EN

User Manual

CE

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Your Endo Specialist™

11/17 Ref. 60300544-J

X-Cid®2

USER MANUAL

This device has been designed and manufactured in accordance with the European directive 93/42 CEE (class I).
X-Cid®2 is an automated device for cleaning dental handpieces, contra-angles and turbines.

LISTE DES SYMBOLES

	Fragile package contents	CE	CE Marking
	Safety instructions		Manufacturer
	Recycling process for end-of-use produtcs		

SAFETY INSTRUCTIONS

■The X-Cid®2 must only be used by qualified personnel to pre-disinfect handpieces, contra-angles and turbines.
■The instruments must be in good working order. It may not be possible to properly clean a damaged instrument.
■Always wear clean, disposable medical gloves when handling handpieces, contra-angles and turbines and X-Cidol®2.
■Only use manufacturer recommended products with the X-Cid®2:
• X-Cidol®2 detergent; Ref.: 50704005
• Demineralised water
• TSU Oil MICRO-MEGA®; Ref.: 50700025
• The device must be installed by a manufacturer-certified technician following the instructions in the installation manual.
■Caution when filling the X-Cidol®2 tank: You must wear an adequate protective gown, gloves, and a protective device for your eyes and face. The risk for severe eye damage is high.
■Do not inhale: Inhalation of steams may cause drowsiness and vertigo. In case of eye contact, wash off immediately and profusely with water and refer to a specialist.
■For more details: please report to the X-Cidol®2 Security Data File, delivered with the device.
■In case of heavy overflowing, when filling the X-Cidol®2 tank, leave the device to dry out for 24 hours before using it again.
■Do not open the device during its use.
■Following an abnormal functioning, and in case the scuttle lid should open, the wear of a surgical mask and gloves is recommended before attempting to stop the device.
■In case the locking system should be damaged, please refer to the salesman.
■Do not store the device near a heat source.
■Do not expose the X-Cid®2 to direct sunlight.
■Do not smoke in close proximity to the device.
■The air exchange rate in the room where the device is installed must be at least 100m^3/h.
■If the device is not used for four weeks, complete an empty cycle before installing instruments in the treatment tank.
■If detergent comes in contact with the eyes, rinse immediately and thoroughly with water and consult a physician. Consult the X-Cidol® 2 safety data sheet available from your distributor or MICRO-MEGA®.
■Do not disassemble or damage the device.
■No not place your hands on the hinges when opening the window.
■Make sure the device is solidly seated before use.
■The wall socket must be grounded.
■To unplug the device, remove the power cable.
■Unplug the device and contact your distributor:
• If the device seems to be operating abnormally (time cycles not respected, abnormal liquid consumption, abnormal noise, etc.).
• If the liquid is no longer evacuated from the reservoir.
• If there is a leak at the back of the device.
• If there is visible damage to the device.
■Contact your distributor or MICRO-MEGA® in order to dispose of the device at the end of its service life in accordance with EU Directive 2012/19/EU.

GENERAL INFORMATION

Introduction

■The X-Cid®2 automatically pre-disinfects, cleans and lubricates handpieces, contra-angles, and turbines with no prior disassembly required.
■The treated instruments are ready to be packaged and sterilised.
■Since the X-Cid®2 complies with Administrative Circular N° DGS/5C/DHOS/E2/2001/138 of 14 March 2001, patients and health personnel can be assured that there is no risk of cross-infection. In addition, the X-Cid®2 increases the service life of instruments, reduces maintenance costs, and is compatible with all brands of handpieces, contra-angles, and turbines.

PROCEDURE

■Pre-disinfection (15 min)

All surfaces in contact with pathogens are treated with X-Cidol® 2, an aldehyde-free detergent/ disinfectant solution that complies with current standards. The internal parts of instruments rotate at low speed to eliminate interfering substances as well as most microorganisms.

■Rinsing (2 min 15 s)

The rotating instruments are rinsed with demineralised water to evacuate the X-Cidol® 2 used in the previous phase.

■Cleaning (5 min 30 s)

The instruments rotate again in X-Cidol® 2. This phase complements the pre-disinfection phase and eliminates all remaining microorganisms, leaving the instruments totally clean.

■Rinsing (2 min 15 s)

The rotating instruments are rinsed with demineralised water to evacuate the X-Cidol® 2 used in the previous phase.

■Drying (2 min)

Once clean and rinsed, the instruments are dried using compressed air.

■Lubricating (4 min 15 s)

The rotating instruments are then lubricated using special oil applied using a mounted spray can.
The excess lubricant is removed using compressed air.

DESCRIPTION

■The device is mounted on a stainless steel frame with a self-extinguishing synthetic hull and includes:

A keyboard with the control keypads and indicators.

A product reservoir with a fixed part for the X-Cidol®2 and a removable part for the water.

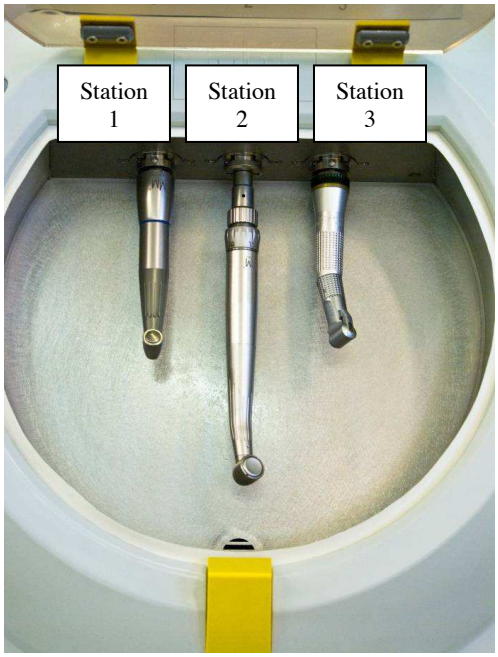
An oil reservoir on the side of the device for lubrication of handpieces, contra-angles and turbines.

A stainless steel treatment tank with a window.

Two (2) ISO 3964 pivot couplings for handpieces and contra-angles and one (1) ISO 9168 (MID) pivot coupling for turbines.

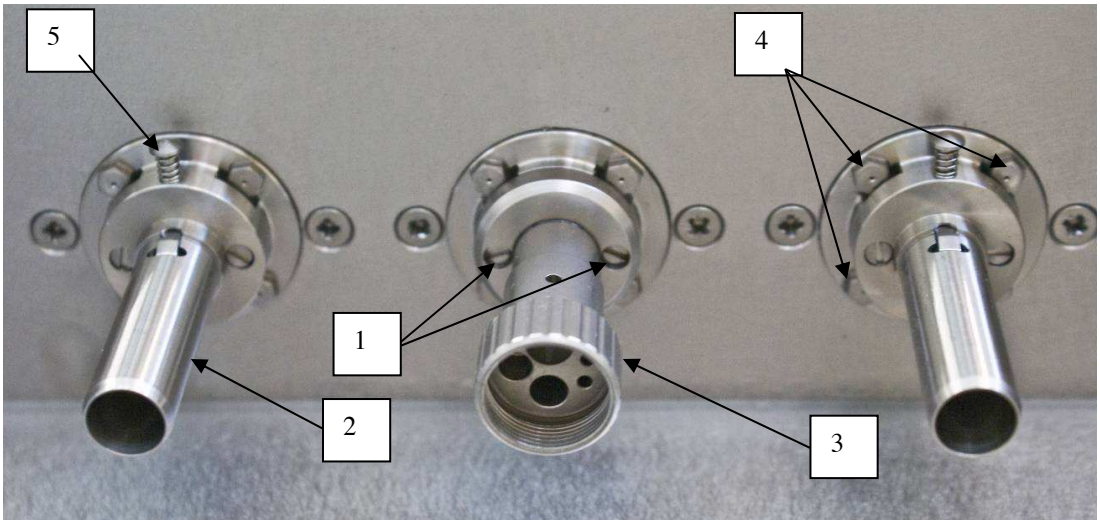
Electrical, compressed air, and fluid evacuation outlets on the side of the steel frame.

2) Treatment tank:



■The treatment tank, which has a window, has three stations that can accommodate instrument couplings in any order. Each coupling is held in place by two screws (1). Two types of couplings can be used:
• an ISO 3964 pivot coupling for handpieces and contra-angles (2);
• an ISO 9168 (MID) pivot coupling for turbines (3). These couplings can be equipped with quick-connectors for each turbine.
■The order of the coupling can be changed to accommodate the types of instruments being used. It is recommended to maintain the MID coupling in a central position.
■Each station is equipped with four removable spray nozzles to treat the external surfaces of the instruments (4).

After treatment of the contra-angles, press the button (5) above the coupling in order to disconnect the contra-angles from the device.



2) Product reservoir:

■The reservoir is located in the top of the device and is composed of two compartments with independent hinged lids. It has been designed for use with the following products:
• X-Cidol® 2 detergent / disinfect for the pre-disinfection and cleaning phases.
• Demineralised water for the rinsing phases.
■To fill, the covers of the two compartments are opened and the appropriate quantity of product is added up to the fill line using a funnel, if necessary. Do not exceed the maximum fill line in order to avoid overflows. In case of liquid spillage: Wipe the spilled liquid immediately.
■Cleaning: The water reservoir can be removed by pulling vertically on its strap (photo B), its filter can also be removed. After removal, clean the filter by brushing it under running water (photo C). It is recommended only to fill the water reservoir once it has been fixed onto the device. For fixing it on the device, press on the filter (photo D). Make sure that the X-Cidol®2 reservoir is perfectly clean. Do not remove the filter in case of product residues (photo E).

Photo A

Photo B

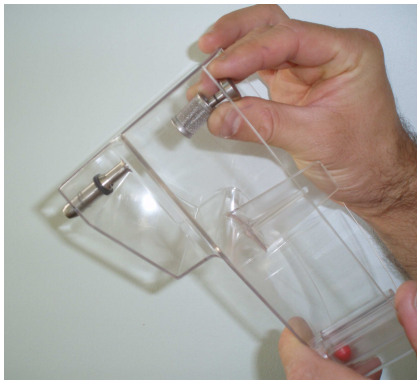


Photo C

Photo D

Photo E

■t is recommended to fill the reservoirs only with the amount of liquid needed for the working day.
X-Cidol® 2 should be refilled every day.
1 liter of X-Cidol® 2 and 1 liter of water are sufficient for cleaning 33 instruments.
Water should be refilled on a weekly basis.

3) Lubricant reservoir:

The oil reservoir is positioned on the side of the device (photo 1). When the oil amount is insufficient, the device displays an error indication (see paragraph malfunction displays).
In order to refill the reservoir, unscrew the cover and pour the TSU oil bottle's content into the reservoir, ref 50700024 (photo 2).
Before moving the device into a horizontal position, close the valve in the middle of the cover by pushing it from the screwing side (photo 3). The valve exceeds the cover when it is completely closed (photo 4).

Photo 1

Photo 2

Photo 3

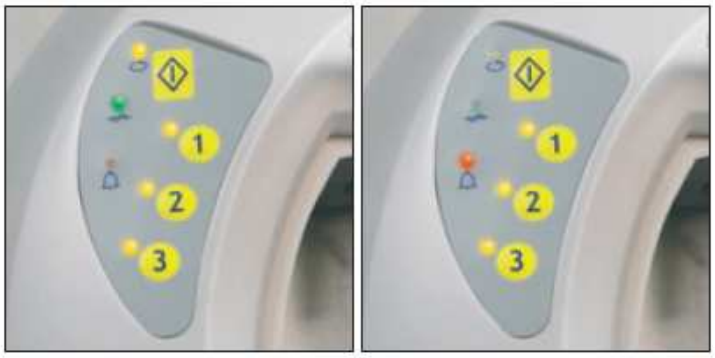
Photo 4

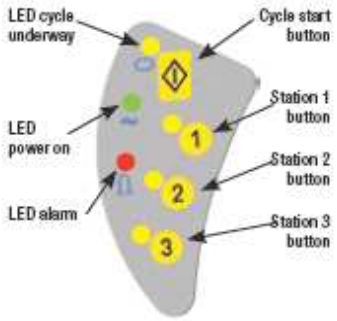
In order to open the air flow (standard use of the X-Cid®2), press on the valve on the top of the cover. The cover top will then raise to the screwed cover's level (see photo hereafter).

A 250 ml bottle TSU oil is sufficient for running 900 lubrications of instruments (standard lubrication mode). The oil must be used up within 12 months.

4) Keypad:

■The control keypad includes the following components:
• A cycle start button.
• Three buttons to select the desired stations.
• Green, yellow and red LED indicators:
- Power on (green).
- Stations selected and cycle underway (yellow).
- Malfunction (red).





Keypad X-Cid®2

INSTALLATION / USE

■The X-Cid®2 must be installed in a well ventilated room. The air exchange rate must be at least 100m³/h per device. The air exchange may be passive or assisted by static extractors, air conditioners, or mechanical extractors. The technician will provide the end user with advice in this regard.
■The X-Cid®2 is designed to be installed on a horizontal surface, but may be wall mounted using the following method:
• The maximum height of the covers must not exceed 1.50 metres in relation to the floor level so that the removable reservoir can be easily assembled and dismantled.
• Make sure that the wall can support the weight of the device (approx. 8 kg).
• Place two anchors (rawl plugs) for Ø 5 to 5.5 mm screws in the wall 200 mm apart. The screws must be screwed into the anchors so that their heads (Ø 10 maxi) protrude 7 mm from the wall.
■Empty the reservoirs and close the oil reservoir's cover valve before moving the device.
■If the X-Cid®2 is not used for a year or more, it should be inspected by a certified installer.

EQUIPMENT

■Equip each station with the following parts, depending on the instruments to be treated:
• ISO 3694 coupling (contra-angles and handpieces).
• ISO 9168 MID coupling (turbines) with suitable quick-connector (not supplied, use a connector in accordance with your turbine).

CONNECTIONS

■Compressed air connection (1)

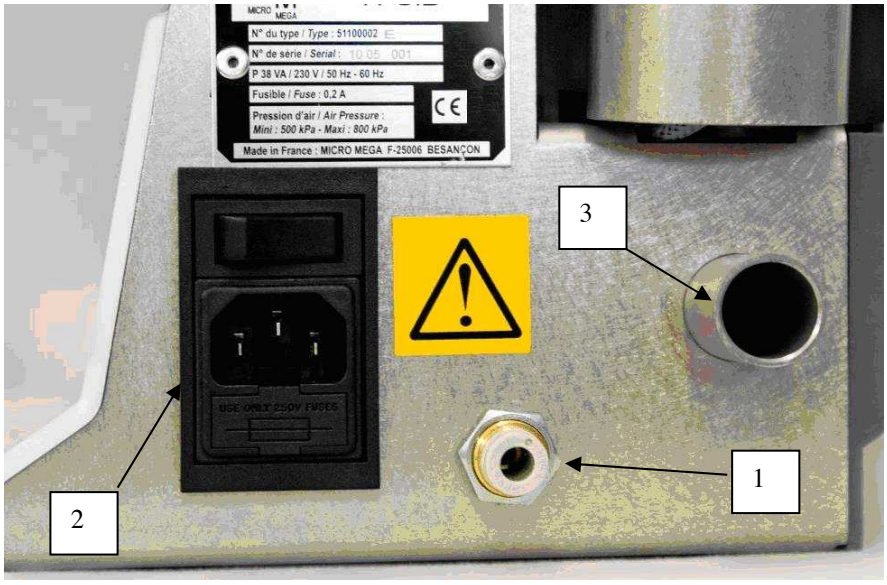
The device is equipped with a quick-connector for Ø 4x6 flexible tubing.
To ensure an airtight connection and avoid leaking, check that the tubing has a clean cut and that the pressure delivered on the device is between 5 and 8 bars.

■Electrical connection (2)

Plug in the X-Cid®2 using the power cord provided. Comply with the safety data sheet.
The wall socket must be easily accessible and must be grounded.

■Fluid evacuation (3)

The tubing for evacuating waste fluids (Ø 25 ext.) is directly connected to the waste outlet. All components are biodegradable.
Make sure that the connection is watertight and that the tubing has a sufficient downward slope. Also make sure that the tube does not form a siphon-like loop that might prevent fluid evacuation.



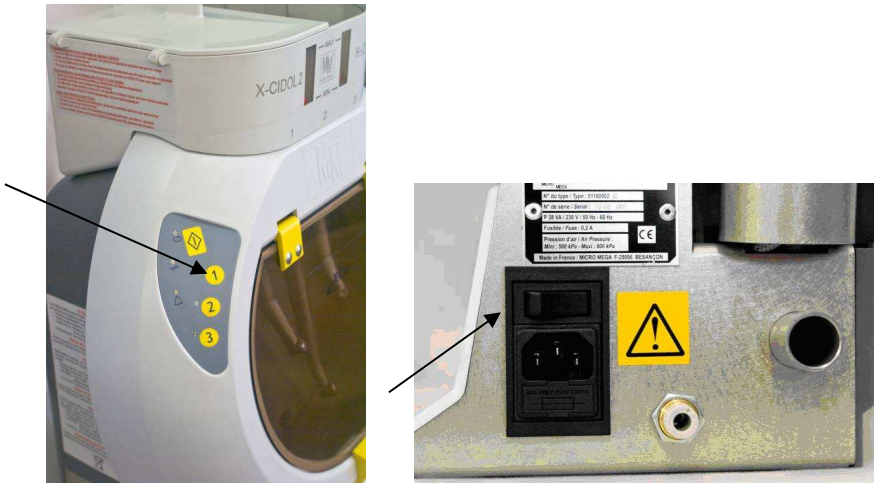
DIRECTIONS FOR USE

1) Make sure that the fluids exceed the minimum required levels.
2) Turn on the device by pressing the 0/1 button. The green “power on” LED will light up.
3) Open the hinged door of the treatment tank and install the instruments to be treated:
• Insert contra-angles and handpieces completely. You will hear a click. To remove them, press the button above the coupling and pull the instrument downwards.
• Place turbines on the suitable quick-connect coupling.
4) Close the door.
5) Press buttons 1, 2 and/or 3 to activate the corresponding treatment stations. The yellow LEDs of the selected stations will blink.
• Caution! Instruments should undergo another complete treatment cycle if the cycle is voluntarily or involuntarily interrupted in order to ensure an effective treatment.

• Only select those stations with an attached instrument. Otherwise, cleaning product will be wasted.
• Make sure the stations to be used are correctly selected on the keypad.
6. Press the “start cycle” button.
• During the cycle, the yellow “cycle” and “stations in use” LEDs will light up.
• At the end of a cycle, the “cycle” LED will turn off and the “stations in use” LEDs will blink.
• If the user voluntarily stops the cycle, the “stations in use” LEDs will turn off (which indicates a reset). The user must reselect the stations before starting a new cycle.
7) At the end of every cycle: Open the hinged door and remove the instruments from the treatment tank. Do not leave the instruments overnight or during the week-end in the device.

Lubrication modes

You can operate your X-Cid®2 in three lubrication modes by pressing one of the buttons on the keypad (1, 2 or 3) at the same time as the “power on” button.
Button 1 + “Power on” button: Non-lubricating mode
Button 2 + “Power on” button: Standard lubricating mode
Button 3 + “Power on” button: Intensified lubricating mode



The lubricating mode will be displayed and the red LED will light up for 5 seconds when the power is turned on.

IMPORTANT INFORMATION: At the end of a non-lubricating mode cycle, the device will automatically switch back to the standard lubricating mode.

MAINTENANCE AND RECOMMENDATIONS

The X-Cid®2 has been designed to clean and lubricate handpieces, contra-angles and turbines after each patient. The following recommendations will help you make the best use of the device and your instruments.
■If your instruments are not new, we recommend a complete internal cleaning to remove accumulated debris prior to a treatment with the X-Cid®2 or to make 2 or 3 cycles.
■Make sure that the internal canals of your contra-angles are wide enough for the cleaning liquids to pass through.
■Treat your instruments immediately after use so that saliva and blood do not have time to coagulate or dry.
■Once treated, instruments must be packaged for sterilization.
■During long dental procedures (> 15 min) with fast rotating instruments (contra-angles with red rings or turbines), we recommend that you manually lubricate your instruments during the procedure because the air flow tends to eliminate the lubricant.
■If the X-Cid®2 is not used for a longer period of time, rinse the device following the instructions of the procedure sheet ref. 60300552.
■We recommend annual preventive service by a manufacturer-certified technician. This control includes liquid volume measurement, sensor functioning, alarms, lubrication, change of filters and reservoir joints if required.

IMPORTANT INFORMATION: For cleaning and maintenance of your X-CID®2 device, never use cleaning wipes or other products that contain chlorine (bleach) or hydrochloric acid. Products that contain these ingredients create brown stains on stainless steel parts which can deteriorate your device and your rotating instrument holders.

Daily maintenance

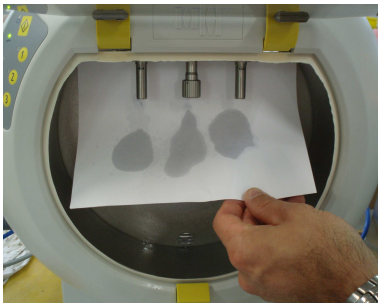
■Before the first daily use of the X-Cid®2, verify the fluid levels. In case you forget this step, the cycle will stop automatically and an alarm will be set off when fluid levels are insufficient.

Monthly maintenance

1) Make sure that the lubricating system works correctly by running a lubricating cycle without cleaning (follow instructions hereafter):

Before starting the maintenance procedure, remove all the rotating instrument holders and the turbine couplings.
Close the treatment tank door.
- Press the button “1” for 5 seconds: Once the yellow LED “1” remains lit, release the button and instantly
- press the button “2” for 5 seconds: Once the yellow LED “2” remains lit, release the button and instantly
- press the button “3” for 5 seconds: Once the yellow LED “3” remains lit, release the button.

Open the treatment tank door and place a sheet of paper under the three stations. After two minutes, oil marks should appear under each station (see photo).



Then close the treatment tank door and wait until the end of the drying cycle (3 min). The device will stop automatically and the three LEDs 1-2-3 will blink.
2) Select all three stations, operate the device without instrument, and verify that there is a good flow of fluid at each station. Then interrupt the cycle by pressing the “power on” button.
3) Clean the outside of the device with a soft towel dipped in disinfectant. Never use abrasives. Never spray any cleaning product on the keypad.
4) Brush the drainage grid at the bottom of the tank (see photo hereafter).

Then close the treatment tank door after having reconnected your clean turbine coupling(s).
5) Clean the reservoir for the X-Cidol®2 with a disinfectant, non pilling wipe without removing the filter.
6) Clean the removable reservoir under running water, remove the filter and clean it with a soft brush.
7) Rinse the device following the instructions of the maintenance and control sheet, Ref.: 60300552. Make sure that the X-Cidol®2 reservoir is nearly empty before starting the procedure.
8) The procedure is now completed and the device is ready for use.

Fuses

■The fuses are located near the ON/OFF switch. They must be replaced by fuses of the same type (see characteristics).

CHARACTERISTICS

Definition:
The X-Cid®2 is an automated pre-sterilization cleaning device.
• Ambient temperature for optimal operation: 10°C to 40°C (50°F to 104°F)
• Ambient humidity for optimal operation: 10% to 80% RH
• Atmospheric pressure for optimal operation: 500 hPa (millibars) to 1,060 hPa (millibars).

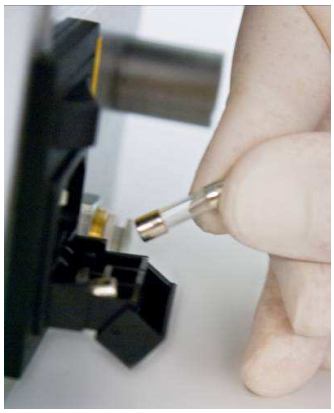
Dimensions: H=47cm /L=40cm /W=23cm

Weight: 8 kg

Electrical:
Ref.: 51100003 = 230V +/- 10% 50-60 Hz EU
Electric class: I

Power: 38 VA

Protection:
• Two 0.2 Amp slow-blow fuses (5x20 mm), Ref.: 50900014, for the 230 V X-Cid®2
• Two 0.5 Amp slow-blow fuses (5x20 mm), Ref.: 50900015, for the 100 and 110 V X-Cid®2



Electrical safety:
The device complies with the following standards:
• EN 60601-1-2 : 2007 Electromagnetic compatibility.
• EN 61010-1 : 2001 Safety requirements for electrical equipment for measurement, control and laboratory.
• EN 61010-2-040 :2005 Particular requirements for sterilisers and washer-disinfectors used to treat medical equipment.

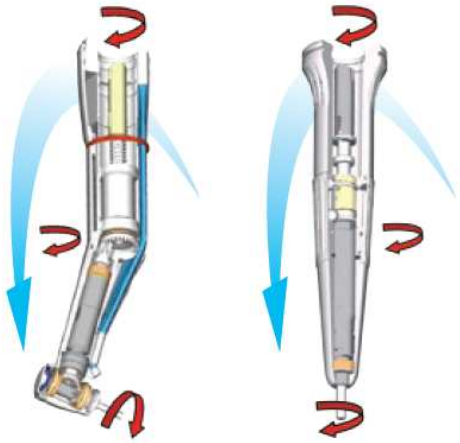
Compressed air feed:
• Feed pressure: max. = 8 bars / min. = 5 bars
• Average flow: 2 l/minute
• Air quality: 1 micron filter; residual water/oil=0.5 ppm at 25°C
• Connection: quick-connect for 4x6 tubing

Evacuation: Tube (Ø 25 mm ext.) connected directly to the waste fluid outlet **without siphon**.

Treatment fluids:
• Pre-disinfection and cleaning: X-Cidol® 2 detergent; Ref.: 50704005
• Rinsing: Demineralised water with conductivity between 0.5 and 10 µS/cm, do not use scented water.
• Lubricating: MICRO-MEGA® TSU Oil Ref.: 50700025

TREATED INSTRUMENTS

■The X-Cidol®2 detergent solution penetrates the components and structures of all commercially available handpieces, contra-angles and turbines, from the bottom to the orifice at the head.



■For the treatment of straight handpieces, fix them in a locked position in the device so that they do not rotate during the cleaning process.
Remove all instruments from the handpieces, contra-angles and turbines before cleaning so that the cleaning liquid can easily penetrate the handpieces, contra-angles and turbines.
■In case of any doubts, contact your distributor.
■It is essential to carefully examine your old handpieces, contra-angles and turbines before treating them with the X-Cid®2.
■If the contra-angle rotates in the device, or if the X-Cid®2 shows repeated motor defects, verify the contra-angle's condition and send it in for service if necessary.
■The manufacturer reserves the right to modify the construction and characteristics of the device without advance notice.

WARRANTY

■For any manipulations other than those described above, please contact the service department of your distributor.
■The X-Cid®2 is guaranteed for **24 months** following the installation date against any manufacturing defects, with the exception of damage caused by improper handling or maintenance, the use of unsuitable products or products that are not recommended by the manufacturer (detergent/disinfectant, demineralised water and oil), non-compliance with the operating instructions for the device or attempted product modification.

DISPLAYS

Indicators

Off	Power on
Steady	Malfunction
Flashing	Malfunction flashing

NORMAL OPERATION DISPLAYS

See X-Cid®2 protocol sheet, Ref.: 60300550

• Cycle underway with station 1 selected

• Cycle underway with stations 1 and 2 selected

• Cycle underway with 3 stations selected

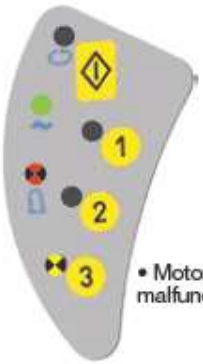
• 3 stations selected before cycle start
• End of cycle with 3 stations selected

MALFUNCTION DISPLAYS

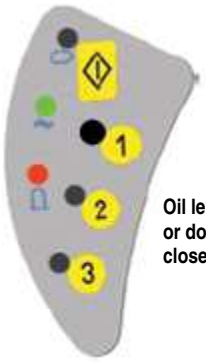
See X-Cid®2 protocol sheet, Ref.: 60300550

• Liquid not present (H2O or X-Cidol® 2)

• Air not present



• Motor malfunction



Oil level insufficient or door improperly closed

We recommend that the operator wear a surgical mask and gloves in the event the device malfunctions or the window opens.

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