

MINIASPEED Battery Evo *Plus*

GUARANTEED

3

YEARS

HOSPITAL

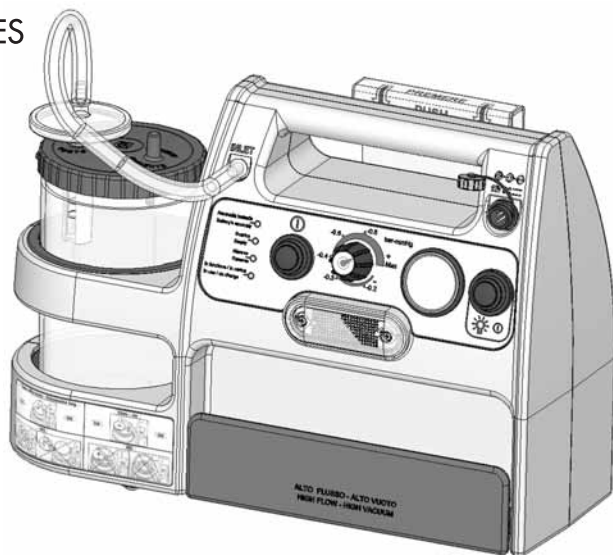
ISTRUZIONI D'USO

MONTAGE-UND GEBRAUCHSANWEISUNG

INSTRUCTION MANUAL

MANUEL D'INSTRUCTIONS

MANUAL DE INSTRUCCIONES



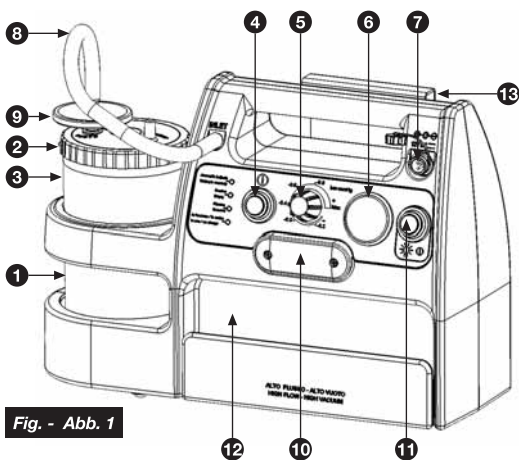


Fig. - Abb. 1

E

1. Vaso de 1000 ml
2. Tapón para el vaso
3. Aparato de protección
4. Botón ON-OFF
5. Regulador de vacío
6. Vacuómetro
7. Toma para alimentador multitenión y recarga de batería
8. Tubo de silicona 24 cm
9. Filtro antibacteriano
10. Lámpara de servicio
11. Botón ON-OFF lámpara
12. Compartimento de accesorios
13. Abrazadera de enganche en la ambulancia

F

1. Vase de 1000 ml
2. Bouchon pour vase
3. Dispositif de protection
4. Bouton ON-OFF
5. Régulateur de vide
6. Videmètre
7. Prise pour alimentation multitenion et recharge de la batterie
8. Tube en silicone 24 cm
9. Filtre antibactérien
10. Lampe de service
11. Bouton ON-OFF de la lampe
12. Compartiment des accessoires
13. Étrier de fixation dans l'ambulance

I

1. Vaso da 1000 ml
2. Tappo per vaso
3. Dispositivo di protezione
4. Pulsante ON-OFF
5. Regolatore di vuoto
6. Vuotometro
7. Presa per alimentatore multitenzione e ricarica batteria
8. Tubo in silicone 24 cm
9. Filtro antibatterico
10. Lampada di servizio
11. Pulsante ON-OFF lampada
12. Vano accessori
13. Staffa di aggancio in ambulanza

D

1. Gefäß 1000 ml
2. Gefäßdeckel
3. Schutzvorrichtung
4. Hauptschalter ON-OFF
5. Vakuumregler
6. Unterdruckmesser
7. Buchse für Mehrspannungsnetzteil und Akkuaufladung
8. Silikon Schlauch 24 cm
9. Bakterienfilter
10. Arbeitsleuchte
11. Betriebsschalter ON-OFF Arbeitsleuchte
12. Zubehörfach
13. Haltebügel für Rettungswagen

GB

1. 1000 ml Vessel
2. Vessel plug
3. Protection device
4. ON-OFF button
5. Vacuum regulator
6. Vacuum gauge
7. Multi-voltage power supply unit and battery charger socket
8. 24 cm silicon tube
9. Antibacterial filter
10. Working light
11. Light ON-OFF button
12. Accessory compartment
13. Ambulance mounting bracket

ACCESSORI / ZUBEHÖR / ACCESSORIES / ACCESSOIRES / ACCESORIOS

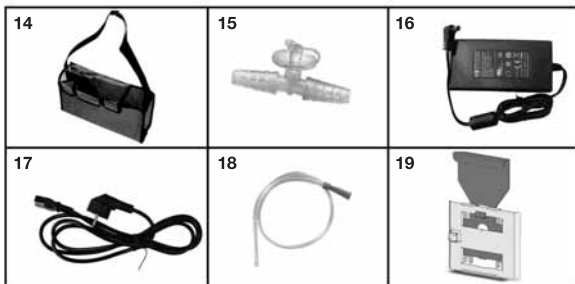


Fig. - Abb. 2

GB

14. Bag with shoulder strap
15. Disposable manual regulator
16. Multi-voltage power supply unit
17. Power supply cord
18. Disposable sterile cannula
19. Permanent ambulance mounting bracket

F

14. Sac en bandoulière
15. Régulateur manuel pour un seul usage
16. Alimentateur multitenion
17. Câble d'alimentation
18. Canule stérile uniservice
19. Étrier de fixation fixe sur l'ambulance

I

14. Borsa con tracolla
15. Regolatore manuale monouso
16. Alimentatore multitenzione
17. Cavo di alimentazione
18. Cannula sterile monouso
19. Staffa di aggancio fissa sull'ambulanza

D

14. Schultertasche
15. Einweg - Handregler
16. Mehrspannungsnetzteil
17. Netzkabel
18. Kanüle
19. Haltebügel im Rettungswagen

E

14. Bolsa con bandolera
15. Regulador manual desechable
16. Alimentador multitenión
17. Cable de alimentación
18. Cánula estéril desechable
19. Abrazadera de enganche fija de ambulancia

**DESCRIZIONE VASO DA 1000 ml / 1000 ml SEKRETBEHÄLTER /
DESCRIPTION OF 1000 ml vessel / DESCRIPTION RÉCIPIENT DE 1000 ml /
DESCRIPCIÓN DEL RECIPIENTE DE 1000 ml**

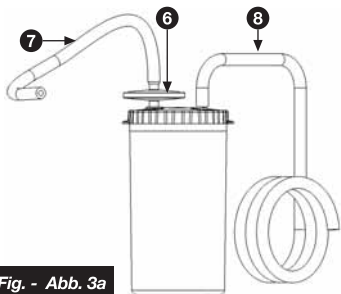
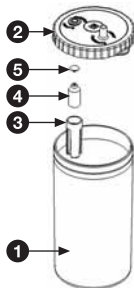


Fig. - Abb. 3a



I

1. Vaso di raccolta serigrafato 1000ml 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. 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. Cannula sterile monouso
11. Regolatore manuale sterile monouso

D

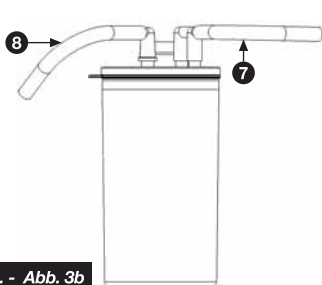


Fig. - Abb. 3b



1. Sekretgefäß, mit Siebdruck, aus sterilisierbarem Polykarbonat
2. Sterilisierbarer Propylenstopfen
3. Schwimmführung aus sterilisierbarem Polypropylen
4. Schwimmkörper aus sterilisierbarem Polypropylen
5. Sterilisierbares Gummiventil
6. Antibakterieller Filter
7. Sterilisierbarer Silikonschlauch, Ø 6x12 mm - 24 cm
8. Sterilisierbarer Silikonschlauch, Ø 6x12 mm - 130 cm
9. Einwegbeutel
10. Steriles Einwegkatheter
11. Steriler Einweghandregler

GB

1. 1000 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. Antibacterial filter
7. Sterilisable silicon tube Ø 6x12 mm - length 24 cm
8. Sterilisable silicon tube Ø 6x12 mm - length 130 cm
9. Disposable bag
10. Disposable sterile cannula
11. Disposable sterile manual regulator

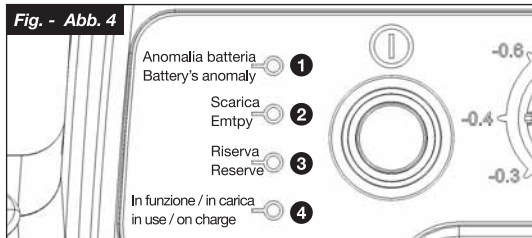
F

1. Pot de collecte sérigraphié 1000 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. Filtre antibactérien
7. Tuyau en silicone stérilisable Ø 6x12 mm 24 cm
8. Tuyau en silicone stérilisable Ø 6x12 mm 130 cm
9. Sac uniservice
10. Canule stérile uniservice
11. Régulateur manuel stérile uniservice

E

1. Frasco de recogida gradado mediante serigrafía 1000 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. Filtro antibacteriano
7. Tubo de silicona esterilizable de 6x12 mm de diámetro - 24 cm
8. Tubo de silicona esterilizable de 6x12 mm de diámetro - 130 cm
9. Bolsa desechable
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



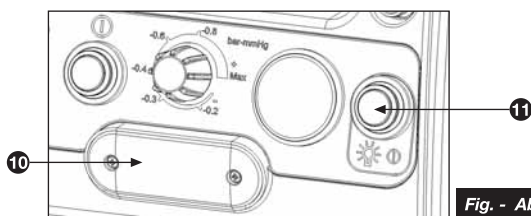
- I**
- 1. Led rosso lampeggiante:** la batteria non è più in grado di fornire la massima autonomia, provvedere alla sua sostituzione.
 - 2. Led rosso fisso:** la batteria è scarica, utilizzare l'apparecchio per 3 minuti massimo e provvedere a ricaricare la batteria
 - 3. Led giallo fisso:** la batteria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

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

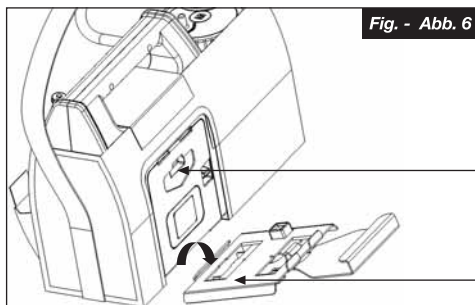
- GB**
- 1. Flashing red Led:** the battery is no longer capable of supplying maximum charge duration; replace it.
 - 2. Red Led permanently on:** the battery is flat, use the appliance for a maximum of 3 minutes and re-charge the battery
 - 3. Yellow Led permanently on:** the battery is in reserve (about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

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

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



DESCRIZIONE AGGANCIAMENTO - SGANCIAMENTO IN AMBULANZA / ABSAUGGERÄT IM RETTUNGSWAGEN MONTIEREN / DESCRIPTION OF AMBULANCE MOUNTING - RELEASE SYSTEM / DEMONTIEREN - DESCRIPTION DE L'ACCROCHAGE - DÉCROCHAGE DANS L'AMBULANCE / DESCRIPCIÓN DEL ENGANCHE - DESENGANCHE EN LA AMBULANCIA



Staffa fissa sull'aspiratore
Haltebügel auf dem Absauggerät
Bracket fixed to aspirator
Étrier fixe sur l'aspirateur
Abrazadera fija en el aspirador

Staffa fissa in ambulanza
Haltebügel im Rettungswagen
Bracket fixed to ambulance
Étrier fixe dans l'ambulance
Abrazadera fija de ambulancia

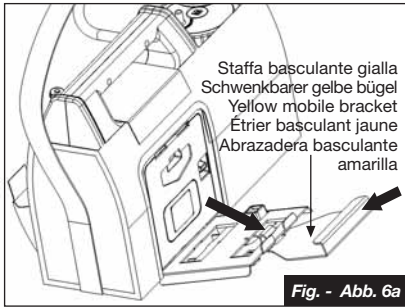


Fig. - Abb. 6a

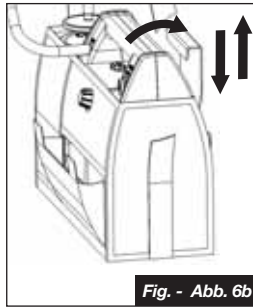


Fig. - Abb. 6b

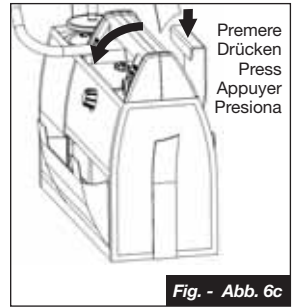


Fig. - Abb. 6c

DESCRIZIONE E FISSAGGIO STAFFA IN AMBULANZA / HALTEBÜGEL IM RETTUNGSWAGEN
DESCRIPTION OF PROCEDURE FOR MOUNTING BRACKET IN AMBULANCE /
DESCRIPTION DE L'ACCROCHAGE/DÉCROCHAGE DANS L'AMBULANCE /
DESCRIPCIÓN Y FIJACIÓN DE LA ABRAZADERA EN LA AMBULANCIA

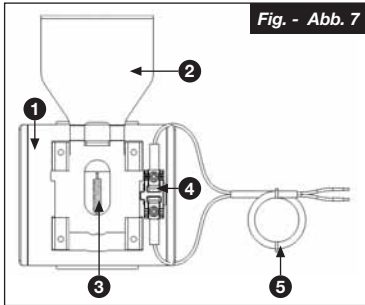


Fig. - Abb. 7

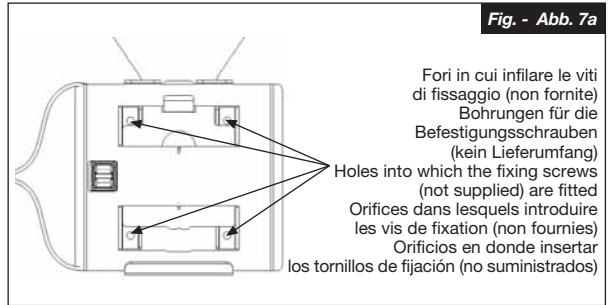


Fig. - Abb. 7a

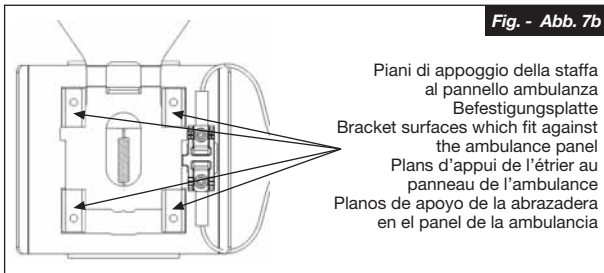


Fig. - Abb. 7b

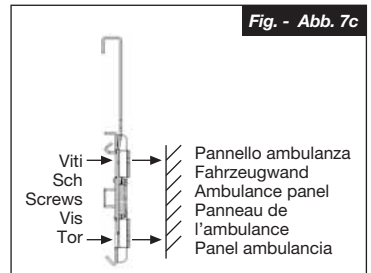


Fig. - Abb. 7c

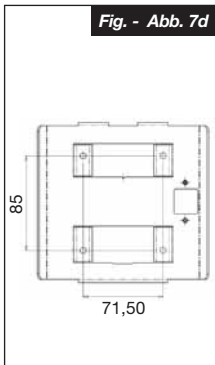


Fig. - Abb. 7d

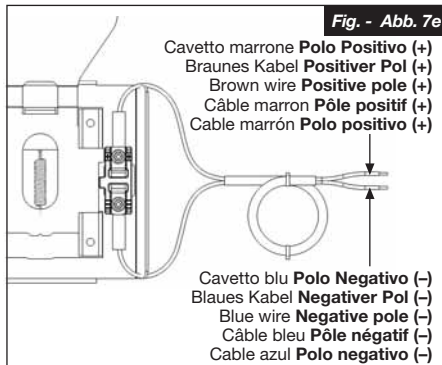


Fig. - Abb. 7e

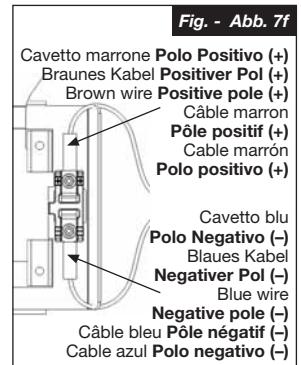


Fig. - Abb. 7f

The MINIASPEED BATTERY EVO PLUS aspirator is a professional portable device suitable for use in ambulances, specific for secretion removal. It has a vacuum regulator, a vacuum gauge and 1000 ml container with a protection device to prevent liquid from entering the suction pump, which cuts off the aspiration flow. It has lifetime lubrication and is easy to handle, simple to use, reliable, strong and silent. This model has a 12 V rechargeable battery; when connected to the ambulance mounting bracket it not only operates on the ambulance's battery but also recharges. The MINIASPEED BATTERY EVO PLUS aspirator has the following 3A accessories: 1000 ml container with protection device, power supply cord with multi-voltage power supply unit, 24 cm long sterilisable silicone connection tube, 130 cm long sterilisable silicone connection tube, **sterile, disposable** cannula, **sterile, disposable** manual flow regulator, **disposable** bag 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).

- Although the device is protected against sprays of water, do not use it in the rain.
- 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 PLUS with other power supply units.
- 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.
- Never modify the device's mounting bracket or the bracket installed in the ambulance as this may impair the safety of both the device and its installation environment.
- 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 MULTI-VOLTAGE POWER SUPPLY UNIT

- 1.1 Check the charge level of the ambulance's battery before using the device
- 1.2 For use outside the ambulance (i.e. not fixed to the bracket [19]) with the internal battery flat or not fully charged, connect the multi-voltage power supply (16) to the socket on the device (7) and connect the cord (17) to a mains power socket.
- 1.3 Connect the appliance as indicated in Figure 1 (page 1).
- 1.4 Start the appliance 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 device, remove the supply cord (17) from the mains socket and disconnect the power supply unit (16) from the device. Perform the cleaning operations as described in the "CLEANING AND DISINFECTION" paragraph.

2. OPERATION WITH BATTERY AND BATTERY CHARGER WITH 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). If the device is not in use and is not connected to the bracket (19) in the ambulance, the power supply unit should be left connected (16) to ensure that the battery is always charged to the optimal level.
- 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. OPERATION WITH THE DEVICE INSTALLED IN THE AMBULANCE

- 3.1 The device can also operate connected to the ambulance mounting bracket (19).
- 3.2 With the device connected to the bracket (19), there is no limit to patient treatment time because the device is powered directly by the ambulance battery.
- 3.3 The device's battery is charged by leaving it connected to the ambulance mounting bracket (19).
 - 3.3.1 The device's battery is also charged while treatment is in progress (with the device connected to the ambulance mounting bracket).
- 3.4. For aspiration procedures see points 1.3; 1.4; 1.5.

4. 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.

- 4.1 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.
 - 4.1.1 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 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.
- 4.2 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).

4.2.1 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 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.

DESCRIPTION OF USE OF WORKING LIGHT

The MINIASPEED BATTERY EVO PLUS 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 5 of page 3; 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).

DESCRIPTION OF AMBULANCE MOUNTING / RELEASE SYSTEM

1. Fit the bottom of the bracket fixed to the aspirator into the recess provided in the bottom of the bracket mounted in the ambulance (as shown in Figure 6 of page 3).
2. Keeping the device engaged with the bracket, push it until it engages with the hook in the top of the yellow mobile bracket (as shown in Figure 6a):

N.B.: to ensure that the device engages correctly, press the mobile bracket, push the device fully down and release the mobile bracket (as shown in Figure 6b).

 **ALWAYS CHECK THAT THE DEVICE HAS ENGAGED WITH THE BRACKET.**

3. To release the device, press the yellow mobile bracket and lift the aspirator up and towards you (as shown in Figure 6c).

 **KEEP A FIRM GRIP ON THE HANDLE OF THE ASPIRATOR WHILE RELEASING IT.**

DESCRIPTION OF PROCEDURE FOR MOUNTING BRACKET IN AMBULANCE

The ambulance mounting bracket is supplied assembled and complete (as shown in Figure 7):

1. Wall mounting bracket.
2. Mobile bracket.
3. Mobile bracket spring.
4. Block complete with electrical contacts and cord.
5. 2 metre power cord for connecting the ambulance battery.

Mounting the bracket in the ambulance

- The bracket must be installed on the panel inside the ambulance by skilled staff authorised by the vehicle's constructor/outfitter.
- The fixing points are shown in Figure 7a, Figure 7b and Figure 7c.
- M5 Allen screws (UNI 5931-DIN 912-ISO 4762) should be used since they undergo deceleration testing at 10g as required by the EN 1789 standard. Otherwise, screws (with the same mechanical characteristics) having (non-tapered) heads, max. Ø10, and no more than 7 mm in height (including the washer, if fitted) can be used.

- See Figure 7d for the fixing centre distances.

Wiring connection/polarity

- The bracket is supplied complete with the ambulance battery connection cord (5) (already fitted), which powers the device and charges its battery when it is connected to the bracket.
- Connect the wires to the ambulance following the polarity shown in Figure 7e.
- If the cord is disconnected from the bracket for any reason, reconnect it following the polarity shown in Figure 7f.

N.B.: Take great care over the polarity (+ and -) because if it is reversed the device's electronic circuit board and battery will be damaged beyond repair.

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:

Suction class:

Protection level against entry of liquids and solids:

Voltage:

Absorption:

Adjustable vacuum level:

Vacuum gauge precision class:

Air flow:

Temporary use:

Dimensions:

Weight:

Noise level:

Multi-voltage switching battery charger:

Internal battery:

Battery charge duration:

Operating conditions:

Temperature:

Air humidity:

Storage conditions:

Temperature:

Air humidity:

Operating-storage conditions:

IIb

High vacuum / High flow

IP44D

12VDC

3A

from 0 to -0.85 bar

2.5% under UNI EN 837

30 lt/min operating without restrictions +/- 10 %

max. 60 minutes

38 (length) x 13.5 (width) x 26 (Height) cm

4.7 kg approx

61dBA

PRI: 100 ÷ 240V~ 50 – 60Hz


SEC: 14VDC 4.28A


12VDC 4Ah Lead, hermetic

45 minutes at maximum suction power

min. 0° C; max 40° C

min. 10 %; max 95 %

min. -10° C; max 50° C 


min. 10 %; max 95 % 


min. 690 hPa; max 1060 hPa 

SYMBOLS USED

 Type BF appliance

 Alternate current

 Carefully read the instructions before using this device

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

IP44D The device's casing is protected against solid particles having diameter of 1 mm or above, spraying water and access to hazardous parts with a wire


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

 Switch On

 Thermally protected safety transformer

 Switch off (or battery on charge)

 Sterilisation by ethyl oxide

 Direct current

 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 PLUS 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 PLUS is suitable for use in all establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for 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 PLUS 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 PLUS 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 PLUS 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.

CERTIFICATO DI GARANZIA/WARRANTY CERTIFICATE

VALEVOLE 36 MESI dalla data di vendita/VALIDITY 36 MONTHS from date of purchase

Data di vendita
Date of purchase

Rivenditore (timbro e firma)
Dealer (Stamp and signature)

La presente garanzia non è valida se non "unitamente allo scontrino fiscale dell'apparecchio" e all'apparecchio difettoso. Sono esclusi dalla garanzia danni causati da usi impropri, incidenti o mancanza di cure opportune./ This warranty certificate is valid only if returned to your dealer along with Receipt and Faulty Unit. Warranty does not cover damages caused by misuse, crashes or lack of attention.

DESCRIZIONE GUASTO/ FAULT DESCRIPTION



PROCEDURA DI SMALTIMENTO (Dir.2012/19/Ue-RAEE) Il simbolo posto sul fondo dell'apparecchio indica la raccolta separata delle apparecchiature elettriche ed elettroniche. Al termine della vita utile dell'apparecchio, non smaltirlo come rifiuto municipale solido misto ma smaltirlo presso un centro di raccolta specifico situato nella vostra zona oppure riconsegnarlo al distributore all'atto dell'acquisto di un nuovo apparecchio dello stesso tipo ed adibito alle stesse funzioni. Questa procedura di raccolta separata delle apparecchiature elettriche ed elettroniche viene effettuata in visione di una politica ambientale comunitaria con obiettivi di salvaguardia, tutela e miglioramento della qualità dell'ambiente e per evitare effetti potenziali sulla salute umana dovuti alla presenza di sostanze pericolose in queste apparecchiature o ad un uso improprio delle stesse o di parti di esse. **Attenzione!** Uno smaltimento non corretto di apparecchiature elettriche ed elettroniche potrebbe comportare sanzioni.

ENTSORGUNGSVERFAHREN (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 Müllsammlungszentrum 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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