



English

Fully Swiss-manufactured devices.

Type
Brushless electric micromotor, The most commonly used coupling in the world as per ISO Standard 3964 with internal spray and light with bulb and switch integral with the motor. Sterilizable motor. Body of chromium and nickel-plated brass. Stainless steel nose. Brushless type, 3-phase. Effective power according to the type of electronic power supply used. Synchronous motor with permanent magnets. USA Caution: Federal law restricts this device to sale by or on the order of a dentist.

Planned use

Product intended for professional use only. Use in dentistry for prophylaxis, general dentistry and endodontics work.

Technical data and assembly

Classification
Class IIa in accordance with European Directive 93/42/EC concerning medical devices.

Junction fig. 1
Tube supply 4VX or B4VX type.

Important
Never connect an instrument with a micromotor that is running.

Safety
According to IEC 60601-1 standard (General safety for Medical Electrical Equipment), the device shall be classified as a class II type BF device. Associated terminology is defined in section 2.1.7 & 2.2.5 of the same document. The following regulations as specified in IEC 60601-1 must be observed:
• "Protection against electrical shock"
• "Ingress of liquids"
• "Protection against excessive temperatures and other safety hazard"

Rphase 1.2 Ohm (included 4VX resistance).

Lphase 120 µH

Torque constant
8.18 mNm/A rms

Back emf constant
6.67 mV/(rad/s).

Permanent 2.5 A rms

I max.
4.2 A rms [10s]

Cooling
Via compressed air from the unit. Place the flowmeter on the connector and set 10 noml/min. **fig. 1.**

Air consumption output
10 NL/min (+/-10%).

Dimensions
Ø 21.2 x 100.5 mm (0.83 x 3.95 in) including the nose attachment.

Coupling
Nose in accordance with ISO 3964, with internal spray and light.

Weight
115 g (4.05 oz) without the cable.

Operating times
According to the type of electronics used.

Noise level
In accordance with ISO 11498, less than 53 dBA at 45 cm (17.72 in).

Recommended rotation speed
Max. 40.000 rpm.

Direction of rotation
clockwise and anticlockwise.

Torque
According to the type of electronics used.

Changing the bulb fig. 3
Box of 5 bulbs. Wear rubber gloves when carrying out this changing operation.

Changing the seals fig. 4

Maintenance

The instrument is delivered "non sterile". Before first use, lubricate and sterilize the instrument. Please comply with these instructions.

- ⚠ Important**
- After each surgical intervention, the instrument should be cleaned, disinfected and lubricated **as soon as possible (within max. 2 hours)**, then sterilized. Observing this procedure eliminates any blood, saliva or saline solution residues and prevents the transmission system from being blocked.
 - Only instruments **bearing a pictogram can be placed in the washer/disinfectant unit.**
 - Do not immerse in an ultrasonic bath.
 - The sleeves and clipped tubes follow the same procedure as the instrument.

- ⚠ Detergent**
- Use a PH-neutral to alkaline (max. pH11), enzyme-based detergent specifically designed for the cleaning and disinfection of dental instruments.
 - Do not use detergents which are corrosive or which contain chlorine, acetone or Javel water.

Only use maintenance products and components from Bien-Air. The use of other products and components can lead to annulment of the guarantee.

Check that the sterilizer and the water that is used are clean. After each sterilization cycle, remove the device from the sterilizing apparatus immediately, in order to reduce the risk of corrosion.

⚠In the event of prolonged disuse, the instrument must be stored in a dry environment. Lubricate and sterilize the instrument before reuse.

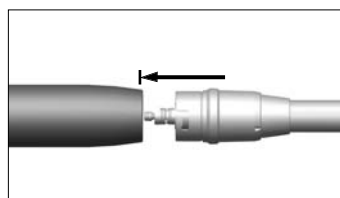


fig. 1a

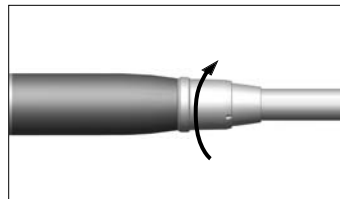


fig. 1b

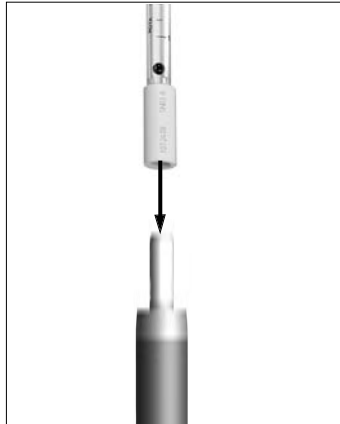


fig. 2

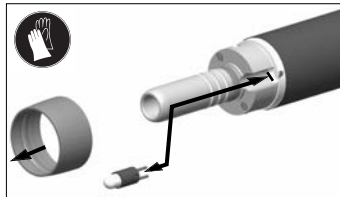


fig. 3

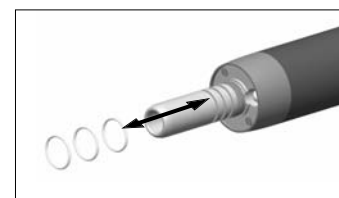


fig. 4

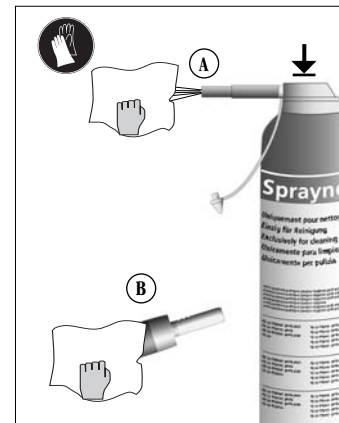


fig. 5

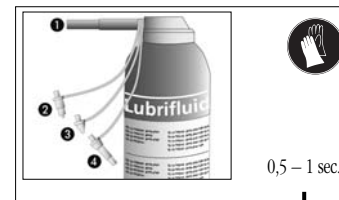


fig. 5

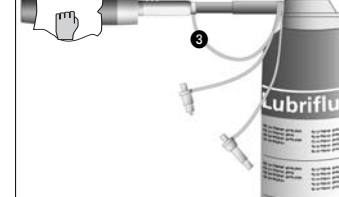


fig. 6

1 Pre-disinfection (at place of operation)

Preparation

- Disconnect the micromotor from the cable (**fig. 1a**)
- Perform manual pre-cleaning or pre-cleaning in a bath.

Manual pre-cleaning
Use the **Spraynet** cleaning product from Bien-Air.

- Spray the exterior of the instrument (**fig. 5**) to remove residue and carefully clean all surfaces with a cloth impregnated with Spraynet.
- Wipe down the external surfaces with an absorbent paper towel.
- Perform a manual or automatic cleaning-disinfection process.

Pre-cleaning by bath

⚠ Attention : Pre-cleaning by bath **must be followed** by automatic cleaning-disinfection.

- Immerse the instrument completely in a cleaning bath containing a sufficient amount of detergent.
- As it leaves the bath, rinse the interior and exterior of the instrument under cold running water.
- Dry the interior and exterior of the instrument to remove all traces of detergent and rinsing water immediately to prevent any adverse impact on the internal components, e.g. which might cause them to seize.
- Perform an automatic cleaning-disinfection process.

2 Cleaning-disinfection

Manual cleaning-disinfection
Cleaning and disinfection:
Clean and disinfect the exterior of the instrument with a suitable detergent.
Rinsing: Rinse the exterior of the instrument under cold running water.
Drying : Spray the exterior of the instrument with **Spraynet** product (**fig. 5**) immediately to remove all traces of detergent and rinsing water to prevent any adverse impact on the internal components, e.g. which might cause them to seize.

Automatic cleaning-disinfection

⚠ Note : only for engraved instruments **Ⓜ**
Cleaner - disinfectant:
Use an approved cleaner-disinfectant with a suitable amount and type of detergent.
Washing cycle: Select the specified washing cycle for these instruments which should be compatible with the detergent manufacturer's instructions
Temperatures recommended for these instruments:
Water: cold to max 95°C (203°F) Air : Max. ambient temperature of 100°C (212°F)

with picto
without picto

	with picto	without picto
Preparation		
Manual pre-cleaning	Yes	Yes
Pre-cleaning by bath	Yes	No
Manual cleaning-disinfection	Yes	Yes
Automatic cleaning-disinfection	Yes	No

3 Lubrication and conditioning process

Check for cleanliness

Visually inspect the cleanliness of the instrument, the sleeve and the clipped tube (if fitted).

Lubrication

- Use **Lubrifiuid** lubricant spray from Bien-Air.
- Place the instrument in a cloth to collect all surplus lubricant.
 - Insert the plastic nozzle ③ of the Lubrifiuid fully into the nose of the motor (fig. 6).
 - Operate the spray for 1 second.

Conditioning process

Immediately wrap the instrument in approved packaging for steam sterilization.

4 Sterilization

Procedure : With steam after fractioned initial vacuum phase acc. to EN285 or with Class B cycle acc. to EN13060.

Nominal temperature : 134°C (273°F)

Duration : From 3 to 18 minutes depending on local directives in force.

Overhaul

Never disassemble the device. For all modifications and repairs, we recommend that you contact your regular supplier or Bien-Air direct. Bien-Air asks the user to have its dynamic instruments checked or inspected at least once a year thereafter.

Environment

Temperature between -40°C (-40°F) and 70°C (158°F), relative humidity between 10% and 100%, atmospheric pressure 50 kPa to 106 kPa (7.3 to 15.3 psi).

Sterilization in USA

Process: Steam autoclave up to 134°C (273°F) for 12 minutes. The required time for sterilization of our products must comply with the prevailing local regulations for this type of instrument.

Information

The technical specifications, illustrations and dimensions contained in these instructions are given only as a guide. They may not be the subject of any claim. The manufacturer reserves the right to make technical improvements to its equipment, without amending these instructions. The French original of this text conforms to the legal standards. For all additional information, please contact Bien-Air at the address indicated on the back cover.

General information


The device must be used by a competent person in accordance with the current legal provisions concerning industrial safety, health and accident prevention regulations, and these working instructions. In accordance with these requirements, the operators:

- must only use operating devices that are in perfect working order; in the event of irregular functioning, excessive vibration, abnormal heating or other signs indicating malfunction of the device, the work must be stopped immediately; in this case, contact a repair centre that is approved by Bien-Air;
- must ensure that the device is used only for the purpose for which it is intended, must protect themselves, their patients and third parties from any danger, and must avoid contamination through the use of the product.

The device is intended for medical treatment only; any use other than that for which this product is intended is unauthorised and may be dangerous. The medical device meets all the current European legal requirements.

The device is not authorised for use in an explosive atmosphere (anaesthetic gas).

Rest the device on a suitable support to avoid risks of infection for yourself, the patient or third parties.

 This equipment needs to be recycled. The user must return the equipment to its dealer or

establish direct contact with an approved body for treatment and recycling of this type of equipment (European Directive 2002/96/EC).

Guarantee

Terms of guarantee

Bien-Air grants the operator a guarantee covering all functional defects, material or production faults. The device is covered by this guarantee for 24 months from the date of invoicing.

In the event of justified claims, Bien-Air or its authorised representative will fulfil the company's obligations under this guarantee by repairing or replacing the product free of charge. Any other claims, of whatever nature, in particular in the form of a claim for damages and interest, are excluded.

Bien-Air shall not be held responsible for damage or injury and the consequences thereof, resulting from:

- excessive wear and tear
- improper use
- non-observance of the instructions for installation, operation and maintenance
- unusual chemical, electrical or electrolytic influences
- poor connections, whether of the air, water or electricity supply.

The guarantee does not cover flexible "fibre optic" type conductors, or any parts made of synthetic materials.

The guarantee shall become null and void if the damage and its consequences are due to improper manipulation of the product, or modifications to the product carried out by persons not authorised by Bien-Air.

Claims under the terms of the guarantee will be considered only on presentation, together with the product, of the invoice or the consignment note, on which the date of purchase, the product reference and the Serial No. should be clearly indicated.








REF	Legend
1600375-001	Electric micromotor MX, with internal spray and light
1600387-001	4VX hose, grey silicone, with revolving 4-hole connector
1600428-001	B4VX hose, grey silicone, with revolving 4-hole connector, bayonet connection to unit
1300967-010	Attachment 'O' Rings for micromotors MX
1300922-001	Outer Sleeve for micromotor MX
1500007-005	Pack of 5 bulbs, for micromotors MX
1600307-001	Flow-meter for micromotor MX
1600036-006	Spraynet, cleaning spray 500 ml, box of 6 cans
1600064-006	Lubrifiuid, lubricant 500 ml, box of 6 cans

List of Bien-Air registered trade mark products ®:

Aquilon® Eolia® Isolite® MX®
Bora® Gyro® Lubrifiuid® Prestilina®
Boralina® Gyrolina® Lubrimed® Spraynet®

In these instructions, "Device" corresponds to the product described in the heading "Type". For example, turbine, contra-angle, handpiece, micromotor, tube, electronics, connectors, station etc.

Symbols

-  Attention
-  Wear rubber gloves
-  Recyclable electrical and electronic material
-  In Thermal washer
-  CE Marking with number of the notified body
-  Movement in the direction indicated
-  Movement fully to the stop, in the direction indicated

This product may be covered by one or more of the following patents:

EP Europe: 0 497 139 / 0 526 783 / 0 745 358 / 0 688 539 / 0 894 879 / 1 145 688 / 1 109 301 **DE Germany:** 296 16 023.7

DK Denmark: 96 00315 **FR France:** 2 679 804 / 2 722 972 / 2 733 680 / 2 692 621 / 2 720 263 / 2 757 763 / 2 766 697 / 2 781 318

CH Switzerland: 693 922 **CN China:** 129343 **JP Japan:** 2 037 611 / 1 991 770 **US United-States:** 5.059.122 / 4.773.856 / 6.033.220 / 6.337.554 / 5.453.008 / 6.319.003 / 6.495.937

REF 1600375-001 MOT MX

Set supplied



MX
REF 16000375-001

Optional accessories



REF 1300967-010



REF 1300922-001



REF 1500007-005



REF 1600307-001



REF 1600036-006



REF 1600064-006

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