

Blowflex Easy



Inline ionisator

| | | |
|----|-----------------------|----|
| NL | Gebruikershandleiding | 1 |
| D | Bedienungsanleitung | 14 |
| GB | User Manual | 28 |
| FR | Mode d'emploi | 42 |



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Preface

This manual is intended for the installation and use of the Blowflex Easy ionization system. When ionization system is mentioned elsewhere in this user manual it refers to the Blowflex Easy ionization system.

This manual must always be available to the operating personnel. Read this manual thoroughly before installing and using this product. Instructions in this manual must be followed to ensure the correct operation of the product and in order to make a valid warranty claim. The warranty provisions are described in the General Terms and Conditions of Sale of SIMCO (Nederland) B.V

Explanation of symbols

The following symbols may appear in this manual or on the product.



Warning

Indicates special information to prevent injury or significant damage to the product or the environment.



Danger

Refers to information to prevent electric shock.



Note

Important information about the efficient use of the product and / or prevention of damage to the product or the environment.



Hint

Advice on how to use the product.

1 Introduction

The Blowflex Easy is an ionizer intended for blowing electrostatically charged surfaces or parts clean. The ionizer produces a stream of air which is rich in positive and negative ions. By directing this air stream to an electrostatically charged surface, an exchange of electrons takes place, so that the surface is neutralized during the blowing clean process. This prevents the blown-off particles from being attracted again.

Because the air outlet of the ionizer is supplied with a G ¼ " female thread, it can be fitted easily with the desired nozzle. The ionizer works on 24 V. The high voltage required for ionization is generated internally. The high voltage is only present when a 24V supply voltage is applied to the ionizer.

The Blowflex is equipped with a 5-pin M12 connector for connecting the 24 V DC supply voltage, and a status LED which indicates whether supply voltage is present.

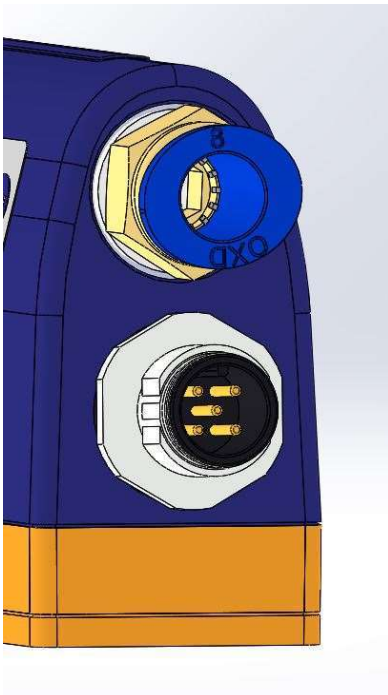


Image 1.1: M12 connector and input compressed air connection

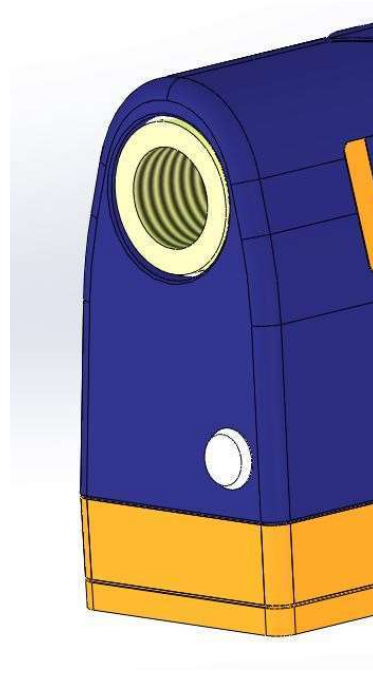


Image 1.2: Outgoing air connection and Status LED

2 Description and operation

The 24 V DC supply voltage is converted in the ionizer into AC high voltage. The high voltage generates an electric field at the emitter of the ionizer, which converts the air molecules around the emitter into positive and negative ions. When an electrostatically charged material comes into contact with the ionized air stream, ions from the ionizer exchange with the charged material until the material becomes neutral.

The status LED shows whether the 24V supply voltage is supplied to the ionizer.

3 Safety

The following safety guidelines must be followed in order to avoid injuries, damage to surrounding objects or the anti-static bar itself.



Warning:

- Electrical installation must be made in accordance with national and local regulations;
- The Blowflex Easy must not be used in a fire or explosion hazardous environment;
- The Blowflex Easy is only intended for blowing and neutralizing at the same time electrostatically charged surfaces. Any other use is not recommended;
- Mount the connection cable of the Blowflex Easy in a suitable way avoiding any risk of mechanical damage;
- To ensure the standard working life of the Blowflex Easy, the ionizer must be supplied with clean, moisture and oil-free compressed air. Contamination of the high voltage emitters reduces the operation of the ionizer and can lead to failure of the Blowflex;
- A small amount of ozone is produced during the internal ionization process. The ozone concentration is so low that there is no risk of any damages to health;
- Do not seal the blow-out opening during use. There may be a danger of ejecting objects.
- Make sure that the power supply is properly grounded. Earthing is necessary for proper operation;
- Never immerse in water or wet the Blowflex Easy. A short circuit will damage the ionizer and can cause an electric shock;
- Never use a damaged ionizer. Touching the live parts will cause an electric shock;
- High voltage can be dangerous for people with pacemakers



- The device loses its warranty if:
 - Changes, modifications, etc. have been made without prior written approval or non-original parts have been used for repairs;
 - Dirty compressed air has been used;
 - The Blowflex has become internally wet and has become defective;
 - The Blowflex has been improperly used.

4 Technical specifications

Supply voltage 24 V DC nominal
 Energy consumption Max. 0,3 A DC
 Connection M12, female, 5 pole

| Power supply | 24V DC ± 2% | 24V DC ± 5% | 24V DC ± 10% |
|---|-------------|---|--------------|
| Max. cable resistance per wire | 4,2Ω | 3Ω | 1Ω |
| Max. total cable length Standard Simco 5x 0.34 mm ² & M12 Male- Female cable | 84m | 60m | 20m |
| Type of supply | | Simco Desktop Power supply (4524001100) | |
| | | | |

Input

Compressed air 1 - 7 bar (15 - 100 PSI)
 Clean and free from oil
 Connection G ¼" female thread and 8 mm hose connection

Output

Connection G (= BSPP) ¼" female thread

Environment

Usage Industrial, indoor

Density class IP66
 Ambient temperature 0 - 55°C

Local signaling

- LED green Unlit Lit
 No power supply Voltage is present
 available

Mechanical

| | | | |
|--|--------|--------------|---------------------------|
| Dimensions excluding connection material | | Blowflex | With mounting base (wide) |
| | Length | 98 mm | 98 mm |
| | Width | 27,3 mm | 50 mm |
| | Height | 53,2 mm | 56,2 mm |
| Weight | | 180 g | 200 g |
| Housing | | PC-ABS / PUR | |
| Universal Mounting Bracket | | PA66/6 | |

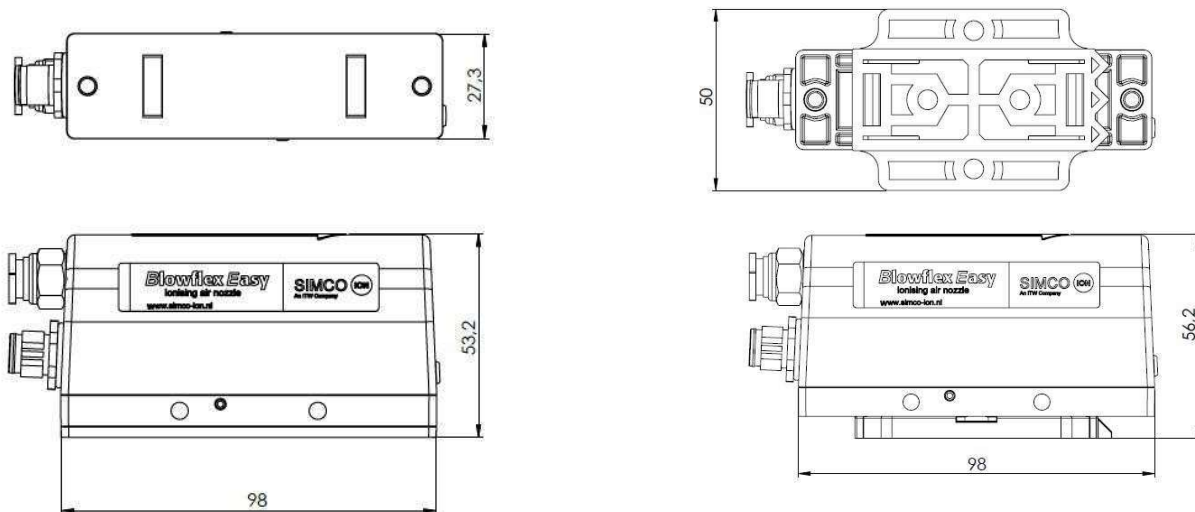


Image 4.1: Dimensions Blowflex Easy

5 Installation



- The equipment must be voltage-free when any maintenance or repair works are carried out.
- Electrical installation must be done by a qualified electrician.
- The Blowflex Easy may only be used indoors and only for suitable light industrial applications.
- Refer to the manual for the suitable power supply to be used for the correct and safe connection of the ionization system.
- The power supply for the Blowflex Easy must be properly grounded. Grounding is necessary for proper operation of the equipment and prevents electric shock when touched.



The 0 Volt of the power supply output must be properly grounded (see section 5.4).

The Blowflex Easy can be powered by an already available 24 Volt DC power supply at the workplace (which meets the above requirements), and also by a separate SIMCO (Nederland) B.V. Desktop power supply (see accessories).

5.1 Control

- Check that the equipment has been received undamaged and is the correct version.
- Check whether the accessories are also included.
- Check whether the packing slip data matches the data of the received product.



In case of problems or questions, please contact Simco Ion or a local Simco Ion representative in your region.

5.2 General

Determine the optimal location where the ionizer with the power supply and the compressed air hose will be used.

The compressed air hose and the power cable can be tied together with suitable materials. Use a standard Simco Ion Device cable as a power cable (see accessories) or make your own connection cable with an M12 connector (see section 5.4)

5.3 Power and compressed air supply

- Make sure that the Blowflex Easy is supplied with clean, moisture and oil-free compressed air.
- Make sure that the compressed air connection and the 24V power supply are within reach of the connection hose and connection cable. Both the hose and the cable must not be able to come under tension during use.
- Screw the power cable with the M12 connector hand tight to the ionizer.
- Connect the other side of the power cable to the 24V power supply.
See connection data of the cable for mounting on your own 24V system.
- Connect the compressed air hose to the G ¼" compressed air connection of the ionistor.
- Connect the other end of the compressed air hose to the compressed air connection with suitable materials. Use a pressure regulating valve with filter to regulate the compressed air to the desired pressure.
- Refer to the manual of the 24V power supply for connecting the power supply.
- When using the desktop power supply (4524001200), connect the yellow/green ground wire to a grounded point in the machine.

5.4 Connection to an external LPS certified power supply

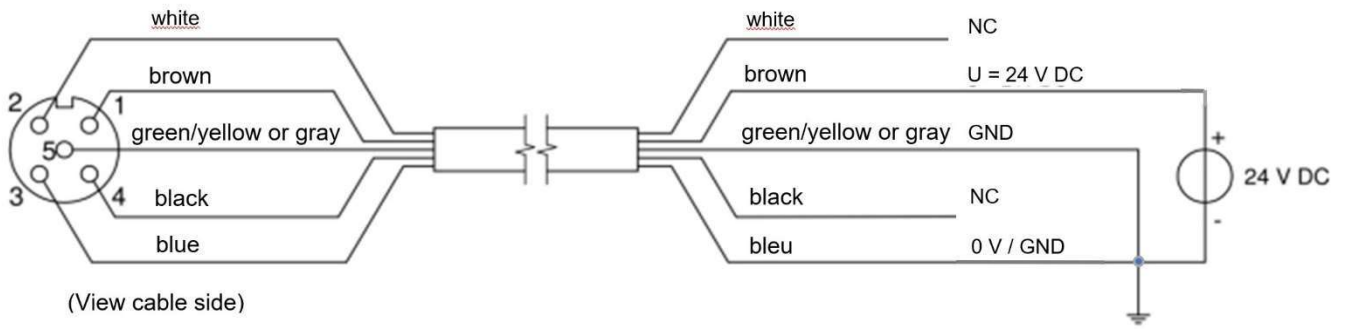


Image 5.1: Wiring power cable Blowflex Easy

| PIN | Pin definition |
|-----|----------------|
| 1 | 24 V DC |
| 2 | Not connected |
| 3 | 0 V/Earth |
| 4 | Not connected |
| 5 | Earth |

Tabel 1: Pin assignment overview

- Connect the wiring according to figure 5.1 and table 1

5.5 Mounting the ionizer using existing mounting holes

There are several mounting holes on the ionizer allowing the ionizer to be mounted in different ways.

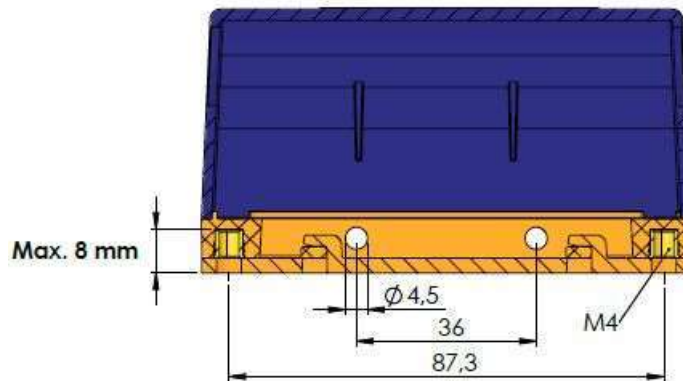
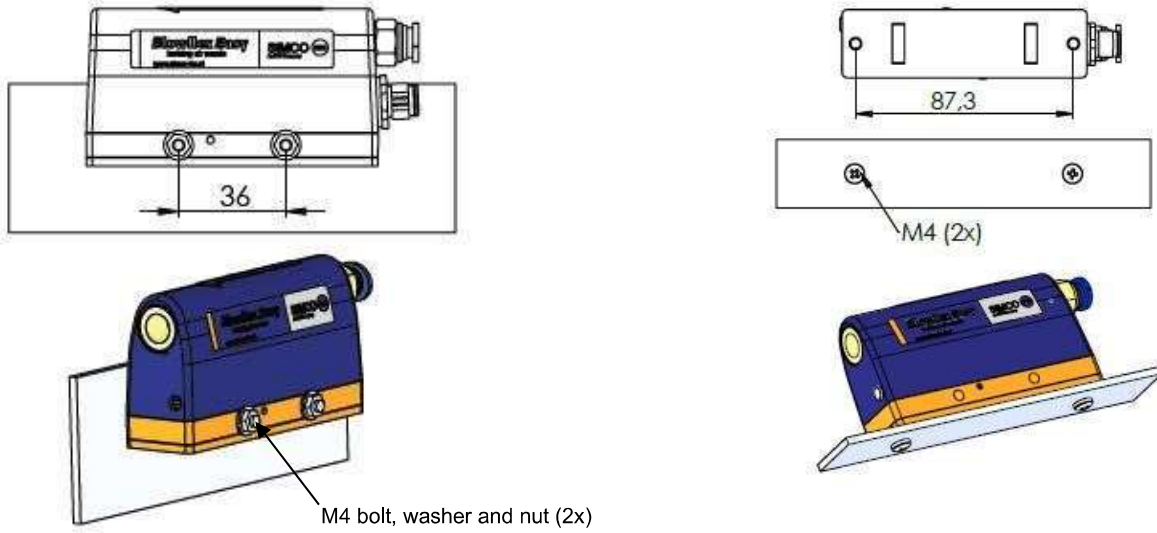
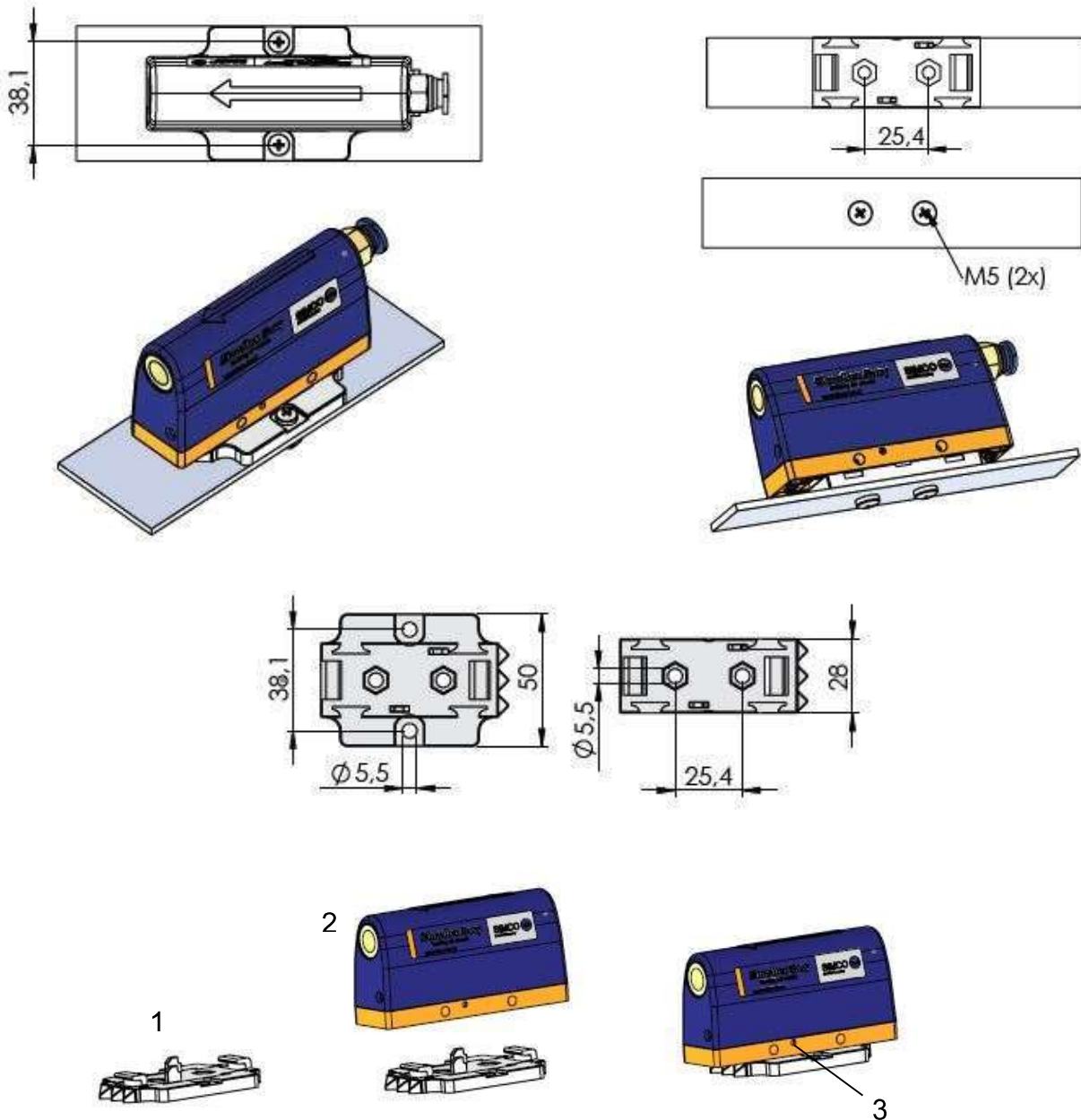


Image 5.2: Fixation using the existing mounting holes

- Mount the ionizer according to one of the steps shown in Figure 5.2. indicated possibilities.
- Connect the ionizer to the power cable and compressed air line

5.6 Mounting the ionizer using the mounting bracket (slide bracket)

A mounting base is supplied with the ionizer on which the ionizer can be mounted in various ways. The mounting base is provided with 2 side pieces, which are removable for narrow mounting.



Afbeelding 5.3: Bevestiging met behulp van montagevoet

- Mount the mounting base (1) on the machine, use suitable M5 mounting material.
- Place the ionizer on the mounting base and slide it against the direction of the three points.
- Lock the ionizer (2) by tightening at least 1 of the two set screws (3) (there is an adjusting screw on both sides).
- Connect the ionizer to the power cable and compressed air line.

5.7 Removing the Ionizer from the mounting base (slide bracket)

- Disconnect ionizer from the power cable and compressed air line.
- Unscrew the set screws (3) from the mounting bracket (see figure 5.3)
- Slide the ionizer off the mounting base in the direction of the three points up to the stop, pull the ionizer perpendicularly off the mounting base.

6 Commissioning and operation

- Provide clean & dry compressed air to the ionizer. Before first use, it is advisable to set the compressed air to a setting of 2 Bar.
- Provide 24 Voltage power supply to the ionizer.
- The LED indicator on the ionizer lights up green when the supply voltage is present, the ionizer is then active.
- The ionized air stream cleans and discharges the object.
- Regulate the compressed air pressure to optimize cleaning of the object.
- Switch off the power supply if no compressed air is available, preventing unnecessary wear.

7 Operational check

During use, the LED indicator lights green continuously. If the LED indicator is not lit, the power supply is not present.

Check that the compressed air connections are not leaking.

The Blowflex Easy works well when sufficient air is blown out when the surface of the object being worked on is clean. If necessary, check this with a Simco Ion field strength meter.

8 Maintenance



- When working on the equipment, the equipment must be voltage-free;
- Electrical installation and maintenance must be carried out by a qualified electrician.

8.1 General Maintenance

- Make sure the ionizer is kept clean and dry.
- Periodically check the connection cable and compressed air hose for any damage.
- Clean the ionizer, the connection cable and the compressed air hose with a suitable cleaning agent (e.g. isopropyl alcohol).
To remove stubborn soiling, Veconova 10 can also be used (www.eco-nova.nl). (www.eco-nova.nl).
- Clean only the outside of the ionizer.
- Make sure the ionizer is completely dry before reuse.

9 Solving malfunctions and problems



- When working on the equipment, the equipment must be voltage-free;
- Electrical installation must be carried out by an electrically skilled person.

| Signaling | Problem | What this means | Solution |
|-----------------------------------|--|---|---|
| LED unlit | No power supply | Defective power supply Power supply not connected Power supply incorrectly connected | Connect power supply See H5 & H6 |
| No compressed air on the Blowflex | No compressed air from the Blowflex outflow opening / nozzle | Compressed air is not connected | Connect the compressed air see H5 & H6 |
| | No compressed air from the Blowflex outflow opening / nozzle | Any compressed air valve in the compressed air connection does not allow air to pass through. The <i>Blowflex does not have a compressed air valve.</i> | Connect the compressed air see H5 & H6 |
| Not enough compressed air | No discharge | Compressed air pressure set too low | Increase the pressure H5 & H6 |
| | | Blowflex ionizer is contaminated by moist air or air contaminated with oil. | Clean the Blowflex ionizer with clean dry clean air. If this doesn't work, have Blowflex repaired See H10 |
| | | Ionization component in Blowflex defective or worn out | Repair the Blowflex See H10 |
| | Poor discharge | Compressed air pressure set too low | Increase the pressure See H6 |
| | | Ionization component in the Blowflex worn out | Repair the Blowflex See H10 |
| No discharge | No discharge | Blowflex ionizer is contaminated by moist air or air contaminated with oil. | Clean the Blowflex ionizer with clean dry clean air. If this doesn't work, have Blowflex repaired See H10 |
| | | Ionization component in Blowflex defective or worn out | Repair the Blowflex See H10 |
| Poor discharge | Poor discharge | Blowflex ionizer is contaminated by moist air or air contaminated with oil. | Clean the Blowflex ionizer with clean dry clean air. If this doesn't work, have Blowflex repaired See H10 |
| | | Ionization component in the Blowflex worn out | Repair the Blowflex See H10 |

Table 3: malfunctions

10 Repairs

The Blowflex can only be repaired by Simco Ion.

In case of problems and or questions, please contact Simco Ion or a Simco Ion representative in your region.

A malfunctioning or defective Blowflex can be returned to Simco-ION for repairs by following the following RMA (Return Merchandise Authorization) procedure on the website

<https://www.simco-ion.co.uk/contact/repairs/>

Pack the Simco-ION product properly and clearly state the RMA number on the outside of the packaging.

11 Disposal

When disposing of the device, follow the local environmental regulations.



Do not dispose of the device with the normal waste at the end of its life, but hand it in at an official collection point. In this way you help to protect the environment.

Spare parts and accessories

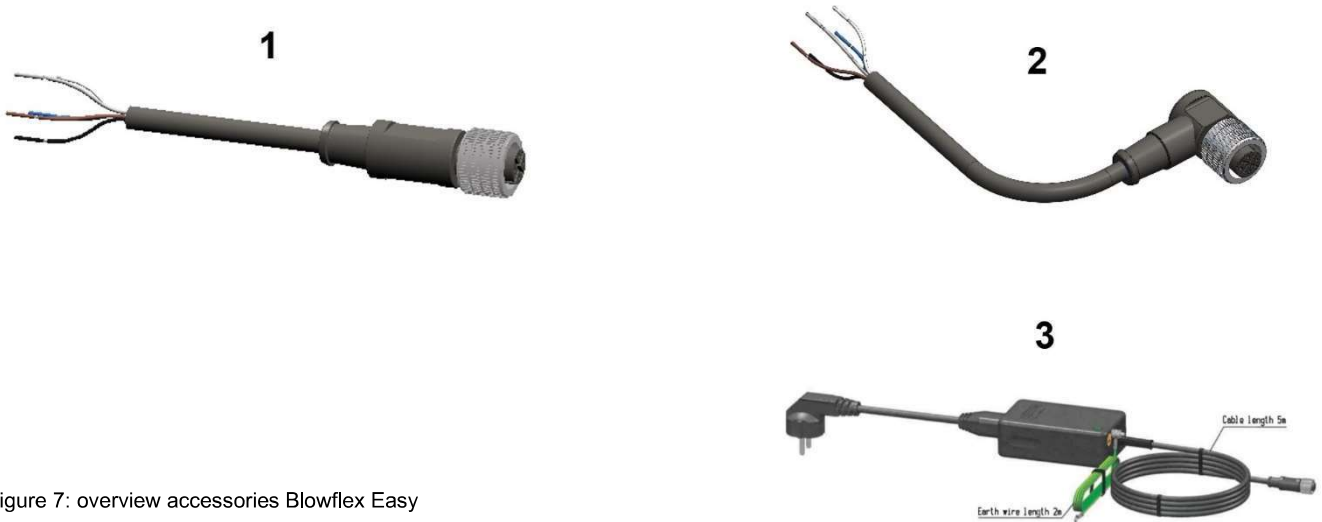


Figure 7: overview accessories Blowflex Easy

| No. | Article number | Description |
|-----|----------------|---|
| 1 | 7519020365 | Device-cable M12 female straight 5 m |
| | 7519020366 | Device-cable M12 female straight 10 m |
| 2 | 7519020375 | Device-cable M12 female angled 5 m |
| | 7519020376 | Device-cable M12 female angled 10 m |
| 3 | 4524001200 | Power supply 100-240V/24V - 5m - Simco-ION Desktop power supply |

Table 4: overview accessories Blowflex Easy

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