



# DERMINATOR® INSTRUCTIONS



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Derminator info page with demo vids:  
<http://derminator.owndoc.com>

digital skin remodeling



# DERMINATOR® INSTRUCTIONS

→ [HTTP://DERMINATOR.OWNDOC.COM/](http://derminator.owndoc.com/)

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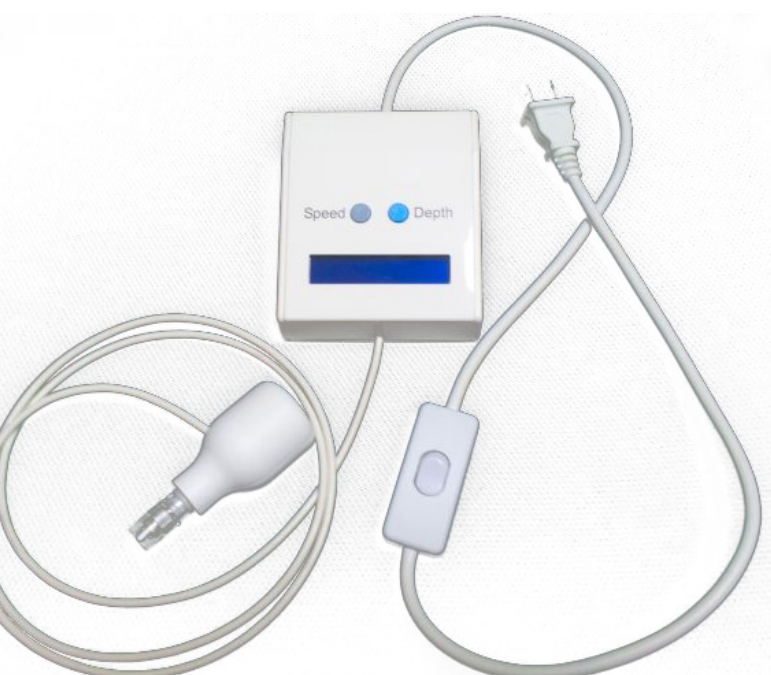
## ESSENTIAL INFORMATION NOT COVERED IN THIS GUIDE

Before using the Derminator, read our dermaneedling instructions available on <http://dermaroller.owndoc.com/dermaroller-instructions.pdf>. These instructions are absolutely essential because they contain important safety- and treatment guidelines as well as advice on how often to treat and with which product to treat.



## INTRODUCING THE DERMINATOR®

The Derminator is an electromechanical dermaneedling device with fully digital control, including digitally set needle length. The needling speed can be slow (3 Hz), medium (5 Hz) or fast (25 Hz). The needling depth is set with a push button and can be 0.25, 0.5, 0.75, 1, 1.25, 1.5, 1.75, 2 or 2.25 mm. 9 and 1-needle cartridges are available. The device is not rechargeable because of the need to avoid microtearing. To avoid microtearing, a very powerful motor is a necessity, and including a rechargeable battery would make the device very heavy and expensive. Competing Chinese-made devices are based on permanent makeup hardware and are totally unuseable for dermaneedling. They do not reach the advertized depth and they cause terrible tearing.



The Derminator is able to count down the time required to optimally treat a skin patch of a certain area by calculating the treatment time required based on needling speeds used to automatically result in the optimal prick density. All you do is set inches or cm, input width and length of the skin area and start needling with any variety of speeds. The machine will stop automatically when the skin has been treated optimally. All the user needs to do is move the machine smoothly at least once over the entire area, but better is to move fast enough to go over the entire area at least twice. The Derminator takes the guesswork out of the equation.



## DERMINATOR BENEFITS

The Derminator is useful for all types of dermaneedling, including the needling of large areas of skin. The device replaces a collection of dermarollers, dermastamps and single needles. Derminator needle cartridges are cheap and can be reused, making it the cheapest alternative for people who plan to needle various skin areas for more than a year.

A Derminator can save money when committed to a multi-year dermaneedling schedule that includes various instruments with varying needle lengths, since replacement needle cartridges cost much less than a dermastamp or dermaroller. Even when you're just buying a few dermaneedling instruments, a Derminator may be a cheaper alternative because it keeps its resale value, since it is easy to totally clean and disinfect the inside of the hand unit. The entire motor is reachable and waterproof.

People often have a natural aversion of penetrating their own skin and have much less trouble with a machine doing the needling.

The Derminator causes minimal pain compared to all other needling methods, including competing electric devices. Numbing cream is totally unnecessary. The “afterglow” after needling with the Derminator is actually more “painful” than the actual needling. The only area that may need numbing before treatment is the area adjacent to the lips.

A skin clinician's job is greatly eased by this device. The Derminator is an “industrial quality” needling device, suitable for years of frequent use. No time is lost setting the needling depth. The needle cartridges are of guaranteed superb quality (manufactured specially for us) and the machine reaches the set depth without microtearing.

The Derminator allows the exact and rapid needling of complex or narrow shapes.

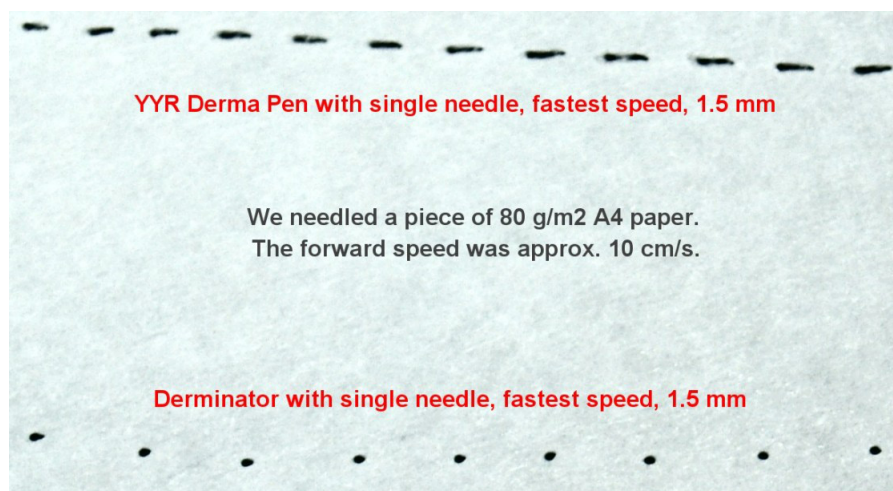


## Unique, essential feature: No microtearing!

Last but not least: All competing devices that we did not invent cause microtearing.

We invented the first non-microtearing device and published how it was supposed to be implemented: Using a powerful electromagnet. A Turkish manufacturer read this, implemented it and called their device “DermaJet”, rebranded as “DermaDart”. The DermaJet does not have digitally set variable-depth needling and was neither safe nor reliable (it was a total fiasco in fact) so we refunded nearly all our customers and invented the Derminator, which we build ourselves in our own workshop.

This is what “micro”-tearing looks like. It is caused by a dermaneedling machine’s motor not having sufficient accelerating power to push the needles in quickly and pull them back out just as fast:



We realize that the above picture may seem like a marketing gimmick designed to make people afraid of all other devices but ours. We provide a video on our sales page where we demonstrate microtearing. Anyone who still does not believe that the above picture is the truth is encouraged to repeat the experiment themselves and post the results online. We will pay \$1000 to the first person to prove that this picture is faked and not the actual result of needling with the YYR Derma Pen, resp. our device. We tested several more devices and they all caused such extreme tearing. It’s inherent in their design. Chinese companies simply recycle their permanent makeup tech, totally not up to the task of dermaneedling. We are extremely angry that those cheap “buzzers” may give electric dermaneedling a bad name. Of course, due to the flexibility of skin vs. paper, skin won’t be (as) ripped as paper.



## LIFETIME OF THE NEEDLE CARTRIDGE

The needles will become blunt after a certain time, depending on how often you treat, needling frequency, how large the treated skin areas are, how many times you go over the skin and how tough and thick the skin is (male skin is thicker than female skin). Scar tissue is harder than ordinary skin, facial skin is soft and thin, etc. A cartridge can nearly always be used more than once. When you feel more pain than when the cartridge was new or when the machine has trouble keeping proper needling depth, it's time to replace it. Cleaning and disinfection of the cartridges should be done according to our dermaneedling instructions downloadable at: <http://dermaroller.owndoc.com/dermaroller-instructions.pdf>







# MAINTENANCE, CLEANING, PRECAUTIONS



## Maintenance

- The main unit is maintenance-free. The only (re)movable part of the machine is the reciprocating magnet in the hand unit. The hand unit should be cleaned when blood has entered it.

Do not use any grease or oil to lubricate the reciprocating magnet.



## Cleaning

- When blood has entered the motor, it should be cleaned immediately after treatment.
- Remove the needle cartridge.
- Remove the reciprocating magnet by either smashing the hand unit down against the palm of the hand or by inserting a narrow steel rod (such as a small screwdriver) into the motor until it connects with the magnet, then pull it out.
- Clean the magnet. Do not put it in hot water and do not autoclave it. Make sure the magnet is dry before placing it back.
- With the magnet taken out, take a cotton swab ("Q-tips"), dip it into water with a little dishwashing liquid or disinfecting alcohol and clean the inside of the motor with it. Do not spray into the motor and do not submerge it into water because there is a small chance that this will affect sensor accuracy when water enters the internals (there is an internal hole inside the tube). Dry the inside of the motor with an unused cotton swab. Make sure the inside of the motor is totally dry and does not have remaining cotton or tissue paper when you put the magnet back. We do not yet offer needle cartridges with a blood barrier membrane because the barrier acts as a very low quality spring and would impair accuracy.
- Note how competing Chinese "buzzers" are a contamination hazard, as can be read in the FDA adverse event report on Eclipse Aesthetics' Micropen.



## Precautions

- **Do not reuse needle cartridges on different people.** It is always best to discard needle cartridges after use, but they can be re-used, as long as you only use them on the same person. Disinfect the cartridge directly after use in that case, according to our Dermaneedling instructions available on <http://owndoc.com/>
- Always clean the inside of the motor tube immediately after treatment when the device will ever be used to treat several people.
- Many plastics deform when they are exposed to hot water and the needle cartridges of the Derminator are no exception. The mounting base of the needles is made of a thermoplastic material and heating it with water can lead to an incorrect needling depth. **Do not use hot water to disinfect the needle cartridges.**
- **Do not hold the hand unit by the needle cartridge and do not squeeze it during operation** because its reciprocating movement will be impaired and this will interfere with accuracy and needling speed.
- **Do not use Chloramine-T to clean the cartridges.** The spring will rust. Used needle cartridges should be disinfected with alcohol according to our general disinfection guidelines described in our Dermaneedling instructions.
- **Do not operate the machine without a needle cartridge, or the reciprocating magnet will fly out** (do not point the motor without cartridge at your eyes and turn the machine on!). When this happens, put the magnet back in so that it stays in when you point the cartridge side down, meaning the reciprocating magnet is attracted by the internal magnet. If you put the magnet in wrongly or operate the device without magnet, an error will appear.
- When a needle cartridge does not fit fully onto the machine, **do not use force to “hammer” it on** because this may damage the plastic bajonet-fitting tip of the hand unit. A cartridge that does not fit fully onto the machine is extremely rare and when it happens, please let us know and we will immediately send you several replacements free of charge. The single needle cartridges have a tighter fit than the 9-needle cartridges and can be hard to put on the machine with greasy or sweaty fingers. Push the cartridge firmly while twisting strongly.
- When reusing a needle cartridge after cleaning it in a liquid, it is unavoidable that liquid remains inside the cartridge. When such a cartridge is used, some of that liquid will enter the hand unit. It is possible that this liquid will interfere with the magnet's movement and cause a “magnet stuck” or “magnet missing” message. It↓

that case, dry the inside of the hand unit with a cotton swab.

- Do not excessively pull the cables.  
For optimal sensor accuracy, do not wear a ferromagnetic (stainless steel etc.) wristwatch or ring in the hand you operate the device with. Keep any magnetized jewelery away from the device when it's in operation. Remove ferromagnetic or magnetic jewelery from the skin area to be treated. Such objects could theoretically interfere with needling accuracy by influencing the magnetic field sensor or the reciprocating magnet itself.
- Especially initially, use one size shorter needle length and one week longer interval than used with manual needling, when using the Derminator. Pushing less hard will make the needles penetrate less. Initially, needle less long than the Timer function indicates.
- Only use the highest repetition rate and/or longer needle lengths when you have experience with the lower repetition rates/shorter needle lengths already, and only after you have done a test patch with the higher repetition rate/needle length. The Derminator's needles penetrate deeper than those of a dermaroller of equivalent needle length, and it makes many more stamps per minute than you can make with a dermastamp. Keep the device moving constantly and evenly over the skin when using the device. Do not needle too long over the same skin patch if you have not seen how the skin reacts to intensive needling yet.
- Do not use needle cartridges not made by us. Even though they may fit, they will be a little different in terms of plunger length, meaning that at the very best, the needling depth will be incorrect. And if the spring tension is not nearly the same as with our cartridges, the device will not work properly at all but will have a too long duty cycle (resulting in microtearing) for example, or a too slow "Fast" frequency. The only 3rd-party cartridges we found that fit that have an actual spring and not a weak plastic membrane "spring" had bent needle tips so we strongly advise against any other cartridges but ours. We know it sounds suspicious (like printer manufacturers making most of their money by selling overpriced ink) but please trust us on this. It took us a very long time to find a manufacturer that could product high quality needle cartridges for a low price. We make nearly no profit on our needle cartridges.



## HOW TO MOUNT THE NEEDLE CARTRIDGES

The needle cartridges have a bajonet fitting. This means that you have to turn them while pushing lightly until their slots “fall” over the notches on the tip of the hand unit. Then, especially with the single needle cartridge, you have to push the cartridge firmly down and while pushing, turn it a quarter turn clockwise. With some single needle cartridges it is necessary to push very hard down, otherwise it is impossible to turn them 90 degrees and then they will slowly loosen, meaning they won’t needle at the correct depth or the cartridge will fly off and the magnet will shoot out.



## CORRECT DERMINATOR NEEDLING TECHNIQUE

When needling with the 9-needle cartridge, the hand unit should be held at a 90 degree angle with the skin, otherwise not all needles will penetrate to their full length.

Do not hover or brush slightly over the skin but apply moderate, constant pressure at all times. This way, you can be assured that the needles penetrate the full length and that the machine is able to regulate needling depth correctly.

Always keep the device moving in a moderate circular motion, do overlapping spirals with a couple cm (1 inch) diameter, with a circling speed depending on the prick density you want to achieve. Always keep the device moving at least slightly, such as not to prick the exact same channels multiple times. **Do not move the device in straight lines, otherwise needling density will not be uniform** but “stripey”. The linear movement technique shown for those weak Chinese “buzzers” is **wrong**, just as we explained why the star pattern is wrong with manual dermaneedling. So the proper way to move over the skin is a constant circling motion with small circles, moving the hand up and down, back and forth, sideways etc. while making small circles with the hand unit. Keep circling and try to cover the entire patch equally at least one full time, but twice is better. Use the timer function and do a “dry run”, a practice run without actual needling in case of doubt.

When needling with the single needle cartridge, no special movement technique is required, but make sure you always keep moving the device.



## TIMER MODE – NO MORE GUESSWORK, NO MORE MATHS!

One of the main problems with manual dermaneedling is to figure out how many times to roll over the skin for optimum treatment. This involves complex maths because it depends on how wide the roller head is, how many needles are in the roller, the circumference of the roller head and of course the size of the skin area. With the Derminator, you only need to tell it the size of the skin area and the machine will simply switch off when you've treated the skin optimally. As long as you keep moving the device over the to be treated skin patch, the device will take care of the rest. You can even change pulsing frequency meanwhile. The Derminator knows how many pricks need to be made on the skin and when the skin patch has that number of pricks, it stops. That's all there is to it. And when you want to be conservative, you just stop sooner.

This “automatic mode” is done via the “Timer” function.

Timer mode is entered by pressing the right, blue “Depth” button marked [OK] when the display shows “Timer”. The device then asks whether to use inches or cm:

**Use in<sup>2</sup> or cm<sup>2</sup>?**  
[in<sup>2</sup>] [cm<sup>2</sup>]

After having selected the appropriate metric (by pressing the corresponding button), the skin width and length is entered by pressing the corresponding buttons as many times as necessary. The left button increases the Length or Width.

**Length skin area**  
[1] [OK]

Pressing the left button increases the value. Pressing the right button accept the entered value, and the next screen appears:

**Width skin area?**  
[1] [OK]

When inches are selected, the max. size that can be entered is 16 inches. When cm are selected, this value is 40. When the maximum value is exceeded, the value cycles back to 1. Be careful to select the proper metric because if you select inches when you mean cm and enter values in cm, treatment time will be too long!

Then you can cancel the timer function or turn it on:

**Turn on timer?**  
**[Cancel] [OK]**

When you turn it on, a time in minutes and seconds appears in the lower left corner like this:

**Slow ▶0.00 mm**  
**905:02 .....**

This means that when you needle the skin area on the “Slow” setting with the selected 9-needle cartridge, needling will take 5 minutes and 2 seconds. Needling time will shorten very considerably on faster settings, and the device automatically knows that and will turn itself off as soon as the optimal number of pricks have been made. The device will stop needling and show “ENDED”.

When the timer has been set by selecting OK to the final value, you can start needling. The machine will stop automatically when the needle density has been achieved. Of course you'll have to actually needle the skin all that time and not take relatively long breaks, otherwise you'll get a lesser prick density.

It is not necessary that the actual patch of skin to be treated has a rectangular shape. All that's required is to know the approximate area. Let's say you're going to treat a circular patch of skin with a diameter of 10 cm. How to set the timer? The area of skin according to the formula  $\frac{1}{2} \pi d^2$  equals  $0.5 * 10 * 3.14 * 3.14$ , or 49 cm<sup>2</sup>. Just use a width of 10 and a length of 5, or vice versa. Or you can just estimate the area. Say you guess that an area is about 60 square inches. Then you enter timer mode, select inches and enter 6 for length and 10 for width.



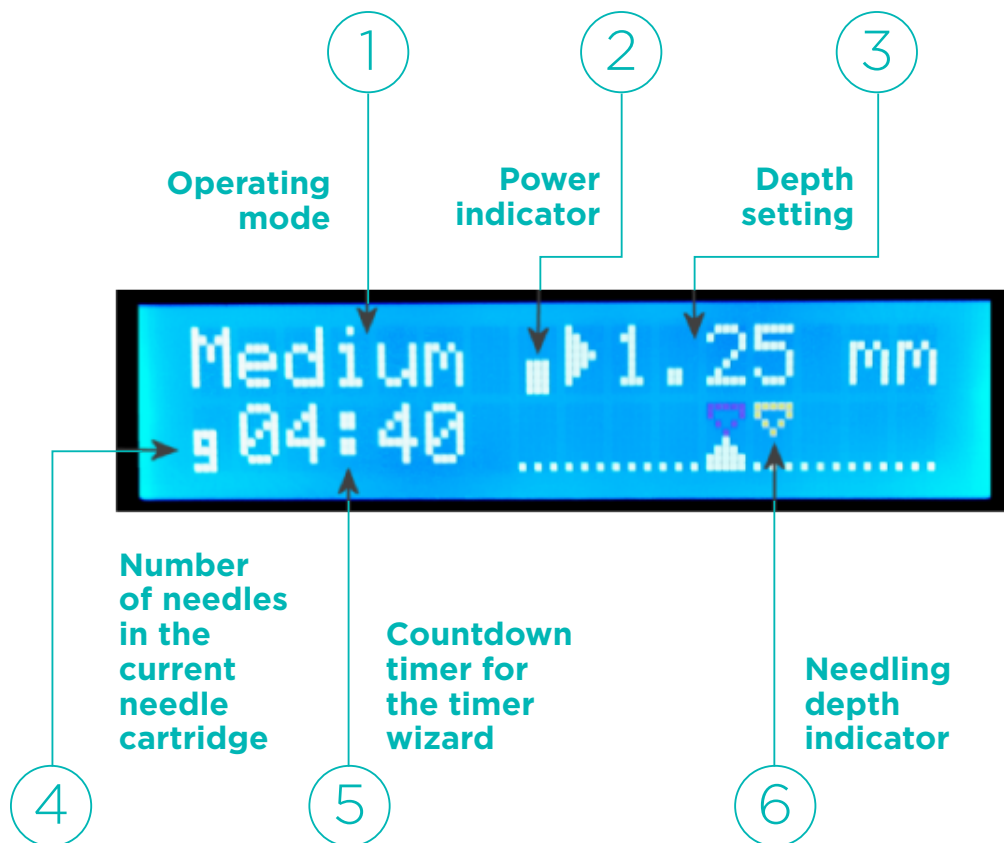
## HOW OFTEN TO TREAT AND WHAT PRODUCTS TO USE

How often to treat and what products to use is explained here:

<http://dermaroller.owndoc.com/dermaroller-instructions.pdf>



## THE DISPLAY



## 1 **Operating mode**

Can be “Slow”, “Medium”, “Fast” or “Timer”, where you can specify a skin area size and the machine calculates how much time should that area be needled with the current speed setting. When you change the needling speed, the remaining time changes as well.

## 2 **Power indicator**

Shows how hard the machine needs to push the needles to reach the set needling depth. Good indicator of how thick the skin or scar tissue is.

## 3 **Depth setting**

From 0 to 2.25 mm in steps of 0.25 mm.

## 4 **Number of needles in the current needle cartridge**

1 or 9. Important to verify that the timer mode's calculations are using the correct needle cartridge, and also to calibrate the sensor properly to the cartridge geometry.

## 5 **Countdown timer for the timer wizard**

This is a very useful feature. The device allows you to specify the area in  $\text{inch}^2$  or  $\text{cm}^2$  of a skin patch by specifying width and length, and it then calculates, using 250 pricks/ $\text{cm}^2$  or 1500 pricks/ $\text{in}^2$ , how long you should needle that patch in order to achieve that prick density. The device will stop when the timer has reached zero. All the user has to do is move the device with circular motions equally over the entire patch a few times during that time period.

## 6 **Needling depth indicator**

The bottom triangle indicates the set depth in increments of 0.25 mm. The top triangle shows the actual needling depth, or, more accurately, how far the needles are penetrating out of the cartridge. This indicator serves as a verification that the device is working properly and that the correct needle depth is indeed attained. It also reminds the user to maintain proper pressure on the skin, because when you lift the device too much from the skin, the depth indicator will briefly show a deeper depth.





## GENERAL OPERATION

When the device is plugged in and switched on, its LCD display shows either “Timer” or the speed setting Slow/Medium/Fast. The top right shows the penetration depth in increments of 0.25 mm.

The punching speed is set with the left gray button marked “speed”. It cycles the speed from “Timer” (this position can be used as a simple “off”) to “Slow” (3 Hz) to “Medium” (5 Hz) to “Fast” (25 Hz) and then back to “Timer”.

The blue button on the right cycles through the needling depth from 0 mm (“off” position) to 0.25, 0.50, 0.75, 1.00, 1.25, 1.50, 1.75, 2 mm and 2.25 and then back to 0 mm.

We recommend to be conservative with both speed, needle length and treatment interval until you have gained sufficient experience with Derminator skin needling. Do a test patch first and wait a few days. It is impossible to give specific speed settings/needle length/moving speed/prick density advice - you have to use our dermaneedling guidelines as a rule of thumb and calculate Derminator needle length and prick density from there.

The machine is louder than competing machines because in order to generate the accelerating forces required to avoid microtearing, a powerful motor is required. But our customers have said that the noise level is still very tolerable and acceptable.

The single-needle cartridge needs quite some force to mount on the machine’s bajonet fitting. Ensure your hands are dry in order to avoid slippage. If the cartridge can’t be pushed fully down onto the device, do not use force by hammering or pushing it onto a table but email [martina@owndoc.com](mailto:martina@owndoc.com) with a photo and she will send you a replacement cartridge.



## MANUALLY CALCULATING HOW LONG TO TREAT AN AREA OF SKIN

With the Derminator, there is no more need to guess how long to treat skin optimally. The machine calculates this itself, using the “Timer” function. However, if you insist on doing the math yourself, below is explained how the “Timer” function works:

The device does approx. 25 punches/second on the “Fast” setting. 1500 pricks in<sup>2</sup> (250 pricks/cm<sup>2</sup>) is the goal. With a 9-needle cartridge,  $25 \times 9 = 225$  pricks/second are made. This means that it takes slightly more than a second to treat 1 cm<sup>2</sup> and nearly 7 seconds to treat 1 in<sup>2</sup>. On the medium setting, it takes five times longer.

So in order to know how to treat an area of skin, all that's required is to know its approximate size, the needling frequency and how many needles are in the cartridge. Out of the simple equation described above comes the correct treatment time for that patch. How exactly you move the device over the skin during that time and how many times the skin is covered by the device is up to you, but it is of course important is that the entire area is more or less equally covered, resulting in a uniform redness.

When in doubt, use the “Timer” function and enter length and width of the skin area. Select inches or cm first. The machine will then turn off automatically when you should stop needling that skin area.



## DERMINATOR FAQ

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**Q :** *Can you recommend a lubricant to be used on the skin while using the machine, to facilitate gliding?*

**A :** Copper peptide - Hyaluronic acid serum from our store. This may cause stinging though - we have not yet collected sufficient data.

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**Q :** *"If I start with 0.5 mm when can I do the next session? For the 0.5 dermaroller the interval can be 3 days, is it the same for the Derminator?"*

**A :** There is no difference whatsoever between Derminator needles and dermaroller needles or dermastamp needles or single needles. That means that our ordinary interval guidelines apply. With one caveat: Be initially conservative with the interval. If you have no experience with the Derminator yet, use a longer interval and shorter needles as you would choose with another dermaneedling instrument. Because you may not have pushed the needles 100% in, with manual needling. And if you use the Derminator correctly, its needles will penetrate 100%. Many people reported that with the Derminator, they need much longer recovery times. This simply is because with manual needling instruments it takes a lot of constant pressure to needle as deep as the instrument can achieve. Many people do not press hard enough, because this is really hard and requires a lot of force. With the Derminator, nearly no pressure is required, so people suddenly needle at the proper (deeper) depth.



## DERMINATOR FAQ

**Q :** *“The needling depth indicator jumps all over the place, is my unit defective?”*

**A :** When “needling air”, it is normal to have the needling depth indicator move around wildly. You’ll notice that the “jumping” gets worse, the looser you hold the device. The combination of shaking inside the hand (not being pressed against the skin) plus not having skin to push against causes wild variations in “virtual needling depth” that have no consequences, because you’re not needling any skin. Exactly because needling depth regulation is so quick and accurate, the machine, when shaking in a loose grip when “needling air” will suffer from recoil and constantly thinks it needs to needle a fraction of a mm deeper or shallower, all the while it is “shaking around” a multitude of that distance. And because needling air takes very little force, the slightest force adjustments cause relatively large depth changes. Even gravity acting on the reciprocating magnet will have an influence on how much force is required. You will notice that when actually needling skin with constant, equal pressure, needling depth is constant as well, depending how constant you maintain pressure.

Remember that the needling depth indicator does not show actual needling depth, but how much the needles penetrate from the edge of the cartridge. This means that if you vary the pressure on the skin slightly all the time (this is practically unavoidable), the needles meet more or less resistance all the time and the machine will immediately adapt to maintain correct needling depth. This will result in a “wrong” “needling depth” (needle protrusion) being displayed but a correct actual penetration depth being achieved.

**Q :** *There is some black stuff on the tip of the hand unit, is that dirt or something?*

**A :** It’s rubber from the coil winding machine’s rubber cones that grip the coil body.



## DERMINATOR FAQ

**Q :** *“I want to take my unit to a country with another voltage, what to do?”*

**A :** A: The device works on any voltage from 100 V to 260 V so all that's required is a simple adapter. This means that for ex. New Zealand customers (for which we offer no plug that fits) can purchase a machine with any plug type and just replace the plug or use an adapter. It also means that when we're sold out of UK-plug machines, a UK customer can buy a US-plug machine and use an adapter or replace the plug, and vice versa for US customers, etc.

**Q :** *“How come the power indicator shows more power used on slower speeds?”*

**A :** A: Strange, isn't it? This is completely normal. The reason is that the “Fast” speed is very special. The device determines how fast it can go based on needling depth and skin resistance and usually operates on its oscillating frequency. In that mode, energy is “recycled” due to the oscillation. The reciprocating magnet bounces off a silicone damper plug at exactly the right time on “Fast”.

**Q :** *“How come the speed on “Fast” changes sometimes, when needling?”*

**A :** A: See above. “Fast” is not a fixed frequency. The device needles as quick as it can on that setting, which depends on needling depth and skin resilience.



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**Q :** *Something rattles when I shake the main unit, is that dangerous?*

**A :** A: When it rattles only a tiny bit, that's a ferrite bead around a diode in the power supply. All our units do that, it's normal. In extremely rare cases, it is possible that the ferrite top of a small coil in the power supply broke off. We heard of one such case. We tested the power supply without the top of that coil and it performs within specifications. Ferrite does not conduct electricity, so it's completely harmless to have it rolling around over any electronics. If it annoys you, you can remove it though. Just open the case by moving the sides of the top part sideways and press down on the power cord where it enters the unit. Snap it back into place the same way, but make sure that you first push the pull stop of the hand unit firmly down and route the mains cord so that the case has room to fully close again.

From Wikipedia: [http://en.wikipedia.org/wiki/Ferrite\\_core](http://en.wikipedia.org/wiki/Ferrite_core) (emphasis ours):  
“Ferrites are ceramic compounds of the transition metals with oxygen, which are ferrimagnetic but nonconductive “.

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**Q :** *Why doesn't the device come in a fancy presentation box?*

**A :** A: It would make the machine a whopping 25% more expensive (\$250 instead of \$199). Cheap Chinese devices are sold by the tens of thousands and because they are tiny, their mass-produced flimsy cases are cheap. And massively over-priced devices for clinics carry a \$1000 profit and they can afford to add an impressive-looking box because the more expensive you try to sell something for, the more fancy it should look, that's human psychology. We are selling our machines with such a low profit margin that adding a thick, colored, printed cardboard case with thick plastic inlay would mean a very substantial cost increase. Not just due to the added cost of the case but also involving more labor for packaging and a higher cost of shipping.

Our goal is to bring professional, safe, advanced digital dermaneedling to the masses and worked hard and took a risk to purchase components in massive bulk to barely achieve a price of \$199. We may later develop a “fancy box” and offer the option to buy a Derminator with it - but it will cost a lot more.

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## ERROR MESSAGES

### **“Magnet inserted upside-down!”**

This error can appear under one of the following conditions:



The reciprocating magnet has been inserted wrong-way-round in the motor. Reverse it.



The machine was turned off and turned on with an interval of just a few seconds. This can “confuse” the machine. Solution: Wait until the display has become dim after turning the machine off before turning it back on again. This takes about six seconds.

### **“Magnet missing from hand unit!” or “Magnet stuck or missing - check!”**



The most common cause of this error is that the reciprocating magnet has been ejected from the hand unit due to user error. When the device is operated without needle cartridge present, the magnet will fly meters through the air and can disappear behind furniture, in thick carpet or get stuck on a metal surface where you would least expect it to be. In rare cases, customs officers turn on the device and the magnet is lost, or somewhere in the packaging. We’ve added instructions for customs officers to pay attention to this.

Check whether the magnet is still there by slamming the hand unit onto your hand with the open end towards the floor or a table. The magnet, normally held in place by another magnet, should come out. If it does not, stick a small screwdriver into the opening and see whether you can fish it out like that. If neither, then the magnet really is gone. If you can’t find the magnet, we sell replacements. Do not replace it with a similar-looking magnet - this Neodymium magnet must have a 80 degree temperature rating, be exactly 20 mm long and 6 mm in diameter and have a strength of exactly N52, not N48 as is commonly sold.

Another reason this may occur is when needle cartridges are re-used and they have remaining liquid inside of them, and some of it has leaked into the hand unit’s internals. This can cause the magnet to be a little bit stuck to the cylinder wall and the machine is sensitive enough to detect this and it will refuse to operate, to be 100% certain that this will not affect accuracy. The problem is solved by using a cotton swab to dry the internals (all the way until the end, where there is a silicone plug that has to be dry as well), after removing the magnet and drying it as well. Remove the magnet by slamming the hand unit hard onto your hand. Then try again with a new cartridge.





## TROUBLESHOOTING

### **Device seems to needle too shallow but depth indicator seems to be OK**

This is caused by the needle cartridge not being put on correctly. This can sometimes happen when not paying attention, especially with the single needle cartridges, since they are harder to mount and need strong downward pressure, while twisting about a quarter turn clockwise.

### **Hand unit does not needle properly but makes buzzing noise or faint clicking noises.**

This is easily solved by giving the hand unit a strong shake so that you feel and hear the magnet coming loose and bounce against the needle cartridge's plunger. You can also slam the hand unit against your hand until the magnet flies into your hand. The reason for this small occasional problem is due to the structure of the back-stop plug behind the magnet. This plug has a solid core but the rest is made of a cell structure. This was a design requirement in order for the machine to work well at high speed. These cells can act as tiny suction cups, sticking to the smooth magnet surface, keeping the magnet stuck. This especially happens when some blood plasma has entered the hand unit, or after cleaning and there still is some moisture in the hand unit. If you're unable to shake hard enough to shake the magnet loose (it is held in place by another, opposing magnet) then you remove the cartridge and "fish" the magnet out with a small screwdriver or other long, narrow steel tool. Just put it back (clean it if there is dried blood on it) and the issue is solved.



## PLEASE DO NOT ASK US TREATMENT QUESTIONS

We of course do answer you when you think that the device is malfunctioning! In that case, email [martina@owndoc.com](mailto:martina@owndoc.com).

Devices that needle the skin deeper than 0.25 mm are classified as medical devices in many countries and any treatment deeper than 0.25 mm is hence classified as

a medical procedure. The providing of any information about treatment deeper than 0.25 mm is hence “giving medical advice”. We do not have a licensed dermatologist on our staff. We provide ample information to support the products that we provide, including the Derminator®. When you ask us about the “safety of using the single needle at 2.25 mm on my nasolabial folds” or “why do I get pinpoint bleeding with the Derminator but not with manual dermaneedling with the same length” or any other question about treatment beyond 0.25 mm, answering it would be a criminal offense in the entire Western world: The offense of practicing medicine without a license. Since we do not employ medical doctors, we do not have medical insurance in case our advice would be alleged to have resulted in problems. The only advice we can give is in our general advice on dermaneedling practices and in this manual. Both documents should be read and understood completely before using the device.



## WARRANTY POLICY

**Private individuals:** 18 months warranty that the device is free from defects in materials and workmanship. We send a new machine to the customer when the customer sends us a video of their malfunctioning machine. No need to send the old machine back to us.

**Professional use:** 12 months warranty that the device is free from defects in materials and workmanship. We refund or replace at our discretion. We send a new machine to the customer when the customer sends us a video of their malfunctioning machine. No need to send the old machine back to us.



### Cost of repair outside warranty period

After the warranty has expired, we will repair the device at cost (without profit). A detailed specification of cost of return shipping, materials and time spent on the repair will be provided. A new warranty period will then commence: 18 months for private use and 6 months for professional use.



# THE DERMINATOR SPECIFICATIONS

- **Operating voltage**  
100 to 265 Volts, 50 to 60 Hz for all plug models.
- **Power used**  
< 10 W at the highest setting ("Fast" / 2.25 mm).
- **Needling depth range**  
0.25 to 2.25 mm in increments of 0.25 mm, digitally set.
- **Needle diameter**  
All needle cartridges have needles with a diameter of 0.15 mm. (38 SWG, 34<sup>1</sup>/<sub>2</sub> AWG).
- **Needling frequencies**  
3 ("Slow"), 5 ("Medium") and 25 Hz ("Fast"). Max. pricks/minute: 13500.
- **Available needle cartridges**  
1 and 9 needles. Only our brand cartridges can be used.
- **Speed of treatment with optimum prick density (250 / cm<sup>2</sup>) for best collagen/elastin regeneration results**  
54 cm<sup>2</sup> / min.  
9 in<sup>2</sup> / min.  
A cheek takes about 1 minute to treat. A typical stomach area of 500 cm<sup>2</sup> takes 10 minutes.
- **Motor design/maintenance**  
Zero-maintenance, indestructable design. The reciprocating magnet and the inside of the 100% inside-and-out waterproof motor can be accessed by removing the needle cartridge and cleaned with a cotton swab dipped in sterilizing solution. This is important for clinicians, who have a requirement for absolute cleanliness.
- **Special features**  
The user can specify skin area, the device calculates and counts down the time to move over that skin area with the selected needling frequency, even when that changes while needling.
- **Safety**  
"Safe return" needles. A back magnet pulls the reciprocating magnet up as soon as the electromagnet is powered down. The advanced, switching power supply unit has a medical safety certification (2 x MOPP (Means Of Patient Protection) between primary and secondary) and delivers a low 5.4 Volt to the hand unit.
- **Microcontroller**  
Atmel AVR, 16 MHz (16 million operations/second).
- **Needle depth sensor**  
Made by Honeywell. +/- 0.0065 mm accuracy, measured 9000 times per second.
- **Noise levels (averaged)**  
Slow: 50 dBA. Medium: 55 dBA. Fast: 60 dBA.



## COMPLIANCE STATEMENTS



### FCC

This device has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 and part 18 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**IMPORTANT:** Any changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate the device. Where shielded interface cables have been provided with the product or specified additional components or accessories elsewhere defined to be used with the installation of the product, they must be used in order to ensure compliance with FCC regulations.



## COMPLIANCE STATEMENTS

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### Canada

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations. Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

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### EU

Products with the CE marking comply with the EMC Directive (89/336/EEC) and the Low Voltage Directive (73/23/EEC) issued by the Commission of the European Community and if this product has telecommunication functionality, the R&TTE Directive (1999/5/EC).

Compliance with these directives implies conformity to the following European Norms (in parentheses are the equivalent international standards and regulations):

- EN55022 (CISPR 22) – Electromagnetic Interference
  - EN55024 (IEC61000-4-2, 3, 4, 5, 6, 8, 11) – Electromagnetic Immunity
  - EN61000-3-2 (IEC61000-3-2) – Power Line Harmonics
  - EN61000-3-3 (IEC61000-3-3) – Power Line Flicker
  - EN60950 (IEC60950) – Product Safety
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## PHOTOS









# DERMINATOR® INSTRUCTIONS

