

# Airtraq Avant

## VIDEO LARYNGOSCOPE

US Patent No. 6,843,769

### OPTICS

#### INSTRUCTIONS FOR USE

ENGLISH

#### DESCRIPTION

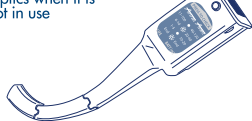
The Airtraq Avant is a video laryngoscope designed to facilitate intubation. It allows full visualization of the airway, during 100% of the intubation. It does not require hyper extension of the neck and permits intubating patients in virtually any position. Visualization can be performed directly through the eyecup or connecting it to any Endo Cam or to the accessories offered by the manufacturer.

#### COMPONENTS

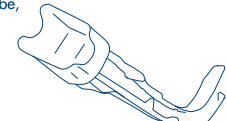
Airtraq Avant comprises 3 elements that have to be assembled by the user every time an intubation is to be performed:

**The Optics:** A **REUSABLE** piece that contains the optical, the anti-fog and the electronic systems and that is articulated to facilitate its insertion into the blade; the Optics element only works when it is fully inserted into a Blade.

A storage case for the Optics is provided with each unit. It protects the Optics when it is not in use



**The Blade:** A **DISPOSABLE** rigid piece of plastic, anatomically shaped, that consists of two side by side channels. One channel, which terminates in a distal lens, for insertion of the Optics and the other channel, open at its distal end, acts as a guide for the endotracheal tube,



**The Eyecup:** A **DISPOSABLE** piece that is assembled on top of the blade and provides direct connection to most Endo Cams.



Additionally the Airtraq Avant system includes a Docking Station that recharges the battery of the Optics and displays its remaining service life. In case the Optics become damaged the LCD will show an error code. Detailed Instructions for Use of the Docking Station are provided in its corresponding package. No service of the Docking Station is required.

#### OPTICS SERVICE LIFE

Airtraq Avant Optics Service Life is defined by the manufacturer as the Number of Times that the Optics are functional. It is equal to 100 uses. Once the Service Life is finished the Optics should be discarded by the user.

Service Life starts the first time the user turns on the Optics. Each time the Optics is turned on and the lens warning period has finished counts as one use.

The number of uses remaining is displayed in the Docking Station when

the Optics is inserted into it. The Optics also includes a light indicator that provides information about Service Life available:

- A steady green light means that there are between 11 and 100 uses remaining,
- A blinking green light means that there are between 6 and 10 uses remaining,
- A steady orange light means that there are between 1 and 5 uses remaining,
- A blinking orange light means that the service life is finished,

Blades and Eyecup shelf life is limited to the expiration date.

#### OPERATING, STORAGE AND TRANSPORT

The Optics should not be used, stored or transported at temperatures below -5°C/23°F or over 55°C/131°F. The relative humidity must not exceed 95%. The air pressure must not exceed 500 to 1060 hPa.

In order to protect the Optics, when not in use, insert it into its storage case.

#### BATTERY CHARACTERISTICS

Each Optics is equipped with a rechargeable battery that provides a voltage of 3.7 volts and powers the LED light and the anti-fog system.

The Optics are packed with the battery already assembled. Remove the plastic tab off the battery box before first use. **THE OPTICS DOES NOT WORK WHEN IT IS BEING CHARGED. IT SHOULD BE CHARGED AT LEAST 1.8 M AWAY FROM THE PATIENT.**

The battery is supplied discharge. It is recommended to perform a full charge/discharge cycle of the battery before starting to use the Optics for Clinical purposes.

When the battery is fully charged the Optics can be used for approximately 20 intubations. The manufacturer recommends recharging the Optics battery using the Docking Station after each intubation. A full recharge cycle of the battery will take 2 hours. The period of time to discharge, without use, a fully charged battery is over 30 days.

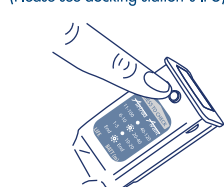
When the Optics is inserted into the Docking Station it displays the battery charge status. The Optics also includes a light indicator that provides battery charge information.

- A steady green light means that the remaining time of use is between 40 and 120 minutes,
- A blinking green light means that the remaining time of use is between 20 and 40 minutes,
- A steady orange light means that the remaining time of use is between 10 and 20 minutes,
- A blinking orange light means that the remaining time of use is below 10 minutes. In this case, the Optics will not turn on.

In order to avoid undesired discharge of the battery, Optics is automatically turned off when it is inside a blade, for more than 30 minutes. Three minutes before turning off, the light will flash every 10 seconds.

#### BATTERY AND SERVICE LIFE CHECK

The user can check battery and service life by pressing the CHECK button in the battery cover or placing the optics into its docking station. (Please see docking station's IFU).



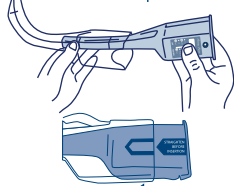
#### BLADE SIZES

Regular: A-511. Size 3  
For use with ETT 7.0 - 8.5. Minimum patient mouth opening: 17 mm  
Small: A-521. Size 2  
For use with ETT 6.0 - 7.5. Minimum patient mouth opening: 17 mm

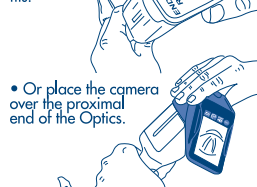
#### INTUBATION TECHNIQUE WITH AIRTRAQ AVANT

##### I. OPTICS, BLADE AND EYECUP ASSEMBLY

- Check Optics battery status and service life available in the Docking Station or by pressing the Check Button.
- Select the appropriate blade size based on the size ETT to be used.
- Straighten the curved portion of the Optics and align the orange indicators on the Optics and on the Blade.
- Insert the Optics into the blade fully, until it clicks into position.



- Place eyecup over the proximal end of the Optics. There is only one position in which it fits.



- Or place the camera over the proximal end of the Optics.

- Upon inserting the blade, the light will automatically start blinking for approximately 35 seconds until the anti-fog warms the lens of the blade. Once the device is ready for intubation the light will become steady.

##### II. PREPARATION

- Lubricate the ETT and place it into the lateral channel of the blade without contacting blade's lens.
- Align the tip of the ETT with the end of the lateral channel.

##### III. AIRTRAQ AVANT PLACEMENT INTO THE AIRWAY (Fig. 1)

- Insert the Airtraq Avant into the midline of the patient's mouth. Take special care to avoid pushing the tongue inside the oropharynx.
- Before it reaches the vertical plane, begin looking to identify airway structures.
- Continue insertion until the epiglottis is identified. Place the tip of the blade in the vallecula. Alternatively, the blade can be placed under the epiglottis, lifting it out of the way.

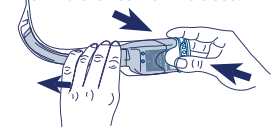
##### IV. ETT INSERTION AND AIRTRAQ AVANT REMOVAL FROM PATIENT'S AIRWAY (Fig. 283)

- **Align the vocal cords in the center of the visual field** by gently moving the tip of the blade as needed.
- Gently advance the ETT in the lateral channel. If needed rotate ETT inside the channel. Check insertion depth.
- Inflate the ETT cuff as normal and check for proper positioning.

- Separate the ETT from the Airtraq Avant by pulling it laterally from the ETT, while holding the ETT in position.
- Remove the Airtraq Avant from the patient's airway following the midline.

##### V. DISASSEMBLY OF AIRTRAQ AVANT

- Separate the Airtraq Avant Optics from the Blade by firmly gripping both lateral sides of the eyecup and pulling apart. Make sure the Optics do not become in contact with any potentially contaminated surface.
- The Optics automatically turns off when it is taken out from the blade.



- Discard the disposable blade and eyecup, as any other potentially contaminated waste following local governing ordinances and recycling plans regarding disposal or recycling.
- If needed, place the Optics back onto the Docking Station to recharge the battery.

#### USAGE TIPS

1. Initial experience should be gained in non-difficult airways.
2. Insert the Airtraq Avant, avoiding the tongue, and slide it softly and slowly.
3. Keep the Airtraq Avant in the mouth's midline.
4. Look before the Airtraq Avant gets to the vertical plane.
5. Do not insert too deep. If structures (arytenoids, epiglottis, etc.) are not clearly recognized, withdraw the Airtraq Avant slightly.
6. Once the tip is located at the epiglottis, either at the vallecula (Macintosh style), or under the epiglottis (Miller style), gently lift up the Airtraq Avant (do not tilt or use a lever action).
7. Advance the ETT slowly. If needed rotate ETT inside the channel.

#### MR CONDITIONAL

Non-clinical testing demonstrated that Airtraq Avant is MR Conditional and can be used in the MRI environment according to the following conditions:

- Static magnetic field of 3-Tesla or less
- Spatial gradient magnetic field of 720-Gauss/cm or less

**IMPORTANT NOTE:** The Airtraq Avant may be inside of the MRI environment (e.g., in the MR system room). It should not be utilized directly inside of the MR system (e.g., inside of the bore of the scanner), during its operation (i.e., scanning). As such, the assessment of magnetic field interactions of the product specifically involved evaluations of transitional attraction in relation to exposure to a 3-Tesla MR system, **only**.

#### WARNINGS AND PRECAUTIONS

- This product should only be used by personnel trained in insertion of endotracheal tubes.
- Do not put pressure on the teeth with this device.
- Do not force the Airtraq Avant into the upper airway.
- Do not incinerate unless battery has been removed.
- Do not submerge in liquids.
- Use only with non-flammable anesthetics.
- Do not touch the Optics LED.

#### OPTICS CLEANING AND DISINFECTION

Optics can be inserted and disengaged from the blade without contacting it.

Optics should never be in contact with the patient. Therefore, it is classified as a non-critical device.

In case that the Optics accidentally become dirty, recommended cleaning is low-level disinfection. Be sure to follow your institution's specific cleaning

procedures in consultation with this manual.

1. Remove the Optics from the blade.
2. Cleaning: Use clean cotton gauze pads that are saturated with the cleaning solution to wipe down the exterior surfaces of the Optics. Use soft brushes with the cleaning solution to access areas that cannot be reached with the gauze pads. Be careful to keep running liquid off the surfaces. The following cleaning solutions may be used:
  - a. Enzymatic Cleaning Solutions (e.g.: ENZOL™ Enzymatic Detergent).
  - b. Neutral pH soap and water.
  - c. Sodium bicarbonate solution (8-10 %).
3. The following Disinfection Agents may be used:
  - a. Peracetic Acid Solution (0.08%).
  - b. Isopropyl Alcohol (70%).
  - c. Solution containing 70% isopropyl alcohol and 2% chlorhexidine (e.g. Clinell Wipe).
  - d. Solution containing chlorine dioxide (e.g. Tristel Wipe)

- e. FDI Sani-Cloth® Germicidal Wipes (AFC, Bleach, Plus or Super Sani-Cloth®).
4. Blot dry the Optics using an individual sterile surgical towel.
  5. Caution:
    - Do not autoclave.
    - Do not rinse under running water.
    - Do not soak in liquids.
    - Avoid liquid or moisture from going inside the Optics.
    - Avoid touching the lens of the Optics.

#### OPTICS DISPOSAL INSTRUCTIONS

Once the Service Life of the Optics is finished it should be disposed of as follows:

- Remove the battery cover by pulling it away from the main body (pull away from the small notches).
- Remove the battery from the Airtraq Avant and place it in an appropriate battery recycling container. The batteries are classified as non hazardous waste material and comply with European Directive WEEE.

Follow local governing ordinances and recycling plans regarding disposal or recycling of device components.

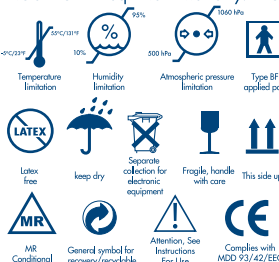
#### MANUFACTURER'S WARRANTY

The manufacturer warrants the Airtraq Avant Optics against faulty materials or manufacturing defects during the full Service Life of the device and for a period of two years from the date of purchase, whichever comes first, provided that it is used in accordance with the procedures set forth in these instructions. This Warranty is applicable only if the device is purchased from an authorized distributor.

**THE AIRTRAQ AVANT BLADE AND EYECUP are designed for SINGLE PATIENT USE.**

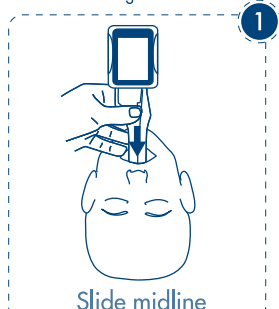
**Warning: Cleaning and reuse of the AIRTRAQ AVANT BLADE may compromise patient safety.**

Use of Airtraq Avant Blades that have been cleaned or sterilized after previous use may generate serious consequences in the product's performance and will void the Airtraq Avant warranty. The

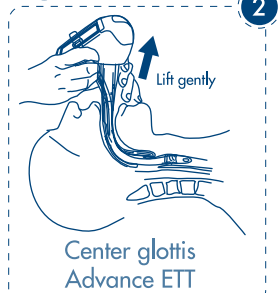


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Manufactured by:  
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519085 P.R. China  
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EU Representative:  
**PROPOL MEDITEC, S.A.**  
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48930 Las Arenas SPAIN  
Caution: Federal (USA) law restricts this device to sale by or on the order of a physician.  
For further advice on using the Airtraq Avant please visit:  
[www.airtraq.com](http://www.airtraq.com) or contact:  
[info@airtraq.com](mailto:info@airtraq.com) or  
[info.usa@airtraq.com](mailto:info.usa@airtraq.com)  
AIRTRAQ is a registered trademark.



- Do not insert too deep
- Lift gently
- Twist Airtraq to center vocal cords
- Corkscrew ETT



Center glottis  
Advance ETT

