



MOBIUS

M60 USER GUIDE



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WELCOME TO THE

# MOBIUS M60 MILL

## INTRO

This User Guide is a comprehensive manual covering the operation and maintenance of the Mobius M60 Mill as of the date of publication. ETEROS TECHNOLOGIES reserves the right to make updates to the machine from time to time. In the event of an update, this User Guide will remain appropriate for the safe operation and maintenance of your unit. This User Guide, as well as any documentation supplied by component manufacturers, are to be considered the information package associated with this device. Every operator must read and understand the User Guide. The manual should be located within easy access for periodic review.

# SERVICES & REPAIRS

Repairs may only be carried out by Eteros Technologies or a designated authorized agent (service technician).

Should the need arise, please notify us:

ETEROS TECHNOLOGIES

26 Industrial Ave. Carleton Place, Ontario, Canada K7C 3T2

[www.eteros.com](http://www.eteros.com)

1.866.874.6244

Improper interfacing, improper repair, or unauthorized modification could result in void *warranty claims*.

# SAFETY INSTRUCTIONS

To ensure operator safety while in use, this device includes decaling, guarding, and other safety features. Operators are encouraged to use caution and best judgment when using equipment. Equipment should be serviced when required.

To avoid possible damage to the machine and risk of injury to the operator, consult with an ETEROS TECHNOLOGIES representative to answer any questions.

All operators must read and understand this User Guide and be trained in safe operation and use of the machine. We recommend the owner of this equipment develop a standard operating procedure specific to each worksite to address any local hazards or other conditions not outlined in this User Guide. The machine must be inspected regularly for damage, component failure, and wear. Results of inspection activity should be documented.

ETEROS TECHNOLOGIES makes every effort to ensure the machine is compliant with all current safety standards. It is the responsibility of the owner to ensure all municipal, provincial, state, county, territorial, and federal codes, regulations, and standards have been met in each working location.

Do not lend or rent your machine without providing the User Guide. A first-time operator should receive practical instruction before using the machine.

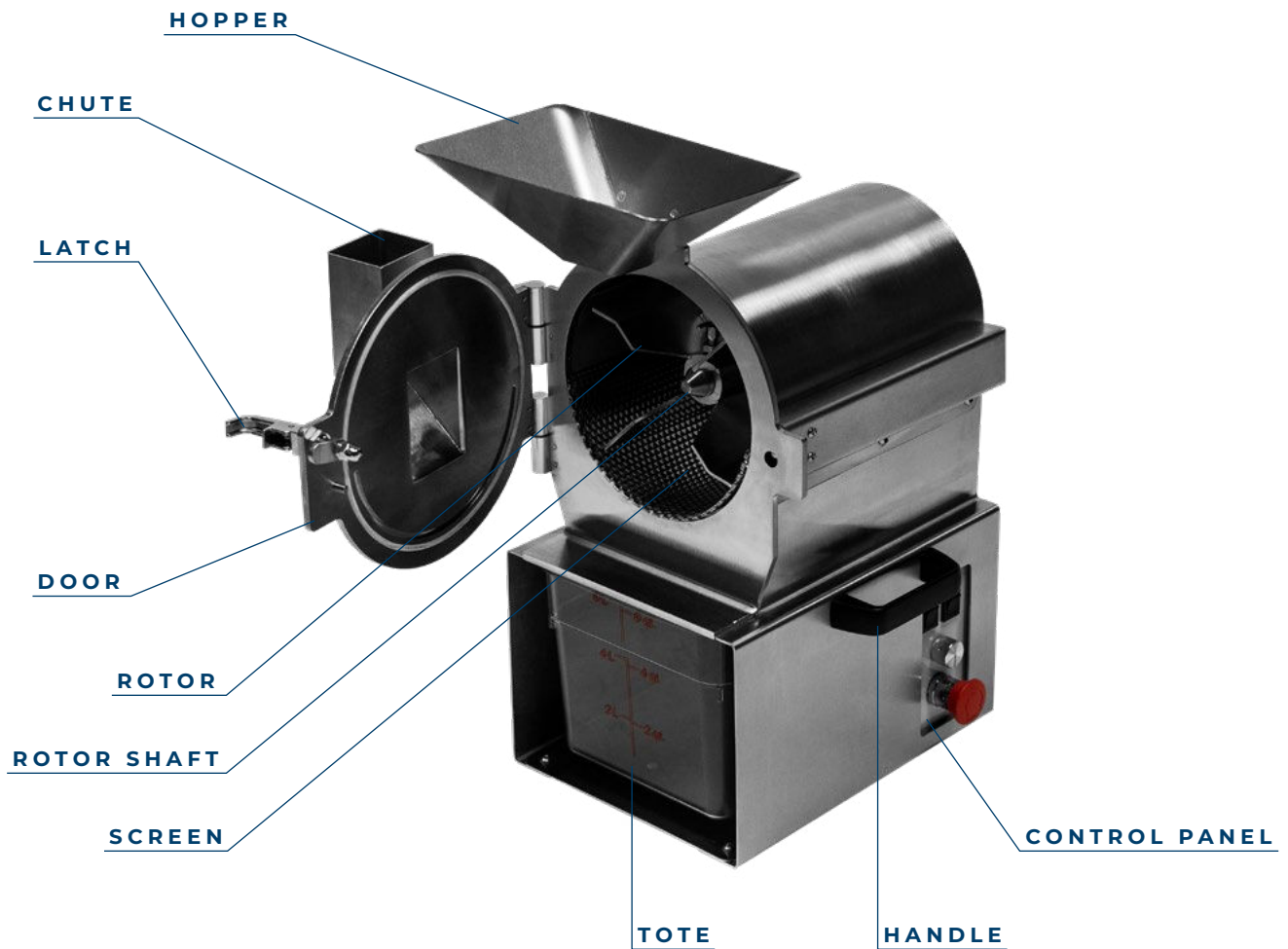
This machine is not to be used for any purpose other than those expressly stated in the User Guide, advertising literature, or other ETEROS TECHNOLOGIES written material *pertaining to the machine*.

## General Safety Precautions

- 1 READ and become familiar with the entire User Guide. Learn the equipment applications, limitations, and possible hazards.
- 2 DO NOT USE THE MACHINE IN A DANGEROUS ENVIRONMENT or damp or wet locations. Never expose the control panel directly to rain or water. Keep the work area well illuminated.
- 3 DO NOT use the device in the presence of flammable liquids or gasses.
- 4 KEEP WORK AREA CLEAN. Cluttered areas and workspaces invite accidents.
- 5 WEAR PROPER APPAREL. Do not wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry which may get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair.
- 6 POWER DOWN AND DISCONNECT EQUIPMENT before washing or servicing and when changing accessories.
- 7 CHECK FOR DAMAGED PARTS PRIOR TO OPERATION. The equipment should be inspected prior to use to ensure proper operation when performing 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. Any damaged part including guards should be properly repaired or replaced.
- 8 ALWAYS WEAR EYE PROTECTION.

GET TO KNOW YOUR

# MOBIUS M60 MILL



WHAT'S IN THE

## BOX

Your M60 Arrives With The Following Components:

- 1 M60 Machine
- 1 366 cu. in / 1.58 gal / 6L
- 1 Tote Lid
- 1 1/8" Perforated Screen
- 1 1.6mm Rasp Screen
- 1 Hopper



INITIAL

# ASSEMBLY & INSPECTION

To set up the Mobius M60, follow these steps:

1. Inspect the package and package contents to ensure no damage occurred during shipping
2. Remove the machine from the package
3. Confirm the power cord is in good condition
4. Remove the HOPPER from the TOTE and fasten to the machine using both HOPPER SCREWS
5. Ensure the ROTOR is properly installed with the spring-pin latch in place
6. Ensure that the equipment is in a clear and tidy workspace and that all controls are accessible and clearly visible

# CLEANING & MAINTENANCE

## CLEANING THE MOBIUS M60

The M60 is washdown rated and features easily removable components. With the exception of the motor and control panel, the M60 can be washed, cleaned, and wiped down with normal detergents, degreasers, and disinfectants.

The door, rotor, screen, and hopper can all be removed to facilitate cleaning. The door can be removed by simply lifting it off the hinges. To remove the rotor, lift up and hold the pin on the spring plunger while sliding the rotor off of the shaft. To remove the hopper, unfasten both hopper screws.

If necessary, the door gasket can also be removed for cleaning. The gasket is pressed by hand into the groove around the circumference of the door.

*Take care to not spray water directly onto the control panel.*

## FUSE REPLACEMENT

Should the need arise, the 3A fuse can be replaced without any tools. To replace the fuse:

1. Ensure the power switch is in the off position, the power cord is unplugged, and the emergency stop has been pressed.
2. Tilt the machine onto its back.
3. Twist the fuse holder cap protruding from the bottom of the electrical box counterclockwise. The cap will have white lettering that says "FUSE."
4. Remove and safely discard the expended fuse. Insert the new fuse into the cap.
5. Insert the new fuse and cap back into the electrical box and twist clockwise to secure.

## PREVENTATIVE MAINTENANCE

The M60 is largely maintenance-free. The door gasket is the only wear component within the M60. The condition of the door gasket should be inspected prior to each use. A faulty or worn door gasket will not affect the operation of the machine, however it is necessary for dust mitigation.

This User Guide does not include instructions for machine repair. For your safety, repairs *must be completed by ETEROS TECHNOLOGIES or an authorized service technician.*

# GENERAL OPERATION

## MILLING

The M60 is designed to be hand fed for small batch, dry milling. To begin milling product:

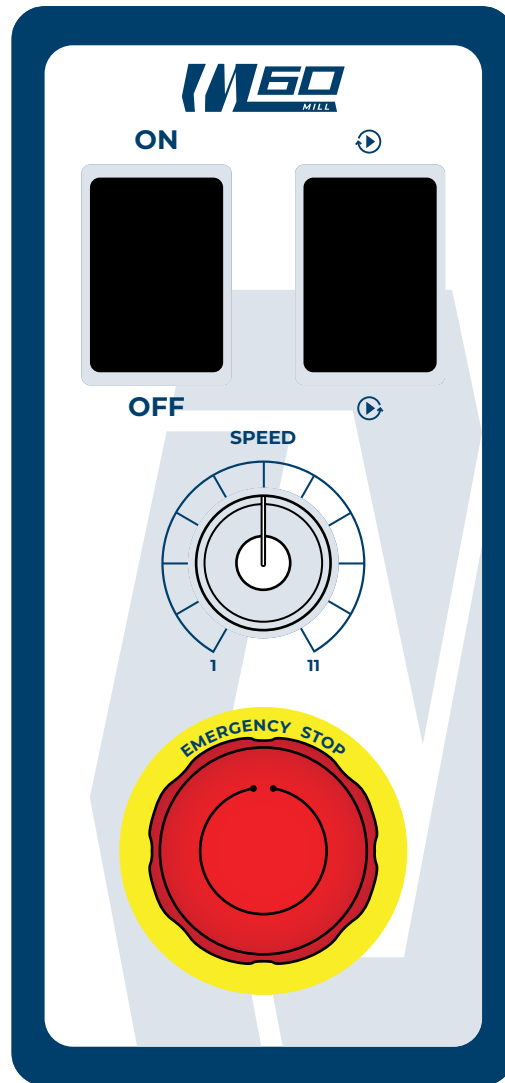
1. Install either the  $\frac{1}{8}$ " perforated screen, or 1.6mm rasp screen depending on how fine or coarse of a grind you prefer by sliding the screen into the groove of the milling chamber. Additional screen sizes are available by request, please contact your dealer or Eteros Technologies for availability and pricing.
2. Slide the tote into the milling chamber until bottomed out.
3. Seal the milling chamber by closing the door of the machine, turning the latch one quarter turn clockwise, and flipping the latch down. You will hear a click and the latch will snap into place when properly engaged.
4. Ensure the emergency stop is not pressed. If you are unsure, rotate the e-stop counterclockwise. If depressed, it will reset when turned counterclockwise. The machine will not start unless the door is sealed and the e-stop is in the default position.
5. Ensure the power cord is plugged into a 120 V (North America) or 240 V (international) outlet.
6. Start the rotor by switching the rotor switch to the ON position.
7. Look down the chute and ensure the rotor is rotating clockwise (when viewed from the front of the machine). If it isn't, flip the direction switch to the opposite position.
8. Feed product one handful at a time into the hopper.
9. Adjust the speed of the rotor as necessary to maintain a consistent feed rate and output.

When all product has been fed into the machine, you can check if product is still being milled by looking through the tote to see if ground product is being pressed through the screen.

Once satisfied that milling is complete, turn the machine off. The tote can now be safely *removed and stowed away with the lid.*

MOBIUS M60 MILL

# CONTROL PANEL



### **TOP LEFT - POWER ON/OFF:**

In the on position, the rotor will immediately begin rotating at the set speed and direction. In the off position, the motor is disabled and the rotor is stationary.

### **TOP RIGHT - DIRECTION CONTROL:**

Initiating the switch in the up position, will spin the rotor clockwise, which is the forward position. Selecting the down position, you will initiate the rotor to spin counter-clockwise (the reverse position).

### **MIDDLE - SPEED CONTROL:**

Rotate the knob clockwise or counterclockwise to reduce the rotor speed.

### **BOTTOM - EMERGENCY STOP:**

Pressing the e-stop will immediately disable all power to the machine and stop the rotor. Power will remain disabled until the e-stop is reset by turning the red knob counterclockwise and the power button is cycled off and back on.

## **LIFTING & MOVING**

The M60 is easily moved using the aluminum handles on either side of the machine. Exercise proper ergonomics and lifting technique when moving the machine. When setting *the machine down, ensure that all four rubber feet are firmly planted on the work surface.*



# TROUBLESHOOTING

## Mobius M60 Will Not Start

- Ensure the machine is plugged in
- Ensure e-stop is disengaged (pulled out)
- Ensure the door is closed and sealed
- Cycle the power button off then on
- Ensure the rotor is not jammed or lodged

## Device is Abnormally Noisy / Rotor Rubbing

- Ensure the rotor is properly seated and the spring pin is engaged to the shaft
- Inspect upper milling chamber for product / resin build up, clean as required
- Contact ETEROS TECHNOLOGIES to discuss different milling screen options

## Milled Material is Over / Under-Processed vs. Desired Consistency

- Contact ETEROS TECHNOLOGIES to discuss milling screen options

## Debris & Product Buildup on the Rotor and/or Milling Chambers

- Remove the rotor, wipe/wash down rotor, shaft, and milling chambers

# SPECIFICATIONS

## Throughput

20 lbs / hour

## Speed Adjustment

0 - 140 RPM

## Power Requirements

115 VAC, 1.5 A or 230 VAC, 0.75 A

## Motor

1/10 HP

## Screen/Rasp Size

60 sq. in (387 sq.cm)

## Screen/Rasp Options

1/8" perforated screen, 1.6 mm rasp other sizes available upon request

## Milling Chamber Dimensions

7 3/4" diameter x 5" depth

## Tote Dimensions

7 1/4" tall x 8 3/8" wide x 8 3/8" deep

## Tote Volume

366 cu. in / 1.58 gal / 6L

## Hopper Volume

76 cu. in / 0.3 gal / 1.25L

## Width

13" / 33 cm

## Length

16" / 41 cm

## Height

22 1/4" / 57 cm

## Weight

60 lbs





