

# CERTIFICAT DE GARANTIE

## GARANTIA PRODUSULUI ESTE DE 36 LUNI DE LA DATA CUMPARARII

Data cumpararii

Distribuitor

Prezenta garantie este valabila doar cu conditia utilizarii dispozitivului medical in conformitate cu scopul sau , in conformitate cu instructiunile de utilizare cuprinse in prezentul manual Garantia nu acopera defectele cauzate de manipularea necorespunzatoare, distrugerea cauzata de accidente , lovituri sau imersari in apa , sau daca echipamentului i-au fost aduse modificari . In cazul in care s eimpune trimiterea echipamentului la unitatea de service a distribuitorului autorizat , se cere completarea si descrierea defectului

### DESCRIREA DEFECTULUI

GUARANTEED  
**3**  
YEARS

**HOSPITAL**

## INSTRUCTIUNI DE UTILIZARE

## MONTAGE-UND GEBRAUCHSANWEISUNG

## INSTRUCTION MANUAL

## MANUEL D'INSTRUCTIONS

## MANUAL DE INSTRUCCIONES



**PROCEDURA DE NEUTRALIZARE (Dir.2012/19/Ue-RAEE)** Simbolurile aflate pe capacul inferior al dispozitivului indica modul de colectare selectiva a deeurilor electrice si non electrice . La sfarsitul ciclului d' eviata , nu aruncati echipamentul la ghelele municipale ci procedati la neutralizarea lor utilizand serviciile specifice ale unui centru specializat din regiunea dumneavoastra sau prin returnarea lor la distribuitorul autorizat. Aceasta procedura de colectare si neutralizare selectiva a deeurilor este strict reglementata de norme Uniunii Europene . Nerespectarea lor se poate sanctiona !

**ENTSORGUNGSMETHODEN (RICHTLINIE 2012/19/Ue-WEEE)** Das Symbol auf dem Boden des Geräts gibt die getrennte Müllsammlung der elektrischen und elektronischen Ausrüstungen an. Am Ende der Lebensdauer vom Gerät es nicht als gemischter fester Gemeindeabfall, sondern es bei einem spezifischen Müllsammelzentrum in Ihrem Gebiet entsorgen oder es dem Händler zurückgeben, wenn Sie ein neues Gerät desselben Typ mit denselben Funktionen kaufen. Diese Prozedur getrennter Müllsammlung der elektrischen und elektronischen Ausrüstungen wird im Hinblick auf eine zukünftige gemeinsame europäische Umweltschutzpolitik vorgenommen, welche darauf zielen wird, die Umwelt zu schützen und sichern, als auch die Umweltqualität zu verbessern und potentielle Wirkungen auf die menschliche Gesundheit wegen der Anwesenheit von gefährlichen Stoffen in diesen Vorrichtungen oder Missbrauch derselben oder von Teilen derselben zu vermeiden. **Vorsicht!** Die fehlerhafte Entsorgung von elektrischen und elektronischen Vorrichtungen könnte Sanktionen mit sich bringen.

**DISPOSAL PROCEDURE (Dir. 2012/19/Ue-WEEE)** The symbol on the bottom of the device indicates the separated collection of electric and electronic equipment. At the end of life of the device, do not dispose it as mixed solid municipal waste, but dispose it referring to a specific collection centre located in your area or returning it to the distributor, when buying a new device of the same type to be used with the same functions. This procedure of separated collection of electric and electronic devices is carried out forecasting a European environmental policy aiming at safeguarding, protecting and improving environment quality, as well as avoiding potential effects on human health due to the presence of hazardous substances in such equipment or to an improper use of the same or of parts of the same. **Caution!** The wrong disposal of electric and electronic equipment may involve sanctions.

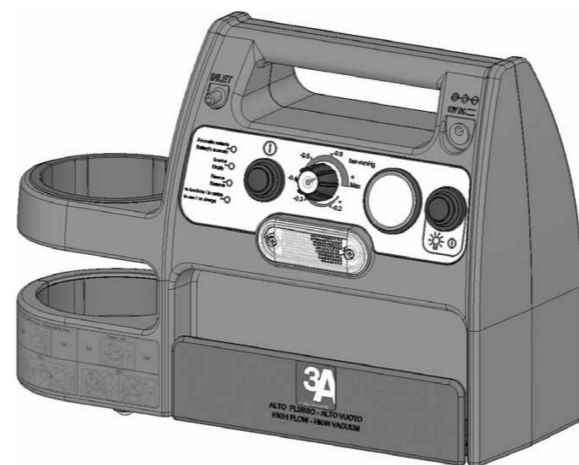
**PROCÉDURE D'ÉLIMINATION (Dir. 2012/19/Ue-WEEE)** Le symbole placé sur le fond de l'appareil indique la récolte séparée des appareils électriques et électroniques. A la fin de la vie utile de l'appareil, il ne faut pas l'éliminer comme déchet municipal solide mixte; il faut l'éliminer chez un centre de récolte spécifique situé dans votre zone ou bien le rendre au distributeur au moment de l'achat d'un nouveau appareil du même type et prévu pour les mêmes fonctions. Cette procédure de récolte séparée des appareils électriques et électroniques se réalise dans une vision d'une politique de sauvegarde, protection et amélioration de la qualité de l'environnement et pour éviter des effets potentiels sur la santé humaine dus à la présence de substances dangereuses dans ces appareils ou bien à un emploi non autorisé d'elles ou de leurs parties. **Attention!** Une élimination incorrecte des appareils électriques pourrait impliquer des pénalités.

**PROCEDIMIENTO DE ELIMINACIÓN (Dir.2012/19/Ue-RAEE)** El símbolo colocado en el fondo del aparato indica la recogida separada de los equipos eléctricos y electrónicos. Al término de la vida útil del aparato, no eliminar como residuo municipal sólido mixto sino eliminarlo en un centro de recogida específico colocado en vuestra zona o entregarlo al distribuidor a la hora de comprar un nuevo aparato del mismo tipo y destinado a las mismas funciones. Este procedimiento de recogida separada de los equipos eléctricos y electrónicos se realiza con el propósito de una política del medioambiente comunitaria con objetivos de salvaguardia, defensa y mejoramiento de la calidad del medioambiente y para evitar efectos potenciales en la salud de los seres humanos debido a la presencia de sustancias peligrosas dentro de estos equipos o a un uso inapropiado de los mismos o de algunas de sus partes. **Cuidado!** Una eliminación no correcta de equipos eléctricos y electrónicos podría conllevar sanciones.



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## VERSIUNEA CU CANISTRA DE 1000 ml / AUSFÜHRUNG MIT 1000 ml-BEHÄLTER / 1000 ml VESSEL VERSION / VERSION AVEC BOCAL DE 1000 ml / VERSIÓN CON FRASCO DE 1000 ml

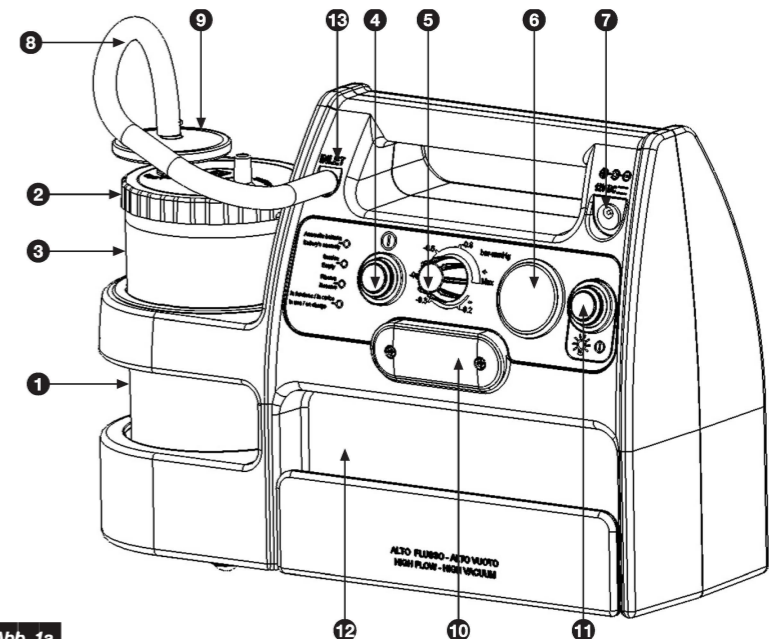


Fig. - Abb. 1a

Romana

- |   |   |   |
|---|---|---|
| 1. Canistra de 1000 ml                                  | 1. Gefäß 1000 ml                                      | 1. 1000 ml Vessel   |
| 2. Capac canistra                                       | 2. Gefäßdeckel  | 2. Vessel plug  |
| 3. Dispozitiv de protectie                              | 3. Schutzvorrichtung                                  | 3. Protection device  |
| 4. Buton ON-OFF   | 4. Hauptschalter ON-OFF                               | 4. ON-OFF button  |
| 5. Regulator de vid                                     | 5. Vakuumregler                                       | 5. Vacuum regulator   |
| 6. Manometru  | 6. Unterdruckmesser                                   | 6. Vacuum gauge   |
| 7. Unit pentru alimentare si priza de incarcare baterie | 7. Buchse für Mehrspannungsnetzteil und Akkuaufladung | 7. Multi-voltage power supply unit and battery charger socket |
| 8. Tub de silicon de 24 cm                              | 8. Silikon Schlauch 24 cm                             | 8. 24 cm silicon tube   |
| 9. Filtru antibacterian                                 | 9. Bakterienfilter                                    | 9. Antibacterial filter                                       |
| 10. Lampa mator functionare                             | 10. Arbeitsleuchte                                    | 10. Working light   |
| 11. Buton ON-OFF lumina                                 | 11. Betriebsschalter ON-OFF Arbeitsleuchte            | 11. Light ON-OFF button                                       |
| 12. Compartiment accesorii                              | 12. Zubehörfach                                       | 12. Accessory compartment                                     |
| 13. Conector INLET                                      | 13. Anschluss INLET                                   | 13. Air inlet connector INLET                                 |

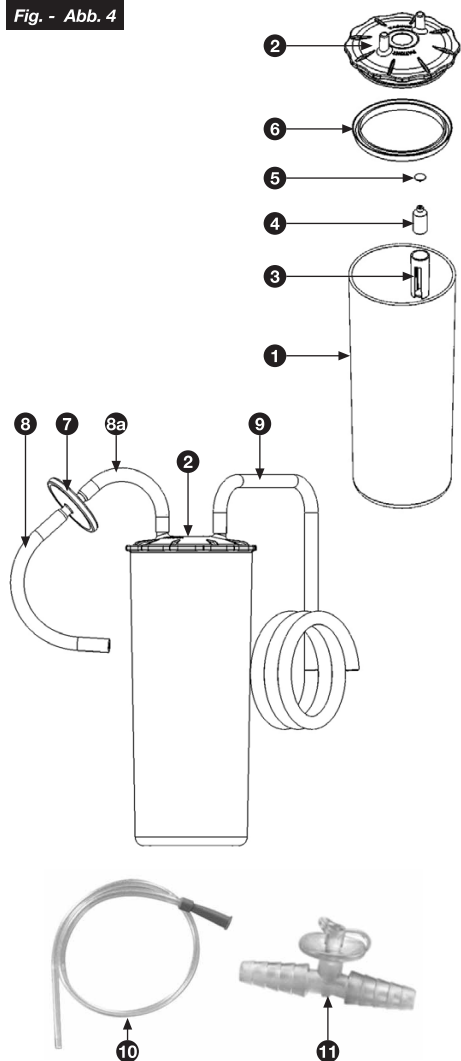
- |  |  |
|--|--|
| 1. Vase de 1000 ml   | 1. Vaso de 1000 ml   |
| 2. Bouchon pour vase   | 2. Tapón para el vaso                                      |
| 3. Dispositif de protection  | 3. Aparato de protección                                   |
| 4. Bouton ON-OFF   | 4. Botón ON-OFF  |
| 5. Régulateur de vide  | 5. Regulador de vacío                                      |
| 6. Videmètre   | 6. Vacuómetro  |
| 7. Prise pour alimentation multitension et recharge de la batterie | 7. Toma para alimentador multitensión y recarga de batería |
| 8. Tube en silicone 24 cm  | 8. Tubo de silicona 24 cm                                  |
| 9. Filtre antibactérien  | 9. Filtro antibacteriano                                   |
| 10. Lampe de service   | 10. Lámpara de servicio                                    |
| 11. Bouton ON-OFF de la lampe                                      | 11. Botón ON-OFF lámpara                                   |
| 12. Compartiment des accessoires                                   | 12. Compartimento de accesorios                            |
| 13. Prise entree air INLET   | 13. Toma entrada-aire INLET                                |

vas de recoltare 1000ml din policarbonat autoclavabil

2. Capac din propilena sterilizabila
3. Guida galleggiante in polipropilene sterilizzabi
4. Corpo galleggiante in polipropilene sterilizzabile
5. Valvola in gomma sterilizzabile
6. Filtro antibatterico Monouso
7. Tubo in silicone sterilizzabile corto Ø6x12 mm -  
Lunghezza 24 cm
8. Tubo in silicone sterilizzabile lungo Ø6x12 mm -  
Lunghezza 130 cm
9. Sacca monouso
10. Can nula sterile monouso
11. Reolatore manuale sterile monouso

**DESCRIZIONE VASO DA 2000 ml / 2000 ml SEKRETBEHÄLTER /  
DESCRIPTION OF 2000 ml vessel / DESCRIPTION RÉCIPIENT DE 2000 ml /  
DESCRIPCIÓN DEL RECIPIENTE DE 2000 ml**

**Fig. - Abb. 4**



**I**

1. Vaso di raccolta serigrafato 2000ml in policarbonato sterilizzabile
2. Tappo in polipropilene sterilizzabile
3. Guida galleggiante in polipropilene sterilizzabile
4. Corpo galleggiante in polipropilene sterilizzabile
5. Valvola in gomma sterilizzabile
6. Guarnizione in silicone sterilizzabile
7. Filtro antibatterico Monouso
8. Tubo in silicone sterilizzabile Ø6x12 mm - Lunghezza 20 cm
- 8a. Tubo in silicone sterilizzabile Ø6x12 mm - Lunghezza 10 cm
9. Tubo in silicone sterilizzabile lungo Ø6x12 mm - Lunghezza 130 cm
10. Cannula sterile monouso
11. Regolatore manuale sterile monouso

**D**

1. 2000 ml Sekretgefäß, mit Siebdruck, aus sterilisierbarem Polykarbonat
2. Sterilisierbarer Propylenstopfen
3. Schwimmführung aus sterilisierbarem Polypropylen
4. Schwimmkörper aus sterilisierbarem Polypropylen
5. Sterilisierbares Gummiventil
6. Sterilisierbarer Silikondichtung
7. Antibakterieller Filter
8. Sterilisierbarer Silikonschlauch, Ø 6x12 mm - 20 cm
- 8a. Sterilisierbarer Silikonschlauch, Ø6x12 mm - 10 cm
9. Sterilisierbarer Silikonschlauch, Ø 6x12 mm - 130 cm
10. Steriles Einwegkatheter
11. Steriler Einweghandregler

**GB**

1. 2000 ml collection vessel with serigraph, made of sterilisable polycarbonate
2. Sterilisable polypropylene top
3. Sterilisable polypropylene float guide
4. Sterilisable polypropylene float body
5. Sterilisable rubber valve
6. Sterilisable silicon gasket
7. Antibacterial filter
8. Sterilisable silicon tube Ø 6x12 mm - length 20 cm
- 8a. Sterilisable silicon tube Ø6x12 mm - length 10 cm
9. Sterilisable silicon tube Ø 6x12 mm - length 130 cm
10. Disposable sterile cannula
11. Disposable sterile manual regulator

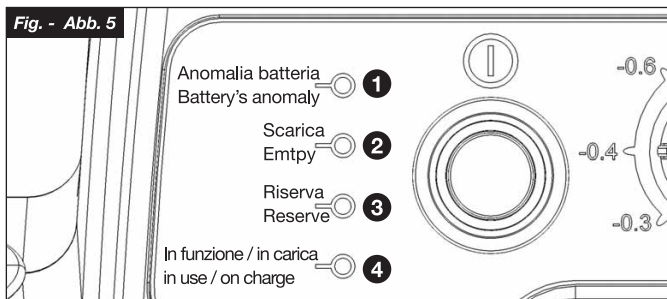
**F**

1. Pot de collecte sérigraphié 2000 ml en polycarbonate stérilisable
2. Bouchon en polypropylène stérilisable
3. Guide flottant en polypropylène stérilisable
4. Corps flottant en polypropylène stérilisable
5. Valve en caoutchouc stérilisable
6. Joint d'étanchéité en silicone stérilisable
7. Filtre antibactérien
8. Tuyau en silicone stérilisable Ø 6x12 mm 20 cm
- 8a. Tuyau en silicone stérilisable Ø 6x12 mm 10 cm
9. Tuyau en silicone stérilisable Ø 6x12 mm 130 cm
10. Canule stérile uniservice
11. Régulateur manuel stérile uniservice

**E**

1. Frasco de recogida gradado mediante serigrafía 2000 ml de policarbonato esterilizable
2. Tapón de polipropileno esterilizable
3. Guía del flotador de polipropileno esterilizable
4. Cuerpo del flotador de polipropileno esterilizable
5. Válvula de goma esterilizable
6. Guarnición hermética de silicona esterilizable
7. Filtro antibacteriano
8. Tubo de silicona esterilizable de 6x12 mm de diámetro - 20 cm
- 8a. Tubo de silicona esterilizable de 6x12 mm de diámetro - 10 cm
9. Tubo de silicona esterilizable de 6x12 mm de diámetro - 130 cm
10. Cánula estéril desechable
11. Regulador manual estéril desechable

**DESCRIZIONE FUNZIONAMENTO LED / BESCHREIBUNG DER FUNKTIONSWEISE DER LED  
LED OPERATION DESCRIPTION / DESCRIPTION DU FONCTIONNEMENT DES LED /  
DESCRIPCIÓN DEL FUNCIONAMIENTO DE LEDS**



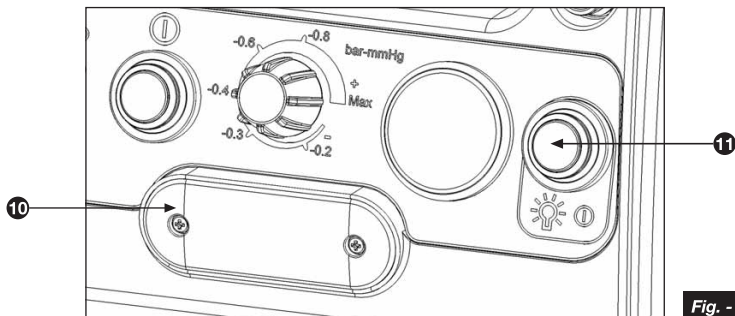
- I**
- Led rosso lampeggiante:** la batteria non è più in grado di fornire la massima autonomia, provvedere alla sua sostituzione.
  - Led rosso fisso:** la batteria è scarica, utilizzare l'apparecchio per 3 minuti massimo e provvedere a ricaricare la batteria.
  - Led giallo fisso:** la batteria è in riserva (autonomia 10 minuti circa), se possibile provvedere a ricaricarla.
  - Led verde fisso:** apparecchio in funzione, batteria carica.  
**Led verde lampeggiante:** batteria sotto carica.

- D**
- Rote LED blink:** Die Batterie ist nicht mehr in der Lage, maximale Autonomie zu liefern. Batterie ersetzen.
  - Rote LED leuchtet kontinuierlich:** Batterie entladen. Das Gerät maximal für 3 Minuten benutzen und die Batterie aufladen.
  - Gelbe LED leuchtet kontinuierlich:** Batterie in Reserve (Autonomie ca. 10 Minuten), Batterie aufladen.
  - Grüne LED leuchtet kontinuierlich:** Gerät in Betrieb, Batterie geladen.  
**Grüne LED blink:** Batterieaufladung.

- GB**
- Flashing red Led:** the battery is no longer capable of supplying maximum charge duration; replace it.
  - Red Led permanently on:** the battery is flat, use the appliance for a maximum of 3 minutes and re-charge the battery
  - Yellow Led permanently on:** the battery is in reserve (about 10 minutes' operating time left); recharge it if possible.
  - Green Led permanently on:** appliance operating, battery charged.  
**Green Led flashing:** battery under charge.

- F**
- Led rouge clignotante:** la batterie n'est plus en mesure d'assurer l'autonomie maximale, la remplacer.
  - Led rouge fixe:** la batterie est déchargée, utiliser l'appareil pendant 3 minutes au maximum puis recharger la batterie.
  - Led jaune fixe:** la batterie est sur la réserve (10 minutes d'autonomie environ); la recharger si possible.
  - Led verte fixe:** appareil en marche, batterie chargée.  
**Led verte clignotante:** batterie sous charge.

- E**
- Led rojo parpadeante:** la batería ya no logra ofrecer la autonomía máxima; sustituirla.
  - Led rojo fijo:** la batería está agotada, utilizar el aparato durante 3 minutos como máximo y volver a cargarla
  - Led amarillo fijo:** la batería se halla en reserva (unos 10 minutos de autonomía); de ser posible volver a cargarla.
  - Led verde fijo:** aparato funcionando, batería cargada.  
**Led verde parpadeante:** batería en carga.



The MINIASPEED BATTERY EVO aspirator is a professional portable aspirator suitable for outpatient use, specific for secretion removal. It has a vacuum regulator, a vacuum gauge, a 1000 ml sterilisable vessel, or (depending on the version) a 2000 ml sterilisable vessel; these vessels are equipped with a protective device to prevent liquid from entering the suction pump and interrupting the aspiration flow.

It is lifetime lubricated, easy to handle, simple to use, reliable, strong and silent. This model is equipped with a 12V rechargeable battery and can also operate directly through the cigarette lighter in car, boat or other vehicles with suitable socket and voltage.

The MINIASPEED BATTERY EVO aspirator, in all its versions, has the following 3A accessories: a 1000 ml vessel or 2000 ml vessel (depending on the version) with protection device, cigarette lighter power supply cord, power supply cord with multi-voltage power supply unit, 24 cm long sterilisable silicone connection tube (only for 1000 ml vessel version), 10 cm and 21 cm long sterilisable silicone connection tubes (only for 2000 ml vessel version), 130 cm sterilisable silicone connection tube, **sterile disposable** cannula, **sterile disposable** manual flow regulator, **disposable** bag (only for 1000 ml vessel version) and **disposable** antibacterial filter.


**N.B.: Only use original 3A accessories.**



## IMPORTANT WARNINGS

**This is a medical device and must be used by qualified staff. It must be operated as indicated in this user instruction manual. It is important for the operator to read and understand the information on use and maintenance of the unit. If you have any questions, contact your stockist. MICROBIAL CONTAMINATION: in the case of illnesses with a risk of infection or microbial contamination, the accessories should be thoroughly cleaned and sterilised after each use.**

The manufacturer has made every effort to ensure that all its products are of the highest quality and are reliable. Nevertheless, as for all electrical appliances, fundamental safety standards must be observed:

- Children and persons who are not self-sufficient may only use the unit under the strict supervision of a responsible adult who has read this manual.
- The device must always be used by specifically trained staff who have read this manual.
- Never use adapters for supply voltages different to the voltage shown on the data plate on the back of the unit. Keep the cord away from hot surfaces.
- The unit should not be used in the presence of inflammable anaesthetic mixtures with air, oxygen or nitrous oxide.
-  Never handle the supply cord plug with wet hands or use the unit when taking a bath or a shower. Never leave the unit close to water, do not submerge it in any liquids. If by chance it falls into water, pull the plug out of the socket immediately before recovering it. Do not use the unit if the plug or supply cord are worn or wet (send it immediately to your stockist).
- Unit casing not protected against liquid penetration.
- Only authorised personnel may perform maintenance and/or repair work. Unauthorised repairs annul the guarantee.
- Ensure that the connections and container closing are performed carefully to prevent suction losses.
- Do not tip the container over while connected to the unit when operating, as liquid may be sucked inside the appliance causing pump damage. If this happens, switch the aspirator off immediately and empty and clean the container. Send the appliance to your stockist.
- When the protection device intervenes aspiration is interrupted; empty the container and perform the cleaning operations.
- The cannula and the manual control of the aspirated flow are **sterile, disposable** products: They must be replaced after every application.
- Check the use-by-date on the original packaging of the cannula and check the integrity of the sterile packaging. If expired and/or deteriorated, replace it.
- The **disposable** antibacterial filter must be replaced after every application.
- Never use the battery charger with other appliances or for uses other than that established by this manual. Never use MINIASPEED BATTERY EVO with other power supply units.
- The power supply cord with cigar lighter plug has a safety fuse for inspection in the event of a fault.
- In view of their length, the power cord and connection hose could constitute a strangulation hazard.

- Use of the device in ambient conditions other than those specified in the manual may seriously impair its safety and technical characteristics.
- In the event of aspiration without the container and/or antibacterial filter, or if it is suspected that substances have entered the aspiration circuit, contact your stockist at once.
- Always use the device in the vertical position on an unobstructed, stable, flat surface.
- The lifetime of the device itself is 5 years, and that of the container and silicone tubes 1 year or 30 sterilisation cycles. However, the lifetime may vary depending on the operating environment.

## USE INSTRUCTIONS

Each time before use, ensure that all the accessories are perfectly clean according to the instructions indicated in the “CLEANING AND DISINFECTION OPERATIONS”.

### 1. OPERATION WITH THE CIGARETTE LIGHTER POWER SUPPLY CORD

- 1.1 Before using the device, check the charge level of the vehicle battery.
- 1.2 For use in a car, camper, boat, etc....., connect the cigarette lighter power supply cord (19) to the device socket (7).
- 1.3 Connect the device as indicated in figure 1a of page 1 for the 1000 ml vessel version or figure 1b of page 2 if the 2000 ml vessel is used.
- 1.4 Start the device by placing the switch to the “I” (ON) position (4) (green pilot light on).
- 1.5 The vacuum regulator (5) can be used to set the level of vacuum required (bar/KPa). Turn the knob clockwise, in the “+” direction, to obtain a higher vacuum or anticlockwise, in the “-” direction, for a lower vacuum; these values are read on the vacuum gauge (6). **Important: the vacuum values on the control decal are purely for guidance; always refer to the vacuum gauge reading.**
- 1.6 After the application, switch off the appliance, detach the cigarette lighter power supply cord from the power socket (19) and perform the cleaning operations as illustrated in the “CLEANING AND DISINFECTION” paragraph.
- 1.7 In the event of a blown fuse in the cigarette lighter plug, replace with a 6.3A – 250V delayed fuse – dimensions Ø 6.3 x 30 mm, by unscrewing the end of the cigarette lighter plug.

### 2. OPERATION WITH A BATTERY AND/OR WITH THE MULTI-VOLTAGE POWER SUPPLY UNIT

- 2.1 The device is supplied with the battery partially charged. We therefore recommend charging it before use.
- 2.2 To charge the battery, with the device switched off connect the multi-voltage power supply unit (16) to the device's socket (7) and to the mains power supply by means of the cord (17). Charging time: about 4 hours. Charge duration: about 40/45 minutes at maximum suction power.
- 2.3 Operation with internal battery only:  
Switch the device on by pressing the “ON-OFF button (4) (green light comes on). If the green light goes out during use, and the yellow light comes on, there is about 10/15 minutes of battery charge left (reserve level). Therefore: terminate the application if possible. If the application cannot be terminated, it can be continued until the red (battery flat) light comes on, but if this occurs do not use the appliance for more than 3 minutes to avoid damaging the battery. To continue the application with the battery flat (red light on), connect the multi-voltage power supply unit (16) (as described in point 2.2).
- 2.4 At the end of the application, switch the device off by pressing the button (4). Connect the power supply unit (16) to charge the battery (as described in point 2.2). When the appliance is not in use, we recommend leaving the power supply unit (16) connected so that the battery charge level is always optimum.
- 2.5 For aspiration procedures see points 1.3; 1.4; 1.5.

**N.B.: when the battery power drops below a set level the aspirator shuts down to avoid damage to the battery. If absolutely necessary, the user can restart the aspirator for 1 minute by pressing the ON/OFF button again.**

### 3. SECRETION COLLECTION VESSEL - 1000 ml

The 1000 ml collection bottle supplied with the aspirator can be used in two ways: as a collection vessel which can be sterilised as shown in Figure 3a or as a collection vessel with disposable bag (9) as illustrated in Figure 3b.

- 3.1 Sterilisable secretion vessel (1): the secretion vessel set consists of an overflow valve, a vessel (1) in clear material (polycarbonate) and a blue plug (2). Fit the antibacterial filter (6) straight into the plug (2); it will only fit into the hole marked VACUUM/VUOTO, which is outlined in yellow. The antibacterial filter also protects the aspiration circuit from any contaminating agents sucked in during use. **Do not use the aspirator without**

**the antibacterial filter, because from a bacteriological point of view, it becomes dangerous for the patient. Keep the device vertical to allow the overflow to function correctly.** All the components of the vessel can be sterilised using a conventional system in an autoclave at a temperature of 121° C, or by boiling for 10 minutes. We recommend replacing the complete vessel at every 30 sterilisation cycles. Do not overturn the vessel during use, in order to prevent the intervention of the non-return valve (3-4-5); should this occur, switch the aspirator off and detach the tube connected to the antibacterial filter. Never use the aspirator without the secretion collection vessel and/or without the antibacterial filter.

3.1.1 Connection: connect one end of the short, sterilisable silicon tube (7) to the antibacterial filter connector (6) and insert this latter into the “VACUUM” hole of the blue top (2); connect the other end to the “INLET” connector (13) of the aspirator. Connect one end of the long sterilisable silicon tube (8) to the “PATIENT/PAZIENTE” connector of the blue top (2); to the other end, connect the disposable, sterile manual regulator (11) and connect the disposable, sterile cannula (10) to this latter.

- 3.2 Secretion collection vessel with disposable bag (9). The aspirator can be used with the re-usable 1000 ml. transparent secretion collection vessel (1) and with the disposable bag (9) supplied. In this case, the antibacterial filter is integrated in the disposable bag and therefore the antibacterial filter (6) and blue top with valve (2) are not used. The filter integrated in the bag also performs the function of preventing the return of aspirated liquids towards the aspirator. **In this case, to restore device operation, it is necessary to replace the disposable bag.** For the cleaning and disinfecting operations of the tubes (7-8) and vessel (1), sterilise the single parts in an autoclave at a maximum temperature of 121° C, or by boiling for 10 minutes. The bag is disposable and must always be replaced after every use. **The bag must be completely inserted in the vessel in order to prevent any vacuum losses.**

**N.B.: maximum disposable bag usage vacuum: – 0.75 bar (75 kPa).**

3.2.1 Connection: connect one end of the short sterilisable silicon tube (7) to the yellow connector (VACUUM) of the top (photograph 3b) and the other end to the “INLET” connector (13) of the aspirator. Connect one end of the long sterilisable silicon tube to the red connector (PATIENT) and connect the disposable sterile manual regulator (11) and the disposable sterile cannula (10) to the other.

**N.B.: only use the disposable bags supplied by 3A - Code 3A1687.**

#### **4. SECRETION VESSEL - 2000 ml (Fig. 4)**

The secretion vessel set consists of an overflow valve, a vessel (1) in clear material (polycarbonate) and a blue plug (2).

Connection: connect one end of the 10 cm tube (8a) to “VACUUM” connector of the blue top (2) and the other end connect it to the antibacterial filter connector (7). Then connect one end of the 20 cm tube (8) to the free connector of the antibacterial filter (7) and the other end to the “INLET” connector (13) of the aspirator. The antibacterial filter also protects the aspiration circuit from any contaminating agents sucked in during use. Do not use the aspirator without the antibacterial filter, because from a bacteriological point of view, it becomes dangerous for the patient. Keep the device vertical to allow the overflow to function correctly. Connect one end of the 130 cm tube (9) to the “PATIENT” connector of the blue cap (2), while at the other end to connect the disposable, sterile manual regulator (11) and connect the disposable, sterile cannula (10) to this latter.

All the components of the vessel can be sterilised using a conventional system in an autoclave at a temperature of 121°C, or by boiling for 10 minutes. We recommend replacing the complete vessel at every 30 sterilisation cycles. Do not overturn the vessel during use, in order to prevent the intervention of the non-return valve (3-4-5); should this occur, switch the aspirator off and detach the tube connected to the antibacterial filter. Never use the aspirator without the secretion collection vessel and/or without the antibacterial filter.

## **DESCRIPTION OF USE OF WORKING LIGHT**

The MINIASPEED BATTERY EVO is fitted with a LED working light (10) which allows use of the device in dark conditions and/or at night.

Press the button (11) to switch on the light, as shown in Figure 6 of page 5; press the button (11) again to switch it off. The light switches off automatically after about 60 minutes.

The light is of LED type, so the amount of current it consumes is minimal and it can be used even during treatment; however, it should be switched off whenever it is not required and/or at the end of the treatment.

## CLEANING AND DISINFECTION OPERATIONS

**N.B.: If using chemical disinfectants, follow the manufacturer's instructions exactly.**

- The cannula and the aspirated flow manual command are **sterile, disposable** products and must be replaced after every application.
- The antibacterial disposable filter must be replaced after every application.
- Never leave the appliance in water or submerged; clean the external casing of the appliance using only a damp cloth with detergent (non abrasive).




## PROBLEMS, CAUSES AND SOLUTIONS

PROBLEMS	POSSIBLE CAUSES	SOLUTIONS
Excessive noise.	Damaged pump or blockages in the internal aspiration circuit.	Send to the assistance circuit.
The unit switches on but does not aspirate.	- Damaged pump. - Vacuum regulator fully open. Connection tubes disconnected and/or badly connected, broken connection tubes. Container not in a vertical position, full, or defective overflow valve. Possible blockage of the hydraulic circuit inside the unit.	- Send to the assistance circuit. - Check the position of the vacuum regulator. Check the connections and the integrity of the tubes. Position the container in a vertical position, check the overflow valve (blocked) and/or replace the silicon tubes.
The vacuum rate cannot be regulated.	Damage to the internal hydraulic system or blockage of the connection tubes to the aspiration unit.	Send to the assistance circuit.
When the appliance is switched on, the protection fuse always trips.	Pump probably damaged or in shortcircuit.	Send to the assistance circuit.
The vacuum gauge does not work.	Liquid penetrating the pneumatic circuit.	Send to the assistance circuit.

**Note: if you experience faults or malfunctioning problems different to those listed above, always and exclusively contact authorised assistance centres.**

## TECHNICAL CHARACTERISTICS

Professional portable medical device for secretion removal, suitable for fixed and transportable use. Complete with flame retardant ABS V0 casing and piston-cylinder electrical compressor lubricated for life.

Risk class under Directive 93/42/EEC:	<b>IIa</b>
Suction class:	High vacuum / High flow
Voltage:	12VDC
Absorption:	3A
Adjustable vacuum level:	from 0 to -0.85 bar
Vacuum gauge precision class:	2.5% under UNI EN 837
Air flow:	30 lt/min operating without restrictions +/- 10 %
Temporary use:	max. 60 minutes
Dimensions:	38 (length) x 13,5 (width) x 26 (height) cm (1000ml Vessel) 38 (length) x 13,5 (width) x 35 (height) cm (2000ml Vessel)
Weight:	4.5 kg approx (1000ml Vessel) 4.7 kg approx (2000ml Vessel)
Noise level:	61dBA
Multi-voltage switching battery charger:	PRI: 100 ÷ 240V~ 50 – 60Hz SEC: 14VDC 4,28A
Internal battery:	12VDC 4Ah Lead, hermetic
Battery charge duration:	45 minutes at maximum suction power
Fuse for cigarette lighter power supply cord:	F6.3A - 250V delayed fuse - dimensions Ø 6.3 x 30 mm
Operating conditions:	
Temperature:	min. 0° C; max 40° C
Air humidity:	min. 10 %; max 95 %
Storage conditions:	
Temperature:	min. -10° C; max 50° C 
Air humidity:	min. 10 %; max 95 % 
Operating-storage conditions:	min. 690 hPa; max 1060 hPa 



## SYMBOLS USED



Type BF appliance



Attention, check the use instructions



Switch On



Switch off (or battery on charge)



Direct current



Alternate current



Do not use the unit when taking a bath or a shower

**CE 0434** Conforms to Directive 93/42/EEC for medical devices



The device contains a hermetic lead battery. It must be disposed of in accordance with current regulations on the disposal of toxic-harmful waste



Thermally protected safety transformer



Sterilisation by ethyl oxide



Disposable

### Electromagnetic compatibility

#### additional notes in conformity with the IEC 60601-1-2/A1:2004-09 Standard

EMISSION		
Emission test	Conformity	Electromagnetic Environment - guidance
Emissioni RF Cispur 11	Group 1	MINIASPEED BATTERY EVO uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
Emissioni RF Cispur 11	Class B	MINIASPEED BATTERY EVO is suitable for use in all establishments and those directly connected to the public low-voltage power supply network that supplies buildings used to domestic purposes. It is possible to use the device in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes, adopting provisions in the installation, such as a longer distance from potentially sensitive appliances.
Harmonic Emissions IEC 61000-3-2	Class A Conforming	It is possible to use the device in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings user for domestic purposes.
Voltage fluctuations/ flicker emissions IEC61000-3-3	Conforming	


IMMUNITY ASPECTS			
MINIASPEED BATTERY EVO is intended for use in the electromagnetic environment specified below. The customer or the user of the device should assure that it is used in such an environment.			
Immunity test	Test level EN 60601-1-2	Compliance Level	Electromagnetic environment - guide
Electrostatic discharge (ESD) EN 61000-4-2	± 6kV contact ± 8kV air	± 6kV contact ± 8kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
Burst/Fast Transient EN 61000-4-4	± 2kV power supply lines	± 2kV power supply lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge EN 61000-4-5	± 1kV differential mode ± 2kV common mode	± 1kV differential mode ± 2kV common mode	Mains power quality should be that of a typical commercial or hospital environment.

Voltage dips, short interruptions and voltage variations on power supply input lines EN 61000-4-11	< 5% UT (>95% dip in UT) for 0.5 cycles  40% UT (60% dip in UT) for 5 cycles  70% UT (30% dip in UT) for 25 cycles  < 5% UT (>95% dip in UT) for 5 seconds	< 5% UT (>95% dip in UT) for 0.5 cycles  40% UT (60% dip in UT) for 5 cycles  70% UT (30% dip in UT) for 25 cycles  < 5% UT (>95% dip in UT) for 5 seconds	Mains power quality should be that of a typical commercial or hospital environment. If the user of the device requires continued operation during power mains interruptions. It is recommended that the device be powered from an uninterruptible power supply or a battery.
Power frequency magnetic field EN 61000-4-8	3 A/m	3 A/m	Magnetic power frequency fields should be that of a typical commercial or hospital environment.

#### IMMUNITY ASPECTS AT R.F.

MINIASPEED BATTERY EVO is intended for use in the electromagnetic environment specified below. The customer or the user of the navigator should assure that it is used in such an electromagnetic environment.

Immunity test	Test level EN 60601-1-2	Compliance Level	Electromagnetic environment - guide
RF conducted EN 61000-4-6	3 Veff from 150kHz to 80MHz	3 Veff from 150kHz to 80MHz	Portable and mobile RF communications equipment should be used no closer to any part of the device, including cables, than the recommended separation distance calculated from that equation applicable to the frequency of the transmitter. Recommended separation distance: $d = 1.2 \sqrt{P}$ from 150kHz to 80MHz $d = 1.2 \sqrt{P}$ from 80 MHz to 800 MHz $d = 2.3 \sqrt{P}$ from 800 MHz to 2.5 GHz Where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in metres (m).
RF conducted EN 61000-4-3	3 V/m from 80MHz to 2.5GHz	3 V/m from 80MHz to 2.5GHz	

Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, should be less than the compliance level in each frequency range. Interference may occur in the vicinity of equipment marked with the following symbol: 

#### RECOMMENDED SEPARATION DISTANCES BETWEEN PORTABLE AND MOBILE RF COMMUNICATIONS EQUIPMENT AND THE DEVICE

MINIASPEED BATTERY EVO is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the device can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the device as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter (W)	Separation distance according to frequency of the transmitter (m)		
	From 150kHz to 80MHz $d = 1.2 \sqrt{P}$	From 80MHz to 800MHz $d = 1.2 \sqrt{P}$	From 800MHz to 2GHz $d = 1.2 \sqrt{P}$
0.01	0.12	0.12	0.23
0.1	0.38	0.38	0.73
1	1.2	1.2	2.3
10	3.8	3.8	7.3
100	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in metres (m) can be determined using the equation to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

#### Notes:

- (1) At 80 MHz and 800 MHz the separation distance for the higher frequency range applies.
- (2) These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.