



LACENANO
TOOLS  **GODS**

ADVANCED TATTOO EQUIPMENT

User manual **ENGLISH**

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Thank you for showing your support by getting your very own LACEnano.

The LACEnano is a brushless rotary tattoo machine with a magnetic drive, so it will feel a lot like a coil machine but without the hassle and the weight. It is also the lightest tattoo machine in the world weighing in at only 46g/1.6oz.

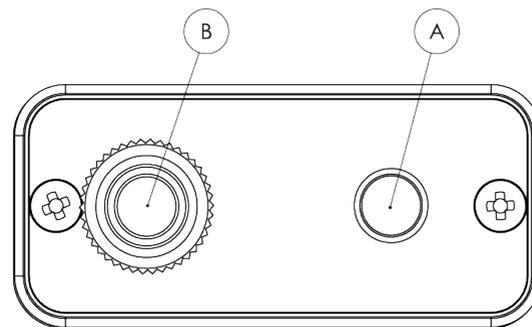
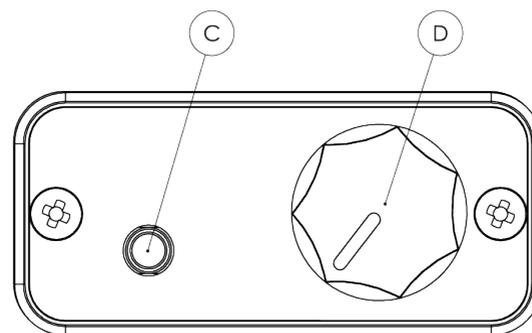
1 | Power supply

LACEnano needs a special power supply that comes with every machine. This is because of the **brushless motor**. The LACEnano will not work with standard power supplies (actually they might hurt the machine so don't try it) and other tattoo machines will not work with the LACEnano power supply.

You also get an international wallwart in the kit; it has 3 interchangeable wall plugs for when you go to conventions abroad. The Power supply is pretty self explanatory; all the connections are different from each other, so there is no way of plugging things in the wrong way. The knob controls the speed of the machine from 2500 RPM to 8000 RPM (42 Hz to 133 Hz). This is a constant voltage power supply; the wizardry inside it will adjust the pulses to the motor and keep the motor spinning at the set speed if the load increases (if you push harder or put on a bigger needle). So no more guessing

and adjusting the voltage.

In the picture bellow are the front and rear panel of the power supply; You plug the wall wart in to port (A), your footswitch into port (B) and the machine into port (C). (D) is the RPM control knob.



2 | The machine

The LACEnano has a tube vice that will take any **standard 8mm tube/grip**. It will not crush the tube like some other guillotine type tube holding mechanisms do.

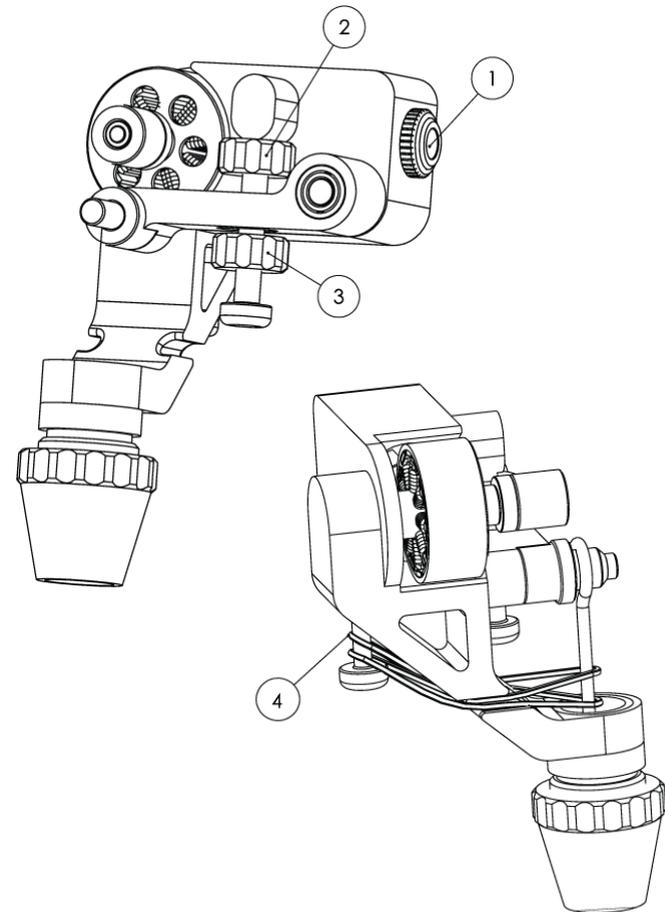
This being a magnetic drive machine, it will not work well with cartridge needles (much like coil machines don't because of the magnetic transfer of force) for this reason we do not recommend the use of cartridge needles.

The settings are really simple and can be done on the fly without any tools and while tattooing using just your fingers. The point here is to control the position of the magnet on the armature bar in relation to the one spinning on the motor.

The **upper thumbnut (2)** controls the hit. You adjust it up for a harder hit and down for a softer hit.

The **lower thumbnut (3)** controls the stroke. You increase the stroke by moving it down and decrease the stroke by moving it up. The **jack (1)** is where you plug in the LACEnano power cable.

It is best to use a thin, small diameter rubber band. Hook it on the **backpost (4)**, stretch it over the needle loop around the machine and hook it on the backpost from the other side as seen in the diagram.



The machine might get hot, if you run it at full speed and with a hard hit for long periods of time without any brakes.

This is not a problem for the machine, but it might be too hot for your hands if you touch it right away. For this reason we advise you to use a tattoo **pedal that turns off everytime you remove your foot** so the machine has a few seconds to cool off. Also; make sure to give it a few moments after you are done tattooing before you touch it.

This phenomena is common in coil machines and the reason for it is the high power of the machine. A small rotary will not get so hot, because it only has a 5w motor, but coils produce much more power (and heat) and the **LACEnano has a 40w motor**, so it does give off some heat.

3 | Adjustment pointers

It is common for artists to use a short stroke for lining and a long stroke for shading. This is probably what you have been taught or you may have developed your own technique to achieve the results you are after.

Nothing is set in stone and it is advisable to set the machine individually for every skin type, needle size and technique combination. The LACEnano is not a one trick pony.

THIS IS HOW YOU ADJUST THE MACHINE

(it might be a little counterintuitive):

- 1 Put the needle you are going to use on the machine as well as a rubber band if you are going to use one.
- 2 Adjust the speed on the power supply first.
- 3 Adjust the give with the upper thumbnut but **make sure that the magnets are not touching or even hitting each other when the machine is running!** The ballpark is up to 2 full turns down from the uppermost position of the thumbnut.
- 4 And now adjust the stroke with the lower thumbnut; the best useable strokes are from 2.5-4.5mm at the needle.
- 5 Now finally turn the machine on, put your thumb on where the needle hooks on the armature bar and feel for the hit. Now make minor adjustments to the stroke with the lower thumbnut. When you feel the hit gets stronger you have found the sweetspot for that particular speed, needle, give and stroke combination.

You have successfully adjusted your machine. Now just adjust the needle stickout and you are all set.

4 | Maintenance and cleaning

The LACEnano was designed to be a really **low maintenance machine**. You can lube the bearings with a drop of light machine oil from time to time if you wish but it's not really necessary. If you are going to clean it in an autoclave, then we advise using an autoclave grade lubricant (you can get it at dental supply shops – in fact; the bearings on the LACEnano are dental machine bearings).

You can clean the whole machine (including the motor) in **an autoclave sterilizer at up to 135° C**. Or if you don't have one you can use any standard cleaner and disinfectant that you use for your other tattoo machines.

If there are any problems or malfunction of the machine please **do not attempt a repair yourself**.

Contact us first and we will advise you on how to proceed and your options (if you decide to send it in our repairs are very fairly priced – we've got your back). Attempting repairs on such small mechanical devices is something like trying to repair your own mechanical watch and you can break more things than you fix if you do not know the correct procedures and screw tightening torques.

5 | Common problems and solutions

- **The needle has a weak and/or intermittent hit;** The stroke and give are set way too high – follow the adjustment pointers and start with a hard hit setting (half a turn down from the uppermost upper thumbnut position while **making sure the magnets are not hitting each other** and 3mm stroke set with the lower thumbnut) and find the sweetspot from there.
- **The machine is making a buzzing sound much like a coil;** The magnets are hitting each other – move the upper thumbnut down until the sharp buzzing sound goes away. Failure to do so will damage your magnets and void your warranty.
- **The machine starts/stops randomly when I move it around;** Your cable has probably worn out and it's time to get a new one. Cables usually fail at the connectors. Test for a worn out cable by twisting the cable around at the connectors with the machine turned on. If this has an effect on the running of the machine, then it is time to order a new cable.

Use your LACEnano according to these instructions. Failure to do so might cause damage to the machine and void your warranty.

6 | Information

For all additional information, contact us through the contact form on our website **www.lacenanano.com** or send an email directly to **rotary@lacenanano.com**.

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- Webshop with additional products
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