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NC Smart



OPERATING MANUAL



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PRODUCT OVERVIEW





	ARTICLE DESIGNATION	ARTICLE DESCRIPTION
1	Controller	10200
2*	needle cartridges	"4.3 Accessories and spare parts" on page 17
3	Handpiece with connecting cable	10700
4	Handpiece cover	25500
5	Foot switch	10860
6	Power supply	10800
7	Country-specific adapter	USA: D-ADP EU: 10800 UK: 10810

* Not included with the delivery

OLADATION OF CONFORMITY

The manufacturer	MT.DERM GmbH Gustav-Krone-Str. 3 D-14167 Berlin
Hereby declares under their ow	vn responsibility that the following product:
Product:	Micropigmentation device Product name: NC Smart Article description: DD11102
Complies with the following dire	ectives:
EMC directive:	2014/30/EU
Machinery directive:	2006/42/EU
RoHS directive:	2011/65/EU
The following harmonised s	tandards have been applied:
DIN EN 60335-1:2012-10	Safety of electronic devices for domestic use and similar purposes – Part 1: General requirements
DIN EN 55014-1:2012-05	EMC requirements for household devices, electrical tools and similar electrical appliances – Part 1: Radiated interference
DIN EN 55014-2:1997 +A1:2001+A2:2008	EMC requirements for household devices, electrical tools and similar electrical appliances – Part 1: Immunity from interference
DIN EN 62233:2008-11	Procedure for measuring the electromagnetic fields from household devices and similar electrical appliances with regard to the safety of persons in electromagnetic fields
DIN EN 1037:2008-11	Safety of machinery – prevention of unexpected start-up
DIN EN ISO 14971:2013-04	Medical products - application of risk management to medial product

Marcel Tritsch, MT.DERM GmbH, CE and documentation officer

This declaration is made with the authorisation of the manufacturer by: Jörn Kluge, Berlin, 19.11.2018

(Signature of the managing director or their authorised representative)

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11 GUARANTEE

This device is a high-quality purchase.

The product is covered by the statutory 2-year warranty against malfunctions due to material failure or production defects.

We guarantee the sterility of the needle cartridge until the use-by date on the needle cartridge packaging providing that the packaging is sealed and undamaged and that the transport and storage conditions have been complied with. In the event of complaints relating to needle cartridges, please provide us with the batch number printed on the label.

The warranty does not apply to the following damage:

- Damage and consequential damage caused by improper use or failure to comply with the operating manual.
- Damage caused by the ingress of fluids or dirt into the inside of the handpiece, the controller or the power supply.





	BUTTONS AND CONNECTIONS
1	Display
2	Increase frequency button ()
3	Decrease frequency button (
4	RUN button (RUN)
5	Standby LED
6	Socket for power supply
7	Socket for handpiece
8	Socket for foot switch
9	ON/OFF button (

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English Version 1.1 - 01/2019 Translation of the original operating manual. The original operating manual was generated in German.

FAULT/ MESSAGE	FAULT	CAUSE	RECTIFICATION
The controller switches off automat- ically during operation.	The power sup- ply is disconnec- ted or there is a fault in the con- troller.	The power supply is not correctly connected.	 Check the connection of the power supply to the controller (see chapter "5.2 Connecting the power supply" on page 20). Check the power supply of the work station.
The handpiece switches off during op-	HP	Handpiece not con- nected	 Connect the handpiece
eration. A fault code HP, F1, F2 is dis-	F1	Overload	Change handpiece
played.		Handpiece defective	 Change handpiece
		Incorrect handpiece	 Select the correct hand- piece (see "Product over- vicw", on page 2).
	F2	System error	 Disconnect power supply from the controller, put the device back into operation after 30 s.

In order to rectify further functional disruptions:

- ► Firstly, disconnect all components, such as the handpiece and the power supply, from the controller.
- ▶ Check all connections and reconnect the components.
- Check the function of the device again.
- If malfunctions persist or if you have any questions or complaints, please contact your specialist retailer.

- ▶ Transport the device and its accessories only in the original packaging.
- ► Store the device and its accessories only in the following conditions:

Ambient temperature	-10°C to +40°C	
Relative humidity	10% to 90%	
Air pressure	540 hPa to 1070 hPa	

8.2 Needle cartridge

► Always store the needle cartridges in the following conditions:

Ambient temperature	+15°C to +25°C
Relative humidity	30% to 65%

9 DISPOSAL

- Dispose the products showing this symbol in compliance with applicable regulations on the disposal of electronic waste. If necessary, ask your specialist retailer or competent authorities about the applicable regulations.
- ▶ Place a container at your workplace for the proper disposal of contaminated parts.
- Dispose used or faulty needle cartridges as well as needle cartridges whose packaging is damaged in a suitable sharps container. Follow the local guidelines for the disposal of the sharps containers

10 QUESTIONS AND PROBLEMS

The following functional disruptions or fault messages could occur:

FAULT/ MESSAGE	FAULT	CAUSE	RECTIFICATION
The controller will not switch to standby mode.	The power sup- ply is disconnec- ted.	The power supply is not correctly connec- ted.	 Check the connection of the power supply to the controller (see chapter "5.2 Connecting the power supply" on page 20). Check the power supply of the work station.

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1 ABOUT THIS MANUAL

This operating manual applies to the NC Smart (DD11102) and its accessories. It contains important information about setting up, operating and looking after the device safely and as intended for use.

This operating manual is restricted to all information essential for the safe use of the device. For further information, required for the safe use of the device and its accessories, please also read the following additional documentation:

- Safety datasheets for disinfectants and cleaning materials
- · Safety at the workplace requirements and statutory provisions for micropigmentation

1.1 Presentation of warning symbols

Warning symbols highlight the danger to persons or objects and are set up as follows:

	LWORD
Type of hazard Consequences ▶ Prevention	
ELEMENT	MEANING
	Indicates risk of injury
Signal word	Indicates the seriousness of the hazard (see following table)
Type of hazard	the type and source of the hazard
Consequences	describes possible consequences if ignored
Prevention	indicates how the hazard can be prevented

 Most inorganic salts and their aqueous solutions (e.g. sodium chloride, calcium chloride, magnesium sulphate)

The device surfaces are **not resistant** to:

- Strong acids (e.g. hydrochloric acid \geq 20%, sulphuric acid \geq 50%, nitric acid \geq 15%)
- Oxidising acids (e.g. peracetic acids)
- Lyes (e.g. caustic soda, ammonia and all compounds with pH > 7)
- Aromatic/halogenated hydrocarbons (e.g. phenol, chloroform)
- Acetone and petrol

7.3 Disinfecting surfaces

Before and after each use:

► Disinfect the handpiece cable, the handpiece and the handpiece tray as described in chapter "5.5 Cleaning and disinfecting the equipment" on page 23.

7.4 Cleaning surfaces

External soiling:

► Wipe the device and its accessories with a soft cloth moistened in the cleaning product or disinfectant.

8 TRANSPORT AND STORAGE CONDITIONS

8.1 Controller, handpiece with handpiece cable, power supply and foot switch

ATTENTION

Damage due to dropping

If the controller or the handpiece is dropped it can be damaged.

- Always set the controller down on the rubber feet on a flat and stable surface so that it cannot fall.
- ▶ Place the handpiece back in the handpiece tray after each use so that it is safe.
- If the controller or the handpiece is dropped, carry out a visual check of the components.
- Hand the controller or the handpiece in to an authorised dealer if the components have visible damage or if they no longer function normally.

ATTENTION

Damage due to fluids

If cleaning products or disinfectant gets inside the handpiece, the controller or the power supply, this may cause a short-circuit. In addition, this may also corrode the electrical and mechanical components.

- Never immerse the handpiece, the controller or the power supply in cleaning product or disinfectant.
- Never clean the handpiece, the controller or the power supply in autoclaves or in an ultrasonic cleaning bath.
- Consider material compatibilities when selecting cleaning materials and disinfectants (see chapter "7.2 Material compatibilities" on page 30).

7.1 Inspection

Inspections may only be carried out by authorised dealers.

It is recommended that the device is handed over to a specialist retailer for inspection in accordance with manufacturers instructions, at regular 24 month intervals.

7.2 Material compatibilities

- ► To clean the device, use a mild soap detergent authorised in your country, or 50% diluted 1-propanol solution.
- ► Use the following disinfectants to disinfect the device:

MANUFACTURER	PRODUCT	WORKING-IN TIME
Antiseptica	Big Spray "new"	1 to 5 min
Bode Chemie	Bacillol	30 s to 1 min
Ecolab	Incidin Foam	1 to 2 min
Schülke & Mayr	Mikrozid Liquid	1 to 2 min

Based on the following material compatibilities, you can assess which cleaning products and disinfectants are suitable.

The device surfaces are **resistant** to:

- Mild acids (e.g. boric acid \leq 10%, acetic acid \leq 10%, citric acid \leq 10%)
- Aliphatic hydrocarbons (e.g. pentane, hexane)
- Ethanol

SIGNAL WORD	MEANING
Danger	Indicates a danger which will certainly result in severe or fatal injuries if the danger is not avoided
Warning	Indicates a danger which could result in severe or fatal injuries if the danger is not avoided
Caution	Indicates a danger which may cause slight to medium-severe injuries if the danger is not avoided
Attention	Indicates a potential risk of damage to the environment, property or the equipment if the danger is not avoided

Symbols used in this operating manual

SYMBOL	MEANING	
•	Action required	
•	Bullet points	
-	Sub-bullet points	

2 IMPORTANT SAFETY INSTRUCTIONS



2.1 General safety instructions

- ▶ Read this operating manual carefully and in full.
- ► Keep this operating manual in a location which is accessible to all those using, cleaning, disinfecting, storing or transporting the device.
- ► Always include this operating manual when transferring ownership of the device.
- ► Follow the safety regulations for the micropigmentation in your country. Keep your workplace hygienically clean and ensure that you have adequate lighting.
- > Only use the device, its accessories and all handpiece cables when in perfect condition.
- Use only original needle cartridges, accessories and spare parts from NOUVEAU CONTOUR.

2.2 Product-specific safety instructions

- ▶ Never modify the device, the needle cartridges or other accessories.
- ► Children must be supervised and prevented from playing with the device.
- Prevent fluids from getting inside the device, the handpiece, the foot switch or the power supply.

- Avoid sources of interference by ensuring that portable or mobile radio devices are not operated in the vicinity of the device.
- ▶ When being handled, protect the handpiece and the handpiece cable from contamination by bodily fluids or substances contaminated with bodily fluids by means of a handpiece cover (see chapter "5.6 Inserting or replacing the needle cartridge" on page 24).
- ► If the device is not being used, disconnect it from the power supply and place the handpiece in the handpiece tray so that it cannot roll away or fall.
- Observe the technical data provided in this operating manual and comply with the operating, transport and storage conditions (see chapter "8 Transport and storage conditions" on page 31).
- Send the device to a specialist retailer for inspection if there are signs of damage, if it does not function as normal or if liquids enter the device or handpiece.
- It is recommended that the device is sent to a specialist retailer for inspection at regular 24 month intervals. In doing so, refer to chapter "7.1 Inspection" on page 30.

2.3 Important health and safety precautions

Please observe the following instructions in order to prevent contaminations or infectious diseases being transmitted to the customers or users during treatment:

- ► Follow all of the steps for disinfecting the equipment before treatment (see chapter "5.5 Cleaning and disinfecting the equipment" on page 23).
- Use disposable gloves made from nitrile or latex during the treatment and disinfect these before use. Observe the applicable directives for your country when selecting suitable disinfectants.
- Clean the respective area of the customer's skin with a mild cleaning agent and disinfectant before treatment. Observe the applicable directives for your country when selecting suitable disinfectants.
- ► For the treatment, use only micropigmentation inks that have been tested and approved for insertion into human skin. Observe the applicable directives for your country when selecting these. If micropigmentation inks that are not intended for permanent make-up treatment or whose sterility is not guaranteed, are introduced into the skin, this can result in infections or possible side effects.
- Use only new, sterile packaged needle cartridges for each customer. Before treatment ensure that the packaging is undamaged and the expiry date has not passed. Note the batch number of the needle cartridge used in the corresponding customer file in order to be able to pass this on to the manufacturer in the event of any problems.
- needle cartridges are sterile disposable products (consumables) and are only ever permitted to be used once.

6.4 Switching the handpiece on and off

CAUTION

Danger of injury when using the handpiece

If an unsecured handpiece is switched on, it may move uncontrollably through vibrations and cause injury.

Hold the handpiece firmly before switching it on or place it in the handpiece tray.

To switch on the handpiece:

- ► Ensure that the power supply is established (see chapter "5.2 Connecting the power supply" on page 20).
- ► Ensure that the controller is switched on (see chapter "6.1 Switching the control unit to operating mode or standby mode" on page 27)
- ► Ensure that the handpiece is correctly connected (see chapter "5.4 Connecting the handpiece" on page 22).
- Press the RUN (RUN) button on the controller.
 Ongoing handpiece operation is indicated by brighter illumination of the RUN button.

If the connected handpiece does not start:

▶ Observe the chapter "10 Questions and problems" on page 32.

To switch off the handpiece:

▶ Press the **RUN** button again (RUN).

7 CLEANING AND MAINTENANCE

ATTENTION

Danger of short-circuit

There is a risk of damage to electronics if device components are dismantled and cleaned whilst still electrically connected.

 Disconnect the controller from the power supply before any cleaning or maintenance tasks. For improved visual checking it is recommended that the needle protrusion depth is adjusted with the handpiece switched on (see chapter "6.4 Switching the handpiece on and off" on page 29).

- Switch the controller to operating mode.
- Switch the handpiece on.
- ► Set the needle protrusion depth by turning the moving part of the handpiece (1). A complete revolution has the effect of changing the needle protrusion depth by ± 1.0 mm, depending on the direction of rotation.



Fig. 11: Setting the needle protrusion depth

6.3 Setting the penetration frequency



Risk of injury due to high puncture frequency

If the puncture frequency is too high, the skin can be cut open.

 Select the penetration frequency on the basis of the skin characteristics and suitable for the working speed.

The preset puncture frequency amounts to 100 punctures per second. The controller automatically resets to this preset every time it is switched on. The device has a puncture frequency range of 70-150 punctures per second and can be adjusted in 9 steps.

The number of penetrations per second shown on the display may deviate by ± 10 % in stationary operation from the value that actually occurs at the handpiece.

To set a suitable penetration frequency:

- ► Ensure that the controller is switched on (see chapter "6.1 Switching the control unit to operating mode or standby mode" on page 27)
- ► Press the Increase frequency button () to increase the penetration frequency.
- ▶ Press the Decrease frequency button () to decrease the penetration frequency.

- Dispose of used or faulty needle cartridges as well as needle cartridges whose packaging is damaged in a non-penetrable sharps container in accordance with the regulations applicable in your country.
- Before the treatment, switch the handpiece off and check that the needles have been completely withdrawn into the needle cartridge. If this is not the case, dispose of the needle cartridge immediately.
- Ensure that needle cartridges never come into contact with contaminated items, such as clothing for example. Contaminated needle cartridges must not be used but rather disposed of immediately.
- ► During use, the handpiece, the handpiece cable and the device including the integrated handpiece tray must be completely covered with protective film. The handpiece must be covered with the protective film sleeve before attaching the needle cartridge (see chapter "5.7 Pulling the handpiece cover on" on page 25).
- Check at regular intervals whether the handpiece is visibly contaminated by bodily fluids running back or by the pigment ink being used. In this case, observe the contents of chapters "7.4 Cleaning surfaces" on page 31 and "7.2 Material compatibilities" on page 30, as well as the chapter "2.2 Product-specific safety instructions" on page 7.
- ► If a local anaesthetic is being used, this should be thoroughly removed before the treatment.
- Always hold the handpiece firmly before switching it on or place it in the handpiece tray. If an unsecured handpiece is switched on, it may move uncontrollably through vibrations and prick or cause injury (see chapter "6.4 Switching the handpiece on and off" on page 29).

Injuries through contaminated needles or needle cartridges can result in the transmission of diseases (see chapter "5.6 Inserting or replacing the needle cartridge" on page 24). In the event of being injured by a contaminated needle, seek immediate medical attention from a physician!

In order to prevent the intensity of the treatment exceeding the extent desired:

- ► Avoid risk of injury due to the needles protruding too deeply (see chapter "6.2 Setting the needle protrusion depth" on page 27).
- Avoid risk of injury due to the penetration frequency being too high (see chapter "6.3 Setting the penetration frequency" on page 28).

Please be sure to inform your customer to avoid contact with recently treated skin. Recently treated areas of skin should also be protected from

- Contamination and
- UV and solar radiation

Additional irritants such as

- Visits to swimming pools or saunas
- · Abrasive or chemical peelings
- · Hair removal at the treated areas or
- Self-tanning products

should be avoided by the customer in the first two to three days after the treatment.

2.4 Contraindications and side effects

The following contraindications and side effects are the results of a thorough analysis of the professional clinical literature concerning micropigmentation. If the person responsible for the treatment should have the smallest doubt that the safety of the customer being treated cannot be guaranteed, for example due to secondary illnesses or conditions, the treatment should be withheld or stopped immediately.

2.4.1 Contraindications

With the following contraindications, **no** permanent make-up treatment should be undertaken:

- Haemophilia or other blood-clotting disorders
- Currently taking blood thinning medication (e.g. Warfarin, Heparin, aspirin, acetylsalicylic acid)
- Uncontrolled diabetes mellitus
- · Any form of active acne in the area of the treatment
- Dermatosis (e.g. Skin tumours, keloids or extreme tendency for keloid formation, solar keratosis, warts and/or moles) in the area of the treatment
- Open wounds and/or eczema and/or rashes in the area of the treatment
- · Scars in the treatment area
- Systemic infections and infectious diseases (e.g. Hepatitis type A, B, C, D, E or F; HIV infection) or acute local skin infections (e.g. herpes, rosacea)
- During chemotherapy, radiotherapy or high-dosage corticosteroid therapy (recommendation: from four weeks before the start until four weeks after the end of the therapy)
- Up to twelve months after a plastic surgery operation in the area to be treated
- Up to six months after filler injections in the area to be treated
- Allergy to topical anaesthetics (local anaesthetic)
- Under the influence of alcohol and/or drugs
- Pregnancy and lactation

The treatment of mucous membrane and eyeballs is strictly forbidden.

► If the device can no longer be operated harmlessly, take it out of service and contact an authorised dealer.

6 USE

6.1 Switching the control unit to operating mode or standby mode

To switch the controller to operating mode:

 Ensure that the power supply is established (see chapter "5.2 Connecting the power supply" on page 20).
 The LED indicator illuminates blue.

The LED indicator muminates blue.

The controller is in standby mode.

► Switch the controller on with the ON/OFF () button on the right side of the device. You will hear a brief acoustic signal (short and long beeps in succession).

All buttons are illuminated.

The preset penetration frequency (100 Hz) appears on the display. The blue LED indicator goes out.

After about 30 minutes without operation of a button, a beep sounds and the controller switches over to standby mode. The LED indicator illuminates blue.

To switch the controller back to operating mode:

▶ Press the ON/OFF button (◯).

To switch off the controller:

 Press the ON/OFF button (CD) on the right side of the device. The display lighting and button lighting switch off.

6.2 Setting the needle protrusion depth

Risk of injury due to excessive needle protrusion

A large needle protrusion depth allows a greater penetration depth. If the needle protrusion depth and the penetration depth are too great, the risk of side effects, such as haematoma, erythema or oedema, as well as their potential severity increases (see chapter "2.4.2 Side effects" on page 11).

 Select the needle protrusion depth on the basis of the skin characteristics of the client and the skin area to be treated.

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5.8 Filling needle cartridges

WARNING

Danger of infections and side effects through unapproved or contaminated micropigmentation inks

If inks that are not intended for micropigmentation or whose sterility or antiseptic characteristics are not guaranteed, are introduced into the skin, this can result in infections or possible side effects.

- ► For the treatment, use only antiseptic and sterile micropigmentation inks that have been tested and approved for insertion into human skin.
- Observe the applicable directives for your country when selecting the micropigmentation inks.
- > Observe the accompanying information for the micropigmentation inks used.
- Use suitable applicators when introducing the micropigmentation inks to the needle cartridge in order to guarantee the sterility of the substances.
- Check that the needle cartridge is firmly seated.
- Insert the desired accompanying preparation into the needle cartridge through the filling opening (1) in the needle cartridge using a suitable applicator that guarantees sterility. In doing so, note the ca. 1 ml capacity of the needle cartridge.



Fig. 10: Filling the needle cartridge

5.9 Checking equipment

- Carry out a visual check of the equipment:
 - Are there any signs of external damage (e.g. kinks in the handpiece cable, detached cap in the area of the cable connection)?
 - Are any cables disconnected?
 - Are the needle cartridge and needles aligned correctly? Are all needles fully withdrawn into the needle cartridge ?
- Switch the handpiece on and carry out an acoustic check: Are operating noises or sounds prominent?
- In the event of anomalies, refer to chapters "10 Questions and problems" on page 32 and "11 Guarantee" on page 34.

The treatment must be immediately aborted in the event of:

- Excessive perception of pain
- Fainting/dizziness

2.4.2 Side effects

In some cases, minor side effects can arise during and after the permanent make-up treatment. These side effects are listed below.

Often:

- Localised bleeding in the area of the treated skin
- · Pain and discomfort on the first day after the treatment
- Short-term inflammatory reactions, erythema and/or oedema up to six days after the treatment
- Skin irritations (e.g. itching or temperature increase), which normally die out over the first 12 to 72 hours after the treatment
- Formation of scabs, which normally recede in the first five days
- · Temporary peeling of the skin which normally subsides within eight days

Seldom:

- Formation of herpes simplex virus type I (HSV-I) blisters
- Formation of small pustules or milia as a result of inadequate cleaning of the skin prior to treatment
- Hyperpigmentation with the body's own pigments, in particular with darker skin types, but completely cleared up within a few weeks
- Inflammatory reactions, haematoma, erythema and oedema
- Retinoid reaction (from slight reddening to peeling of the skin)
- Possible heating of the pigmented area under PET and MRT radiation

As a matter of principle, recently treated skin areas should be protected from UV and solar radiation.

The following problems could also arise with the application of permanent make-up:

- Colour tone differences
- Loss of pigment
- Allergic reactions to components of the aseptic pigment colour

2.5 Required qualification (user requirements)

The device and its accessories may not be used by persons with impaired physical, sensory or mental capabilities or by children. The device and its accessories may not be used by persons with no experience or knowledge unless they are being supervised or instructed (training).

The device may only be used by persons trained in the following:

- Qualification for micropigmentation/PMU
- Basic knowledge of micropigmentation treatment (see chapter "6.3 Setting the penetration frequency" on page 28 and "6.4 Switching the handpiece on and off" on page 29)
- Knowledge of hygiene and safety regulations (see chapter "2.3 Important health and safety precautions" on page 8)
- Knowledge of risks and side effects (see chapter "2.4.1 Contraindications" on page 10 and "2.4.2 Side effects" on page 11)

2.6 Intended purpose, scope of application and proper use

2.6.1 Intended purpose

The intended purpose of the device is the minimally invasive injection of sterile or aseptic pigment colours of mineral or organic origin into the dermis by means of micropigmentation (permanent make-up).

There are no open wounds caused in the skin by this thanks to the minimally invasive puncturing of the epidermis (top skin layer) and the dermis (middle skin layer). Afterwards, the skin requires only a very short regeneration phase in which the epithelial function will be restored.

2.6.2 Scope of application

The most common applications for permanent make-up (PMU) are:

- Drawing hairs in the eyebrows
- Applying eye-liner
- Drawing fuller lips or improving the lip contours
- Applying body tattoos

2.6.3 Proper intended use

The treatment must be carried out in a dry, clean and smoke-free environment as well as under hygienic conditions. The device must be prepared, used and looked after as described in this operating manual. In particular, the applicable requirements concerning workplace design must be observed and the materials to be used must be sterile. ► Turn the needle cartridge clockwise until you can feel resistance. The needle cartridge is now firmly seated in the handpiece.



Fig. 8: Tightening the needle cartridge

- Check that the needle cartridge is firmly seated.
- To remove the needle cartridge, turn it anticlockwise and remove it from the handpiece.

5.7 Pulling the handpiece cover on

In order to protect the handpiece and the handpiece cable from contamination with bodily fluids or substances contaminated with bodily fluids during the treatment, we recommend pulling a handpiece cover with a diameter of 20-27 mm over the handpiece. This represents a cover width of approx. 30-45 mm.

In order to pull the handpiece cover on properly:

- Switch the handpiece off.
- ► Slide the handpiece cover fully over the handpiece cable and over the handpiece.
- ▶ Stick the end of the handpiece cover firmly to the moving part of the handpiece.



Fig. 9: Handpiece cover in place

Dispose the used handpiece covers in containers for proper disposal of contaminated parts, after the conclusion of each treatment.

5.6 Inserting or replacing the needle cartridge

WARNING

Danger of injury due to needles

- ▶ Use exclusively original needle cartridges, appropriate to the handpiece supplied, for the device. The safety membrane installed in these needle cartridges prevents bodily fluids entering the drive and pathogens are also unable to pass the membrane.
- Never touch the points of the needle cartridge.
- Switch the handpiece off before replacing the needle cartridge.
- Never press the needles out of the needle cartridge.
- When removing a needle cartridge, ensure that any ink or accompanying preparations that may be being used do not run from the needle cartridge into the handpiece.
- After removing the used needle cartridge, check that the needles have been completely withdrawn into the cartridge.
- Dispose of the used needle cartridges that are no longer required for the current treatment, properly (see chapter "9 Disposal" on page 32).
- ▶ The needle cartridges are shipped in sterile packaging. Only remove them from the sterile packaging immediately before use.
- Always place the handpiece back in the handpiece tray so that the needle cartridge does not rest on the surface.
- In the event of being injured by a contaminated needle, seek medical attention from a physician.
- ▶ Switch the handpiece off.
- Grasp the needle cartridge by the base body to insert it in the handpiece.
- ▶ Guide the bayonet fastening of the needle cartridge in the opening in the handpiece as shown below. You can insert the needle cartridge with all possible orientations.





Fig. 7: Inserting the needle cartridge

Injuries through contaminated needles can result in the transmission of diseases.

Intended use also includes the assumption that this operating manual and in particular chapter "2 Important safety instructions" on page 7, have been read in full and understood. Intended use also assumes the following consumer groups exclusively:

· Adult men and women who are in good health.

Improper use is when the device or its accessories are used in a manner other than as described in this operating manual or if the operating conditions have not been complied with. The treatment of contraindications in particular is forbidden (see chapter "2.4.1 Contraindications" on page 10).

2.7 Symbols on the product

The symbols described below can be found in this operating manual, on the device and on its accessories or the packaging:

SYMBOL	MEANING
CE	Device complies with the requirements of directive 2006/42/EC & 2004/108/EC
	Attention!
IP21	Housing offers protection from coarse dust and water drops
IPX6	Housing offers protection from jets of water
IP40	Housing offers protection from foreign objects thicker than 1 mm
Ŕ	Applied part, type B: Applied part provides safety from electrical shock and leakage currents
	Handpiece
Z	Foot switch
⊝⊛⊙	DC connection, inner pin positive
	DC
\sim	AC
	Observe operating manual!

NC Smart

SYMBOL	MEANING
***	Manufacturer
m	Date of manufacture
REF	Catalogue number, order number
SN	Serial number
LOT	Batch code
BTERILE ED	Sterilised with ethylene oxide
	Can be used until
X	Temperature limit
<u>کی</u>	Humidity limit
\$ •\$	Air pressure limit
Ť	Protect from moisture
	Only use indoors
Ţ	Fragile
	Do not use if packaging damaged
\otimes	Not for re-use
X	Dispose of in compliance with waste electronic appliances guidelines

5.5 Cleaning and disinfecting the equipment

ATTENTION

Damage due to fluids

If cleaning products or disinfectant gets inside the handpiece, the controller or the power supply, this may cause a short-circuit. In addition, this may also corrode the electrical and mechanical components.

- Never immerse the handpiece, the controller or the power supply in cleaning product or disinfectant.
- Never clean the handpiece, the controller or the power supply in autoclaves or in an ultrasonic cleaning bath.
- Consider material compatibilities when selecting cleaning materials and disinfectants (see chapter "7.2 Material compatibilities" on page 30).

ATTENTION

Device damage caused by unapproved cleaning materials or disinfectants

Cleaning materials or disinfectants that are not compatible with the materials of the device can cause damage to its surface.

- Use only cleaning materials and disinfectants that are authorised for use by the legislation in your country.
- Consider material compatibilities when selecting cleaning materials and disinfectants (see chapter "7.2 Material compatibilities" on page 30).
- ► Disconnect the controller from the power supply.
- ► Wipe the controller, the handpiece cable, the handpiece and the handpiece tray with a soft cloth moistened with cleaning product.
- ► Wipe the handpiece, the controller, the handpiece cable and the handpiece tray with a soft cloth moistened with disinfectant.

5.4 Connecting the handpiece

If no handpiece is connected to the controller, a message appears on the display:



Fig. 5: Handpiece detached

 Insert the FireWire plug of the handpiece cable fully into the output socket of the controller.





The handpiece is detected by the controller and the preset puncturing frequency appears on the display.

If the handpiece is not detected:

▶ Refer to chapter "10 Questions and problems" on page 32.

SYMBOL	MEANING
	Do not re-sterilise
A	Warning of cutting or penetrating injuries
	JAPAN TUV R-PSE
emater unit. (6)	Energy efficiency level VI
[V@]	Device complies with Japanese VCCI standards
3	CHINA SJ/T 11364-2014
F172801	UL certification for components recognised in Canada and the USA
	Double insulation / device protection class II
PG	GHOST-R mark for Russia
RoHS2	Device complies with the requirements of RoHS 2
SI @	SIQ mark license EN60601-1
10139	Ukraine UKRSepro
ī	See operating manual for further information

3 SCOPE OF DELIVERY

1 Controller

3

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1 Handpiece with handpiece cable

- 1 Power supply
 - 1 country-specific adapter (EU)

- 1 country-specific adapter (UK)
- 1 country-specific adapter (US)
- 3 Handpiece covers
- 1 Foot switch
- 1 Operating manual
- 1 Guarantee

The handpiece covers (25500) required for operation are not included in the delivery. Suitable accessory parts for the handpiece can be obtained via authorised retailers, see "4.3 Accessories and spare parts" on page 17.

4 PRODUCT INFORMATION

4.1 Technical data

Device type	DD11102
Nominal voltage	100-240 V AC, 50-60 Hz
Power consumption	max. 10 W
Power supply model	Model number: GTM96180-1817.9-2.9 Part number: WR9QG1200CSPCR6B2958 (GlobTek)
Protection class	2
Penetration frequency	70-150 Hz
Drive	Precision motor - DC
Operating mode	Continuous operation
Dimensions (W x H x D)	253 mm x 133 mm x 168 mm
Handpiece weight	approx. 100 g
Total weight	approx. 650 g

4.2 Operating conditions

Ambient temperature	+15°C to +25°C	
Relative humidity	30% to 75%	

In order to establish the power supply:

► Insert the DC plug of the power supply into the socket for the power supply (∞∞) on the rear of the controller.



Fig. 3: Socket for the power supply

 Insert the power supply into a mains outlet. The standby LED on the controller illuminates blue.

5.3 Connecting the foot switch (optional)

Only the foot switch cited in chapter "1.3 Accessories and spare parts" on page 17 will ensure safe operation.

► Insert the RCA plug of the foot switch into the socket for the foot switch (≥) on the rear of the controller.



Fig. 4: Socket for the foot switch

5.2 Connecting the power supply

The device may only be operated with the power supply cited on the type plate of the device. The mains voltage must match with the device voltage cited on the label of the power supply.

 If there is no suitable country-specific adapter included in the scope of delivery, contact an authorised dealer (see also chapter "10 Questions and problems" on page 32).

To remove the existing country-specific adapter, if necessary:

 Pull back and hold the catch for the adapter and at the same time lift the country-specific adapter out of the recess in the power supply.



Fig. 1: Remove country-specific adapter

To insert the desired country-specific adapter:

- ▶ Place the country-specific adapter in the recess of the power supply as shown below.
- > Press the adapter into the plug-in power unit until the catch can be heard to engage.



Fig. 2: Inserting country-specific adapter

Air pressure

1

4

4

700 hPa to 1070 hPa

4.3 Accessories and spare parts

The following accessories and spare parts can be purchased from authorised retailers.

ACCESSORIES	ARTICLE DESCRIPTION	SCOPE OF DELIVERY	PIECE/VPE
Needle cartridges	11201 (1-liner) 11210 (1-micro) 11220 (1-nano n(1)) 11225 (1-nano n(2)) 11230 (1-nano nt) 11203 (3-liner) 11303 (3-power) 11204 (4-flat) 11205 (5-shader) 11206 (5-magnum) 11305 (5-power) 11205 (5-round) 11207 (7-magnum) 11307 (7-power) 11209 (9-magnum) 11209 (3-micro) 11313 (3-slope) 11315 (5-slope)		15 15 15 15 15 15 15 15 15 15 15 15 15 1
Handpiece cover	25500	5	16
Foot switch	10860	=	1
SPARE PART	ARTICLE DESCRIPTION	SCOPE OF DELIVERY	PIECE/VPE
Controller	10200	1	1
Handpiece	10700	1	1
F 1 3 1			
Foot switch	10860	1	1

SPARE PART	ARTICLE DESCRIPTION	SCOPE OF DELIVERY	PIECE/VPE
Country-specific adapter	EU: 10800 UK: 10810 USA: D-ADP	1 1 1	1 1 1
Operating manual	501 10200 (DE) 500 10200 (EN) 502 10200 (NL) 503 10200 (US)	1 1 1 1 1 1	1 1 1

5 GETTING STARTED

CAUTION

Cable tripping hazard

An incorrectly laid cable can constitute a tripping hazard and cause injury.

Ensure all cables are positioned so that no one can trip over them or pull on them unintentionally.

Danger of injury and of device malfunctions

Unsuitable accessories and spare parts can impair the function and safety of the device The device can be damaged or can fail or malfunction endangering persons.

 Use only the needle cartridges, accessories and spare parts listed in chapter "4.3 Accessories and spare parts" on page 17.

ATTENTION

Danger of short-circuit

There is a risk of damage to electronics if there is visible damage to cables or cable connections.

- Check the device and the cables by visually checking for damage such as a defective cable connection for example.
- ► Never kink the product's cable.

ATTENTION

Damage from condensate

If the device is exposed to high temperature variations e.g. during transport, condensate may accumulate inside and damage the electronics.

Ensure that the device has reached ambient temperature before using it. If the device has been exposed to high temperature variations, wait for at least 3 hours per 10 °C of temperature difference before using it.

5.1 Positioning the device

Reduced functionality due to electromagnetic interference

Portable and mobile HF communications devices, such as mobile phones or WLAN routers, can influence the functionality of the device through the transmission of electromagnetic radiation. Safe operation of the device can no longer be assured.

- Avoid sources of interference by ensuring that portable or mobile radio devices are not operated in the vicinity of the device.
- Inform your customers about the risk of sources of interference.

ATTENTION

Damage to the device due to inadequate stability

If the device is not positioned safely, safe operation is not guaranteed. The device could fall and get damaged during operation.

- Place the device on a clean, firm and level surface.
- Ensure that the buttons and the display of the device remain freely accessible during use.
- Never place the device on or underneath other devices.