Device/type:	claros nano dental laser
Manufacturer:	elexxion AG Otto-Hahn-Str. 7 78224 Singen, Germany Tel. +49 7731 907330 Fax +49 7731 9073355 E-mail: info@elexxion.com
Serial no:	04-
Software version:	V 1.06
Release/date:	V 3.3 / 2022-06

CE 2797

Contents

1. Overview

1. User interface
2. Handpiece holder
3. Fiber connection (laser aperture)
4. Ventilation opening
5. Laser stop button
6. Transmission fiber reel
7. Foot switch connection
8. Power supply
9. Interlock connection

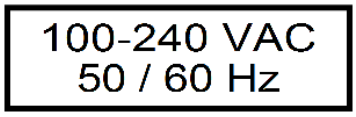
2. Labelling and warning notices

2.1. Labels on the device

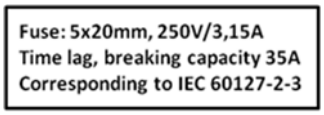
type label: foil label on bottom of device

Symbol	Description
	Manufacturer
	Date of Manufacture
SN	Serialnumber
REF	Partnumber
	Application Part Type B
	Do not dispose with household waste
	General waning sign
	Follow instruction for use
	Laser warning sign, laser radiation
	Avoid eye exposure to direct or scattered radiation
	Avoid skin exposure to direct or scattered radiation
	Laser transmission part

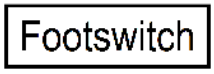
Power supply: foil label on back of device



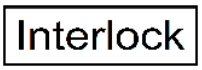
Fuses: foil label on back of device



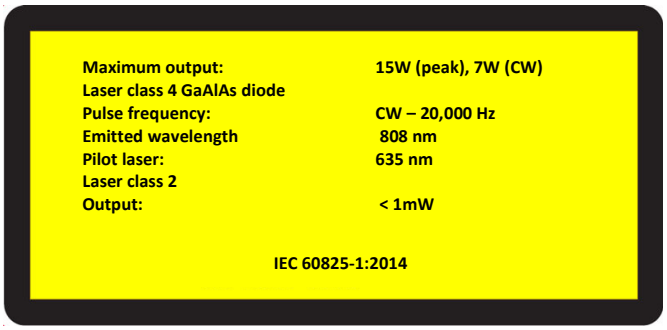
Foot switch connection: foil label on back of device



Interlock connection: foil label on back of device



Laser type: foil label, yellow/black, on back of device:



Warning label: on back of device

Warning labels: on right side of device

2.2. Labels on the accessories

Foot switch: foil label on bottom of foot switch

Application fibers: foil label on bottom of packaging:

Manufacturer:	elexxion AG Otto-Hahn-Straße 7 78224 Singen / Germany
Type:	starterkit fibers longlife
Lot-no.:	19-064
Application	Application fibers for elexxion pico/nano/claros/delos dental Laser, 2*200µm, 2*300µm, 3*400µm, 2*600µm
Item no.:	11056

Manufacturer:	elexxion AG Otto-Hahn-Str. 7 78224 Singen / Germany
Type:	ergo T8
Application	Therapie applicator 8mm for elexxion dental laser
Item no.:	10650

Manufacturer:	elexxion AG Otto-Hahn-Strasse 7 78224 Singen / Germany
Type:	elexxion 200 longlife
Lot-no.:	19-063
Application	Application fibers 200µm for elexxion dental Laser pico/nano/claros/delos
Item no.:	10063

Manufacturer:	elexxion AG Otto-Hahn-Strasse 7 78224 Singen / Germany
Type:	elexxion 300 longlife
Lot-no.:	19-065
Application	Application fibers 300 µm for elexxion dental Laser pico/nano/claros/delos
Item no.:	10391

Manufacturer:	elexxion AG Otto-Hahn-Strasse 7 78224 Singen / Germany
Type:	elexxion 400 longlife
Lot-no.:	19-066
Application	Application fibers 400µm for elexxion dental Laser pico/nano/claros/delos
item no.:	10112

Manufacturer:	elexxion AG Otto-Hahn-Strasse 7 78224 Singen / Germany
Type:	elexxion 600 longlife
Lot-no.:	19-062
Application	Application fibers 600 m for elexxion dental Laser pico/nano/claros/delos
item no.:	10120

Handpieces: Foil label on bottom of the storage box

Manufacturer:	elexxion AG Otto-Hahn-Strasse 7 78224 Singen / Germany
Type:	ergoflex plus
Application	handpiece ergoflex plus for elexxion dental laser pico / nano / claros / delos
Content	Soft metal tips (green & pink) & Bending tool
item no.:	11317-01

Manufacturer:	elexxion AG Otto-Hahn-Straße 7 78224 Singen / Germany
Type:	ergo T
Application	Therapy handpiece for elexxion dental lasers pico / nano / claros / delos
item no.:	10638

Laser safety glasses: Labeling / Instructions from manufacturer

Manufacturer:	elexxion AG Otto-Hahn-Str. 7 78224 Singen / Germany
Type:	claros protect
Application:	Laser safety glasses for elexxion lasers Wavelength 800-8
Item no.:	14475

2.3. Warning notices - danger to persons

If the following instructions are ignored or not followed correctly, this may result in endangerment of the patient, operator or support staff.

- By law, the device may be sold only to or on behalf of a dentist.
- The energy emitted by the laser light exceeds the tolerance threshold of the eye and can therefore lead to irreversible damage to the eye. The prescribed safety glasses must be worn by all persons in the room in order to prevent eye damage. Safety glasses for the appropriate wavelength range and suitable protection level are provided by elexxion AG with the designation ''elexxion claros protect''. The separate instructions for use for the laser safety glasses must be observed when using laser safety glasses.
- The laser danger zone (referred to as the 'treatment room' or 'room' in the following) is the entire area located within the range of the laser beam. Warning! As reflections from instruments and equipment introduced into the beam path are possible, the laser danger zone is only delimited by obstacles around the laser system that are not transparent with regard to laser radiation (e.g. walls, ceiling, floor, closed doors) . The room in which the device is operated and the electrical installation must be equipped in accordance with the relevant regulations in respect to rooms used for medical purposes. This is the responsibility of the operator or a laser safety officer appointed by the operator. Users, patients and other persons must wear safety glasses during laser operation.
- The operator of the laser system must ensure that the treatment room is clearly marked and that nobody enters the treatment room without safety glasses while the laser is being used. The laser system can also be shut down externally via the interlock connection located on the device if the operator opens the door of the treatment room.
- Use is permitted only in rooms designed for medical purposes and which meet the above requirements. Use anywhere else is not allowed.
- Visible and invisible laser radiation Laser class 4. Irradiation of eyes and skin by direct or stray radiation!
- Only accessories specified by elexxion AG may be used. A list of all accessories can be found in Section 7 Accessories of these instructions for use. In case of doubt, please consult your medical product consultant.
- Only the operating equipment indicated in the instructions for use may be used. Attention: Use of the operating equipment in any way other than that described here may result in dangerous irradiation.
- The device may not be used in explosive atmospheres, irrespective of how these are created.
- People must not look into the laser beam directly or through optical devices or instruments.
- Please make sure that the position of the device ensures that the power cord can be easily unplugged.
- Completely disconnect the device from the power supply (pull out power cord) when it is not in use for a long period of time.
- If the emission switch is deliberately or accidentally activated, an unprotected laser beam may be emitted from the fiber end.
- Caution: laser smoke may contain viable tissue particles. Please use an extraction system.
- Do not store any explosive or flammable materials in the immediate vicinity.
- The use of flammable anaesthetic gases and oxidising gases such as nitrogen and oxygen should be avoided. Some materials such as cotton wool that are saturated with oxygen can ignite at high temperatures, as can arise when the device is used in accordance with its intended use. Solvents,

such as those contained in adhesives and flammable solutions that are used for cleaning or disinfection purposes, should be given time to evaporate before the laser device is operated.
- Gases produced by the body can also be flammable!
- Applicators and handpieces must be decontaminated using an autoclave or by spraying/wiping with disinfectant before they are first brought into service and before and after each use.
- It must be ensured that the disinfectant/cleaning agents used have a bactericidal (including TbB), fungicidal and virucidal (including HBV) effect.
- The exposure times for disinfectant/cleaning solutions given by the manufacturer must be observed.
- Servicing and maintenance must be performed by authorised specialist personnel only (apart from fuse change). Make sure that a technical safety inspection is carried out on the laser system at least once a month.
- To change the fuse, disconnect the device from the power supply (pull out mains adapter).
- Do not introduce any objects through the housing openings.
- The device must be disconnected from the power supply before cleaning/disinfecting. Liquids must be prevented from penetrating into the housing openings.
- If the system is damaged or shows signs of not functioning properly, stop operation immediately and notify the manufacturer.
- The laser system may not be used for the removal of tooth hard tissue.
- When changing the default programs, the following rule applies: 'Start with the lowest power possible and then increase it later if necessary'.
- To avoid the risk of electric shock, this equipment must only be connected to a supply mains with protective earth.
- Do not modify this equipment without authorization of the manufacturer.

2.4. Warning notices - system hazard

If the following instructions are ignored or not followed correctly, this may result in damage to the system. It may not be possible to continue with ongoing treatment, or this may only be possible with some delay.

- Please ensure that the device is placed in a secure and stable position.
- The ventilation grilles of the device must not blocked.
- If the device is brought from a cold environment into a warm environment, please wait a sufficient amount of time (at least 30 minutes) until the device has reached the ambient temperature before switching it on.
- Please stop using application fibers if there is less than 5 mm of fiber left.
- Please handle applicators with care and do not squeeze, twist or apply a heavy load on them.
- The flexibility of the fibers is limited. Pressing, bending, stretching or compressing the fibers too heavily can cause them to break.
- Failure to comply can cause damage to the transmission system and/or injury to the patient or user.
- The applicators may be replaced in any operating state. However, it must be ensured that the foot switch is not activated.
- Make sure that a minimum distance of 20 cm is retained between the side ventilation slats and walls during operation.
- Use a spray bottle or soft cloth for surface disinfection/cleaning of the device, foot switch, fibers

and handpieces. The display can be treated in the same way.

2.5. Warning EMC

- Use of this equipment adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this equipment and the other equipment should be observed to verify that they are operating normally".
- The use of accessories, transducers and cables other than those specified or provided by the manufacturer of this equipment could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation.
- Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of the claros, including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result.
- When the AC input voltage is interrupted, this equipment will shut down and if the power supply restored, it should be recovered by operator manually, this degradation could be accepted because it will not lead to unacceptable risks and it will not result in the loss of basic safety or essential performance.

2.6. Warning notices - additional information

Imprecise observance or failure to observe the following notes can result in a device malfunction. Reference is also made to important and useful additional information.

- Activating (pressing) the EMERGENCY OFF switch disconnects the device from the power supply completely and stops all functions. After releasing the EMERGENCY OFF switch, the device is ready for operation again within a few seconds, and the desired mode can be selected.
- Do not use pointed objects to operate the glass panel.
- As the target beam follows the same path through the laser transmission system as the working beam, it offers a good method for checking the sound condition of the laser transmission system. To perform the check, direct the target beam onto a white surface (paper). A full circular spot of light should be visible. If the target beam does not appear, its intensity is reduced or it is scattered diffusely, this is a possible indication of a damaged or improperly operating laser transmission system.
- The laser transmission system is equipped with high-precision optics in the handpiece. Foreign bodies such as dust and moisture can therefore result in a reduction in power output or destruction. For this reason, a protective cap or handpiece front part must be placed on the laser aperture when cleaning the handpiece. We also recommend using a protective cap or handpiece front part when the laser is not in use in order to prevent penetration of dust.
- The nano system complies with applicable electromagnetic compatibility regulations, both with regard to background radiation interference and the emission of electromagnetic interference. However, it is strongly recommended that no strong electromagnetic transmitters such as mobile phones, radio remote controls, etc. be used in the vicinity of the laser system. If an electromagnetic effect/interference is suspected, the system may no longer be operated until the cause is determined and remedied.

3. Electromagnetic compatibility (EMC)

3.1. General information

claros is a class A device in accordance with CISPR 11 and is intended for use by medical specialists only. claros is intended for use in settings other than residential settings. This equipment with no ESSENTIAL PERFORMANCE is intended used in Professional healthcare facility environment, such as a hospital, clinic or doctor's surgery.

3.2. Installation and operation

Device installation and maintenance should be carried out by personnel with corresponding EMC expertise; the operation should be performed by trained personnel. Particular attention must be paid to proper cabling with specified cable types and lengths as well as firm assembly of the plug-in connectors and their locking mechanisms.
The device should be used in a controlled electromagnetic environment that is characterised by perception and control of the EMC loads by the user.

Electromagnetic emissions from the device are below the standardised interference emission limit values.

In special cases, if for example highly sensitive operating equipment is used in the immediate vicinity, additional remedial measures may have to be taken so that the electromagnetic interference emission is reduced further below the specified limit values.

Electronic devices are sensitive to electrostatic discharge. In order to prevent malfunctions in the claros system, electrostatic charges created by the operator should be prevented by means of ESD protective measures (use of anti-static materials).

In order to prevent disruptions due to electrostatic discharges, the floors should be made of wood or concrete or covered with ceramic tiles. If the floor is covered with synthetic materials, the relative humidity must be no lower than 40%.

Operators should be familiar with the basic physical processes behind electrostatic charges and how to prevent them.

The claros system uses RF energy for its own operation only. The amount of radio frequency interference emitted is therefore very low and is unlikely to disturb other devices being operated in the vicinity. Nevertheless, it should be noted that simultaneous operation of the claros system together with other devices may result in interference in the claros system or other devices. Care should therefore be taken to ensure that the claros system is not positioned directly next to or above another electronic device.
If it is impossible to avoid positioning the claros system in the immediate vicinity of analogue medical measurement devices, the user of these measurement devices must be made aware that device results should be observed in order to monitor intended device use in the position selected.

3.3. Guidelines and manufacturer declerations

Table 1: Emission

Phenomenon	Compliance	Electromagnetic environment
RF emissions	CISPR 11 Group 1, Class A	Professional healthcare facility environment
Harmonic distortion	IEC 61000-3-2 Class A	Professional healthcare facility environment
Voltage fluctuations and flicker	IEC 61000-3-3 Compliance	Professional healthcare facility environment

Table 2: Enclosure port

Phenomenon	Basic EMC standard	Immunity test levels
		Professional healthcare facility environment
Electrostatic Discharge	IEC 61000-4-2	±8 kV contact ±2kV, ±4kV, ±8kV, ±15kV air
Radiated RF EM field	IEC 61000-4-3	3V/m 80MHz-2.7GHz 80% AM at 1kHz
Proximity fields from RF wireless communications equipment	IEC 61000-4-3	Refer to table 3
Rated power frequency magnetic fields	IEC 61000-4-8	30A/m 50Hz or 60Hz

Table 3: Proximity fields from RF wireless communications equipment

Test frequency (MHz)	Band (MHz)	Immunity test levels
		Professional healthcare facility environment
385	380-390	Pulse modulation 18Hz, 27V/m
450	430-470	FM, ±5kHz deviation, 1kHz sine, 28V/m
710	704-787	Pulse modulation 217Hz, 9V/m
745		
780		
810	800-960	Pulse modulation 18Hz, 28V/m
870		
930		
1720	1700-1990	Pulse modulation 217Hz, 28V/m
1845		
1970		
2450	2400-2570	Pulse modulation 217Hz, 28V/m
5240	5100-5800	Pulse modulation 217Hz, 9V/m
5500		
5785		

Table 4: Input a.c. power Port

Phenomenon	Basic EMC standard	Immunity test levels
		Professional healthcare facility environment
Electrical fast transients/burst	IEC 61000-4-4	±2 kV 100kHz repetition frequency
Surges Line-to-line	IEC 61000-4-5	±0.5 kV, ±1 kV
Surges Line-to-ground	IEC 61000-4-5	±0.5 kV, ±1 kV, ±2 kV
Conducted disturbances induced by RF fields	IEC 61000-4-6	3V, 0.15MHz-80MHz 6V in ISM bands between 0.15MHz and 80MHz 80%AM at 1kHz
Voltage dips	IEC 61000-4-11	0% U_T; 0.5 cycle At 0º, 45º, 90º, 135º, 180º, 225º, 270º and 315º
		0% U_T; 1 cycle and 70% U_T; 25/30 cycles Single phase: at 0º
Voltage interruptions	IEC 61000-4-11	0% U_T; 250/300 cycles

Table 5: Signal input/output parts Port

Phenomenon	Basic EMC standard	Immunity test levels
		Professional healthcare facility environment
Electrical fast transients/burst	IEC 61000-4-4	±1 kV 100kHz repetition frequency
Conducted disturbances induced by RF fields	IEC 61000-4-6	3V, 0.15MHz-80MHz 6V in ISM bands between 0.15MHz and 80MHz 80%AM at 1kHz

Table 6: Cable information

Cable	Max cable length Shielded/ unshielded		Number	Cable classification
AC power line	2.5m	Shielded	1 set	AC- Power
Foot switch line	2m	Unshielded	1 set	SIGNAL INPUT/OUTPUT PORT
Hand piece line	1.7m	Unshielded	1 set	PATIENT-Coupled Cable

4. Intended use

Elexxion Claros nano is a class 4 diode laser system for use in dental medicine and that can be used in the following fields:

- **Surgery and Haemostasis**
  Applications in the field of surgical incision to cut soft tissue in the mouth and stop bleeding
- **Endodontology**
  Application to reduce bacteria by decontaminating root canals
- **Periodontology**
  Application to reduce bacteria by decontaminating hard and soft tissue surfaces
- **Implantology**
  Application to reduce bacteria by decontaminating implant surfaces
- **Bleaching (not for medical purpose)**
  Whitening of teeth and depigmentation of lips and gingiva
- **Low-level laser therapy**
  Non thermal treatment for pain reduction, biostimulation and prophylaxis

Dentists are the users of this laser device. They must be instructed in the risks of laser radiation and they must be trained in working with the laser equipment (Laser Safety Representative). Operate the laser only in a laser protection area; every person in this area (user, patient, assistant, etc.) must wear protective eyewear that complies with the requirements in section 2.

The base device is used to select the parameters and to generate the laser light which can be emitted using the switch at the footswitch. An optical applicator (fiber or glass rod) inside a handpiece is used to transmit the laser light. The laser beam is emitted at the distal end of the applicator after choosing mode, parameter and actuating the foot switch. This laser beam can be used to address the above mentioned fields of applications by irradiating.

5. Protection and safety regulations

The device may be commissioned only after the operator has received instruction, and in accordance with requirements and safety regulations.
The separate instructions for use for the laser safety glasses must be observed when using laser safety glasses.
laser equipment should be protected against unauthorized use.
Caution - Laser fume and/or plume may contain viable tissue particulates
What is a laser plume? Lasers and electrocautery are used for surgery to vaporize, coagulate, and cut tissue. The vapours, smoke, and particulate debris produced during these surgical procedures are called laser plumes.

5.1. Side-effects:

- **Carbonization/necrosis zones (only surgery):**
  High outputs and/or exposure of one area over a longer period of time can result in irreversible tissue damage in the above form.
  Measures: Keep fibers in controlled motion, avoid power outputs that are too high!

- **Unpleasant odour formation (only surgery):**
  Vaporization of tissue caused by intended photo-thermal effect.
  Measures: use saliva suction device!

- **Noise levels (surgery only):**
  Cutting noise caused by vaporization of tissue.
  Measures: none, noise unavoidable

- **Warming of hard tissue, destruction in some cases (surgery only):**
  Side-effect that may arise when employing the device outside its intended use caused by harmful warming of hard tissue (tooth, bone) at high power outputs and over a long duration.
  Measures: use surgery programs in accordance with intended use and operating instructions; process hard tissue according to the intended program only!

5.2. Mutual interference risks:

- There are no risks of reciprocal interference during operation.

5.3. Residual risks/assessment

- **Hazard due to energy: minor risk** [1)]
  (caused by electricity, heat, mechanical force, non-ionising radiation, electromagnetic fields, moving parts and acoustic pressure)

- Hazards when inserting, sharply bending, or improperly securing the fiber optics, indicating

failure to follow manufacturer's recommendations may lead to damage to the fiber or delivery system and/or harm to the patient or laser operator
Minimal risk [1]

- **Biological hazards: minor risk** [1)]
  (caused by bio-burden, bio-incompatibility, incorrect supply (substance, energy), toxicity, infection, pyrogenicity and decomposition of material)

- **Environmental hazards: minor risk** [1)]
  [caused by electromagnetic interference, inadequate energy supply (excess voltage or undervoltage), limited cooling, operation outside prescribed environmental conditions, incompatibility with other devices, accidental mechanical damage and contamination with waste products]

- **Hazards associated with using the device: low risk**[2)]
  (caused by inadequate labelling, insufficient instructions for use, insufficient accessory specifications, over-complicated instructions for use, instructions for use that are not available or have become separated, untrained staff, insufficient warning of side-effects, incorrect measurements and other technical measurement aspects, misdiagnosis, incorrect data transfer, misinterpretation of results and incompatibility with consumables and other products)

- **Hazards due to malfunctions, maintenance and ageing: low risk**[2)]
  (caused by insufficient performance features for planned use, inadequate maintenance, lack of appropriate assessment as to when the device's service life will expire, loss of mechanical integrity, substandard packaging (contamination) and unsuitable reuse)

[1)] Definition key 'minor risk':
Risks of identified hazards are assessed as 'minor' when, if one or more of the hazards specified arises, the extent of injuries caused by the product to the user, patient or individuals in the immediate vicinity, both during intended use and in the event of error, is so small that it is not expected to result in health impairment and/or physical harm or detriment of any sort to the above individuals.

[2)] Definition code 'low risk':
Risks of identified hazards are assessed as 'low' when, if one or more of the hazards specified arises, the extent of injuries caused by the product to the user, patient or individuals in the immediate vicinity, both during intended use and in the event of error, is so low that it is not expected to result in any permanent or long-term health impairment and/or physical harm or detriment of any sort to the above individuals.

Vasoconstrictors do not need to be used when administering local anaesthetic for invasive procedures. This is particularly the case when treating pregnant patients or those with pre-existing cardiac problems.

5.4. Contraindications

- There are no known contraindications.

5.5. Summary assessment of residual risks

With due regard to the potential side-effects, the resulting residual risks in terms of hazards are deemed acceptable in due consideration of the intended application and use of the laser system and accessories. As a result, no restrictions have been specified for use of the claros nano system in accordance with its intended use.

Users (laser safety officers) who participate in operation courses as offered by elexxion AG are taught about the risks of laser radiation and trained in how to handle the laser device.

A functional test of the device on site and subsequent instruction will familiarise the user with how to handle and operate the laser.

6. Operation

6.1. Commissioning

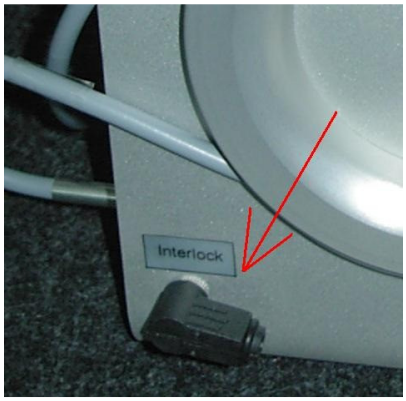
Please wait at least 30 minutes after moving from a cold environment to a warm environment before switching the device on to prevent condensation forming on electronic components.

- Please ensure that the device is set up in a secure and stable position.

- Plug the power cord into the plug-in connection provided for this on the rear of the device. Plug earthing contact plug into the mains socket. Lay the power cord so that nobody can trip over it or fall.

- Plug connector of the foot switch into the connecting socket on the rear of the device. Make sure, the red dots are facing to each other while pushing in.

- Make sure that the interlock connector is plugged into the interlock socket on the back of the device.

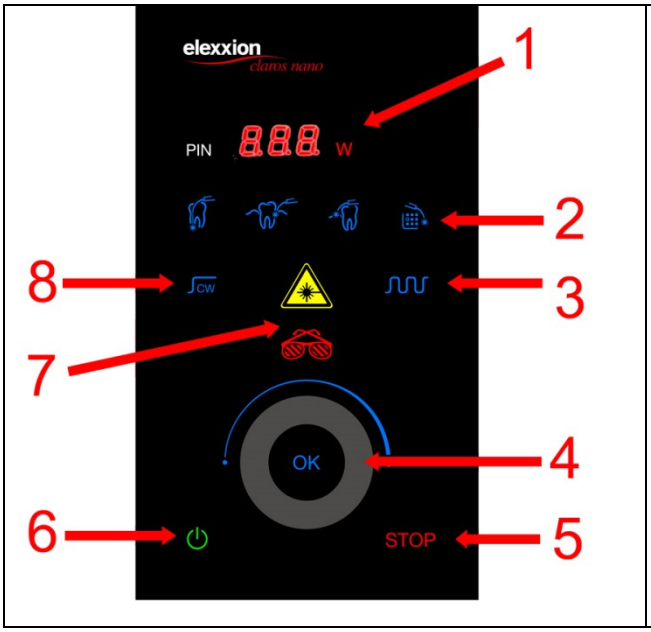


The foot switch and interlock connection may be removed and reconnected during operation. The emission of laser radiation is not possible without the foot switch or interlock.

6.2. Display test

A display test is performed at each system start (power supply connected). All symbols/segments are displayed simultaneously for 3 seconds.

6.3. Display elements



1 – PIN; parameter display

2 – Program selection/application areas

3 – Pulse mode display

4 – Scroll wheel and OK button
(parameter entry/program selection)

5 – STOP button

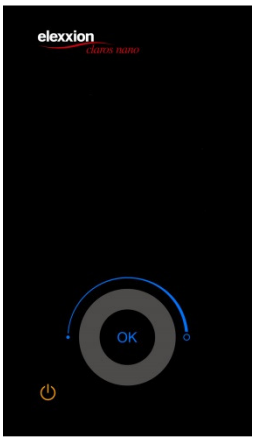
6 – ON/OFF/Standby button

7- 'Laser active' and 'Wear safety glasses' display

8 – Non-pulsed mode display (continuous wave)

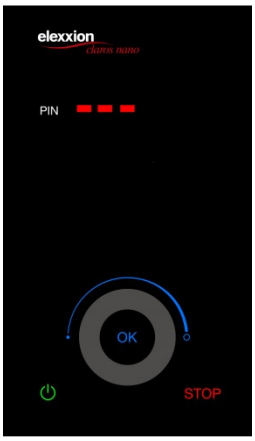
6.4. Program selection and laser operation

6.4.1. Standby mode



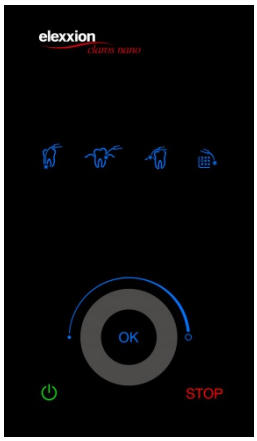
After connecting the device to the power supply with the power cord, a display test (all symbols on for 3 seconds) is performed. Next, the firmware version is indicated in the display. After this, the system changes automatically into standby mode.(ON/OFF button turns orange).
Pressing the orange ON/OFF button switches on the device.

6.4.2. PIN entry (Authorisation code)

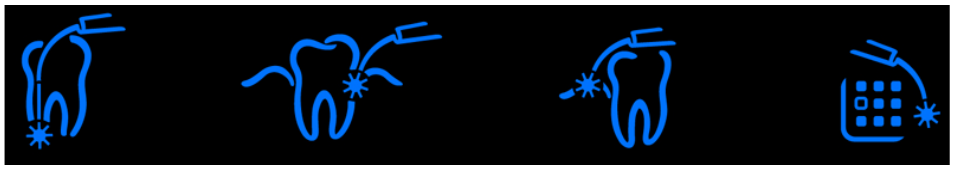


After switching on the device, the three-digit PIN must be entered. Use the scroll to change the flashing numbers from 0 through 9 and confirm this with the OK button. Repeat this until you have entered the three-digit PIN. (The default PIN is set as 000)
To reset the PIN entry, press the STOP button.
You can cancel the PIN entry by pressing the green ON/OFF button. The device then returns to standby mode.

6.4.3. Program selection



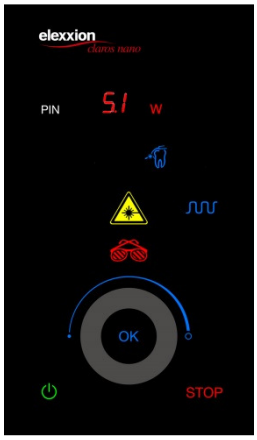
After entering the three-digit PIN, the program selection symbols are displayed. Select the program area by pressing one of the four program area buttons:



Endodontology[E] Parodontology[P] Surgery[S] LLLT[L]

Use the scroll wheel to select the specific program x01–x09 from the desired program area. Confirm by pressing the OK button.
Pressing the STOP button cancels the program, and the program selection symbols are displayed again.

6.4.4. Laser warning mode

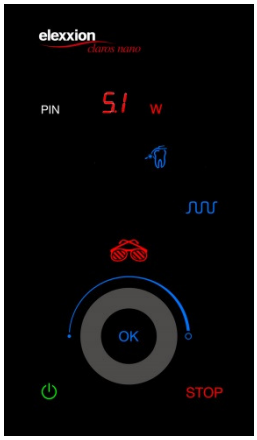


After confirming the specific program, the device displays a flashing laser warning symbol along with a flashing laser safety glasses symbol. This serves as a reminder that suitable laser safety glasses must be worn.

A warning tone sounds simultaneously. This mode lasts 2 seconds.

Attention! From this point in time, activating the foot switch will result in emission of laser radiation.

6.4.5. Laser ready mode

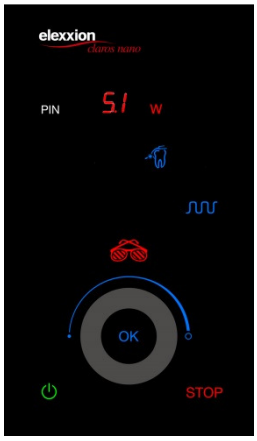


Following the laser warning mode, the laser is ready for use. The selected program number is displayed and, if the foot switch is not activated for 2 seconds, its parameters are shown as well. First, the pulse output in watts, then the pulse frequency in kHz and finally the average power output in watts. The safety glasses symbol indicates that the laser is ready and that safety glasses must be worn.

Laser emission is activated by pressing the foot switch. The laser warning symbol flashes, a periodic warning tone sounds and laser radiation is emitted while the foot switch is pressed.

Pressing the STOP button changes the device to program selection mode.

6.4.6. Changing program parameters



Select program whose parameters are to be changed and confirm with the OK button (laser ready mode).
Press program symbol button for more than 2 seconds. The program parameter setting mode is activated and the 'Pulse output' parameter begins to flash. This value can be changed using the scroll wheel.

The following applies for power outputs greater than 1 W:
The pulse output is shown in the red, 3-digit display. The pulse duration is fixed at 17 µs in pulse mode.
The following applies for power outputs less than 1 W:
The average power output in watts is shown in the red 3-digit display. The pulse duration is calculated by the system in relation to the set pulse frequency (see following paragraph) in pulse mode.

After confirming by pressing the OK button again, the pulse frequency is displayed flashing in kHz and can be changed by turning the scroll wheel.
'--' means continuous wave mode (cw) in this case. Pressing the OK button confirms the selection again.

The average power output of the selected parameter set is then calculated and shown in the display. To confirm the changed parameter set and save these in the selected program space, a subsequent release by pressing the OK button is necessary. The parameter settings remain permanently saved.

Pressing the STOP changes the device to program selection mode.

6.4.7. Stopping laser emission

The program can be terminated at any time, even during laser emission, by pressing the STOP button on the glass panel, pressing the button marked with 'Laser-Stop' or pulling the power cord out of the device. Laser emission is terminated immediately.

6.5. Customer PIN

After switching on the device from stand-by mode, enter the PIN '999' to take you to customer PIN mode. Now enter the new PIN (three-digit) three times in succession and confirm this with OK. The new PIN is now active.

6.6. Handling the handpieces

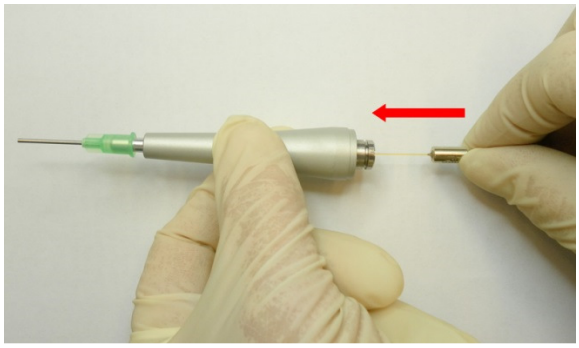
6.6.1. ergoflex plus

6.6.1.1. Introducing the application fibers

The claros nano system is fitted with an innovative application system, which keeps subsequent costs as low as possible and ensures a high level of hygiene capability at the same time.
Depending on the diameter of the application fibers, various soft metal tips must be attached before introducing the application fibers:

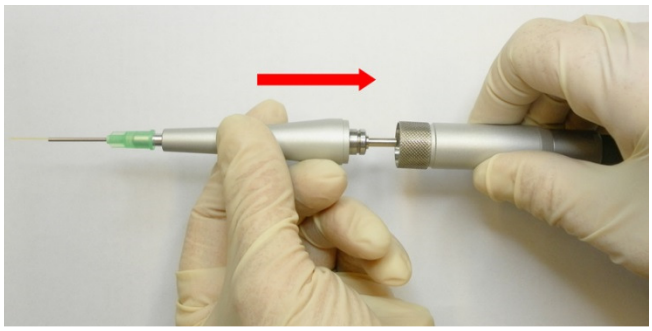
Pink for 200 µm/300 µm fibers	Green for 400 µm/600 µm fibers
	

Push application fibers carefully into the handpiece front part from behind as far they will go. (Caution: glass fibers can break)

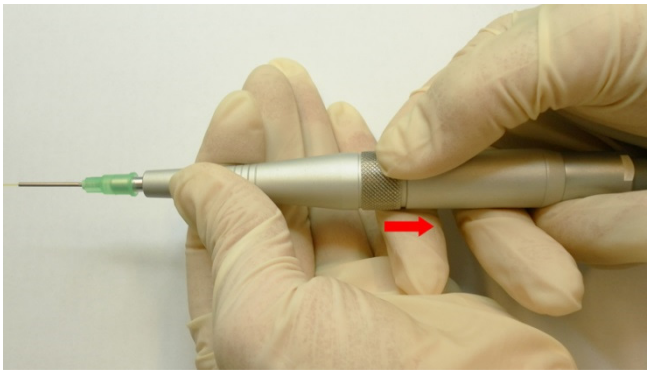


After this, place the handpiece front part centrally on the rear handpiece part. Then press both parts

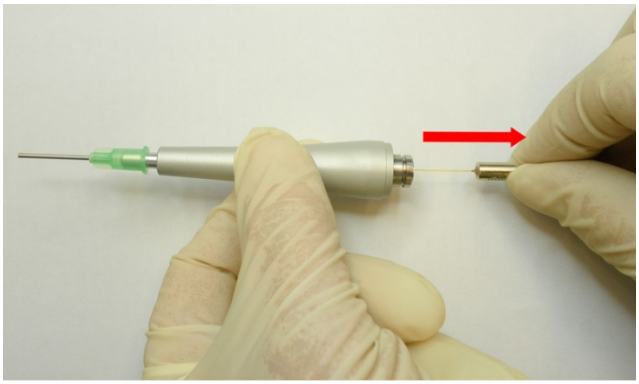
together in the handpiece longitudinal direction until the interlock ring can be heard to engage.



The fiber can be removed after use. (To do so, ensure that the soft metal tip has been bent straight again or removed beforehand.) To remove the handpiece front part, the interlock ring must be pulled to the rear. The handpiece front part can now be removed.



Carefully pull the fiber out of the handpiece front part and have it be disinfected.



The fibers can be changed during operation with the device switched on. Fibers must not be replaced during laser emission under any circumstances!
Fibers have a limited service life depending on the power output used and the fiber diameter. Fibers can typically be used up to 15 times. Disinfected fibers can be disposed of in household waste.

6.6.1.2. Adjusting the fiber length

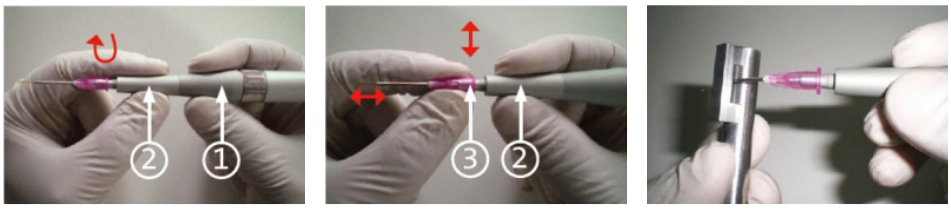
Open the locking device by twisting parts 1 and 2 anticlockwise. A quarter turn is sufficient. Hold on to

part 2 and twist part 3 to adjust the fiber length.

Turning clockwise => increases the fiber length;
Turning anticlockwise => shortens the fiber length.

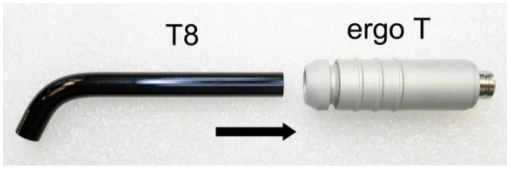
When you have reached the desired fiber length, lock the handpiece by twisting parts 1 and 2 clockwise. Bend the thin metal tube of the soft metal tip into the desired position using the bending tool.

Straighten the tube after use. Then separate the handpiece from the fiber cable and pull the fiber out of the handpiece.
Do not adjust the fiber length when the tube is bent!



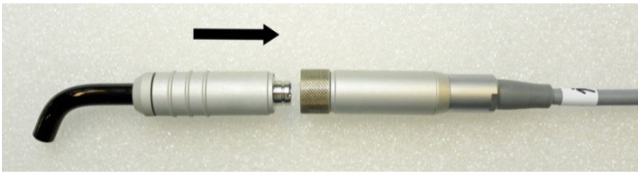
6.6.2. ergo T

The ergoT handpiece can be used with the two glass rods T4 (optional) and T8. The glass rods are used in all therapy programs. The application information on the list of applications shows which glass rod is used in the relevant program.
To insert the glass rod, undo the fixing nut on the ergo T handpiece and introduce the glass rod into the handpiece as far as it will go.



After this, tighten the fixing nut by hand so that the glass rod sits firmly.

Remove the safety cap from transmission fiber, pull the interlock ring to the rear and press the handpiece into the handpiece holder until it can be heard to engage.



To undo the handpiece, the interlock ring must be pulled back.

6.7. Device reset (default settings)

The procedure below can be followed to reset the customer PIN to 000 and the output parameters to the default settings:
In standby mode, keep the buttons (not shown) "Endodontics" and "LLLT" (first and fourth rows) pressed and activate the foot switch at the same time. The device acknowledges the reset with a beep. The parameters and customer PIN are now restored to their delivery settings.

7. Accessories

claros nano is a diode laser system developed for dental use. It consists of a base unit, which generates the laser radiation, and a range of accessories:

Article No.	Article	
11199	nano: base unit including transmission fiber	
11317-01	ergoflex plus: handpiece for use with application fibers includes	
	11256	Soft metal tips: single-use tips for Elexxion longlife 400 oder 600 (green)
	11257	Soft metal tips: single-use tips for Elexxion longlife 200 oder 300 (pink)
	12930	Bending tool: tool used to bend the soft metal tips
10638	ergo T: handpiece for use with glass rod T8	
11056	Starterset fibers longlife includes	
	10063	elexxion longlife 200: application tip 200 µm
	10391	elexxion longlife 300: application tip 300 µm
	10112	elexxion longlife 400: application tip 400 µm
	10120	elexxion longlife 600: application tip 600 µm
10650	Ergo T8: applicator, glass rod 8 mm in diameter	
14475	claros protect: laser safety glasses	
13973	Claros nano step: foot switch	
10765	“Laser“ wall sign english	
14174	Storage case	

The use of accessories other than those specified here is not permitted.

8. Cleaning and sterilisation

The base unit and transmission fiber are wiped with an appropriate cleaning/disinfectant agent. (DGHM- or VAH-listed/e.g. Dürr FD 322 or Mikrozid liquid)

Note: Unplug the mains adapter before cleaning the device!

Preparing the instruments generally involves cleaning followed by sterilisation.
Place instruments (application fibers/glass rod) in a burr steriliser or instrument bath filled with a suitable cleaning/disinfectant agent (mild alkaline/aldehyde-free/alcohol-free/DGHM- or VAH-listed) immediately after use on patient. This prevents residues from drying (protein fixation). Instruments (application fibers/glass rod) should be transported to the preparation site in the burr steriliser, instrument bath or an appropriate container in accordance with accident prevention regulations (industrial safety/employer's liability insurance association).

8.1. Cleaning

Instruments in the "critical B" category (handpieces) should generally be cleaned by machine according to RKI guidelines. Manual pre-cleaning may be necessary for effective cleaning if the instruments are particularly dirty.

- Thoroughly clean and dry re-usable instruments immediately after use to minimise corrosion and possible cross-contamination.
- Validation of the cleaning, sterilisation and re-sterilisation processes and the correct setup of the corresponding devices must be checked regularly.
- Do not allow instruments to come into contact with any substances that contain chlorine or fluorine.
- Do not allow instruments that are made entirely or partly of plastic to come into contact with strong acids or bases, organic or ammonia-containing solvents, aromatic and/or halogen-containing hydrocarbons or oxidising chemicals.
- Do not allow aluminium or materials that contain aluminium to come into contact with any substances that contain mercury. Even the slightest trace of mercury can cause considerable corrosion. Instruments made from materials that contain aluminium may be wiped and cleaned only with (or placed only in) solvents or disinfectant agents with a pH value between 4.5 and 8.5. Higher or lower pH values cause the neutral coating of the aluminium-containing materials to detach, leading to corrosion.
- Do not let dirt dry on the instruments, as this may make later cleaning difficult.
- If corrosive substances, such as silver nitrate, iodine preparations, albothyl and mercury compounds are used during the operation, all residues of these substances must be removed from the instruments immediately.
- Instruments must not be placed in physiological saline solutions, as extended contact with these substances can result in corrosion and changes to the instrument surfaces.
- Do not use metal brushes or abrasive cleaners to clean the instruments. Subsequent rinsing with demineralised water is recommended to prevent water spots. The instruments must then be dried immediately. Sterile compressed air can be used for drying.
- Rinsing in demineralised water is recommended after cleaning.
- After cleaning, grease moving metal parts with a water-soluble lubricant approved for use with medical products. Reassemble and, if applicable, tighten screws.
- Submerge instruments entirely in the enzyme or alkaline solution (pH ≤ 12) and leave them to soak for ten minutes. Gently brush the product using a brush with soft nylon bristles until all visible dirt marks have been removed. Pay particular attention to the gaps, lumina, fitting surfaces, connections and other areas that are difficult to clean. Lumina should be cleaned with a long, thin brush with soft bristles (i.e. a pipe-cleaner).
- Note: Using a syringe or water jet can make it easier to rinse out areas that are difficult to access, as well as small fitting surfaces.
- Remove instruments from the cleaning solution and rinse them with clean water for at least a minute. Thoroughly rinse lumina, blind holes and other difficult-to-reach areas.
- Place the instruments in a suitable basket for the cleaning/disinfecting machine such that they can be reached unhindered by water and cleaning agents and undergo a standard cleaning cycle for instruments.
- The following minimum parameters are extremely important for thorough cleaning and disinfection:

Step	Description
1	Pre-rinse with cold water for at least one minute
2	Clean with 0.3% Neodisher MediClean cleaner at 55°C for at least five minutes

3	Rinsing 1: at least two minutes with water
4	Rinsing 2: at least one minute with water
5	Disinfection: 5 minutes, 15,5 l water (≤ 3µS / cm), 90° C
6	Drying: 15 minutes, 95° C air inlet temperature

The automated reprocessing of cannulated parts or hollow bodys (e.g. handpieces) is done by the specifications and with the tools of the manufacturer of the cleaning unit (e.g. Thermaldisinfectors). They are mandatory to adhere.

Note: The instructions from the manufacturer of the cleaning/disinfecting machine must be strictly observed. Use only cleaning agents recommended for this particular type of automatic cleaning/disinfecting machine. A cleaning/disinfecting machine with verified effectiveness must be used (e.g. CE marking and valid validation as per EN ISO 15883-1).

If residual contamination is still visible on the instrument following manual preparation, repeat cleaning and chemical disinfection process until contamination is no longer visible (a visual inspection using a magnifier is recommended according to the RKI).

8.1.1. Packaging

Packaging that is suitable for the instrument (application fibers/glass rod) and the sterilisation procedure should be selected. Instruments with restrictions in terms of their frequency of use should be labelled accordingly in order to ensure clear allocation for the purpose of the QM system. The packaging must be labelled, at the latest after their treatment in the steam steriliser, with usage-relevant markings. The following must be visible: the sterilisation date or sterile storage period, the contents, the sterilisation procedure and, if multiple sterilisers are used, the device used.

8.2. Sterilisation

For dental practices, devices with cycle B or cycle S are specifically prescribed. In order to ensure effective sterilisation, it is vital that steam can reach all parts of the product being sterilised, especially in the event of stricter preparation requirements (critical B / e.g. hollow parts, handpieces). Based on the risk assessment for the instruments (application fibers/glass rod = critical A) (handpiece= critical B), all detachable parts must be sterilised. The autoclave procedure using a fractioned pre-vacuum method is validated in accordance with DIN EN ISO 13060. The person preparing the instruments is responsible for ensuring that the reprocessing actually carried out using the equipment, materials and staff available in the reprocessing facility achieves the desired results.

Step	Description	Duration	Temperature	Pressure
1	Fractionated Vakuum	-	-	3x200 – 1500mbar
2	Hold time	5 min	134°C	Saturated steam 134°C
3	Drying	5 min	-	<100mbar

! PLEASE NOTE

We recommend that after repeated sterilisations a suitable optical inspection is carried out (for visual damage etc.).

9. Maintenance

The device must undergo a technical safety inspection once a year together with these instructions for use and the medical products log belonging to the device. This may be performed only by individuals who are able to conduct the inspections correctly based on their training, knowledge and experience gained through practical application and who can carry out inspections without supervision. Time period: once a year

- Radiation output test in all application modes.
- General functional test
- General visual inspection
- Protective earth conductor in accordance with VDE 0751
- Replacement device leakage current in accordance with VDE 0751
- Safety concept test in accordance with 'nano testing' operating instructions in force

Note: If the device does not undergo this inspection on schedule, elexxion AG cannot guarantee unrestricted operating safety. Any warranty and liability claims on the part of the manufacturer shall also expire. All maintenance work must be performed by providers that have been authorized by elexxion AG to maintain the device type in question.

Authorized maintenance providers:
elexxion AG | Otto-Hahn-Str. 7 | 78315 Singen, Germany
Tel. 0049-7731-90733-0 | Fax 0049-7731-90733-55 | E-mail: info@elexxion.com
Contact information can also be found on the website at www.elexxion.com

10. Service life

The claros nano system and accessories have a service life of at least 10 years when used in accordance with their intended use, when subject to proper care and maintenance and when requirements with regard to technical safety inspections are observed.
Attention: If you have any queries, please contact the manufacturer. If you identify any malfunctions or damage, stop using the device immediately and notify the manufacturer.

11. Disposal

11.1. Packaging

elexxion AG recommends retaining the unit's packaging so that it can be sent off correctly in the event of servicing. In order to dispose of packaging, please contact your elexxion AG representative or dispose of the packaging in accordance with applicable legal regulations. For this, also refer to the information at www.elexxion.com.

11.2. Device

The system must be disposed of correctly at the end of its service life in order to prevent environmental damage and rule out the possibility of improper use. The device must be taken to or sent to an authorized service company. When necessary, the system must be secured to prevent accidental reuse before disposal. The usual risks concerning the disposal of electronic devices apply.

12. Technical data

12.1. Description of the beam guiding system:

Laser diodes: gallium aluminium arsenide (Ga Al As). The divergent beam is focused internally on a defined point in front of the laser aperture by a multiple-lens system. By inserting an optical fiber with NA (numerical aperture) = 0.22 and an SMA screw connection, the focal point is projected onto the fiber input (plug), and the beam is guided to the application end of the fiber with virtually no losses by means of total internal reflection and emitted at an angle of 13° (divergence).

12.2. Laser aperture:

The laser aperture is located behind the side cover. This is where transmission fiber is connected to the handpiece. Laser emission is not possible without a connected fiber. The device signals an error in this case. When the fiber is connected, the distal end of the handpiece (fiber or glass rod) forms the laser aperture. Laser emission may be started only when the handpiece and inserted fiber or glass rod are connected. Glass rods T4 and T8 may not be used for applications other than those that are described (therapy).

claros nano technical data:

Dimensions:	22x18.5x21 cm (HxWxD)
Weight:	3,7kg
Power supply:	100–240 VAC, 50/60 Hz
Current consumption:	2.0 A max.
Fuses:	3.15 A T (corresponding to IEC 60127-2/III)
Operating mode:	Short-term operation: Laser emission 2 min ON/1 min OFF
Protection class:	I application part type B IP X0
Wavelength:	808 nm +/- 10 nm max.
output power (pulse output):	15 W
Max. power output (CW operation):	7 W
Pulse frequency:	CW – 20,000 Hz
Pulse duration:	17 µs – CW
Wavelength of pilot laser:	635 nm +/- 5 nm
Power output of pilot laser	< 1 mW
Operating conditions:	Temp. 15°C – 35°C Rel. humidity 20–85% Air pressure: 800–1100 hPa
Storage/transportation conditions:	Temp. 5°C – 50°C Rel. humidity 10–85% Air pressure: 800–1100 hPa

Accuracy of values displayed:

- Power output:	+/- 20%	of display value
- Frequency:	+/- 3%	of display value
- Time:	+/- 3%	of display value
- Temperatures:	+/- 5%	of display value

13. Error messages

Error message	Possible cause	Action
F03 'Close housing'	Housing open or damaged	Close the housing (front panel)
F04 'Check interlock'	Door open while interlock connected, no interlock plug	Close door Insert interlock connector
F05 'Shutter does not open'	Fault in beam attenuator	Contact elexxion Service if this occurs more than once.
F06 'Shutter does not close'	Fault in beam attenuator	Contact elexxion Service if this occurs more than once.
F07 'Output power too low'	Significant deviation in the output power Actual power output is LOWER than the target power output.	Contact elexxion Service if this occurs more than once.
F08 'Output power too high'	Significant deviation in the output power Actual power output HIGHER than the	Contact elexxion Service if this occurs more than once.
F09 'Check fiber contact'	The transmission fiber is not screwed in.	Screw the transmission fiber in by hand as far as it will go.
F12 'Laser temperature too low'	The temperature of the laser diode is too low.	Switch on the device at room temperature and wait it this has heated up.
F13 'Laser temperature to high'	The temperature of the laser diode is too high.	Switch on the device and wait until the internal cooling system has cooled the laser sufficiently. Ensure the correct ambient temperature.
F14 'Cooler temperature too low'	The temperature of the cooler is too low.	Switch on the device at room temperature and wait until it has heated up to the required
F15 'Cooler temperature too high'	The temperature of the cooler is too high.	Switch on the device and wait until the internal cooling system has cooled the cooler sufficiently. Ensure the correct ambient temperature.
F16 'Board temperature too low'	The electronics temperature is too low.	Switch on the device at room temperature and wait until it has heated up to the required
F17 ' Board temperature too high'	The electronics temperature is too high.	Switch on the device and wait until the internal cooling system has cooled the electronics sufficiently. Ensure that the ambient temperature is correct.
F18 'Check setup'	No calibration data in the internal memory	Contact elexxion Service.
F20 'Check foot switch'	Damaged/blocked foot switch Program start attempt with foot switch pressed down	Remove the foot switch block or contact elexxion Service. Start without pressing the foot switch.
F21 'Peltier element malfunction'	Defective Peltier element or ambient temperature too high (Peltier element is switched on longer than 5 minutes without interruption)	Switch on the device and wait until the internal cooling system has cooled the laser (ensure that the ambient temperature is correct) or contact elexxion Service.
F22–F25 'Hardware defective'	Hardware malfunction	Contact elexxion Service.

If the device or accessories are to be sent to elexxion, please clarify the packaging and shipping modalities with elexxion beforehand.

Please send only disinfected devices and accessories to elexxion. Contaminated devices and accessories cannot be accepted.

14. Calibration

Power calibration takes place during the annual technical safety inspection. A power calibration is not normally necessary outside these periods. However, if a power calibration is necessary, the following procedure should be followed. Please note that class 4 laser radiation is emitted during this procedure, as in normal laser operation. Please observe the warnings given in Section 2.

Power meter: Ophir NOVA with measuring head 30A-BB-18 (with valid calibration)

Procedure:

- Enter the service PIN
- Selection of 'Pulse' menu
- Selection of the 2nd program symbol
- Use the scroll wheel to calibrate the value of the laser threshold (roughly 17)
- Use a 600 µm applicator in the handpiece and aim the fiber at the measuring area of the measuring instrument.
- Activate foot switch
- Read the measured value; while the laser is operating, set the DAC value so that the target value is attained
- Repeat the procedure for the 3rd program symbol (DAC 1 W, roughly 30) and 4th program symbol (DAC 7 W, roughly 90)
- Save the calibration parameters by pressing 'OK'.
- Document calibration in the product folder.

15. Application table/default settings

	Endodontology	Pulse output	Pulse frequency	Applicator	Average output
E01	Bacterial reduction in canal	1.5 W	CW	200 µm, open canal minim. ISO 30, dry it with paper tip and move from apex under circulating motion out of canal with 30 sec.	1.5 W
E02	Pulp capping	5.0 W	12 kHz	600 µm/glass rod, immediate hemostasis, inhibits anti-inflammation	1.02 W
E03-E09	-	-	-	-	1W (cw)

	Parodontology	Pulse output	Pulse frequency	Applicator	Average output
P01	Bacterial reduction	1.0 W	CW	300 µm, moving under undulating motion from mesial to distal within 30 sec. out of pocket	1.00 W
P02	Gingivectomy, external	15.0 W	20 kHz	400 µm, tighten tissue	5.10 W
P03	Bleaching	1.5 W	CW	glass rod, 15 sec./tooth 1 mm distance to gel	1.5 W
P04	Hypersensitive teeth	1.5 W	CW	glass rod, 600 µm, 15 sec./tooth after application of fluoride	1.5 W
P05	perio green® (Periodontitis therapy with perio green® Periimplantitis therapy with perio green®)	0.3 W	0.05 kHz	300 µm, after application of perio green®, 40 sec. per pocket	0.3 W
	Removal of granulation tissue	1 W	CW	200 um if the dentist will do the treatment from inside the rootcanal 300 um if the dentist will perform the	1 W
	Retraction of gingiva	1W	12 kHz	200 or 300 depends on the space between the gingiva and tooth surface	0.12 W
P06-P09	-	-	-	-	1W (cw)

,

	Surgery	Pulse output	Pulse frequency	Applicator	Average output
S01	Surgery, general	15.0 W	20 kHz	400/600 µm tighten the tissue	5.10 W
S02	Gingivectomy before impression	15.0 W	15 kHz	400/600 µm	3.83 W
S03	Frenectomy	15.0 W	12 kHz	400/600 µm, tighten frenulum	3.06 W
S04	Expose implant	15.0 W	10 kHz	300/400 µm, from center of screw outward, impression can be taken immediately	2.55 W
S05	Vestibuloplasty	15.0 W	20 kHz	400/600 µm, tighten tissue	5.10 W
S06	Hyperplasia	15.0 W	20 kHz	600 µm, move in a grid at a distance of approx. 1 mm	5.10 W
	Hemostasis	5 W	20 kHz	Application fiber 600 µm longlife, maintain distance of around 2 mm	2.5 W
	Abscess opening	5 W	20 kHz	Application fiber 200µm longlife, selectively penetrate as far as possible into abscess	2.5 W
	Sample biopsies	5 W	20 kHz	Application fiber 400µm longlife, stretch tissue, wedge excision	2.5 W
	Periimplantitis, surgical	5 W	12 kHz	Application Fiber 400µm/600µm longlife, to remove granulation tissue, assistant to provide suction	1.5 W
	Decontaminate implants	5 W	12 kHz	Application fiber 200µm/300µm longlife, move around to cover all areas if possible	1.5 W
	Retention cysts	5 W	20 kHz	Application fiber 300µm longlife, remove cyst sac undamaged if possible	2.5 W
	Expose impacted teeth	5 W	20 kHz	Application fiber 400µm longlife, expose impacted teeth (soft tissue only)	2.5 W
	Curettage	5 W	16 kHz	Application fiber 400 µm longlife, remove granulation tissue	2 W
	Aphthae	5 W	16 kHz	Application fiber 600 µm longlife, move in a grid motion at a distance of around 1 mm	2 W
	Depigmentation of lips (special)	5 W	16 kHz	400/600 and this treatment is very sensitive and dentist must be professional to do it.	2 W
	Depigmentation of gingiva	5W	16 kHz	Only to be used with the protocol of Dr Kenneth Luk, Hong Kong	2 W
	Sulcus preparations	5W	16 kHz	Application fiber 300µm longlife, for anterior teeth, 400µm/600µm for molars	2 W
	Hemangioma treatment	5W	16 kHz	300 / 400 µm, detach in circular fashion, no stitches	2 W
	Fibroma removal	5W	16 kHz	400/600µm,stretch tissue with surgical tweezers	2 W

	Dentitio difficilis, surgical	5W	20 kHz	Application fiber 300µm/400µm longlife	2.5 W
S07-S09	-	-	-	-	1W (cw)

	LLLT	Pulse output	Pulse frequency	Applicator	Average output
L01	Healing of wounds	1 W	8 kHz	glass rod under contact for 120 sec.	0.08 W
L02	Pain in general	1 W	9 kHz	glass rod under contact for 100 sec.	0.09 W
L03	Dolor Post	1 W	9 kHz	glass rod under contact for 90 sec.	0.09 W
	Aphthae	1 W	CW	Glass rod T8, coat directly if possible, aphtha melts down, 2 – 3 treatments, 60 Seconds	1 W
	Herpes labialis	1 W	CW	Glass rod T8, dry blisters, tension eases, 2 – 3 treatments, 60 Seconds	1 W
	Suppress gag reflex	1 W	CW	Glass rod T8, irraditate KG24 and LG25 directly, helps for around 20 minutes, 60Seconds	1 W
	Temporomandibular joint disorders	1 W	CW	Glass rod T8, pain relief, but does not remedy cause, 2 treatments, 60 Seconds	1 W
	Hypersentivity	1 W	CW	Glass rod T8, coat entire area, allergy dissipates, 3 treatments, 60 Seconds	1 W
	Post-extraction pain	1 W	CW	Glass rod T8, immediately after extraction in wound area, quicker wound healing, 90 Seconds	1 W
	Gingivitis	1 W	CW	Glass rod T8, coat gum seam, bleeding an pain ease, 2 – 3 treatments, 70 Seconds	1 W
	Haematoms	1 W	CW	Glass rod T8, irradiate at clos distance, acceleratied absorption, 1 – 2 treatments, 45 Seconds	1 W
	Relieve lockjaw	1 W	CW	Glass rod T8, irradiate each side, hold directly on joints, 60 Seconds	1 W
	Alveolar osteitis	1 W	CW	Glass rod T8, prevention of post-extraction pain, irradiate entire surgical area, 2 treatments, 45 Seconds	1 W
	Neuralgiform pain	1 W	CW	Glass rod T8, position on suspected point of pain, usually helps immediately, 90 Seconds	1 W
	Oedema	1 W	CW	Glass rod T8, tension eases immediately, rapid absorption, 2 – 3 treatments, 90 Seconds	1 W
	Pulpitis, initial	1 W	CW	Glass rod T8, directly on open pulp horn, soothes pulp, 30 Seconds	1 W
	Acid trauma	1 W	CW	Glass rod T8, irradiate gingiva on both sides, complete relief from pain, 90 Seconds	1 W

	Abrasion trauma	1 W	CW	Glass rod T8, after 2 min. haemostasis, immediate improvement, 90 Seconds	1 W
	Stomatitis	1 W	CW	Glass rod T8, rapid reduction in inflammation, 5 treatments, 60 Seconds	1 W
	Root end resection wound treatment	1 W	CW	Glass rod T8, apply directly in apex area, prevents oedema, 90 Seconds	1 W
L04-L09	-	-	-	-	1W(cw)