

Basic quattro

No. 2954-0005 / 2954-1005

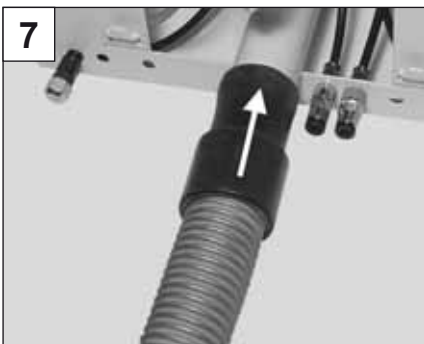
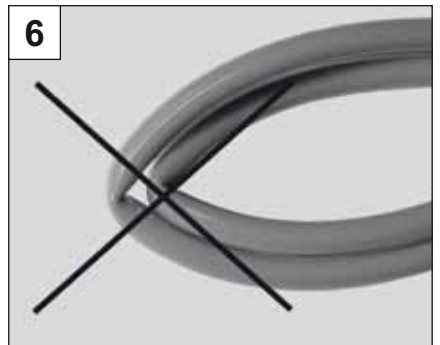
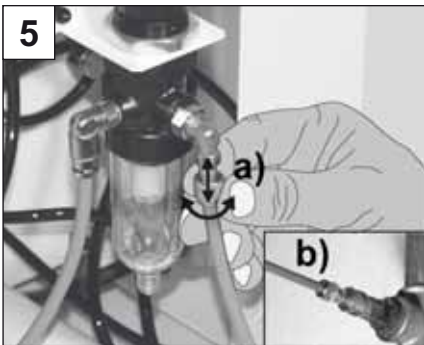
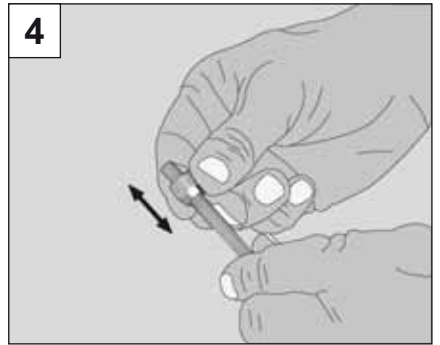
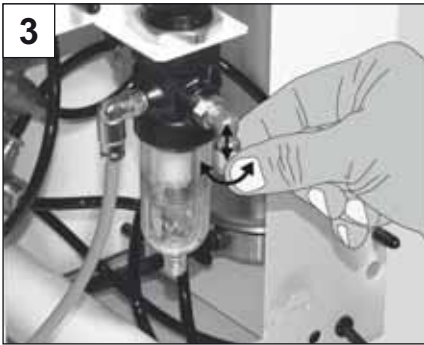
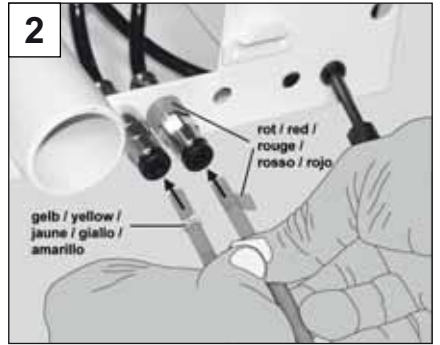
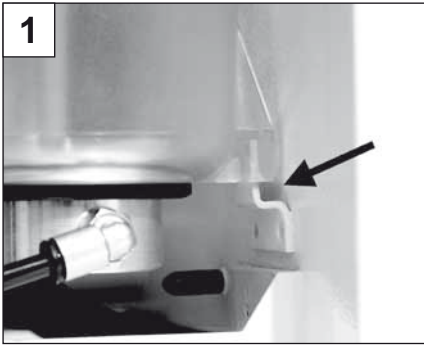
Bedienungsanleitung
Instruction Manual • Mode d'emploi
Instruzioni d'uso • Instrucciones de servicio
Инструкция по эксплуатации
取扱説明書 • 사용 설명서

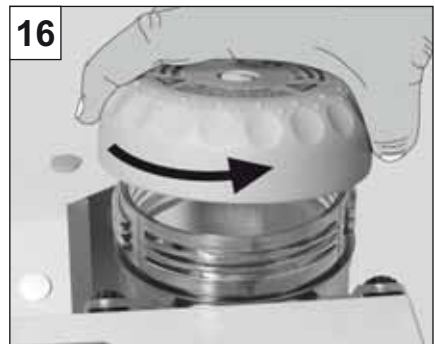
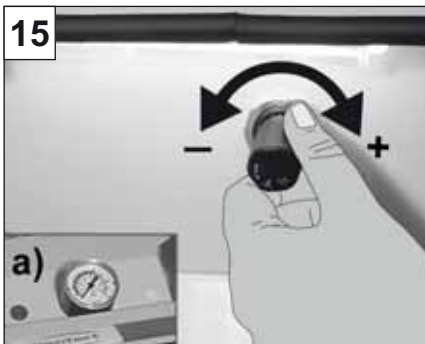
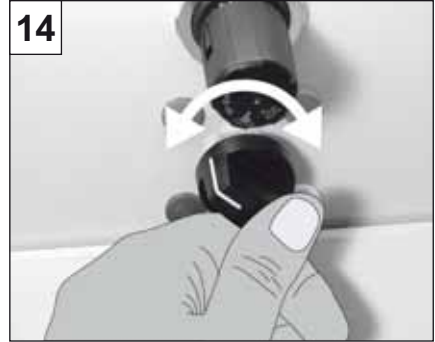
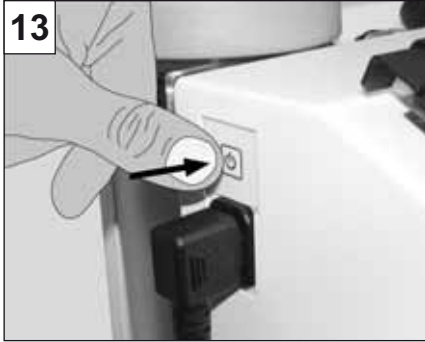
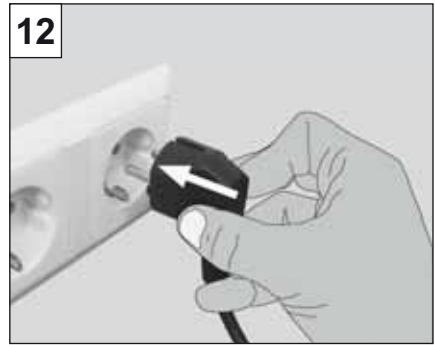
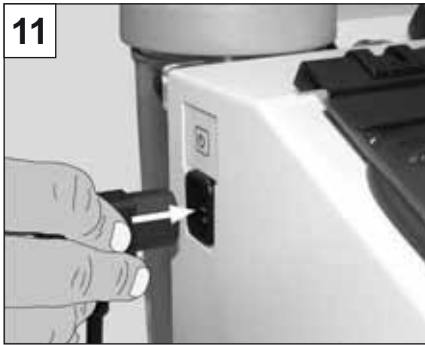
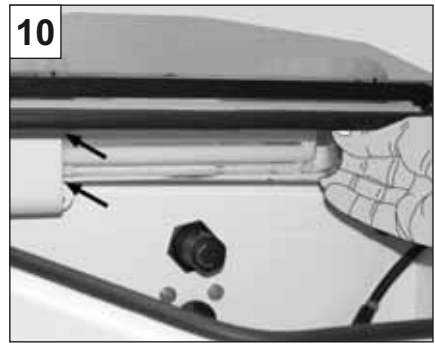
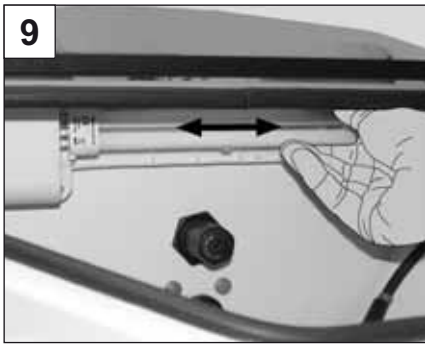


0809 21-6573 A

Made in Germany

Renfert
Ideen für die Dentaltechnik

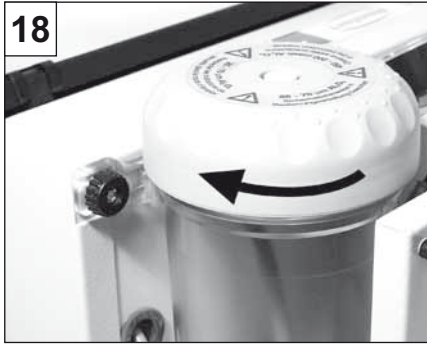




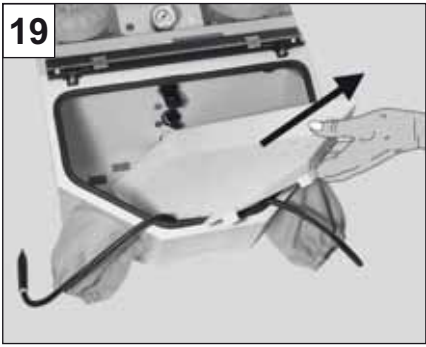
17



18



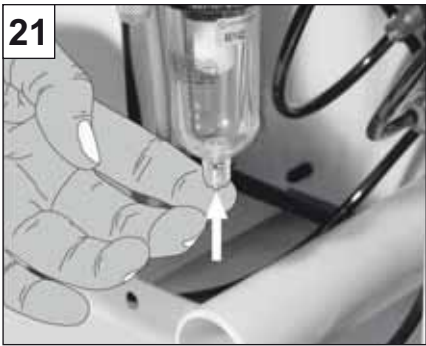
19



20



21



Basic quattro

No. 2954-0005 / 2954-1005

ENGLISH

1. Introduction

We are pleased with your decision to purchase the *Basic quattro*.



Please read the following operating instructions carefully and observe all the information they contain in order to ensure long and trouble-free service.

2. Application Area

The *Basic* line of sandblasting units are designed for use in dental laboratories to remove investment residues, oxides on cast objects, and for surface treatment.

2.1 Ambient Conditions

(in accordance with DIN EN 61010-1)

The *Basic quattro* may only be operated:

- Indoors;
- Up to an altitude of 2,000 m [6,500 ft] above sea level;
- At an ambient temperature of 5 - 40°C [41 - 104°F] *);
- At a maximum relative humidity of 80% at 31°C [87.8°F], decreasing linearly to 50% relative humidity at 40°C [104°F] *);
- With a mains power supply where current fluctuations do not exceed 10% of the nominal value;
- Under level 2 contamination conditions;
- Under overvoltage category II conditions.

*) Between 5 – 30°C [41 - 86°F], the unit can be operated at a relative humidity of up to 80%. At temperatures between 31 - 40°C [87.8 - 104°F], the humidity must decrease proportionally in order to ensure operational readiness (e.g., at 35°C [95°F] = 65% humidity; at 40°C [104°F] = 50% humidity). The unit may not be operated at temperatures above 40°C [104°F].

3. Safety Information

3.1 Employed Symbols

The following symbols are used in these instructions and on the unit:



Danger

This indicates an imminent risk of injury.



Electrical hazard

There is a risk of electrical shock.



Attention

Failure to observe the associated information can result in damage to the unit.



Note

The operating instructions contain useful information to make handling easier.



Wear eye protection.



Only for indoor use.



Before opening the unit, always disconnect it from the power supply.



Note the operating instructions.

3.2 Safety Information

- Always disconnect the unit from the compressed air and power sources prior to beginning any maintenance work.
- When working on the tank (filling up, cleaning, maintenance) wear protective glasses for protecting your eyes.

- Any residue of abrasive material on the gasket may lead to leakage and early wear of the gasket. After filling up clean the thread and the gasket and close the lid properly.
- Solvents and tensides can create micro-cracking in the plastic (danger of explosion!). Clean the tank and the lid only with a dry cloth. Do not write or stick something on the tanks.
- Check the tanks and the lids regularly on damages and replace them in case of doubt.
- Check the tank cover for correct seating prior to beginning operation. Covers that are not securely closed can suddenly be blown off as the tank pressure increases. The resulting flying parts and abrasive represent a serious hazard.
- **Never** operate the blasting units without suitable dust extraction and appropriate protective gear, as this could result in health hazards. The type of dust extraction should be selected on the basis of the dust being generated. Follow here absolutely EN 60335-2-69 appendix AA or ask the appropriate authorities.
- Improper use can result in the risk of eye or skin injuries.
- Never direct the blasting material towards eyes or unprotected areas of skin!
- Never work with the view screen open!



! Caution: Failure to wear proper eye protection can result in eye injury due to particles suspended in the air. Always wear proper eye protection to protect your vision!

- Do not employ the foot switch when only the compressed air supply hose is connected. The loose hose could wrap around itself and cause serious injury.

- Unplug the unit from the wall outlet before changing the fluorescent tube.
- Do not squeeze or bend the fluorescent tube body when replacing the tube (breakage hazard). Always wear gloves or use a towel to protect your hands against possible glass splinters.
- Inspect power cords before beginning operation. The unit may not be operated if the power cord is damaged.

3.3 Liability Exclusion

Renfert GmbH shall be absolved from all claims for damages or warranty if:

- The product is employed for any purposes other than those cited in the operating instructions;
- The product is altered in any way other than those alterations described in the operating instructions;
- The product is repaired by other than an authorized facility or if any but Renfert OEM parts are employed;
- The product continues to be employed, despite obvious safety faults.

4. Installation / Commissioning

4.1 Setting up and Connecting the Unit

1. Inspect the tank for proper installation (Fig. 1).
2. Check the voltage information on the nameplate.
3. The unit is operational with two tanks. To connect additional tanks, please refer to Installation Instructions, No. 21-9498.
4. Remove the foot switch from its shipping location in the blasting chamber.
5. Connect the foot switch to the sand-blasting unit (red + yellow). Make sure to both pneumatic hoses are fully inserted up to their stops (Fig. 2).

6. Connect the compressed air supply to the sandblasting unit. To do this, loosen the screw-on air coupling on the unit (Fig. 3).
7. Push the screw-on coupling over the supplied blue compressed air hose (Fig. 4).
8. Connect the compressed air hose to the unit and tighten the coupling sleeve (Fig. 5a).
9. Connect the compressed air hose to the compressed air supply (Fig. 5b).
10. Do not bend or kink the hoses (Fig. 6)!
11. Connect the dust extraction hose to the extraction tube (Fig. 7).



Do not connect the unit to the mains power supply yet!

4.2 Starting the Unit

1. Connect the mains power cord to the sandblasting unit (Fig. 11), then plug the power cord into the wall outlet (Fig. 12).
2. Switch the unit on (Fig. 13).

4.3 Adjusting the Operating Pressure

1. Select the sandblasting tank (Fig. 14).
2. Adjust a blasting pressure of 1-6 bar [14.5–87 psi] (Fig. 15). The pressure is displayed on the manometer (Fig. 15a). The pressure adjustment applies to all sandblasting tanks.

4.4 Filling the Sandblasting Tanks



Never press the foot switch during filling. Before closing the tank, be sure to clean the threads in the cover and the tank to remove any abrasive residue.



Even though the manometer may indicate pressure, the sandblasting tanks are only under pressure if the foot switch is engaged.

1. Unscrew the tank cover (Fig. 16).
2. Add abrasive up to the maximum fill level (the point where the tank jacket thickens just below the thread) (Fig. 17). Make sure the abrasive being used is compatible with the sandblasting tank.
3. Reinstall the tank cover (Fig. 18).



Do not cross-thread the cover.

Always use only clean, dry abrasive of the appropriate grain size (refer to the accessories).

The sandblasting unit is now operational.

5. Cold silanization in the sandblasting unit

The *Basic* series of Renfert sandblasting units is exclusively recommended by 3M ESPE for use with ROCATEC™. This bonding system is ideal if an adhesive bond is required between a composite and a dental material (metal, acrylic, porcelain, zirconia porcelain).

Advantage: The surface film is applied cold, preventing thermal loading of metal frameworks and consequently the risk of distortion. All units in the *Basic* series can be used for ROCATEC™ due to their regular, homogeneous jet flow.

6. Cleaning / Maintenance



Switch off machine and pull plug out before starting cleaning and maintenance work!

6.1 Cleaning the Interior

- Use only solvent-free cleansers (e.g., soapy water).
- Remove the grate and vacuum the blasting chamber (Fig. 19+20).
- Wipe out the tanks and lids only with a dry cloth!

6.2 Condensation

1. Inspect the water separator.
2. Drain any water off through the valve (Fig. 21).

6.3 Blasting Nozzle Replacement

1. Refer to insert no. 21-9162 for installation.
2. Inspect for abrasive residue.
3. Inspect the seal ring position.

6.4 View Port Replacement

Please refer to the installation instructions provided with the new pane (insert no. 21-9811).

6.5 Sandblasting Hose Replacement

1. Disconnect the sandblasting unit from the compressed air supply (Fig. 5,4,3).
2. Refer to insert no. 21-9162 for the installation instructions.

6.6 Replacing the Fluorescent Lamp



Danger of breakage!
Do not press on the fluorescent lamp or try to bend it when replacing it. We recommend using gloves or a cloth to protect your hands in case of breakage.

- Switch off the unit.
- Pull plug out.
- Lightly press light cover on the right side and remove it (Fig. 8).
- Pull fluorescent lamp horizontally out of the socket and remove it.
- Vacuum socket as thoroughly as possible.
- Insert new fluorescent lamp in the retainer and slide it horizontally into the socket (Fig. 9).
- Install lamp cover in the housing on the left side, then press it to the right until it clicks into position (Fig. 10).



Use only original Renfert replacement fluorescent lamps (see spare parts list).

6.7 Replacing the lamp cover

- Switch off the unit.
- Pull plug out.
- Lightly press lamp cover on the right side and remove it (Fig. 8).
- Install lamp cover in the housing on the left side, then press it to the right until it clicks into position (Fig. 10)

7. Spare Parts

For the order numbers of consumables and spare parts please refer to the spare parts list at the end of this manual.

8. Warranty

Provided the unit is properly used, Renfert warrants all parts of the *Basic quattro* for a **period of 3 years**. In case of any claims for warranty original dealers' invoice is required. Components subject to natural wear (e.g., blasting nozzles, hoses, fluorescent tubes, hose connections, view panes, filter materials, etc.) are excluded from this warranty. The warranty is voided in case of improper use; failure to observe the operating, cleaning, maintenance, and connection instructions; in case of independent repairs or repairs by unauthorized personnel; if spare parts from other manufacturers are employed, or; in case of unusual influences or influences not in compliance with the utilization instructions. Warranty service shall not extend the original warranty.

9. Technical Specifications

Working pressure: 1 - 6 bar [14,5 - 87 psi]
Connecting pressure, external:
6 - 8 bar [87 - 116 psi]
Air consumption: 120 l/min. at 6 bar [87 psi]
Voltage: 230 V, 50/60 Hz
100-120 V, 50/60 Hz
Lamp power consumption: 16 W
Cable length: 2 m [78,74 inch]

Ø hose connection: interior: 4 mm [0,16 inch]
 exterior: 6 mm [0,24 inch]
 Ø size of pipe union for external extraction unit:
 interior: 35 mm [1,38 inch]
 exterior: 40 mm [1,58 inch]
 Dimensions 4-tank version (WxHxD):
 425 x 305 x 560 mm
 [16.74 x 12.02 x 22.06 inch]
 Blasting chamber volume: 21 l
 Tank capacity: 1000 ml each
 Weight 2-tank version (empty): approx. 11 kg
 Noise level according to DIN 45635-01-KL3:
 < 72 dB(A)

10. Shipping Notes

- Empty all sandblasting tanks.
- Request a Renfert shipping box (Tel.: +49 7731 8208-61).
- If a Renfert shipping box is not used, always disassemble any additional tanks (otherwise we can assume no liability for shipping damage).

The return form can be downloaded from the „Advice“ section on the Renfert website at www.renfert.com.

11. Disposing of the Unit

The unit must be disposed of by an authorized recycling operation. The selected firm must be informed of all possibly health-hazardous residues in the unit.

11.1 Disposal of the lighting equipment

Before disposing of the sandblasting unit / the extraction box, please remove the lighting equipment including the lamp.

- Remove the mains plug
- Loosen the 2 fixation screws from the lighting equipment at the back of the sandblasting unit / extraction box.
- Remove the lighting equipment including the lamp.

For disposal of the lighting equipment please observe the following advice: To conserve and protect the environment, prevent environmental pollution and improve the recycling of raw materials, the European Commission adopted a directive that requires the manufacturer to accept the return of electrical and electronic units for proper disposal or recycling. Within the European Union units with this symbol should not therefore be disposed of in unsorted domestic waste:



For more information regarding proper disposal please apply at your local authorities.

12. Standard Delivery

- 1 *Basic quattro*
- 1 Foot switch
- 1 Connection set
- 1 Fluorescent tube, with lamp cover
- 1 Accessories set
- 2 Abrasive samples
- 1 Set of Operating Instructions, with attachment
- 1 Power cord

13. Delivery Versions

- No. 2954-0005 *Basic quattro Basic unit, 2 tanks, 230 V, 50/60 Hz 1 x 25-70 µm + 1 x 70-250 µm*
- No. 2954-1005 *Basic quattro Basic unit, 2 tanks, 100-120 V, 50/60 Hz 1 x 25-70 µm + 1 x 70-250 µm*

14. Accessories

Additional tanks

No. 2954-0050	25-70 µm Right / blue
No. 2954-0051	25-70 µm Left / red
No. 2954-0250	70-250 µm Right / blue
No. 2954-0251	70-250 µm Left / red

Protective mesh

No. 2960-0003	Protective mesh for view port
---------------	-------------------------------

Abrasives

Cobra aluminium oxide

No. 1594-1105	25 µm [500 mesh], white 5 kg canister
No. 1594-1205	50 µm [270 mesh], white 5 kg canister
No. 1594-2220	50 µm [270 mesh], white 20 kg bucket
No. 1584-1005	90 µm [170 mesh], white 5 kg canister

No. 1583-1005	110 µm [150 mesh], white 5 kg canister
No. 1583-1020	110 µm [150 mesh], white 20 kg bucket
No. 1587-1005	125 µm [115 mesh], pink 5 kg canister
No. 1587-1020	125 µm [115 mesh], pink 20 kg bucket
No. 1585-1005	250 µm [60 mesh], white 5 kg canister
No. 1585-1020	250 µm [60 mesh], white 20 kg bucket

Rolloblast glass beads

No. 1594-1305	50 µm [400-200 mesh] 5 kg canister
No. 1594-2312	50 µm [400-200 mesh] 12.5 kg canister
No. 1589-1005	100 µm [170-100 mesh] 5 kg canister

15. Troubleshooting Guide

Problem	Possible cause	Corrective action
No air and no abrasive.	<ul style="list-style-type: none"> Blasting nozzle blocked at the hand-piece. Foot switch connecting lines kinked. Switch set to an intermediate position. 	<ul style="list-style-type: none"> Unscrew the nozzle from the hand-piece and blow it out. With the nozzle removed, blow out the blasting hose by activating the foot pedal. Inspect/correct the connection lines. Turn the switch until you feel it click into place.

Problem	Possible cause	Corrective action
<p>Only air, no or very little abrasive.</p>	<ul style="list-style-type: none"> The dosage nozzle in the mixing chamber is blocked due to contaminated or moist sand. 	<ul style="list-style-type: none"> Wear protective goggles. Unscrew tank lid. Remove sand. Close the uptake tube (blue tube) in the tank (by bending), so that no air can escape. Hold the sandblasting nozzle on the handpiece closed with the other hand. Using a setting of 4 to 6 bar pressure, activate the foot switch repeatedly in succession. Before re-filling with sand, check the tank and sandblasting material for contamination or moisture. If necessary replace with new sand. Re-fill with sand and secure the tank lid. (Continue sandblasting in the usual manner).
<p>Only air, no or very little abrasive.</p>	<ul style="list-style-type: none"> Mixing chamber filter combination blocked 	<p>Install new filter sets:</p> <ul style="list-style-type: none"> - Part no. 90002-8889 25-70 µm - Part no. 90002-8888 70-500 µm <p>(Refer to the insert for the appropriate filter set):</p> <ul style="list-style-type: none"> Disconnect the compressed air supply to the mixing chamber. Unscrew the plug-in connection. Remove the old filter sets. Run a thin (1 mm) wire through the opening in the mixing chamber. Install new filter sets as follows (number of components according to the filter set– smooth (colour marked) side facing the mixing chamber): <ol style="list-style-type: none"> Screen Filter, thin Filter, thick Screen Spacer <p>Reinstall the screw-on connections in the reverse order.</p>

Problem	Possible cause	Corrective action
Only air, no or very little abrasive.	<ul style="list-style-type: none"> Mixing chamber filter combination blocked Abrasive contains impurities or is moist. 	<p>Make certain there is no abrasive residue on the threads.</p> <p>Attention: Never operate the unit without filters!</p> <p>Do not reinstall used filter sets!</p> <ul style="list-style-type: none"> Replace the abrasive.
Unit blasts continuously.	<ul style="list-style-type: none"> Foot switch connected incorrectly. Valve in foot switch is defective. 	<ul style="list-style-type: none"> Inspect/correct the foot switch connection. Replace foot switch.
Lamp does not go on.	<ul style="list-style-type: none"> Power cord not plugged in. Fluorescent tube defective. Faulty electronics. Fluorescent tube not properly seated in the socket. 	<ul style="list-style-type: none"> Plug the power cord into the wall outlet. Replace the fluorescent tube (refer to Sec. 6.6). Call for service to replace the electronics, or refer to the spare parts list. Refer to Sec. 6.6, "Fluorescent Lamp Installation".
Compressed air leaking from the foot switch.	<ul style="list-style-type: none"> Pneumatic hoses reversed. 	<ul style="list-style-type: none"> Reverse the connections.
Foot switch fails to switch on.	<ul style="list-style-type: none"> No pressure at the compressed air connection. Pneumatic hoses are kinked. 	<ul style="list-style-type: none"> Inspect the compressed air lines and/or the compressor. Reposition the hoses.
Foot switch hoses cannot be disconnected from the unit.	<ul style="list-style-type: none"> Push-in connection is not released (Fig. 2). 	<ul style="list-style-type: none"> Press the push-in connection ring on the hose side firmly while pulling on the hoses.

Subject to modification.