

# TD25 TRIMMER

USER GUIDE VI.I



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# INTRODUCTION

This User Guide is a comprehensive manual covering the operation and maintenance of the Mobius TD25 trimming machine 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.

### DISCLAIMER

ETEROS TECHNOLOGIES recognizes that the MOBIUS TD25 TRIMMER is a purpose-built machine for processing cannabis by licensed producers. Please check all municipal, provincial/state, and federal laws and regulations before using the MOBIUS TD25 TRIMMER. ETEROS TECHNOLOGIES does not promote or condone the use of processing equipment in any way that may be deemed illegal.

ETEROS TECHNOLOGIES recognizes that our equipment can be used for processing herbs, hops, flowers, and many other products. It is not the responsibility of ETEROS TECHNOLOGIES to confirm alternative applications for our equipment.

# **SERVICE & REPAIRS**

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

Should the need arise, please notify:

**ETEROS TECHNOLOGIES** 26 INDUSTRIAL AVE. CARLETON PLACE, ONTARIO, CANADA K7C 3T2

eteros.com

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

# WARRANTY

Thank you for purchasing Mobius equipment from Eteros Technologies Inc.

The Mobius TD25 Trimmer is covered by our manufacturer's warranty as follows:

- No warranty on consumable parts, including tumblers, shear bands, and bearings;
- Warranty coverage for one (1) year or 1,000 operating hours, whichever occurs first, on motors, electrical components, and remainder of machine components.

The warranty period begins on the date the equipment is received by the customer. Any damage that occurs during shipping will be the responsibility of Eteros Technologies.

The above terms are valid if Mobius equipment is used and maintained as directed. If the equipment is modified in any way, all terms of this warranty are void. This warranty does not apply to cosmetic damage, such as scratches or general wear and tear.

Should you experience a technical problem with your equipment, please contact Eteros Technologies at the email or phone number outlined in the Services & Repairs section.

# WARNING LABELS



### **DANGER:**

Indicates a hazardous situation that, if not avoided, will result in serious injury and/or death. This signal word is to be limited to the most extreme situations; typically for machine components that, for functional purposes, cannot be guarded.



#### **WARNING:**

Indicates a potentially hazardous situation that, if not avoided, could result in serious injury and/or death. It includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.



#### **CAUTION:**

Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

# SAFETY INSTRUCTIONS

To ensure operator safety while in use, this device includes warning decals, 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.

This document refers to the ETEROS TECHNOLOGIES product trimming machine as the MOBIUS TD25 Trimmer. Since this machine has a rotary trimming unit, special safety precautions must be observed to reduce the risk of personal injury. Careless or improper use may cause serious or even fatal injury. Please read and understand these precautions thoroughly before using the machine.

All operators must read and understand this User Guide and be trained in safe operation and use of the MOBIUS TD25 TRIMMER. 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 MOBIUS TD25 TRIMMER 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 MOBIUS TD25 TRIMMER 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 MOBIUS TD25 TRIMMER.

Operators must be in good physical condition and mental health to operate this device. Under no circumstances should the device be operated by anyone under the influence of any substance, including drugs or alcohol, which might impair vision, dexterity, or judgment. Do not operate the MOBIUS TD25 TRIMMER when fatigued. Be alert - If tired while operating the device, take a break. Fatigue may result in loss of control. Working with any equipment can be strenuous. If you have any condition that might be aggravated by strenuous work, check with your doctor before operating the device.

### **GENERAL SAFETY PRECAUTIONS**

#### KNOW THE SAFETY INFORMATION

Read and become familiar with the entire User Guide. Learn the equipment applications, limitations, and possible hazards.

### KEEP GUARDS AND SHIELDS IN PLACE

Keep all guarding in place and in working order to protect both the device and the operator.

### WORK IN A SAFE ENVIRONMENT

Do not use equipment in a dangerous environment or damp/wet locations. Never expose the control panel directly to rain or water. Keep the work area well-illuminated.

### WORK AWAY FROM FLAMMABLE LIQUIDS OR GASSES

Do not use the device in the presence of flammable liquids or gasses.

#### KEEP THE WORK AREA CLEAN

Cluttered areas and workspaces invite accidents.

#### TRAINED OPERATORS ONLY

Keep children and bystanders away from the device. Visitors should be kept at a safe distance from the work area.

### DON'T FORCE THE EQUIPMENT

It will operate optimally and safely at the rate for which it was designed.

#### **USE THE RIGHT TOOL**

Don't force the device to do a job for which it was not designed.

#### WEAR PROPER APPAREL

Do not wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry that may get caught in moving parts. Non-slip footwear is recommended. Wear a protective hair covering to contain long hair.

#### ALWAYS OPERATE DEVICE IN A WELL-VENTILATED AREA

Dust generated from certain materials can be a health hazard. Use a dust collection system whenever possible.

### WEAR A FACE MASK OR DUST MASK

This device may produce dust or operate near other dust-producing machines. If dust extraction is not considered, a dust mask must be worn.

### POWER DOWN AND DISCONNECT

Power down and disconnect equipment before servicing and when changing any accessories, consumables, or other components.

### CHECK FOR DAMAGED PARTS BEFORE OPERATION

The equipment should be inspected prior to use to ensure proper operation in 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.

### ALWAYS WEAR EYE PROTECTION

Safety goggles can protect your eyes from fast-moving debris.

#### ALWAYS WEAR EAR PROTECTION

Wear ear muffs or earplugs when operating loud machinery.

# **PREFACE**

## INTENDED USE OF EQUIPMENT

The TD25 is designed and manufactured to trim excess plant material from cannabis and hemp flower. It should be used in a laboratory, clean room or production-type environment.

To optimize the performance of your TD25 please ensure that your product is:

- Cannabis or Hemp
- Flower, leaf, or trimmings
- Fully bucked or de-stemmed
- Dry to a moisture content of 8%-10%

### **OPERATING CONDITIONS**

| Location              | Indoor                          |
|-----------------------|---------------------------------|
| Altitude              | 0 - 2000 meters above sea level |
| Temperature (ambient) | 5°C - 25°C                      |
| Relative Humidity     | 25% - 75%                       |
| Voltage               | 115 V +/- 10%<br>230 V +/- 5%   |
| Pollution Degree      | 2                               |
| Overvoltage Category  | II                              |

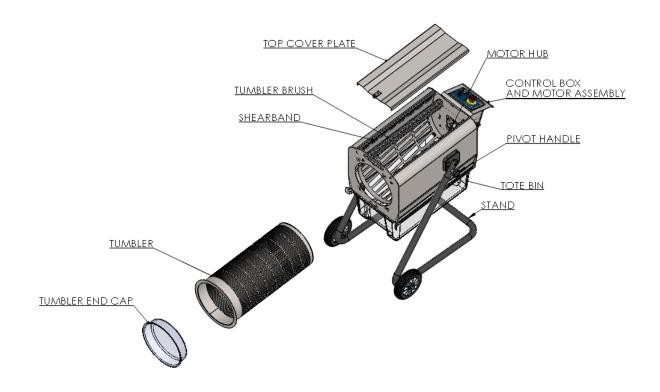
**NOTICE:** THIS DEVICE IS NOT TO BE OPERATED IN WET LOCATIONS.

## **SPECIFICATIONS**

|                      | TD15   | TD25   |
|----------------------|--|--|
| Construction Body    | Stainless Steel                                    | Stainless Steel                                    |
| Tote                 | PETG   | Polycarbonate                                      |
| Shearband            | Nylon 6/6  | Nylon 6/6  |
| Speed Adjustment     | no   | 1-11   |
| Motor                | 40 W   | 90 W   |
| Dimensions (rounded) | 18" ( 47 cm) H<br>12" ( 31 cm) W<br>20" ( 51 cm) L | 35" ( 90 cm) H<br>24" ( 62 cm) W<br>38" ( 96 cm) L |
| Tumbler Dimensions   | 9" (22 cm) Diameter<br>15" (37 cm) Depth           | 12" (30 cm) Diameter<br>25" (65 cm) Depth          |
| Weight               | 47 LBS (21 KG )                                    | 106 LBS (48 KG)                                    |
| Recommended PPE      | Ear Protection<br>Eye Protection<br>Dust Mask      | Ear Protection<br>Eye Protection<br>Dust Mask      |
| Power Requirements   | NA: 120 V, 1.5 A<br>ITL: 240 V, 0.75 A             | NA: 120 V, 1.5 A<br>ITL: 240 V, 0.75 A             |
| Warranty             | 1 Year or 1,000 Hours                              | 1 Year or 1,000 Hours                              |
| Motor Markings       | UL, CSA, CCC, EN, CE                               | UL, CSA, CCC, EN, CE                               |

# **INITIAL SETUP**

### GET TO KNOW YOUR MOBIUS TD25 TRIMMER



### WHAT'S IN THE BOX

Your MOBIUS TD25 TRIMMER comes fully assembled, tested, and ready for operation. When unpacking the device, please ensure the following items are included:

- MOBIUS TD25 TRIMMER MACHINE
- TRIM TOTE
- TUMBLER
- TUMBLER CAP
- SHEARBAND
- CONTROL BOX AND MOTOR

# **OPERATION**

### **OPERATION PREP**

Please take the following steps to confirm the MOBIUS TD25 TRIMMER is ready to operate:

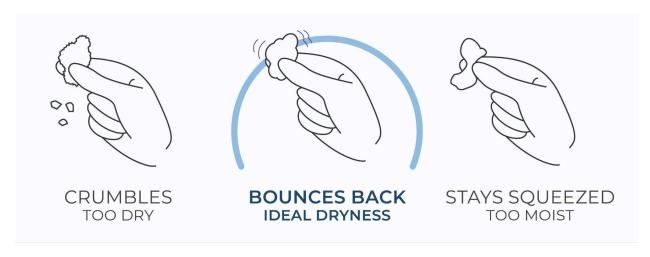
- Ensure that your MOBIUS TD25 TRIMMER has been configured for the appropriate voltage (see SPECIFICATIONS section)
- Complete a thorough inspection of the equipment to ensure no damage occurred during shipment
- Confirm the power cord is in good condition
- Ensure the tumbler is properly installed with the hub securely latched to the tumbler base
- Ensure the trim tote is installed on the tote rails beneath the tumbler.
- Ensure the tumbler cap is snugly installed
- Ensure the shearband is installed and tensioned
- Install and latch the top cover into place
- Ensure that the equipment is in a clean and tidy workspace and that all controls are accessible and visible.

### PRODUCT PREP

### CHECK MOISTURE CONTENT

A successful trim starts with using properly prepared product. The Mobius TD25 Trimmer is designed to trim plant material at 8-12% moisture content, but the 9-10% range is ideal. While a moisture meter will provide the most accurate measurement of the moisture content, the reference images below can also be used to gauge how wet or dry your plant material is:

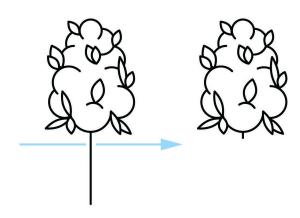
#### PINCH TEST



Another way to gauge the moisture levels is to bend the stem: if there is a snapping sound, the product is close to ideal moisture levels. If the stems bend with no snapping sound, this is a sign that they are still too moist.

#### **REMOVE STEMS**

If feasible, it is recommended to remove the stems from the buds prior to trimming. Try to trim the stem as close to the bud as possible.



### CONTROL PANEL OVERVIEW



**E-STOP** - Emergency stop button – stops all moving parts on the device.

TIMER - Turn the timer clockwise to the desired position to energize the motor and rotate the tumbler.

SPEED - Turn dial to adjust tumbler speed to desired rate.

### **GENERAL OPERATION**

NOTICE: PRIOR TO DEVICE OPERATION, ENSURE ALL GUARDS AND THE TOP **COVER ARE IN PLACE AND PROPERLY SECURED** 

NOTICE: PRESS THE E-STOP BUTTON AT ANY TIME TO STOP ALL MOVING PARTS AND TURN OFF THE MACHINE

### MACHINE START-UP SEQUENCE

- 1. Remove the top cover from the machine.
- 2. Drape the slots in the edges of the shearband over the tabs in the left and right side panels of the machine body.
- 3. Install the tumbler brush by clicking it into the two clips on the inside of the machine front and back plates.
- 4. Slide the tumbler through the front plate until the motor hub protrudes through the cutout at the base of the tumbler. Twist the tumbler slightly to latch it on to the motor hub.
- 5. Use the handle on the back of the machine to tension the shearband tight against the tumbler. There is no need to provide additional leverage on the handle, hand tightening is sufficient.
- 6. Install the top cover on to the trimmer and latch it in place.

- 7. Slide the tote along the tote rails beneath the machine.
- 8. Tilt the machine back so the front is facing upwards by holding the handle with one hand, retracting the knob with the other hand and tilting the machine backwards.
- 9. Once the machine is tilted backwards, load it with the product. Only fill the tumbler about ½ to ¾ of the way full. Overfilling the tumbler will lead to a lower quality trim and a slower processing time.
- 10. Level the machine back to horizontal and install the tumbler end cap snugly in the front face of the machine.
- 11. Ensure the e-stop is retracted, and start the machine by rotating the timer knob to the desired run time. Use the speed knob to adjust the tumbler speed.

Once the machine is running, it is recommended to check the trim after about 3-5 minutes to make sure the desired trim quality is being achieved with the tumbler speed and shearband tension setting. Continue to monitor and check the trim approximately every 5 minutes while the machine is running.

### MACHINE STOP SEQUENCE

The machine will stop automatically after the chosen time has elapsed. The machine can also be manually stopped by pressing the e-stop. Once the product inside the machine has been trimmed for the specified duration or to your desired consistency, remove the tumbler end cap and tilt the machine to deposit the trimmed product into a tote, bin or container.

### MACHINE SHUTDOWN SEQUENCE

Press the e-stop button to de-energize the machine.

NOTICE: ENSURE THE MOBIUS TD25 TRIMMER IS POWERED DOWN AND UNPLUGGED BEFORE PERFORMING ANY SETUP, MAINTENANCE, OR CLEANING **TASKS** 

### **SET-UP & ADJUSTMENTS**

The MOBIUS TD25 TRIMMER typically requires minimal adjustments under normal operating conditions. Simply adjust the shearband to the required tension level to get the desired trim consistency.

# GENERAL

### **CLEANING**

With the exception of the motor, gearbox, and electrical enclosure, the MOBIUS TD25 TRIMMER can be washed, cleaned, and wiped down with normal detergents, degreasers, and disinfectants.

The Mobius GMP Solutions cleaning agent is specifically formulated to break down residue buildups and makes cleaning your machine much easier versus using traditional cleaning solutions.

The tumbler, tumbler end cap, tumbler brush, and shearband can be removed to facilitate cleaning. The inside of the MOBIUS TD25 TRIMMER can be washed and wiped as needed.

The entire motor and control box assembly can also be removed for easy cleaning by lifting up the latching arms on either side of the motor assembly and lifting it away from the machine. With the drive assembly removed the rest of the machine can be sprayed, pressure washed, or soaked.

The motor and control box assembly of the MOBIUS TD25 TRIMMER should never be hosed or sprayed. Evidence of water near the motor, conduit, electrical panel, or gearbox could void the machine warranty.

### MAINTENANCE

The MOBIUS TD25 TRIMMER is largely maintenance-free.

The TD25 gearbox is a fully sealed unit and is 100% maintenance free for life.

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

Should repairs be required, please contact:

**ETEROS TECHNOLOGIES** 26 INDUSTRIAL AVE. CARLETON PLACE, ONTARIO, CANADA K7C 3T2

eteros.com

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

### LIFTING & MOVING

The machine is easily moved and rolled on level surfaces. The machine includes two wheels that are installed at the factory. The machine is designed to be operated on smooth and level floors.

If lifting is required, the TD25 must be lifted using a forklift on the lower structural frame between the casters. Ensure that the forks are fully spread to avoid overturning or flipping off the forks.

# **TROUBLESHOOTING**

| Problem                                  | Resolution   |
|--|--|
| MOBIUS TD25 TRIMMER WILL NOT START       | <ul> <li>Ensure the machine is plugged in</li> <li>Ensure the e-stop is disengaged (pulled out), by twisting counterclockwise</li> <li>Ensure the tumbler base is engaged properly with the motor hub</li> </ul>                             |
| PRODUCT IS UNDER TRIMMED OR OVER TRIMMED | <ul> <li>Adjust the tension on the shearband and run smaller batches to get the desired trim consistency</li> <li>Adjust the tumbler speed using the speed dial</li> <li>Ensure product is within the recommended hydration range</li> </ul> |
| DEVICE IS ABNORMALLY NOISY               | <ul> <li>Ensure the tumbler is correctly engaged with the motor hub</li> <li>Check the motor assembly on the rear of the machine and make sure it is installed properly and latched securely</li> </ul>                                      |
| TRIM QUALITY IS DEGRADED                 | <ul> <li>Verify moisture content is within 8-12% range</li> <li>Clean the tumbler, shearband and tumbler brush. Residue accumulation on trimming components is the number one factor that negatively impacts trim quality.</li> </ul>        |