru 5 again until you achieve a smooth shearing action.

7. Tip the machine onto its backside and tighten the two screws securing the lower blade holder with the 3/16” Allen wrench.

8. Return the machine to an upright position and recheck the shearing action of the blades.

9. Return the machine to service by installing the safety guard, air supply and power.

**GROUND LOCATION**

This protective Earth ground label is located inside the housing beside the ground wire. This wire is connected to the Power Supply Cable and is wired back through the Mains supply to ground.

**CAUTION LABEL**

Refer to the operating instructions before using this unit. High voltage is inside this unit and power must be disconnected before servicing.

**ON/OFF LABEL**

This is the ON/OFF switch. Press I for on and press O for off. This switch is also the anti-start switch. In case of power outage, this switch must be reset for the unit to operate.

**CE MARKING**

Indicates compliance with all applicable EU directives.
IMPORTANT SAFETY INSTRUCTIONS
READ ALL INSTRUCTIONS

WARNING

DO NOT OPERATE TOOL UNTIL YOU HAVE READ THOROUGHLY, AND UNDERSTAND COMPLETELY, ALL INSTRUCTIONS, RULES, ETC. ON THIS PAGE, AND IN THE OPERATING MANUAL. WHEN USING ELECTRIC TOOLS, BASIC SAFETY PRECAUTIONS SHOULD ALWAYS BE FOLLOWED TO REDUCE RISK OF FIRE, ELECTRIC SHOCK, AND PERSONAL INJURY, INCLUDING THE FOLLOWING:

GROUNDING INSTRUCTIONS
In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This tool is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances.

Do not modify the plug provided — if it will not fit the outlet, have the proper outlet installed by a qualified electrician.

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The green conductor with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.

Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded.

Use only 3-wire extension cords that have 3-prong grounding plugs and 3-pole receptacles that accept the tool's plug. Repair or replace damaged or worn cord immediately.

GENERAL INSTRUCTIONS

REMOVE ADJUSTING KEYS AND WRENCHES. Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning on.

KEEP WORK AREA CLEAN. Cluttered areas and benches invite accidents.

DON'T USE IN DANGEROUS ENVIRONMENTS. Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well lighted.

ALWAYS USE SAFETY GLASSES. Everyday eyeglasses only have impact resistant lenses; they are NOT safety glasses. Also use face or dust mask if cutting operation is dusty.

WEAR PROPER APPAREL. Do not wear loose cloth-
SPECIFICATIONS

Replace screw to use as a handle (repeat for left side)

Firmly grasp both cap screws and push blade off of the knuckle key, lower blade and remove from machine.

Specification Photo 1

Specification Photo 2

Specification Photo 3
Lower Blade Holder Screws

Specification Photo 4