

MT Evolution 3

Brushless Tattoo Machine Evolution 3
Congratulations on purchasing the MT Mustang Tattoo equipment!

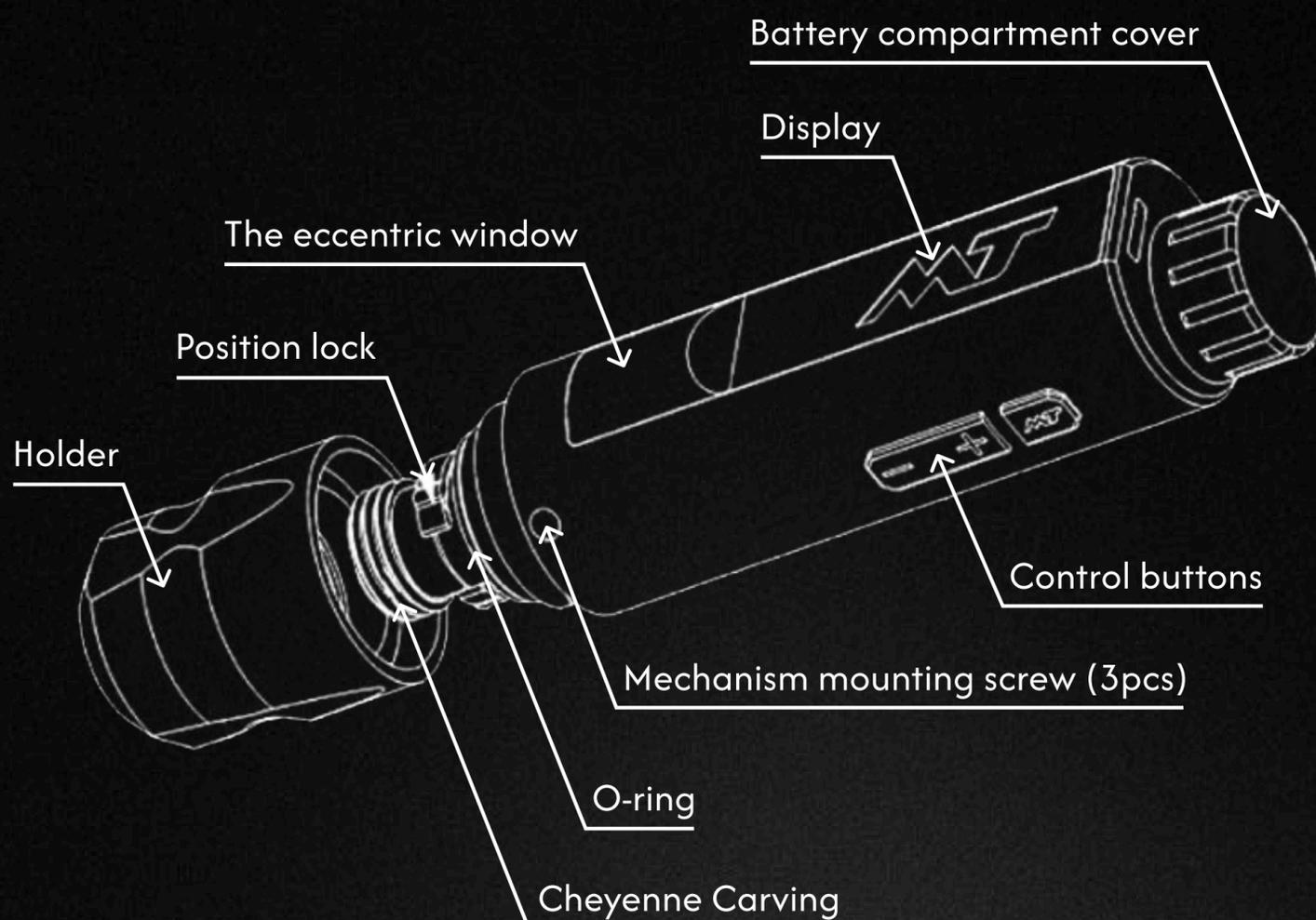
The expertise of our engineers and continuous testing by tattoo artists during the development stage ensure an ideal balance of accuracy, ergonomics, and high quality. Please carefully review this manual before starting operation!



FEATURES OF THIS MACHINE

Please carefully review this manual before starting operation!

- This machine uses a brushless motor, providing a consistently high torque at any rpm and significantly higher reliability compared to traditional brushed motors.
- Equipped with a solid, machined aluminum stand with an automatic pause function, which does not require power, and a magnetic base for fixing to the tattoo table.
- Two proprietary Keep Power batteries with a capacity of 3500 mAh each will provide up to 10 hours of continuous work. The quick replacement and charging capability during operation make you practically independent of external power sources and charging downtime.
- A large, full-color OLED display simultaneously shows all indications and adjustable parameters, eliminating the need to search through menus. Ergonomic side buttons allow for easy adjustments without distracting hand movements.
- The device has three needle strike stiffness modes, helping to prevent excessive skin trauma in sensitive areas and ensuring fast and reliable coverage of large surfaces, making it versatile. DotWork mode is available for specific tasks, along with several memory slots for quick switching between different styles and settings. Your time is your money.
- It features non-volatile memory of all settings, indicators, and operation modes stored in each slot.
- The design allows the user to easily remove the mechanism for self-replacement of the eccentric and routine cleaning.
- A transparent window on the eccentric node enables visual monitoring of its operation and engagement with the motor shaft.



NO ADDITIONAL PURCHASES NEEDED

- The kit includes a power adapter, a 1.5-meter long cable for charging during operation, an external charger for the batteries which also functions as a case and universal power bank, and two Keep Power batteries with maximum capacity for this type of batteries. All connectors are Type-C, ensuring full universality.
- A second eccentric with increased stroke length, tools for disassembly and replacement, a larger second grip, spare position lock pins—all included.
- All structural parts are manufactured through CNC machining from lightweight, durable aluminum alloy.
- And of course, it supports working with disposable Cheyenne D-GRIPS.

User Interaction Elements:

1. Operating voltage
2. Motor power
3. Needle stroke
4. Weight with battery
5. Charging port type
6. Dimensions
7. Operating time at 7V
8. Charging time from port

Packaging List:

1. Evolution 3 tattoo machine
2. Magnetic stand
3. Additional large-diameter grip
4. Additional eccentric with increased stroke length
5. Power bank charger (external charger)
6. Power adapter
7. Two batteries
8. Power cable
9. Case key for assembly/disassembly
10. Key for eccentric replacement
11. 2 spare grip position locks
12. 2 spare sealing rings for the grip
13. Case for storage and transportation

Specifications:

1. Parameter
2. Value
3. Voltage
4. 5-13 Volts
5. Power
6. 6 Watts
7. Needle stroke
8. 3.8 mm / 4.5 mm
9. Weight
10. 218 grams
11. Charging port type
12. USB Type-C
13. Dimensions
14. 151 x 33 x 33 mm
15. Working time at 7V
16. 10 hours
17. Charging time from port
18. 1 hour 40 minutes



WORKING CHARACTERISTICS AND SAFETY MEASURES

The machine is designed for professional use only by tattoo artists. The manufacturer is not responsible for improper operation or misuse!

Also, follow sterilization and disinfection standards strictly.

- Use disposable cartridges. Wipe the machine with disinfectant before and after use.
 - Always use barrier protection for the machine.
 - Wear disposable gloves during each session.

Before Starting Work:

- Unscrew the cover counter-clockwise, insert the battery with the correct polarity according to the label inside the battery compartment, then tighten the cover firmly.
- Power On: Press and hold the "MT" button to turn on the machine. It'll be in standby mode.
- Start the motor: Short press the "MT" button. Listen for a few seconds to the motor operation.
- Sound check: The noise should be smooth, without irregular knocks or tonal fluctuations.
- Stop the motor: Short press "MT" again to return the machine to standby.
- Insert the cartridge and adjust needle protrusion by rotating the holder. The machine is now ready to work.

Note: To avoid variable or unstable loads, it's not recommended to change cartridges while the motor is running.

Magnetic Stand with Soft Pause Function:

When you place the machine on the stand, it detects this and automatically enters standby mode, stopping the motor. When you pick up the machine again, it restarts the motor and resumes the previously set working mode before activation. For convenience, it's best to place and pick up the machine when the stand faces you, not away from you. The stand doesn't require power or periodic battery replacements.

FUNCTIONS, INDICATORS, AND MODES

Speed Indicator:

The machine displays two types of indication: voltage (in volts) and rotations per second (RPS). Both values are always visible on the display, but you can switch between large and small windows for easier reading. It's important to understand what these mean:

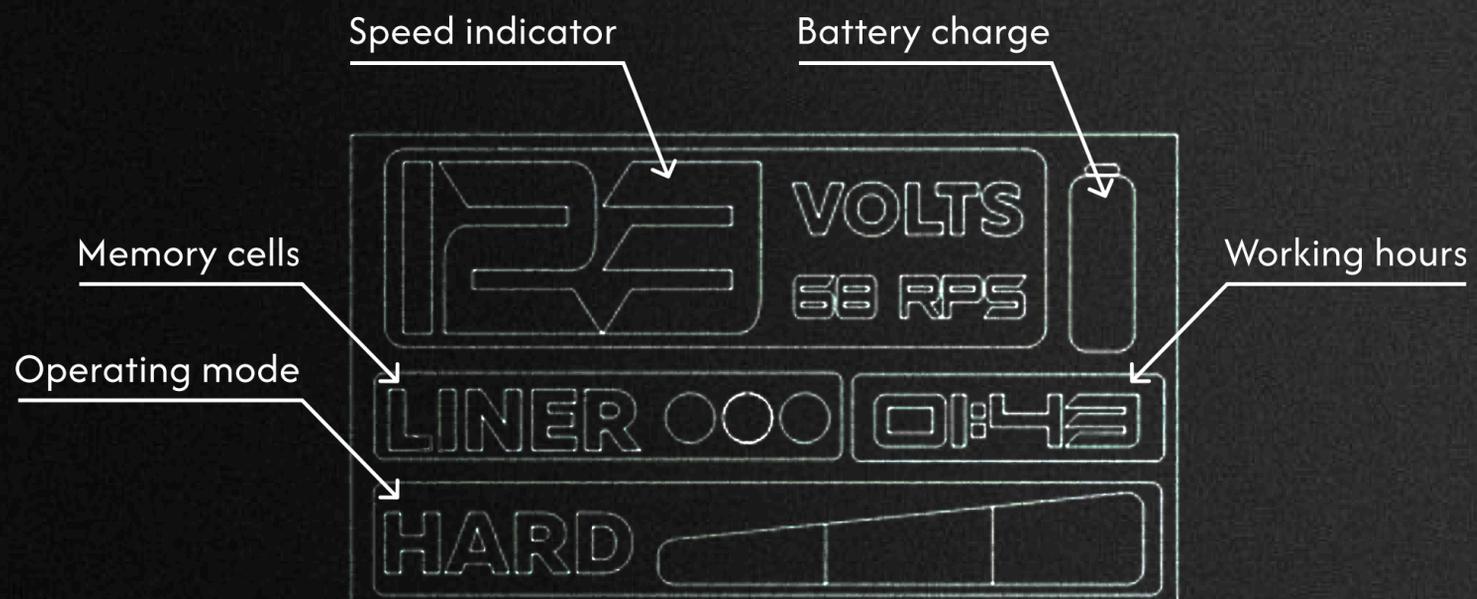
- "Speed in volts" is not the actual rotational speed. It's just the applied voltage to the motor.
- Different motors have different speed-volt curves, meaning the same voltage can produce different actual rotation speeds, especially across machines.
- For example, a 7-volt setting on one machine might correspond to a certain number of RPM, and on another with a different motor, a different RPM.
- Historically, early rotary machines used simple circuits and indicators that could not measure the real rotation speed, only voltage, which remained a standard but somewhat imprecise measure.
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- Experienced old-school masters may prefer to focus on voltage and "feel" the machine, but beginners are encouraged to use the actual RPS indicator to better adapt to comfortable operating modes.

Work Time:

Shows the duration of the current session, resets automatically when the device is turned off.

Memory Cells:

The machine has three memory slots, each storing settings for display mode, operation mode, and speed. They are linked to lines, shading, or user preferences. The active slot is highlighted in blue. These slots are non-volatile, meaning they retain their settings even when the machine is turned off or the battery is removed.



Operation Functions:

Turn on/off — Push and hold **MT** button to turn on or off.

Standby mode — Single press **MT**.

Precise voltage adjustment (step 0.1V) — Use **+** or **-** buttons.

Rapid voltage change — Hold **+** or **-** buttons.

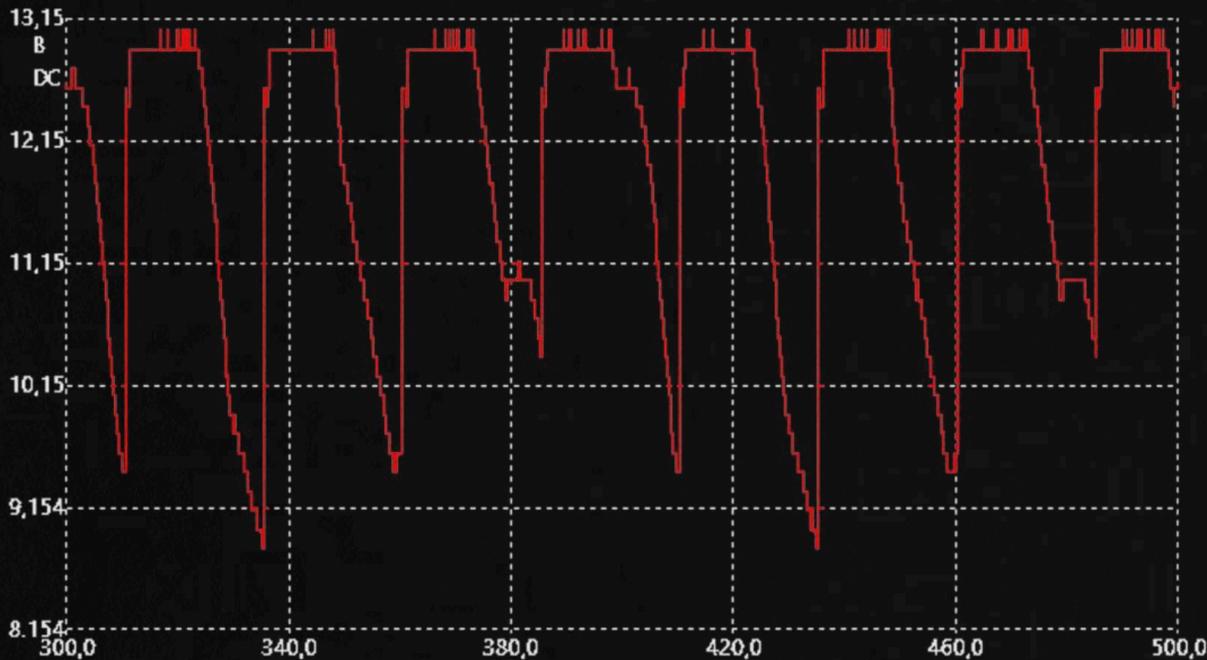
Switch memory slot — Double press **MT**.

Change operation mode — Hold **MT** and **+** buttons.

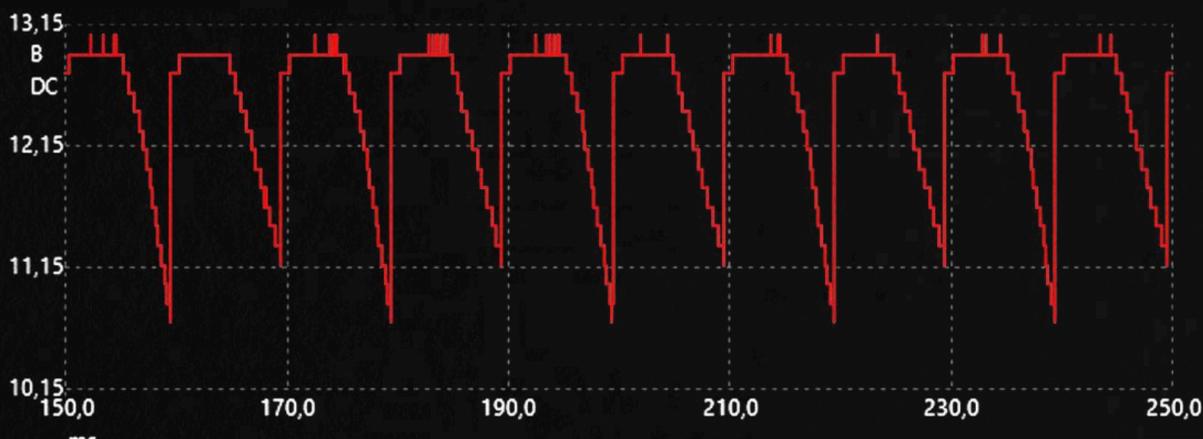
Change display orientation — Hold **MT** and **-** buttons.

Change speed indication — Hold **MT** and **+** buttons or **MT** and **-** buttons.

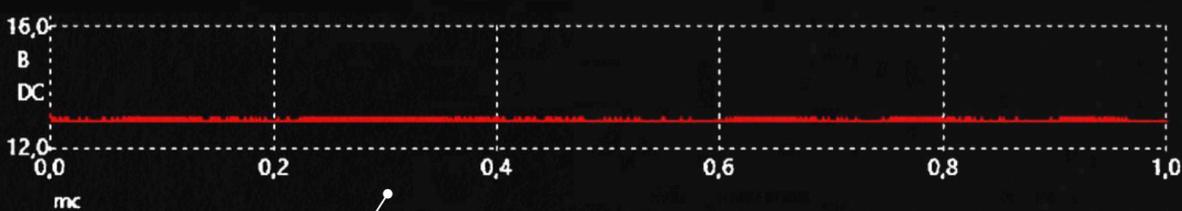
OPERATION MODES



Soft – This mode reduces the motor speed more under load, useful for beginners or when working with dull or poorly sharpened cartridges to minimize skin trauma.



Norm – Standard operation mode, where the electronics don't interfere with the natural reduction in RPM under load (e.g., when the needle works in the skin).



Hard – Increases power to prevent RPM from dropping under load, suitable for experienced artists working on large areas with fast, firm lines.

Note: The mode is a helper, not a safeguard. Needle penetration is always deep and fast, and constant visual control is essential to avoid skin trauma. It's recommended to start with the standard (Norm) mode, then explore others if needed.

EVERYTHING YOU NEED TO KNOW ABOUT CHARGING AND THE BATTERY

This machine is compatible with any 18650 lithium-ion battery. Its capacity directly affects the runtime. We recommend investing in good-quality batteries from reputable companies for better performance and safety.

Charging the battery:

The battery can be charged both in a charger and directly in the machine, whether it's turned off or running.

- When the charge indicator on the screen turns red, the machine can still work for at least another 1.5 hours under typical operating conditions. This is to remind you to take action — similar to smartphone charging — but not leave you without a working tool unexpectedly.
- It is allowed to use third-party chargers, adapters, and cables with voltage of 5V and current up to 2A. However, to avoid quality issues or damage, we recommend using only the original devices included in the set.

IMPORTANT

Store the battery in the provided case.

Keep it away from moisture.

Remove the battery from the machine if not used for more than a week.

Do NOT charge universal batteries like 18650 with "fast chargers" as this can cause rapid failure.

REPLACING THE ECCENTRIC

The kit includes two types of eccentric units with needle strokes of 3.8 mm and 4.5 mm, which can be changed by the user depending on preferences. Additional types can be purchased separately. The kit also includes two hex keys.

Procedure:

1. Remove the battery before any internal work.
2. Fully unscrew the three screws securing the mechanism (see Figure 1) with the large hex key.
3. Pull the grip and remove it along with the threaded tip.
4. Grasp the plastic frame holding all internal parts and pull it out of the casing.
5. Using the small hex key, loosen (but do not fully unscrew) the screw on the end of the eccentric flywheel and remove the eccentric unit from the shaft.
6. Put the other eccentric unit onto the motor shaft and slightly tighten the screw.
7. Assemble in reverse order.

IMPORTANT

Tighten the flywheel screw firmly, but do not overtighten to the point of stripping or breaking the screw.

After reassembly, turn on the machine, insert the cartridge, and at a low speed, gently give force (e.g., press the needle against cardboard or artificial skin).

Check that the eccentric does not rotate freely on the shaft by observing through the window.

MAINTENANCE AND CARE

The kit includes two types of eccentric units with needle strokes of 3.8 mm and 4.5 mm, which can be changed by the user depending on preferences. Additional types can be purchased separately. The kit also includes two hex keys.

Disinfection:

While the equipment is not medical and doesn't require strict sterilization, it's strongly recommended to follow procedures used in medical facilities regarding blood and saliva transmission.

1. Wipe the device with antiseptic solutions after each session (also disinfect hands and work surfaces).
2. Autoclave the grip if possible. (The device itself should never be exposed to high temperatures or moisture.)
3. Use sterilized cartridges from reputable brands; remember they are disposable.
4. Use barriers, disposable gloves, and other protective measures.
5. Your health and your clients' safety depend on it!

Cleaning:

- Inspect, clean, and lubricate the device every 3 months with active daily use or as needed.
- Remove the grip, wipe inside with a clean cloth.
- Clean the threaded tip and cavity where the cartridge sits.
- Lubricate the threads, grip, and seal with silicone or graphite lubricant if no excessive wear is observed.
- If damaged, replace parts with spare parts from the kit.
- Disassemble the machine, remove the frame, and clean the hole where the pushing ball runs along the eccentric node with a cotton swab.
- Apply silicone or graphite lubricant, clean the metal ball and rotate the eccentric smoothly and quietly.
- Check battery contact oxidation and clean if needed.
- Power on the machine without a cartridge - listen for a smooth, even sound without interruptions or abnormal noises.

MANUFACTURER'S WARRANTY

5 YEARS

Warranty on case parts

1 YEAR

Warranty on working parts: motor, internal mechanisms, circuit board, etc

3 MONTHS

Warranty on power elements (batteries)

Warranty does not cover equipment that has been:

- Damaged by aggressive non-alcoholic antiseptic agents
- Has signs of falling, impact, or damage to the case and components
- Shows signs of modifications or upgrades made independently
- Has foreign objects, liquids, or dirt inside the mechanism
- Operated outside the intended use
- Sterilized in autoclaves or dry heat chambers

Additional Notes:

The warranty period for batteries is three months because, as manufacturers, we can't control or verify how users charge their batteries during diagnostics. Any obvious defect is almost always detected within this period.

IMPORTANT

Our equipment is primarily designed for professionals with significant experience and understanding.

If you're a beginner or unsure about disinfection, cleaning, disassembly, or maintenance, there are plenty of resources online or you can contact us for guidance.

Contact for warranty and service center:

Email: mustangtattooeu@gmail.com

Website: www.mustang-tattoo.com