



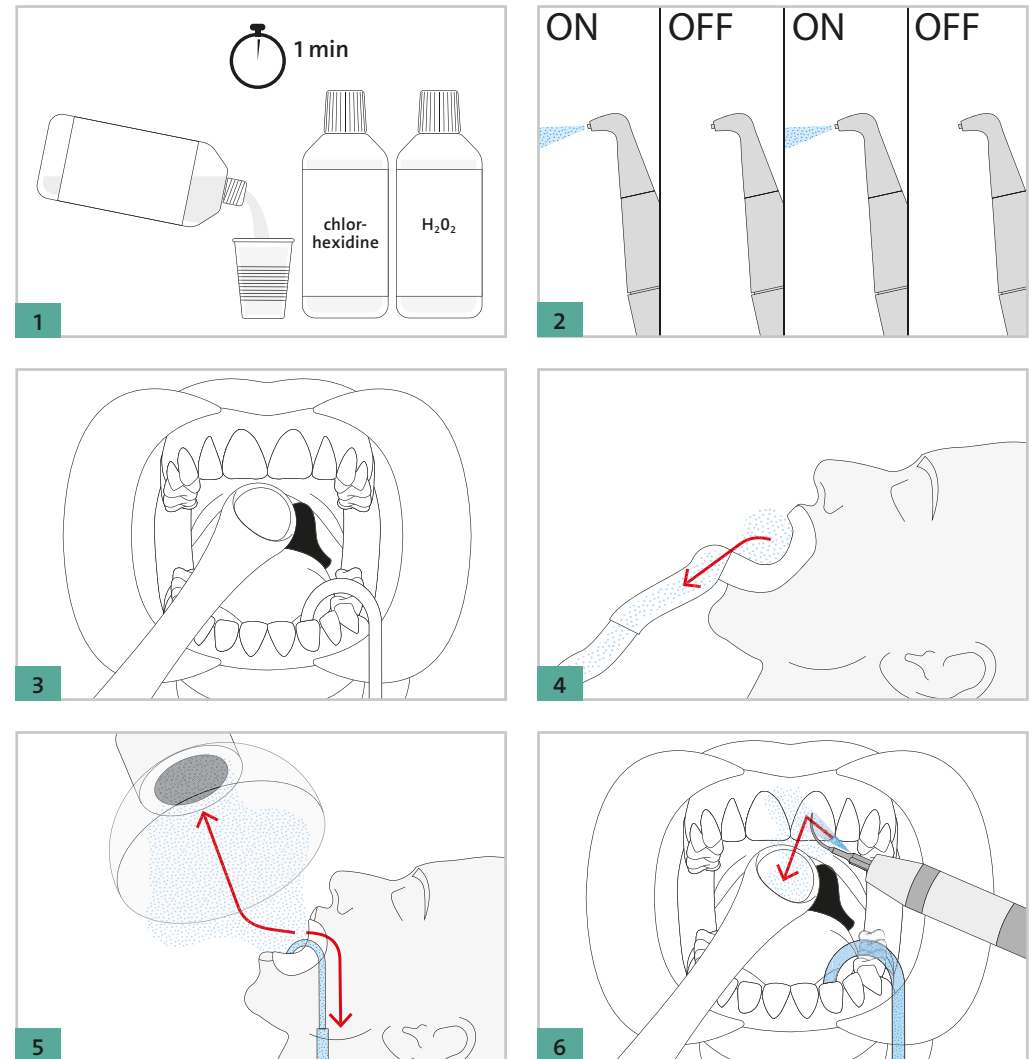
→ RECOMMENDATIONS
FOR COVID-19 PREVENTION

RECOMMENDATIONS FOR USING MECTRON PROPHYLAXIS EQUIPMENT

HOW TO MINIMIZE AEROSOL

GENERAL CONSIDERATIONS:

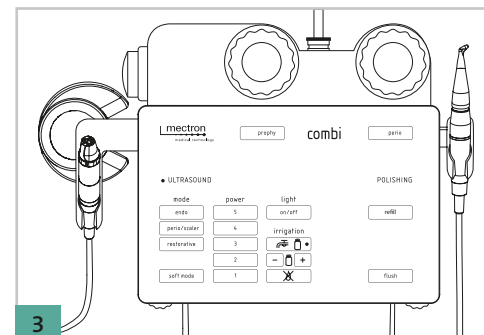
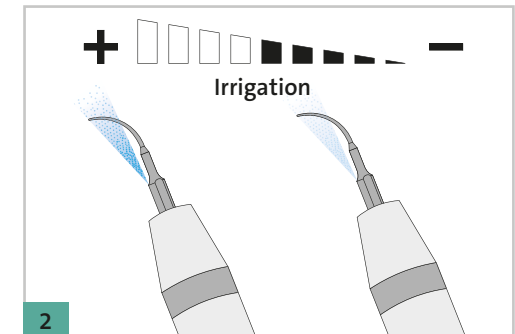
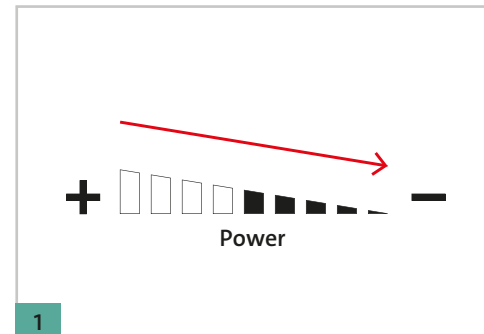
1. Before beginning the session, a pre-rinse for 1 minute with H₂O₂ 1.5% and chlorhexidine 0.20% is recommended to reduce the bioburden. This reduces the patient's bioburden by up to 70% (Fig. 1).
2. Reduce the aerosol by using the device intermittently¹: properly regulate the ratio between the vibration power and the spray of the irrigating solution (Fig. 2).
3. Use double aspiration: aspiration with standard cannula and High-Speed Aspiration (HSA) to reduce the spread of potentially contaminated aerosols in the air by up to 95% - High Volume Evacuation system² (Fig. 3).
4. It is recommended to use a labial retractor connected to an aspiration system or an extraoral suction system positioned near the oral cavity (Fig. 4+5).
5. Keep the aspiration terminals as close as possible to the treatment area to minimize aerosols (Fig. 6).



2 1The microbiota and the oral microbiome. In 2001, the concept of 'microbiome' was introduced for the first time by Joshua Lederberg. It is formed of the entirety of the genomic heritage of microorganisms and biochemical interactions with the host. (G. Oldoini, S. Cosola and A. M. Genovesi).
2 „Aerosols and splatter in dentistry“ (Stephen K. Harrel, D.D.S.; John Molinari, Ph.D.) JADA - Journal of the American Dental Association, April 2004.

→ ULTRASOUNDS:

1. For biofilm or non-calcified plaque, reduce the power and irrigation level of the ultrasound devices (Fig. 1).
2. If possible, use a device that can precisely regulate both the water supply and the range of movement of the insert in order to minimize the production of aerosol. Where possible, it's recommended to use the SOFT MODE function (Fig. 2+3).



→ DISINFECTANT LIQUIDS:

The pipes and all parts of the irrigation circuit are made of a material that is compatible with the main clinical solutions and the liquids generally used for the treatments included in the intended use of the device, such as:

- Water (distilled, demineralised, potable)
- Saline solution 0.9%
- Chlorhexidine < 0.3%
- Ethyl alcohol < 1.5%
- Citric acid < 5%
- Povidone-iodine < 12%



CAUTION: DO NOT USE the following as disinfectants:

- highly alkaline products (pH > 9)
- products containing hydrogen peroxide
- products containing abrasive substances
- products containing aldehydes, amides and/or phenols, acetone or methyl ethyl ketone.

They can dechlorinate and/or damage plastic materials.

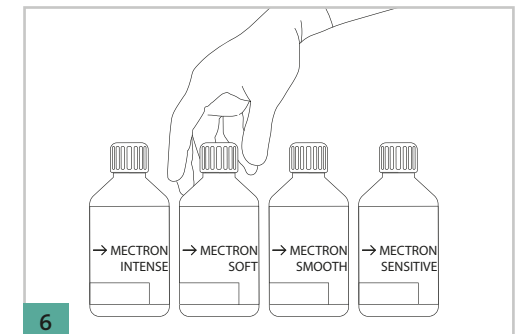
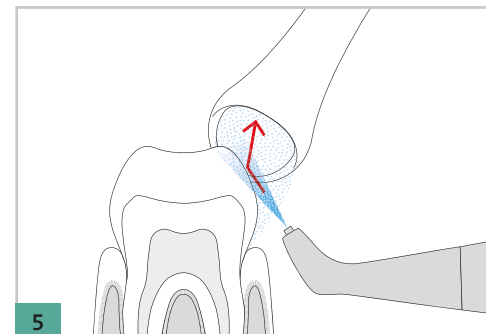
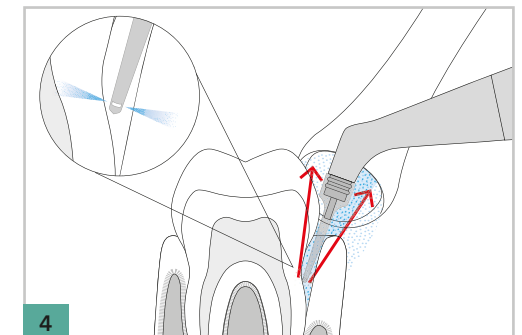
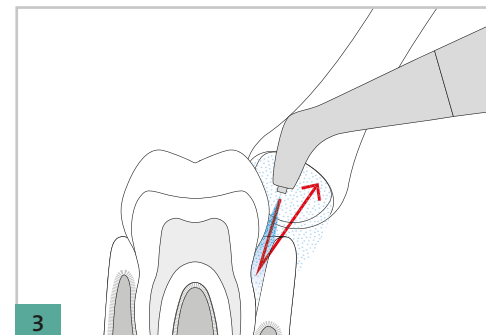
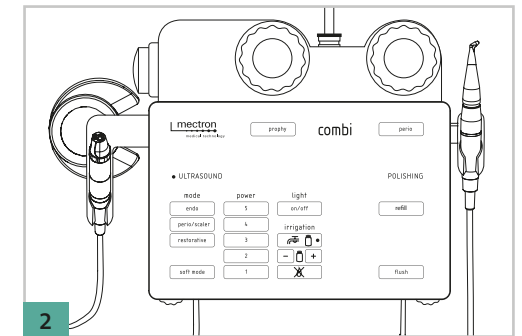
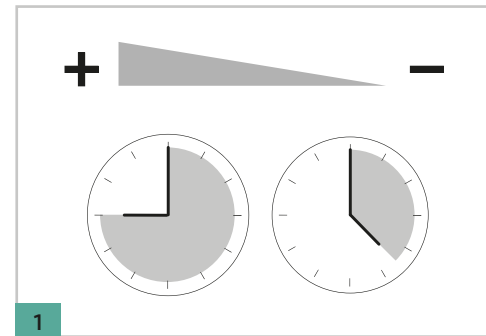
The manufacturer, Mectron, shall not be held responsible for any damage caused by clinicians' use of the aforementioned substances.

RECOMMENDATIONS FOR USING MECTRON PROPHYLAXIS EQUIPMENT

HOW TO MINIMIZE AEROSOL

AIRPOLISHING:

1. Reduce the application time as much as possible (Fig. 1).
2. Use table top devices which are able to optimally regulate the spray of water/powders/compressed air (Fig. 2).
3. When treating periodontal pockets up to 5 mm depth it's recommended to use the 120° nozzle with Glycine Powder, directing the spray inside the periodontal pocket (Fig. 3).
4. When treating periodontal pockets deeper than 5 mm it's recommended to use the PERIO nozzle with a Subgingival Perio Tip with Glycine Powder, inserting the tip into the periodontal pocket (Fig. 4).
5. In the supragingival areas, use powders containing micronised sodium bicarbonate or calcium carbonate, which are ideal for hard and soft supragingival tissues and restoration materials. These powders are capable to remove bacterial biofilms and pigmentations in a shorter application time³ (Fig. 5).
6. Choose powders suitable for the area to be treated and for the clinical need. Avoid using sprays of powders/water/compressed air for long periods of time so as to limit the amount of aerosol produced (Fig. 6).



→ USING HANDPIECES AND POSITION OF PATIENT:

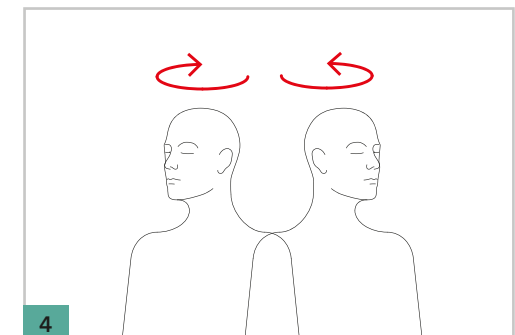
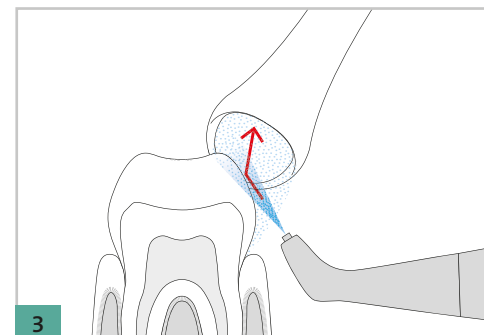
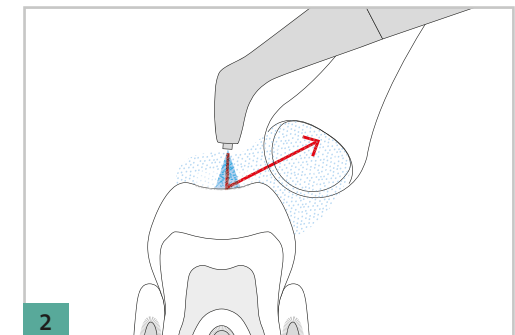
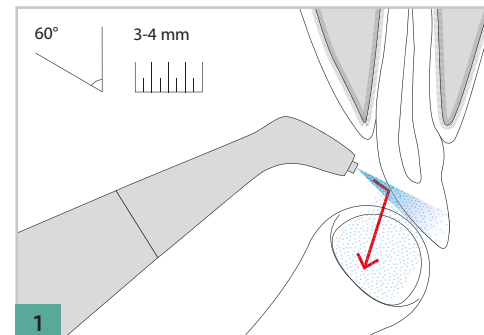
It is recommended that the handpiece be inclined as shown in the figures below to avoid any splatter and to reduce the risk of dispersion of potentially contaminated material and therefore potential infection⁴⁻⁵.

The air-polisher handpiece must be kept 3-4 mm from the tooth surface and inclined at 60° from the vestibular and lingual surfaces of the anterior teeth (Fig. 1).

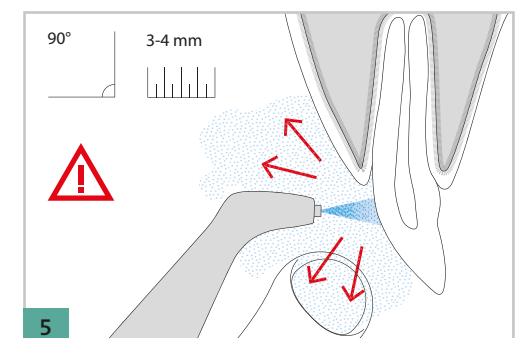
The occlusal surfaces must be treated by holding the nozzle of the air-polisher handpiece at a 90° angle from the occlusal surface (Fig. 2).

The nozzle of the air-polisher handpiece must be kept at an angle of 80° from the vestibular and lingual/palatine surfaces of the posterior teeth, while remaining 3-4 mm from the tooth surface (Fig. 3).

The patient should have their head turned all the way to the right or left, based on which side is to be treated. This positioning allows for optimal access to the areas to be treated, the retraction of the buccal mucosa or tongue and the simultaneous evacuation of aerosol spray⁶ (Fig. 4).



NOTE: Incorrect positioning of the air-polisher handpiece entail higher risk.
The incorrect angle of the handpiece nozzle may cause reflux splatter, with consequent excessive production of aerosol or may not allow for proper irrigation, with an accumulation of powder and suboptimal treatment. A 90° angle causes the powder to disperse on both sides and increases the aerosols and the risk of infection⁷ (Fig. 5).



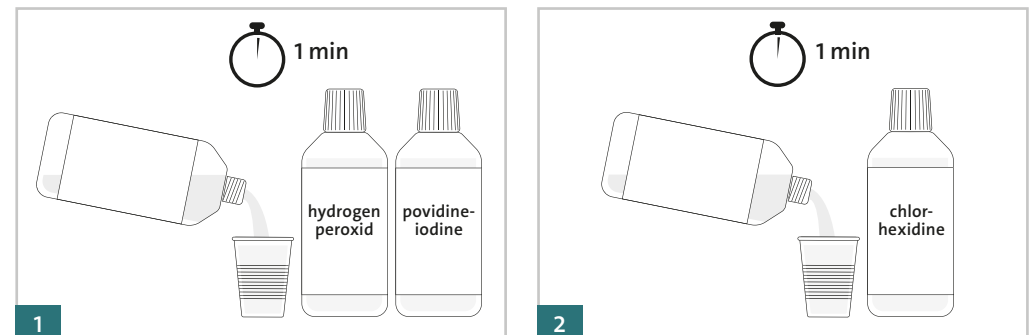
4 „Dissemination of aerosol and splatter during ultrasonic scaling: A pilot study“ (H.R. Veena, S. Mahantesha, Preethi A. Joseph, Sudhir R. Patil and Suvarna H. Patil), Journal of Infection and Public Health (2014).
5 „A Scoping Review on Bio-Aerosols in Healthcare and the Dental Environment“ (Charifa Zemouri, Hans de Soet, Wim Crielaard and Alexa Laheij) PLoS One. 22 May 2017.
6 „The Management of Aerosols with Airpolishing Delivery Systems“ (Caren M. Barnes, RDH, MS) – August 1991 – Journal of Dental Hygiene.
7 „An In-Depth Look at Air Polishing“ (Caren M. Barnes, RDH, MS) – Dimensions of Dental Hygiene (March 2010).

RECOMMENDATIONS FOR USE MECTRON PIEZOSURGERY® EQUIPMENT

HOW TO MINIMIZE AEROSOL

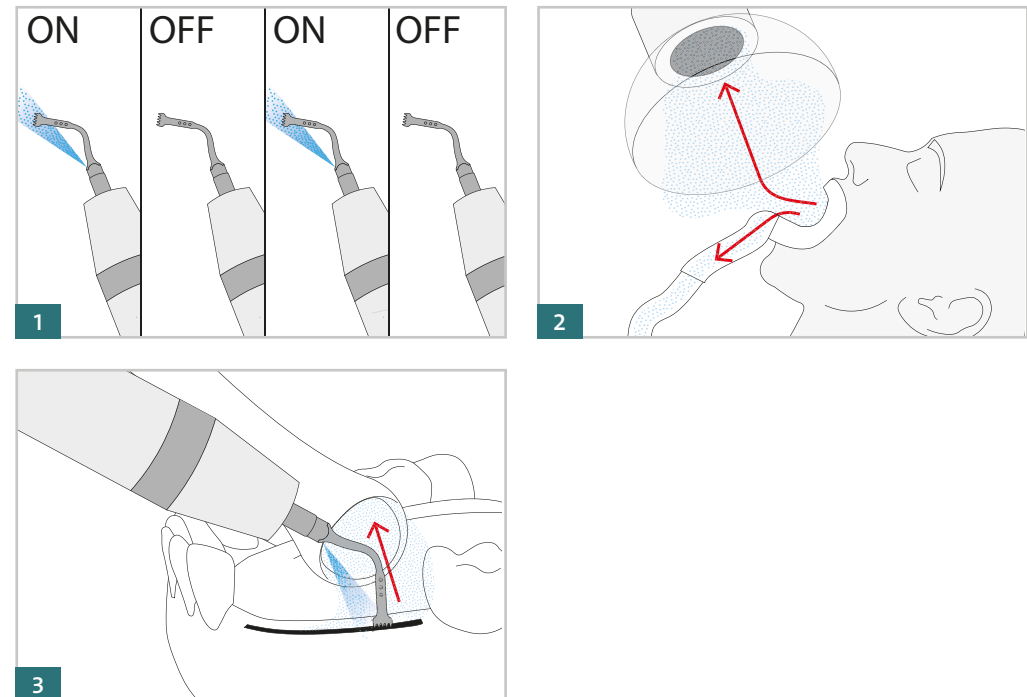
PREPARATION:

1. Rinse the patient's mouth with mouthwash containing povidone-iodine 0.2% or hydrogen peroxide 1% for 1 minute, followed by a rinse with mouthwash containing chlorhexidine 0.2% for 1 minute so as to reduce the bioburden. While rinsing, do not have them gargle, but carefully expel the mouthwash into the spittoon⁸ (Fig. 1+2).



→ USING THE DEVICE:

1. Reduce the aerosol by using the device intermittently⁹ (Fig. 1).
2. Use a retractor connected to aspiration and an extraoral suction system positioned near the oral cavity. If available use the extraoral suction system with a large protective screen, to separate the spray of the patient's exhale and the aerosol from operators (Fig. 2).
3. Use powerful aspirators that reduce the spread of contamination of the aerosol in the air by 95% - High Volume Evacuation system¹⁰ (Fig. 3).
4. Keep the aspiration as close as possible to the treatment area to reduce aerosols to a minimum (Fig. 3).
5. Limit intraoral X-rays, which could stimulate the secretion of saliva and coughing, in favour of extraoral X-rays (panoramic X-rays, CBCT).¹¹



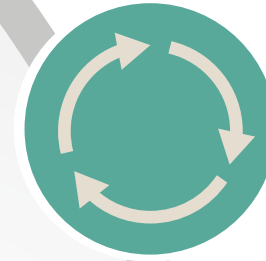
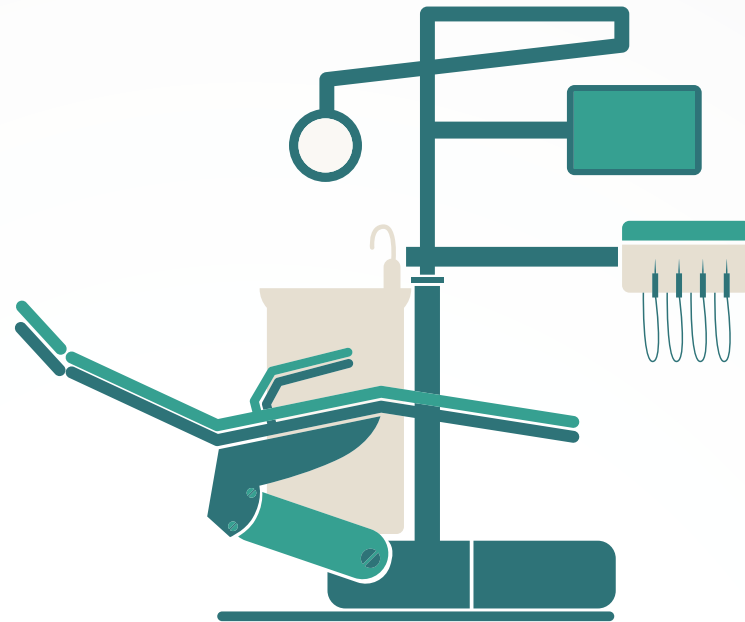
⁹ The microbiota and the oral microbiome. In 2001, the concept of 'microbiome' was introduced for the first time by Joshua Lederberg. It is formed of the entirety of the genomic heritage of microorganisms and biochemical interactions with the host. (G. Oldoini, S. Cosola and A. M. Genovesi).

¹⁰ „Aerosols and splatter in dentistry“ (Stephen K. Harrel, D.D.S.; John Molinari, Ph.D.) JADA - Journal of the American Dental Association, April 2004.

¹¹ Guy, J.L., Lambert, D.W., Warner, F.J., Hooper, N.M. & Turner, A.J. „Membrane-associated Zinc Peptidase Families: Comparing ACE and ACE2“. Biochim. Biophys. Acta. 1751, 2–8 (2005). „Transmission routes of 2019-nCov and controls in dental practice“. Peng et al. 5 International Journal of Oral Science (2020) 12: 9, Page 6.

CHOOSE THE RIGHT TOOLS!

Protect yourself and your patients. Choose from a selection of mectron products for reprocessing, protection and regular rotation of the equipment. For your convenience, they are divided into three categories.



REPROCESSING ACCESSORIES

Use material appropriate for disinfection or take single use.



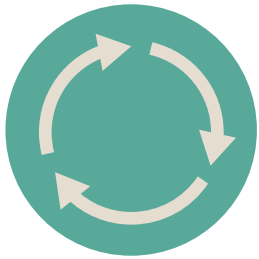
PROTECTION

Protect yourself and use protection barriers to avoid contamination of your equipment.



INSTRUMENTS

Consider a rotation of your instruments and provide a buffer stock for sterilization phases.



→ REPROCESSING ACCESSORIES



irrigation set



Enzymec



Adaptor for thermodesinfection of PIEZOSURGERY® handpieces

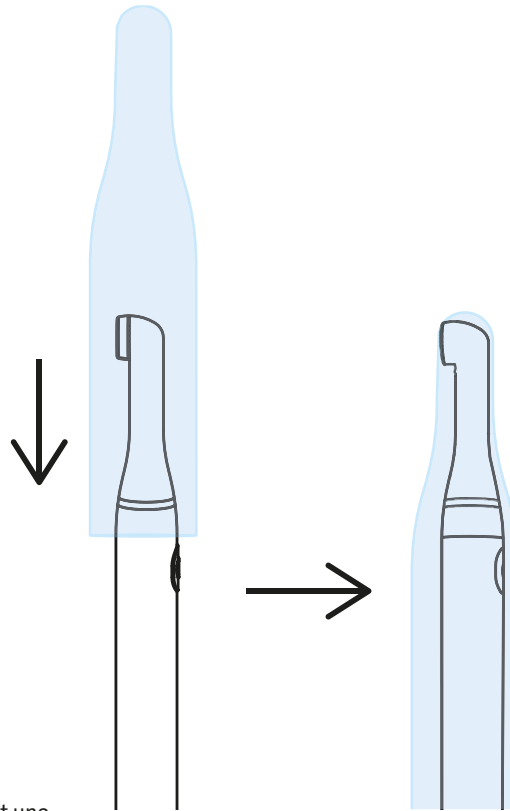


Adaptor for thermodesinfection of PIEZOSURGERY® inserts - ref. Miele

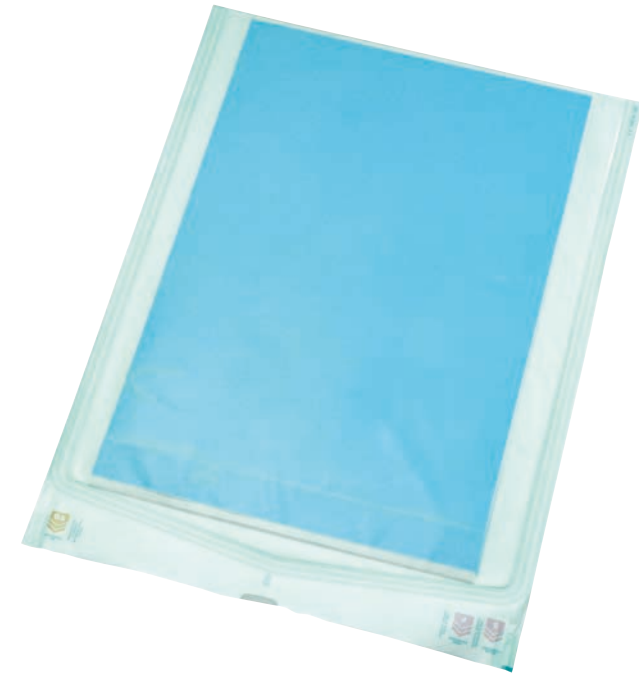
product category	description	ref. no.
●	adaptor for thermodesinfection of PIEZOSURGERY® handpieces (DPS)	04610006
●	spare filter for thermodesinfection adaptor DPS, DSC, MPS	04590006
●	adaptor for thermodesinfection of PIEZOSURGERY® inserts - ref. Miele	04610010
●	adaptor for thermodesinfection of scaling handpieces (DSC)	04610007
●	spare filter for thermodesinfection adaptor (DSC)	04590006
●	adaptor for thermodesinfection of scaling inserts	04610009
●	kit of 8 tubes for pump (PIEZOSURGERY® touch and PIEZOSURGERY® white)	02900104
●	kit of 8 tubes for pump (PIEZOSURGERY® I)	02900022
●	kit of 8 tubes for pump (PIEZOSURGERY® II + 3, for handpiece cords with metal connector)	02900039
●	kit of 8 tubes for pump (PIEZOSURGERY® II + 3, for handpiece cords with plastic connector)	02900104
●	irrigation set (50 pieces)	03230006
●	Enzymec - enzymatic solution for efficient removal of organic residues. 4-bottle pack (4 liters)	03900002



→ PROTECTION



protective sleeves for starlight uno



protection foils for PIEZOSURGERY®

product category	description	ref. no.
●	protective sleeves for starlight uno (500 pieces)	03230015
●	protection foils for PIEZOSURGERY® (pack of 10 pcs. - each in a single sterile packaging)	03230012



→ INSTRUMENTS



ultrasonic LED handpiece



PIEZOSURGERY® LED handpiece



spray head PERIO
for combi touch

product category	description	ref. no.
●	PIEZOSURGERY® LED-handpiece complete with cord (PS touch and PS white)	03120134
●	PIEZOSURGERY® handpiece complete with cord	03120217 (for PIEZOSURGERY® white) 03120023 (for PIEZOSURGERY® I, II et 3)
●	ultrasonic LED handpiece	03120142 (Multipiezo and Compact Piezo LED) 03120224 (Combi touch)
●	ultrasonic handpiece (grey)	03120016 (Micropiezo, Compact Piezo, Combi)
●	spray head 90° for combi touch	03340007
●	spray head 120° for combi touch	03340008
●	spray head PERIO for combi touch	03340009
●	spray head 90° for starjet	03340015
●	spray head 120° for starjet	03340014
●	spray head PERIO for starjet	03340013
●	subgingival perio tip (40 pieces)	02900120
●	dynamometric torque wrench SafeKey K10	02900137-001
●	black optical fiber with metal click-clack connection Ø 8 mm	02900086

mectron s.p.a.,
via Loreto 15/A, 16042 Carasco (Ge), Italy,
tel +39 0185 35361, fax +39 0185 351374

 www.mectron.com or mectron@mectron.com

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