Precision Performance

Lares Research
Perceptive Motor **RX Only**

REF 13187

Lares Research
295 Lockheed Ave
Chico, CA 95973

Device Specifications

⚠ **Caution: This device is not designed for use in an explosive atmosphere (anesthetic gas).**

Identification:
Brushless electric sterilizable micromotor. Handpiece attachment per ISO 3964 with internal sprays and LED lighting.

Intended Use:
Product intended for professional use only. Use in dentistry for general dentistry work. Any use other than that for which this device is intended is prohibited and may prove dangerous.

Classification:
Class IIa in accordance with European Medical Device Regulation. This medical device is in compliance with the legislation in force.

Electrical Safety:
According to IEC 60601-1 standard (General safety for medical Electrical Equipment), The device shall be classified as a class II type B device.

The following requirements as specified in IEC 60601-1 apply:
• Protection against electrical shock
• Ingress of liquids
• Protection against excessive temperatures and other safety hazards.

Electromagnetic Compatibility:
Corresponds to the electromagnetic compatibility in accordance with IEC 60601-2 and IEC 80601-2-60.

Motor Type:
Brushless type, 3 phase motor, synchronous with permanent magnets.

Cooling:
Cooling is conducted through compressed air from the unit. To ensure that your Contra-angle/micro motor unit functions with maximum efficiency, it must be cooled by an air supply of 8-10 standard liters per minute on the nose of the micro-motor.

Air consumption:
Less than 40 NI/MIN

Dimensions:
22 X 71.7 mm (0.87 X 2.82 inches) including the nose attachment.

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

Weight:
70.1g (2.47 oz.) without the cable.

Noise Level:
In accordance with ISO 14457, less than 53 dBA at 45 cm (17.72 inches).

Motor Rotation Speed:
From 1000 rpm to a maximum 40,000 rpm.

Motor Direction:
Clockwise and anti-clockwise.

Device Maintenance

⚠ **Caution**
• The motor is delivered “non-sterile”.
• Before using for the first time and within a maximum of 30 minutes after each treatment, clean, then sterilize the motor. Observing this procedure eliminates any blood, saliva or saline solution residues and prevents the transmission system from being blocked.
• Do not clean in a washer/disinfectant unit.
• Do not immerse in an ultra-sonic bath or any other solutions.
• Use only Lares Research provided maintenance products and parts or those recommended by Lares Research. Using other products or parts may cause operational failure and/or void the warranty.
• Do not spray any lubricant or cleaning solution into the motor.
• Wearing of personal protective equipment (gloves, goggles etc.), should be complied with by medical personnel using or performing maintenance of medical devices that are contaminated or potentially contaminated.
• Pointed and sharp instruments should be handled with great caution.
• In the event of prolonged disuse, the motor must be stored in a dry environment. Clean and sterilize the motor before reuse.
• Check that the sterilizer and the water that is used are clean. After each sterilization cycle, remove the device from the sterilizing apparatus immediately to reduce the risk of corrosion.

Clean the motor exterior:
We recommend that the motor is cleaned, disinfected, and sterilized as directed below before the initial first use and subsequently after each treatment.

The Perceptive Motor is maintenance free and does not require lubrication.

1. Remove the motor from the hose and hold the motor by the nose under warm running water 40˚C ± 5˚C (104˚F ± 10˚F).
2. With the aid of a soft brush, clean the external surface of the motor (figure 1). Avoid allowing water to enter internally into the motor either by the nose or the connector.
3. Wipe the handpiece with disinfectant wipe.
4. Dry the motor with a soft towel.
5. Visually check the cleanliness of the motor. If required, re-clean with a soft brush.

NOTE: Lares Research recommends the following disinfectant CaviWipes® (manufactured by Metrex). After cleaning, if the moisture is present, wipe off with dry cloth or blow it off with compressed air until there is no moisture in the interior and exterior. When blowing off with compressed air, cover the handpiece with cloth to prevent scattering of water.

Sterilization:
⚠ **Caution**
• The quality of the sterilization depends very much on the cleanliness of the device. Only perfectly clean devices may be sterilized.
• Do not use a sterilization procedure other than the one described below.

1. Install protective motor caps prior to sterilization. Figure 2
2. Insert the motor into an autoclave bag, one motor per bag.
3. Lares Research has validated a gravity type steam autoclave cycle of 132˚C (270˚F) for 15 minutes with a drying time of 30 minutes.

NOTE: Temperature should not exceed 275˚F (135˚C). Follow autoclave manufacturer’s instructions.

4. After autoclave cycle is completed, remove instrument immediately and allow to dry. Remove protective caps. Allow to cool down 30 minutes prior to handling.

Device Operation

⚠ **Caution**
• Never mount an instrument on a rotating motor.
• It is essential to use dry, purified compressed air to ensure the long working life of the device. Maintain the quality of the air and water by regular maintenance of the compressor and filtration systems. The use of unfiltered hard water will lead to early blockage of the tubes, connectors, and spray ports.

Operating Environment:
Temperature: +10 °C (50°F) to +25°C (77°F).
Relative Humidity: 20% and 90%.
Atmospheric pressure: 700 hPa to 1060 hPa. Altitude: 0 to 3048m (0 to 10,000 ft).

1. Connect the Perceptive motor to the end of the control tubing; align the connector pins on the motor with the holes on the tubing, tighten clockwise. (Figures 3 and 4)
2. See Perceptive Motor Control Instructions for operating the motor.

General Precautions

⚠ **Other precautions for use**
• Excess material from products used for maintenance (lubricants, cleaning products and disinfectants) originating from the motor may penetrate the electric motor and interfere with its functioning. It is essential to follow the maintenance instructions accompanying each product. Never lubricate the electric motor.
• The device must be used by a qualified person in accordance with the current legal provisions concerning industrial safety, health and accident prevention measures, 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 Lares Research.
- 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.
- must rest the device on a suitable support to avoid risks of infection for yourself, the patient or third parties.

• The device must not be used in the presence of open lesions, injury to soft tissue or recent extractions. The exhaust air could propel infected material into the wounds and cause infections and risk embolism.
• The device is intended for medical treatment only; any use other than that for which this product is intended is unauthorized and may be dangerous. The medical device meets all the current legal requirements.

Warranty and Service

Servicing:
O-rings should be changed when they are damaged or the motor is leaking (figure 5 and 6).
Never disassemble the device. For any modification or repair, we recommend that you contact your account manager directly. Lares Research asks that you have the device checked or inspected every 300 sterilization cycles or once per year.

Information:
The technical specifications, illustration 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. For all additional information, please contact Lares Research directly at 1-888-333-8440.

Warranty:
Each Lares Perceptive Motor is warranted against defects in materials and workmanship for a period of 2 years from the date of purchase.

Additional Conditions of Warranty:
• Warranty registration is automatic as of shipping date (Outside the US warranty registration may be required).
• The motor must be operated and maintained in accordance with procedures outlined in these instructions.
• The motor must not be subjected to abuse or neglect.

• The motor must not be repaired or disassembled by anyone other than Lares Research or your authorized Lares distributor.

Lares Research will repair or replace, at its discretion without charge, any defective parts covered by this warranty provided the Perceptive motor is returned to the factory, transportation prepaid. (Outside the US return to your authorized Lares distributor.) Lares Research makes no other warranties expressed or implied.

Transportation, Storage & Disposal

Transport and storage conditions:
Temperature between-25˚C (-13˚F) and 70˚C (158˚F), relative humidity between 20% and 80%, atmospheric pressure 500 hPa to 1060 hPa (7.25 to 15.37 psi).

Disposal:
This device must be recycled. Electrical and electronic equipment may contain dangerous substances which constitute health and environmental hazards. The user must return the device to an approved body for treatment and recovery of this type of equipment (European Directive 2002/96/EC).

Replacement Parts

13191 - Replacement Sterilization Caps (2 pcs.) *Figure 2*

13506 - Replacement O-Rings, Motor Nose Cone (3 pcs.) *Figure 5*

13507 - Replacement Hose Nut O-Ring *Figure 6*

Questions?
Call 1-888-333-8440, Ext. 1
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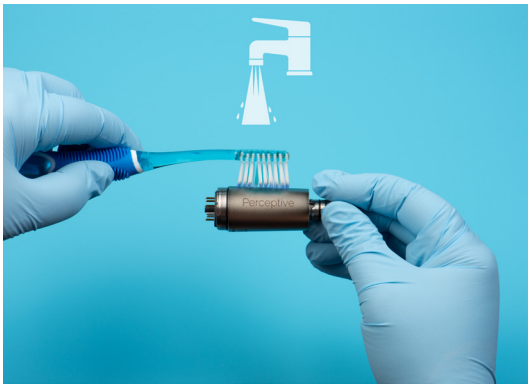

Figure 1

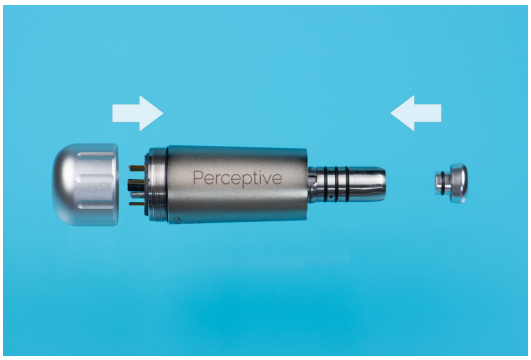

Figure 2

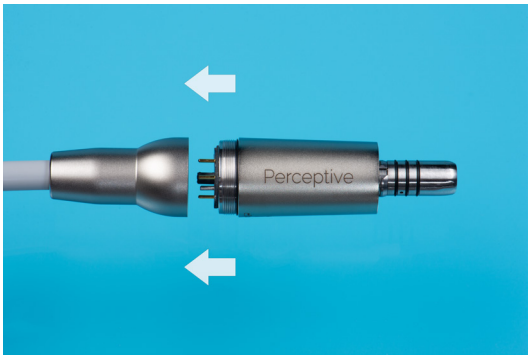

Figure 3

Figure 4

Figure 5

Figure 6