Models WC2/WC2M Automatic Wire & Tubing Cutters

Service and All Spare Parts Available
Specifications

Maximum cut length ................. 999.99" (9,999.9mm)
Minimum cut length ................ 0.22" (5.6mm)
Maximum material size
  Wire ........................................ 16 AWG (1.30mmø)
  Tubing (WC2) .. up to 5/32" OD (3.97mmø)
  Tubing (WC2M) .. up to 1/4" OD (6.35mmø)
Tolerance ........................................ 1% or better
  dependent on material and feed
Production rates
  2.2" - 999.99" (56mm - 9,999.9mm) .. 900 ft/hr
  0.22" - 2.2" (5.6mm - 56mm) .............. 90 ft/hr
Blades ........................................ Hardened ground tool steel
Dereeler ........................................ DE100 Dereeler
Power ...................................... 115V 60Hz or 220/240V 50Hz
Counter ..................................... 0-99,999
Decibel Rating ............................... 75 dB(A)
Size ......................................... 12 3/4" x 9" x 9 3/4"
  (324mm x 229mm x 248mm)
Weight ....................................... 24 3/4 lbs. (11.2 Kg)

Ordering Information

Units
AR6301 (WC2) ................. Automatic wire cutter 115V 60Hz
AR6302 (WC2) ................. Automatic wire cutter 230V 50Hz
AR6401 (WC2M) .......... Automatic wire & tubing cutter 115V 60Hz
AR6402 (WC2M) .......... Automatic wire & tubing cutter 230V 50Hz

Replacement Parts
IR0099 .................. Standard replacement shears for WC2
IR0097 .................. Replacement modified tubing cutting shears for WC2M
AR0010 ................. Replacement DE100 dereeler
PG0232 .................. Replacement fuse

Optional Parts/Accessories
IR0102 .................. Optional carbide shears for WC2
IR8953 ................. 1/4" (6.35mm) M conversion kit
to convert model WC2 to WC2M
AR3801 ................. DE400 Bench mounted dereeler
AR0015 ................. DE500 Five station dereeler
ER0901 ................. DE900 Power assisted dereeler 115V
ER0902 ................. DE900 Power assisted dereeler 220V
  European plug
ER0903 ................. DE900 Power assisted dereeler 220V UK plug
AR3950 ................. WS1 Wire straightener
IR7927 ................. Rubber feed rollers for use on
  AR6301/AR6401 (115V)
IR0121 ................. Rubber feed rollers for use on
  AR6302/AR6402 (230V)

Operation

--- Diagram of self-adjusting feed rollers and standard cutting blades (WC2 and WC2M) ---
Models WC2 / WC2M Automatic Wire & Tubing Cutter

OPERATING INSTRUCTIONS

SET-UP

Set-up and use of both models is the same unless otherwise noted.

Note: The WC2M comes assembled to cut flexible tubings up to 1/4" (6.35mm) OD. Before cutting wire the transport assembly and shears must be changed. See operation section for instructions.

It is recommended that the unit be secured to the work bench by means of the 5/16" hole drilled in front of the fan on the base of the unit. To access the hole open the right side panel by loosening the quarter turn fastener and swinging the panel up and over the unit. After securing the unit, close the cover and tighten the fastener.

Plug the unit into the appropriate power supply (either 115V 60Hz or 230V 50Hz). Note: 230V units are shipped without plugs. Wire on appropriate plug. Color Coding is: Brown = live; Blue = neutral; Green = ground.

Place reel of material to be cut on the DE100 dereeler. Load the material into the unit. To load material turn the feed release knob located on the left side of the unit to the left until the pointer contacts the stop rod. The feed rollers will now be separated allowing the material to be fed into the entry port and between the feed rollers. Close the feed rollers by returning the feed release knob to its original position.

Note: DO NOT run the WC2 or WC2M with the feed rollers open.

Turn the unit on. Depress the JOG button to feed the material through the unit until it exits the port on the right side of the unit. The JOG button is not functional as long as the unit's cover is open. Depress the CUT button to cut the material off even with the shears before starting the cycle.

Note: If material does not exit the port on the right side of the unit almost immediately after pressing JOG open the cover and ensure that the wire is feeding properly through the transport spring. Occasionally, the wire may miss the spring's entrance bushing when being inserted and will bunch up inside the unit.

Note LED indicator "Inch" or "mm" is lit. To change from one mode to the other press the INCH/MM button on the keypad.

If the length to be cut is less than 2.2" (56 mm) engage the short cut gear by lifting the box guard on the back of the unit and gently pushing in the knob until the gear engages. If the gear will not engage easily depress the JOG button while pushing in the short cut gear knob. Note: Pressing JOG will also advance the material through the feed tube. It will be necessary to cut the material once the short cut gear has been engaged so that the material will be properly positioned for the start of the cycle. In cutting lengths longer than 2.2" (56 mm) the short cut gear should be disengaged before programming.

To program the desired length press the COUNT/LENGTH button until the LED for "Length" is lit. Press the PROGRAM button and note that the LED for "Program" is lit. Enter the desired length using the number keys.

The WC2 will accept length inputs of 0.220"-99.999" (5.60-999.00mm) with the short cut gear box is engaged and 2.20"-99.99" (56.0 mm-9,999.9mm) when the short cut gear box is disengaged. The read-out automatically places the decimal point. Two decimal places are available when programming in inches and one decimal place for millimeters. If the short cut gear box is engaged, three decimal places are available when programming in inches and two in mm. When the short cut gear box is engaged the decimal point will automatically shift in the display. If a value outside these ranges is entered, it will not be accepted and "error" will show on the display. If a mistake is made in entering the length, press ENTER and then PROGRAM to clear the readout and repeat. Once the desired length reading is showing on the readout press ENTER.

To program the desired number of cut pieces press COUNT/LENGTH button until the "Count" LED is lit. Press PROGRAM and enter the desired number of cut pieces and press ENTER. The WC2 will accept count inputs up to 99,999 pieces. The last five input values will be used. For example, if “1,2,3,4,5,6” is entered the unit will program “23456” as the desired count, and will display this in the readout. If a mistake is made press ENTER and then PROGRAM to clear the readout.

OPERATION

Note: For safety purposes, the unit will not operate unless the cover is completely closed. Opening the cover during any operation will cause programmed count and length data to be erased.

With the length and count programmed the cycle is ready to run. Press STOP/START. The unit will run, and the readout will count down the number of cut pieces to 0. During the run the programmed length value may be checked without stopping the unit by depressing COUNT/LENGTH. This value will remain on the display until COUNT/LENGTH is depressed again. The unit will shut off automatically at the end of the run and the readout will flash the number of pieces cut.

Note: The first piece measured and cut after START or RESUME is depressed may be slightly out of tolerance compared to the rest of the pieces in the run. When checking length, check the second or subsequent pieces for accuracy.

If it is necessary to stop the cycle for any reason, for example to check the length of cut pieces, press PAUSE/RESUME. The unit will stop when the next cut is made. The display will read “r” and will show the remaining number of pieces to be cut in the run. The originally programmed count may be checked by pressing COUNT/LENGTH. The readout will show a “c” and the original count. Depress COUNT/LENGTH again to show the originally programmed length. When ready to resume the
cycle press PAUSE/RESUME. The unit will continue the cycle to its end. Once a cycle has been completed, it may be repeated by pressing STOP/START. To terminate the cycle before it is completed press STOP/START.

MODEL WC2M
To use the Model WC2M to cut wire it is necessary to change the transport assembly and blades. Note: If the tubing blades are used to cut wire premature blade wear may occur. Numbers refer to the drawing in this manual.

To change the assembly
1. Unplug the unit.
2. Open the right side panel of the unit by loosening the quarter turn fastener (32).
3. Swing the panel up and over the unit.
4. Remove the exit chute (22) by loosening the two screws at the base of the exit chute.
5. Remove the input bracket (144) near the feed rollers by removing the two Allen screws.
6. Loosen the set screw in the blade mounting block (123) by inserting an Allen key through the round hole in front of the machine cover.
7. Remove the transport assembly (248).

To remove the blades
1. Remove the nuts (54 & 55) and spacer (37) from the post on the blade mounting block (123).
2. Remove the blade assembly, leaving the brass shim washer (27) intact.
3. Remove the two cam rollers (13), spacers, screws, washers, and nuts from the tubing shears. These must be used on the wire shears. Replace them on the wire shears, in the same order as they were on the tubing shears. The short spacer goes on the blade with the off-set spring leg.
4. Apply a light coat of grease to the blade surfaces at the pivot point.

To install the blades
1. Place the first blade with the off-set spring leg on the blade mounting post, on top of the brass shim washer (27). The torsion spring should be toward you.
2. Install the second blade, spacer (37), large nut (54) and small nut (55).
3. Tighten the nuts, holding the large nut in position while tightening the small nut against it. The correct tightness is achieved when the blades close with a slight drag, yet open freely and completely when released.
4. Install the wiper bushing (145) of the new transport assembly in the blade mounting block (123). The flat on the wiper bushing should be oriented toward the set screw. This will position the protruding lip properly to the blades. The bushing should be approximately .015” from the lower blade. Ensure that neither blade can contact the wiper bushing during any point in the blade cycle. To check this, slowly push the cutter plate (118) assembly back until the blades close.
5. Reinstall the exit chute. The chute should be against the cutter mounting block and the left side of the chute should be even with the left side of the cutter mounting block.
6. Install the new input bracket in place of the one removed.
7. Close the cover of the unit and tighten the quarter turn fastener.

Note: If changing the transport assembly (248) from the wire assembly to the tubing assembly, take special care with the wiper bushing (145). The wiper bushing for the tubing assembly should be oriented so that the protruding lip is horizontal and positioned on the lower side of the bushing. It should be .015” away from the lower blade.

CARBIDE SHEARS
Carbide shears are available as an option in place of the standard tool steel shears for the Model WC2 wire shears only. The tubing shears used on the WC2M are not available in carbide. See ordering section for more information.

FEED ROLLERS
All units are fitted with knurled steel feed rollers. These are adequate for most applications. However, if cutting wire with soft insulations or bare or enamel coated wires the knurls may cause undesirable marking of the wire or insulation. To resolve this, rubber covered feed rollers are available as an accessory. See ordering information for more details.

To change feed rollers
1. Unplug the unit.
2. Remove the front cover assembly by removing the 4 screws on the left panel, 2 on the front panel and the quarter turn fastener on the right panel.
3. Remove the 4 screws holding the transport support plate (140) in place, 2 in the upper left corner and 1 on either side at the bottom of the plate.
4. Pull the plate straight back towards you until the drive shafts are clear.
5. Remove existing rollers by loosening the set screws and sliding them off the shafts.
6. Replace with the new rollers, ensuring that the rollers are installed with the set screws on opposite sides to facilitate access.
7. Leave the rollers loose and replace the transport support plate by inserting the top drive shaft in the top bushing first, then insert the lower shaft by tipping the plate down and pushing forward.
8. Reinstall the screws and tighten.
9. Align rollers with input bushing and tighten set screws.
10. Reinstall the cover, ensuring that the feed release knob is pointing up.

MAINTENANCE
Unplug the unit before performing any maintenance. If unit is in heavy use, do the following WEEKLY. If not, do every 2 - 3 months.
1. Lightly oil the 6 holes in the gear box plates (at top of gear box assembly (128). To access the gear box, remove the rear panel.

2. Apply oil or light grease to the cam rollers on the blades.

3. Clean the ramp plate (117). If free movement is impeded, lubricate the ways (131) with a teflon or silicon spray. DO NOT USE grease or oil on the ways.

**TROUBLE-SHOOTING**

**PROBLEM**  
Unit will not operate.

**SOLUTIONS**  
1. Check power supply.  
2. Check fuse. Replace if necessary.  
3. Ensure counter has a pre-set number (see Set-Up.)  
4. Ensure hinged right panel is secured by means of the captive quarter turn fastener. This closes safety switch.

**PROBLEM**  
Material does not feed properly.

**SOLUTIONS**  
1. Ensure feed rollers are not open. Feed roller release knob should point up.  
2. Check nuts on blade mounting post. Blades must open freely. (See Operation.)  
3. Ensure feed rollers are properly secured to transport shafts by set screws.  
4. Ensure gear box is properly engaged in short-cut or regular mode.  
5. Try rubber feed rollers for material that can’t be marked or deformed.  
7. Clean feed rollers if necessary, ie: build up of material.

**PROBLEM**  
Poor quality cut.

**SOLUTIONS**  
1. Check that blades are sharp. Replace as necessary.  
2. Ensure proper choice of blades: Regular for most wire cutting applications. Carbide for tough or abrasive materials. Tubing blades are for tubing only.

**PROBLEM**  
Erratic cut lengths.

**SOLUTION**  
1. Ensure ramp plate assembly slides freely in ways. Clean ways, and lubricate if necessary (see Maintenance).

**PROBLEM**  
Wire jams in feed spring.

**SOLUTION**  
1. Check that shears are not too tight (See Operation).  
2. Check that exit chute is properly aligned and tight.

**PROBLEM**  
Unit will not accept a length or count value.

**SOLUTION**  
1. Check that "Program" LED is lit, if not press PROGRAM.

**PROBLEM**  
"Error" is displayed.

**SOLUTION**  
1. A value of less than 2.2" or 56 mm (.22" or 5.6mm in short cut mode) was entered. Enter a larger value or switch to short cut mode if appropriate.
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 clothing, gloves, neckties, rings, bracelets, or other jewelry that might get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair.

DON’T OVERREACH. Keep proper footing and balance at all times.

MAINTAIN TOOLS WITH CARE. Keep tools sharp and clean for best performance and to reduce the risk of injury. Follow instructions for lubricating and changing accessories.

DISCONNECT TOOL before servicing; when changing accessories, such as blades, wheels, cutters, and like.

USE RECOMMENDED ACCESSORIES. Consult the operating manual for recommended accessories. The use of improper accessories may cause risk of injury to persons.

CHECK DAMAGED PARTS. Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.

DO NOT EXCEED THE MAXIMUM MATERIAL SPECIFICATIONS.

DO NOT OPERATE UNIT WITHOUT GUARDS IN PLACE OR GUARDS NOT IN WORKING ORDER.

DO NOT PERFORM MAINTENANCE OR ADJUSTMENTS WITH POWER ON.

DO NOT PLACE FINGERS OR APPENDAGES IN OR NEAR OPENINGS IN GUARDS.

DO NOT RUN UNIT WITH INCORRECT LINE VOLTAGE. REFER TO LABEL PLACED OVER I/O SWITCH.

DO NOT ALLOW UNTRAINED OR UNQUALIFIED PERSONNEL TO OPERATE UNIT.

DO NOT DEFEAT ANY OF THE SAFETY FEATURES DESIGNED INTO THE UNIT.

IMPORTANT: No liability will be incurred by The Eraser Co. for injury, death, or property damage caused by a product which has been set up, operated, and/or installed contrary to Eraser’s written instruction manual, or which has been subjected to misuse, negligence, or accident, or which has been repaired or altered by anyone other than Eraser, or which has been used in a manner or for a purpose for which the product was not designed.