

WHIP TATTOO MACHINE

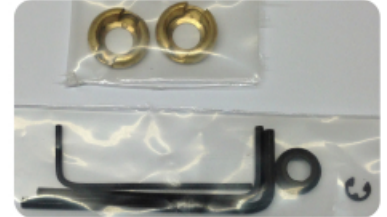
The Swashdrive **Whip** tattoo Machine a Original and unique Innovation in Tattoo machinery. We at Swashdrive Developments have been pioneering and refining different technologies in Tattoo machines forward since 1993. **DO NOT OPERATE this Machine with PWM Power supplies**
USE only LINIER type Power Supplies on this machine (VOLTAGE REGULATED)

Contents

- 1 Whip Tattoo machine
- 2 set of allen keys
- 3 Spare Crankshaft big-end bearing & clip
- 4 Clipcord to RCA plug connector
- 5 Brass anvil weights
- 6 Spare needle bar tensioner O-rings

RCA to Clip-cord Adaptor Is a fresh new look in the way power may be connected to the whip, If you are setup using Clip cord then its easy to connect with this adaptor. This has allowed us at Swashdrive to design a more compact machine with allot less junk hanging off the back !

Needle bar tensioner Comes standard with the WHIP machine and so eliminates the use of rubber bands. Component is possible to retro fit on all Swashdrive machines from Gen 4 up and may be purchased as an after market part.



Running the Whip & making Adjustments

The Whip is infinitely adjustable having 3 controlled variables ;

- Volts** = Speed of the machine in cycles per second
- Give** = Soft to hard adjustment of give Slider (hit)
- Stroke** = A combination of Volts & Give

Try an initial setup with a shading mag with softest give setting with smallest weight running @ 6 – 8 Volts or slower). The action of the whip is able to stroke more than the crank stroke depending on needle bar weight and RPM (Volts) As volts are increased the anvil will stroke more depending on give setting & needle bar weight. For more information on settings etc please visit

www.swashdrivetattoo.com

Armature Brass weights Are for the use of softening the give effect of the anvil and also add an increased driving force behind each hit. Slower speeds must be used with the added weights as they will increase stroke !

Armature up Spring has been added to the WHIP machine, in stop mode the needles will stop in the up position.

Power supplies We recommend to use Only Quality **dual knob lab** DC power supplies to power this machine. We recommend the supply have no more than Ripple & Noise $\leq 1.0mVrms$. Use the Spinner, it's the great power supply designed for this machine which also works on most other machines. Although this machine will run on most single knob supplies, **NOTE** poor quality supplies will considerably reduce the life of the electric motor, PWM controllers (Critical) are not recommended, (it will destroy the motor and invalidate your warranty).

Calculation for machine speed

6.0Volts = 3000rpm which is = 50 Hz (50 Cycles Per Second)

9.0Volts = 6000 rpm which is = 100 Hz (100CPS)

12Volts = 9000rpm which is = 150Hz (150 CPS)

Setting power supply

Do not exceed **12 Volt** its equal to 150 Hz (CPS). Using of higher speeds are at your own peril. **Do not exceed 0.6 Amps @ 12 volts**, this is **100 %** duty cycle for the motor, the Whip machine should run at 10 to 50% duty cycle, (0.04 – 0.3Amp).

Tube Chucking System

Note No more than 1/2 turn nut tension should be put on the tube clamp, do not use tools to tighten, **hand tighten only !**

Do not allow the following to happen !

1. **Do not use oil or any lube directly onto the electric motor**, this will cause motor failure and invalidate any Warranty.
2. **Do not use sprays directly on machine especially in around Crankshaft area, use clean wipes !**
3. **Do not** place machine into **Autoclave** or immerse into an **Ultra-sonic**.
4. **Do not run this machine with PWM Power supplies**, may invalidate your Warranty !
5. **Do not run** the machine above **12Volts DC**.
6. **Do not force the armature up & down by the anvil**, move it by turning the Crankshaft centre boss. This is important as the Crankshaft will lock-over at TDC & BTC (Top & Bottom)
7. **Do not over tighten the wing nut on the tube clamp**, test how well it works by just tightening it by taking up the slack then another 1/2 turn **MAX**
8. **Do not exceed 0.35 Amps load @ 12V on electric motor, (5 Watt motor)**
9. **Do not remove the back of motor were there are 2 screws showing, this will destroy the motor and invalidate your warranty !**
10. **Do not disassemble machine, if a repair is required contact www.swashdrivetattoo.com for help or return!**

Warranty The Swashdrive WHIP Tattoo machine has a **Six month warranty** from date of purchase. To which Swashdrive Developments will repair the manufacturing fault of the machine free of charge. However We do not cover return postage costs. Failure to the above do not list may invalidate your warranty. Proof/ Purchase invoice of date of purchase must be provided for any warranty claim.

Disclaimer Swashdrive Developments **warrantees** the manufacturing quality of the Swashdrive Whip Tattoo machine. But under no circumstances is Swashdrive Developments in any way liable for any injury, infection or quality of any tattoo of any person that Swashdrive Whip machine is used on. That is the sole responsibility & liability of the Artist / Owner of this Swashdrive Whip Tattoo machine. **Updated information on the WHIP Tattoo machine may be found at www.swashdrivetattoo.com**

