

# MINIASPEED BATTERY PRO

ISTRUZIONI D'USO

INSTRUCTION MANUAL

MANUEL D'INSTRUCTIONS

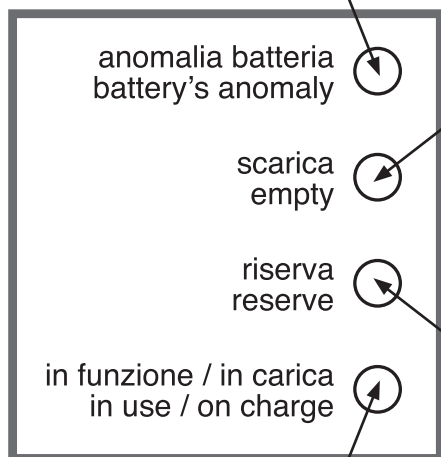
MONTAGE-UND GEBRAUCHSANWEISUNG

MANUAL DE INSTRUCCIONES



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

Led rosso lampeggiante: la batteria non è più in grado di fornire la massima autonomia, provvedere alla sua sostituzione / Flashing red Led: the battery is no longer capable of supplying maximum autonomy; replace it. / Led rouge clignotante: la batterie n'est plus en mesure d'assurer l'autonomie maximale, la remplacer. / Rote LED blinkt: Die Batterie ist nicht mehr in der Lage, maximale Autonomie zu liefern. Batterie ersetzen./ Led rojo parpadeante: la batería ya no logra ofrecer la autonomía máxima; sustituirla.

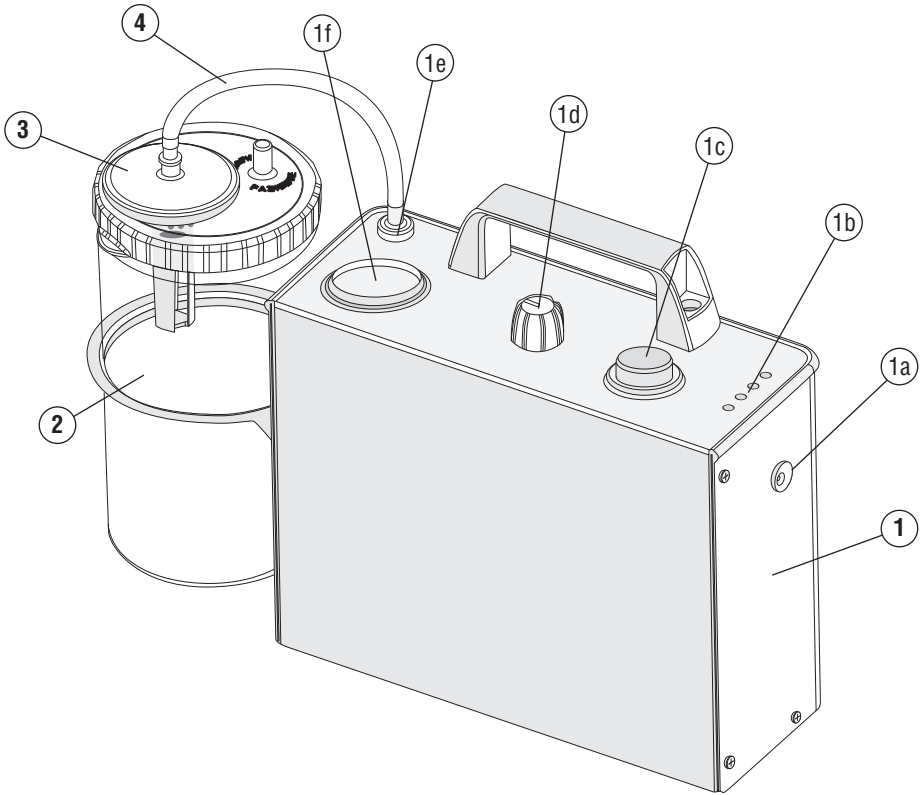


Led rosso fisso: la batteria è scarica, utilizzare l'apparecchio per 3 minuti massimo e provvedere alla ricarica della batteria. / Red Led permanently on: the battery is flat: use the appliance for a maximum of 3 minutes and re-charge the battery. / Led rouge fixe: la batterie est déchargée, utiliser l'appareil pendant 3 minutes au maximum puis recharger la batterie. / Rote LED leuchtet kontinuierlich: Batterie entladen. Das Gerät maximal für 3 Minuten benutzen und die Batterie aufladen./ Led rojo fijo: la batería está agotada, utilizar el aparato durante 3 minutos como máximo y volver a cargarla.

Led giallo fisso: la batteria è in riserva (autonomia 10 minuti circa), se possibile provvedere a ricaricarla. / Yellow Led permanently on: the battery is in reserve (around 10 minutes autonomy), se possible, recharge it. / Led jaune fixe: la batterie est sur la réserve (10 minutes d'autonomie environ); la recharger si possible. / Gelbe LED leuchtet kontinuierlich: Batterie in Reserve (Autonomie ca. 10 Minuten), Batterie aufladen. / Led amarillo fijo: la batería se halla en reserva (autonomía de unos 10 minutos); si es posible volver a cargarla.

Led verde fisso: apparecchio in funzione, batteria carica. Led verde lampeggiante: batteria sotto carica. / Green Led permanently on: appliance operating: battery charged. Green Led flashing: battery under charge. / Led verte fixe: appareil en marche, batterie chargée. Led verte clignotante: batterie sous charge. / Grüne LED leuchtet kontinuierlich: Gerät in Betrieb, Batterie geladen. Grüne LED blinkt: Batterieaufladung. / Led verde fijo: aparato funcionando, batería cargada. Led verde parpadeante: batería en carga.

**SCHEMA DI COLLEGAMENTO / CONNECTION DIAGRAM  
SCHÉMA DE RACCORDÉMENT / ANSCHLUSSPLAN  
ESQUEMA DE CONEXIÓN**



**IT**

1. Aspiratore
  - 1a. Presa per alimentatore multitemensione e ricarica batteria
  - 1b. LED di funzionamento
  - 1c. Interruttore ON-OFF
  - 1d. Regolatore di vuoto
  - 1e. Presa entrata-aria INLET
  - 1f. Vuotometro
2. Vaso da 1000 ml in policarbonato sterilizzabile
  - 2a. Tappo in polipropilene sterilizzabile
  - 2b. Guida galleggiante in polipropilene sterilizzabile
  - 2c. Corpo galleggiante in polipropilene sterilizzabile
  - 2d. Valvola in gomma sterilizzabile
3. Filtro antibatterico monouso
4. Tubo in silicone sterilizzabile Ø 6x12 mm L 240 mm
5. Tubo in silicone sterilizzabile Ø 6x12 mm L 1300 mm
6. Regolatore manuale sterile monouso
7. Cannula sterile monouso
8. Sacca monouso
9. Cavo di alimentazione
10. Alimentatore multitemensione
11. Cavo con spina accendisigari
12. Borsa con tracolla

**EN**

1. Aspirator
  - 1a. Multi-voltage power supply unit and battery charger socket
  - 1b. Power LED
  - 1c. ON-OFF switch
  - 1d. Vacuum regulator
  - 1e. Air INLET connection
  - 1f. Vacuum gauge
2. 1000 ml vessel in sterilisable polycarbonate
  - 2a. Sterilisable polypropylene cap
  - 2b. Sterilisable polypropylene float guide
  - 2c. Sterilisable polypropylene float body
  - 2d. Sterilisable rubber valve
3. Disposable antibacterial filter
4. Sterilisable silicone tube Ø 6 x 12 mm L 240 mm
5. Sterilisable silicone tube Ø 6 x 12 mm L 1300 mm
6. Disposable sterile manual regulator
7. Disposable sterile cannula
8. Disposable bag
9. Power cord
10. Multi-voltage power supply unit
11. Cable with cigarette lighter plug
12. Bag with shoulder strap

**F**

1. Aspirateur
  - 1a. Prise pour alimentation multi-tension et recharge de la batterie
  - 1b. LED de fonctionnement
  - 1c. Interrupteur MARCHE/ARRÊT
  - 1d. Régulateur de vide
  - 1e. Prise d'arrivée d'air INLET
2. Récipient de 1000 ml en polycarbonate stérilisable
  - 2a. Bouchon en polypropylène stérilisable
  - 2b. Guide flottant en polypropylène stérilisable
  - 2c. Corps flottant en polypropylène stérilisable
  - 2d. Soupape en caoutchouc stérilisable
3. Filtre antibactérien jetable
4. Tuyau en silicone stérilisable Ø 6x12 mm L 240 mm
5. Tuyau en silicone stérilisable Ø 6x12 mm L 1300 mm
6. Régulateur manuel stérile jetable
7. Canule stérile jetable
8. Poche jetable
9. Câble d'alimentation
10. Alimentation multi-tension
11. Câble avec fiche allume-cigare
12. Sac bandoulière

**D**

1. Absauggerät
  - 1a. Buchse für Mehrspannungsnetzteil und Batterieaufladung
  - 1b. Funktions-LED
  - 1c. Schalter ON-OFF
  - 1d. Vakuumregler
  - 1e. Lufterlassbuchse INLET
2. 1000 ml-Sekretbehälter aus sterilisierbarem Polycarbonat
  - 2a. Sterilisierbarer Polypropylendeckel
  - 2b. Schwimmführung aus sterilisierbarem Polypropylen
  - 2c. Schwimmkörper aus sterilisierbarem Polypropylen
  - 2d. Sterilisierbares Gummiventil
3. Antibakterieller Einwegfilter
4. Sterilisierbarer Silikonanschlauch Ø 6x12 mm L 240 mm
5. Sterilisierbarer Silikonanschlauch Ø 6x12 mm L 1300 mm
6. Steriler Einweghandregler
7. Sterile Einwegkanüle
8. Einwegbeutel
9. Netzkabel
10. Mehrspannungsnetzteil
11. Kabel mit Zigarettenspannenderstecke
12. Schultertasche

**E**

1. Aspirador
  - 1a. Enchufe para alimentador multitensión y recarga batería
  - 1b. LED de funcionamiento
  - 1c. Interruptor ON-OFF
  - 1d. Regulador de vacío
  - 1e. Toma de entrada-aire INLET
2. Recipiente de 1000 ml en policarbonato esterilizable
  - 2a. Tapón de polipropileno esterilizable
  - 2b. Guía flotador de polipropileno esterilizable
  - 2c. Cuerpo flotador de polipropileno esterilizable
  - 2d. Válvula de goma esterilizable
3. Filtro antibacteriano desechable
4. Tubo de silicona esterilizable Ø 6x12 mm L 240 mm
5. Tubo de silicona esterilizable Ø 6x12 mm L 1300 mm
6. Regulador manual estéril desechable
7. Cánula estéril desechable
8. Bolsa desechable
9. Cable de alimentación
10. Alimentador multitensión
11. Cable con toma de mechero
12. Bolsa con bandolera

**Schema di collegamento con Vaso - fig. 1**  
**Connection with vessel - fig. 1**  
**Schéma de raccordement au récipient - fig. 1**  
**Anschlussplan mit Sekretbehälter - Abb. 1**  
**Esquema de conexión con Recipiente - fig. 1**

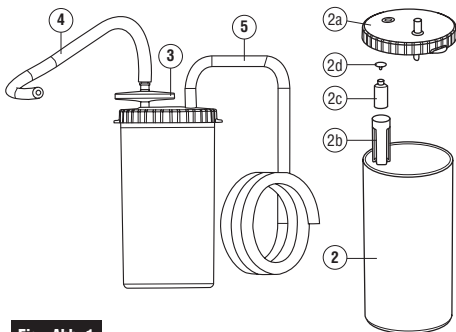


Fig - Abb. 1

**Schema di collegamento con Sacca monouso - fig. 2**  
**Connection with disposable bag - fig. 2**  
**Schéma de raccordement avec poche jetable - fig. 2**  
**Anschlussplan mit Einwegbeutel - Abb. 2**  
**Esquema de conexión con Bolsa desechable - fig. 2**

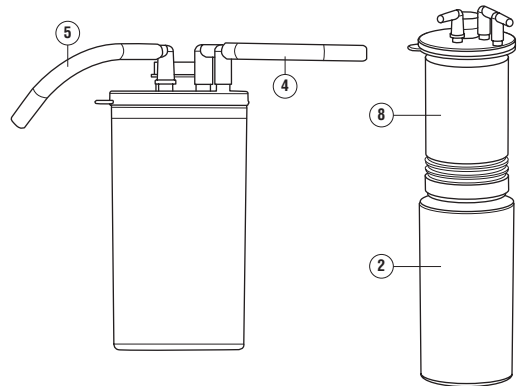
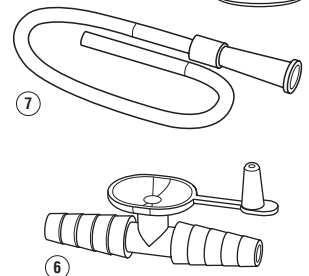
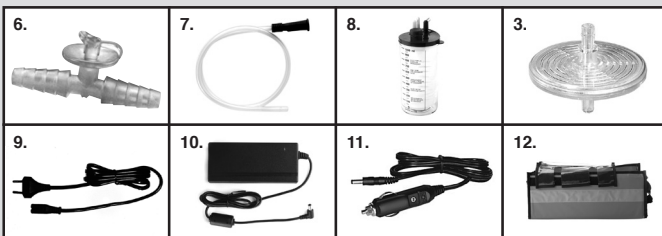
**ACCESSORI / ACCESSORIES / ACCESSOIRES / ZUBEHÖR / ACCESORIOS**

Fig - Abb. 2

The **MINIASPEED BATTERY PRO** aspirator, specific for secretion removal, is a medical and surgical device suitable for use in the home, in clinics, and also in field facilities and on vehicles. This model is equipped with a 12 V rechargeable battery, which enables the device to operate with no mains power available. It can also be powered via a 12 V cigarette lighter socket. The device generates a vacuum for aspiration to extract bodily fluids through a disposable cannula connected to a collection vessel, where they are collected for appropriate disposal. Its use must be prescribed by a physician. For correct operation and a longer service life, carefully follow the use and cleaning instructions. The device includes a vacuum regulator, vacuum gauge and 1000 ml vessel with a safety device that prevents liquid from entering the suction pump, which would cut out the suction flow. It never needs lubrication. It is sturdy, silent, reliable, easy to handle and simple to operate. The **MINIASPEED BATTERY PRO** aspirator includes the following accessories: 1000 ml vessel with safety device, power cord with multi-voltage power supply, power cord with cigarette lighter plug, short sterilisable silicone connection tube, long sterilisable silicone connection tube, **disposable, sterile** cannula, **disposable, sterile** manual regulator, **disposable** bag and a **disposable** antibacterial filter.

**N.B.:** Only use genuine accessories supplied by 3A Health Care; the accessories supplied with the device by the manufacturer have been tested and proven compliant with the latest current safety standards. **WARNING!** Correct operation of the device is not guaranteed in the event of use of accessories other than those supplied.

## INTENDED USE

Battery-powered medical / surgical aspirator intended for use in the field and/or in vehicles. It may also be used in home care and/or outpatient settings.

**Medical purposes:** This product is intended for use for the aspiration of body fluids.

**Intended users of the product:**

- Legally certified medical personnel (doctors, nurses and therapists).
- For home treatment or home care under the guidance of medical personnel.
- Users must also be able to understand the operation of the medical device, and the contents of the instruction manual, in general terms.

**Intended patients for the product:** People who need to remove body fluids (saliva, blood, etc.).

**Environment:** This product is intended for use in the field and/or on a vehicle. It may also be used in home care and/or outpatient settings.

**Expected duration:** Duration may vary based on the operating environment. The lifetime of the device is 5 years and that of the collection vessel and the silicone tubes 1 year or 30 sterilisation cycles. The cannula, manual flow regulator, antibacterial filter and bag are disposable devices and must therefore be replaced after each application. Frequent use of the product may shorten the duration.

**Precautions for use:** The warnings and cautions described in the instruction manual must be observed.



## IMPORTANT WARNINGS

**This is a medical device and must be used by qualified staff. It must be operated as indicated in this user 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 dealer. MICROBIAL CONTAMINATION: in 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 safe. Nevertheless, as with all electrical devices, make sure to follow all basic safety standards.

- Children and persons who are not self-sufficient may only use the device under the strict supervision of a responsible adult who has read this manual. Some device components are small enough for children to swallow. Therefore, keep the device out of reach of children.
- Due to their lengths, the power cord and connection tube could create a strangulation hazard.
- The device must always be used by specifically trained staff, who have read this manual.
- This device should only be used for its intended purpose as an aspirator for home and clinical use. Any other use shall be considered inappropriate and therefore hazardous. The manufacturer shall not be liable for any consequences arising from inappropriate use.
- Never use power adapters with voltages other than the voltage shown on the power supply unit (rating plate). Keep the power cord away from hot surfaces.
- The device should not be used in the presence of flammable anaesthetic mixtures with air, oxygen or nitrous oxide.
- Never handle the power supply unit with wet hands. Never use the device (with power supply unit connected) close to water.
- Never immerse the device in any liquid. Do not wet the device. If the device falls into water, disconnect the power supply from the power outlet before recovering the device.
- Do not use the device if the plug or power cord are worn or wet (immediately send it back to your dealer).
- Only authorised personnel may perform maintenance and/or repair work on this device. Unauthorised repairs void the warranty.
- Ensure that all connections and vessel closing are performed carefully to avoid suction losses.
- Do not overturn the vessel while connected to the device in operation, as liquid may be sucked inside the device, causing pump damage. If this occurs, immediately switch the aspirator off. Then drain and clean/sterilise the vessel. Send the device to your dealer.
- Tripping of the safety device stops the suction. Drain the vessel and perform the cleaning/sterilisation operations.
- The disposable cannula and manual regulator are **disposable sterile** products. **They must be replaced after every use.**
- Check the expiry date of the cannula on the original packaging. Check the integrity of the sterile packaging. **If expired or damaged,**

replace it immediately.

- The **disposable antibacterial filter must be replaced after every use.**
- Never use the battery charger with other devices or for uses other than that described in this manual. Never use the MINIASPEED BATTERY PRO with other power supply units.
- The cigarette lighter plug cord has a safety fuse, which can be inspected in case of malfunction.
- 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 vessel and/or antibacterial filter, or if you suspect that solid or liquid substances have entered the aspiration circuit, send the device to customer service.
- Always place the device in a vertical position on an unobstructed, stable and flat surface before use.

## INSTRUCTIONS FOR USE

Before each use, ensure that all accessories are perfectly clean according to the instructions in the "CLEANING AND DISINFECTION OPERATIONS" section.

### 1. Operation using cigarette lighter plug cord:

**1.1** For use on vehicles, connect the power cord (11.) to the socket on the device (1a.).

**1.2** Check the charge status of the vehicle's battery before using the device.

**1.3** Connect the device as shown in the connection diagram on page 2.

**1.4** Use the vacuum regulator (1d.) to set the level of vacuum required (bar/KPa). Turn the knob clockwise, in the "+" direction, to obtain a stronger vacuum or anticlockwise, in the "-" direction, for a weaker vacuum. These levels may be read on the vacuum gauge (1f).

**Important: the vacuum values on the control decal are purely for guidance. Always refer to the vacuum gauge reading.**

**1.5** Start the device using the "ON-OFF" switch (1c.) (solid green indicator light on).

**1.6** After use, switch off the device, disconnect the cigarette lighter plug cord (11.) and clean the device as described in the "CLEANING AND DISINFECTION PROCEDURES" section.

**1.7** If the cigarette lighter plug fuse blows, replace it with a delayed 6.3 A-250 V fuse, size Ø 6.3 x 30 mm, by unscrewing the tip of the cigarette lighter plug.

### 2. Operation using the battery and/or 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** Charge the battery, with the device off, by connecting the multi-voltage power supply unit (10.) to the device's socket (1a.) and to mains power using the power cord (9.). Maximum charging time 6 hours, which provides autonomy of about 45 minutes.

**2.3** Operation with internal battery only:

Start the device using the "ON-OFF" switch (1c.) (solid green indicator light on). If the green light goes out during use (1b), and the yellow light comes on, there will be about 10 minutes of battery charge left (reserve level). Then, terminate use as soon as possible. If use cannot be stopped, continue until the red indicator light comes on (battery flat). If this occurs, **do not use the device for more than 3 minutes to avoid damaging the battery.** To continue using the device with the battery flat (red light on), connect the multi-voltage power supply unit (10.) (as described in point 2.2). After use, turn the switch (1c.) to "O" (OFF) and leave the power supply (10.) connected to the device's socket (1a.) to charge the battery. The power supply (10.) should be left connected when the device is not in use to ensure an optimal battery charge level.

**2.4** For aspiration procedures, see points 1.3, 1.4 and 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.**

**2.5** After use, switch off the device, disconnect the power cord (9.) from the mains socket and disconnect the power supply unit (10.) from the device. Perform the cleaning operations as described in the "CLEANING AND DISINFECTION PROCEDURES" section.

**2.6** Use only genuine 3A accessories.

### 3. Secretion collection vessel – 1000ml

The 1000 ml collection bottle (2.) supplied with the aspirator can be used in two ways: as a collection vessel which can be sterilised as shown in figure 1 or as a collection vessel with disposable bag (8.) as illustrated in figure 2.

#### 3.1 Sterilisable secretion vessel (2.):

The secretion vessel set consists of an overflow valve, a vessel in clear material (polycarbonate) and a blue plug (2a.). Fit the antibacterial filter (3.) straight into the plug (2a.); it will only fit into the hole marked VACUUM/VUOTO. 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 (2b/2c/2d); 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 (4.) to the antibacterial filter connector (3.) and insert this latter into the "VACUUM" hole of the blue top (2a.); connect the other end to the "INLET" connector (1e.) of the aspirator. Connect one end of the long sterilisable silicon tube (5.) to the PATIENT/PAZIENTE" connector of the blue top (2a.); to the other end, connect the disposable, sterile manual regulator (6.) and connect the disposable, sterile cannula (7.) to this latter.

### 3.2 Secretion collection vessel with single use bag (8.):

The aspirator can be used with the 1000 cc re-usable transparent secretion collection vessel (2.) and with the single use bag (8.) supplied. In this case the antibacterial filter is integrated in the single-use bag, therefore the antibacterial filter (3.) and the blue lid with the valve (2a.) should not be used. The filter embedded in the bag, also prevents the reflux of the liquids sucked towards the aspirator when it is full, or when it is inadvertently turned over. **In this case to restore the device to normal operation, the single use bag shall be replaced.** For the cleaning and disinfecting operations of the tubes (4. and 5.) and vessel (2.), sterilise the single parts in autoclave at a maximum temperature of 121°C, or by boiling them for 10 minutes. **The bag is single use and it MUST be replaced after each 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 (4.) to the yellow rubber holder (VACUUM) of the bag (8.) and the other end to the "INLET" input (1e.) of the aspirator. Connect one end of the long sterilisable silicon tube (5.) to the red rubber holder (PATIENT) of the bag (8.) and connect the sterile single-use manual regulator (6.) and the single-use sterile cannula (7.) to the other end.

**N.B.: only use the single use bags supplied by 3A - Code 3AC461.**

## CLEANING AND DISINFECTION PROCEDURES

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

- The cannula and the manual regulator are sterile, disposable products and must be replaced after every application.
- The disposable antibacterial filter must be replaced after every use.
- Never wash the device under running water or by immersion. Clean the outside of the device using only a cloth dampened with a non-abrasive detergent.

### TECHNICAL SPECIFICATIONS OF THE ACCESSORIES:

- Disposable antibacterial filter - code 3A1385
- 1000 ml collection vessel in polycarbonate, complete with cap - code 3AC286
- Silicone tube Ø 6 x 12 mm L 240 mm - code 3A476
- Silicone tube Ø 6 x 12 mm L 1300 mm - code 3A561
- Disposable sterile cannula CH14 - code 3A4167
- Disposable manual regulator - code 3A560
- 1 litre disposable bag - code 3AC461

## 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 SPECIFICATIONS

Electric two-cylinder piston compressor with lifetime lubrication. Metal casing with epoxy powder coating

Risk class under Directive 93/42/EEC:	<b>IIa</b>
Suction class:	High vacuum / Low flow
Voltage:	12VDC 45 W
Power consumption:	3.75A
Adjustable vacuum level:	from 0 to -0.85 bar (-85 KPa)
Vacuum gauge precision class:	2.5% according to UNI EN 837
Air flow rate:	28 L/min operating without restrictions +/- 10%
Temporary use:	maximum 45 minutes
Dimensions:	37 (length) x 10 (width) x 24 (height) cm
Weight:	5.8 kg approx.
Noise level:	58 dBA approx.
Multi-voltage switching battery charger:	PRI: 100-240V~ 50-60Hz SEC: 14V DC 4.29 A
Internal battery:	12VDC 4.5 Ah lead, hermetic
Battery charge duration:	45 minutes at maximum suction power
Cigarette lighter plug cord fuse:	F6.3 A-250 V, delayed; dimensions Ø 6.3 x 30 mm
Operating conditions: Temperature: min. 0°C max. 40°C – Air humidity: min 10% maximum 95%	
Storage conditions: Temperature: min. -10°C max. 50°C $\chi$ – Air humidity: min. 10% max. 95% $\text{RH}$	
Atmospheric pressure for operation/storage: min. 690 hPa - max. 1060 hPa $\text{hPa}$	

## SYMBOLS USED

-  Type BF device
-  Class II device
-  It is compulsory to carefully read the instructions before using this device
-  Switch on
-  Switch off (or battery on charge)
-  Direct current
-  Alternating current
-  Never use the device when taking a bath or a shower
-   The device contains a sealed lead-acid battery. It must be disposed of in accordance with current regulations on the disposal of toxic-harmful waste.
- IP21** The device's casing is protected against solids 12.5 mm or more in diameter, against vertically falling drops of water and against finger access to hazardous parts.
-  Ethylene oxide sterilisation
-  Disposable

 **3A HEALTH CARE S.r.l.**  
Via Marziale Cerutti, 90F/G  
25017 Lonato del Garda (BS) - ITALY

 0051 Compliant with Medical Devices Directive 93/42/EEC



## Electromagnetic Compatibility Compliance levels according to EN 60601-1-2:2015 standard

- ESD immunity: 15 kV air, 8 kV contact (EN 61000-4-2)
- Burst immunity: 2 kV/100 kHz (EN 61000-4-4)
- Surge immunity (EN 61000-4-5): 1 kV common mode /2 kV differential mode
- Magnetic field (EN 61000-4-8): 30 A/m
- Immunity to rf currents in the 150 kHz-80 MHz range (EN 61000-4-6) 3 V modulation 80% 1 kHz
- RF emissions, CISPR 11: Class B
- Harmonics emissions, EN 61000-3-2: Class A

<b>Rf field immunity (EN 61000-4-3):</b>		
Field (V/m)	Frequency	Modulation
3	80MHz 2700MHz	1kHz AM 80%
27	380MHz 390MHz	18Hz PM 50%
28	430MHz 470MHz	18Hz PM 50%
9	704MHz 787MHz	217Hz PM 50%
28	800MHz 960MHz	18Hz PM 50%
28	1700MHz 1990MHz	217Hz PM 50%
28	2400MHz 2570MHz	217Hz PM 50%
9	5100MHz 5800MHz	217Hz PM 50%

### Warnings:

Although compliant with the EN 60601-1-2 standard, the MINIASPEED BATTERY PRO medical device may interfere with other devices in the vicinity. The device must not be used in proximity to or stacked on top of other equipment. Install the device well away from other equipment that emits high frequencies (short waves, microwaves, electric scalpels, cell phones).

The device is intended for use in an electromagnetic environment in which radiated RF disturbances are under control. The customer or user can help prevent electromagnetic interference by maintaining a minimum distances between mobile and portable RF communication equipment (transmitters) and the medical device as recommended below, according to the maximum output power of the radio communication equipment.

Rated maximum output power of transmitter (W)	Separation distance (m) in relation to transmitter frequency		
	from 150 kHz to 80 MHz $d = 1.2 \sqrt{P}$	from 80 MHz to 800 MHz $d = 1.2 \sqrt{P}$	from 800 MHz to 2.5 GHz $d = 2.3 \sqrt{P}$
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 with rated maximum output power not listed above, the recommended separation distance  $d$  in metres (m) may be determined using the equation adopted for the transmitter frequency, where  $P$  is the maximum rated output power of the transmitter in Watts (W) stated by the transmitter manufacturer.

### Notes:

- (1) At 80 MHz and 800 MHz the highest frequency range applies.
- (2) These guidelines might 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.

**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 following 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.

**ENTSORGUNGSMETHODEN (RICHTLINIE 2012/19/Ue-WEEE)** Das Symbol auf dem Boden des Geräts gibt die getrennte Müllsammmlung der elektrischen und elektronischen Ausrüstungen an. Am Ende der Lebensdauer vom Gerät es nicht als gemischter fester Gemeindefüllabfall, sondern es bei einem spezifischen Müllsammmlungszentrum in Ihrem Gebiet entsorgen oder es dem Händler zurückgeben, wenn Sie ein neues Gerät desselben Typ mit denselben Funktionen kaufen. Diese Prozedur getrennter Müllsammmlung 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.

**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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