

Operating Instructions



CombiBlow CB161

BA-en-2047-2207



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Dear customer,

Please read these instructions carefully before starting the unit. This will help you prevent personal injuries and damage to property.

Simply give us a call if you have any suggestions, proposals or ideas for improvements. We greatly appreciate the feedback from the users of our appliances.

1. Outline of appliance

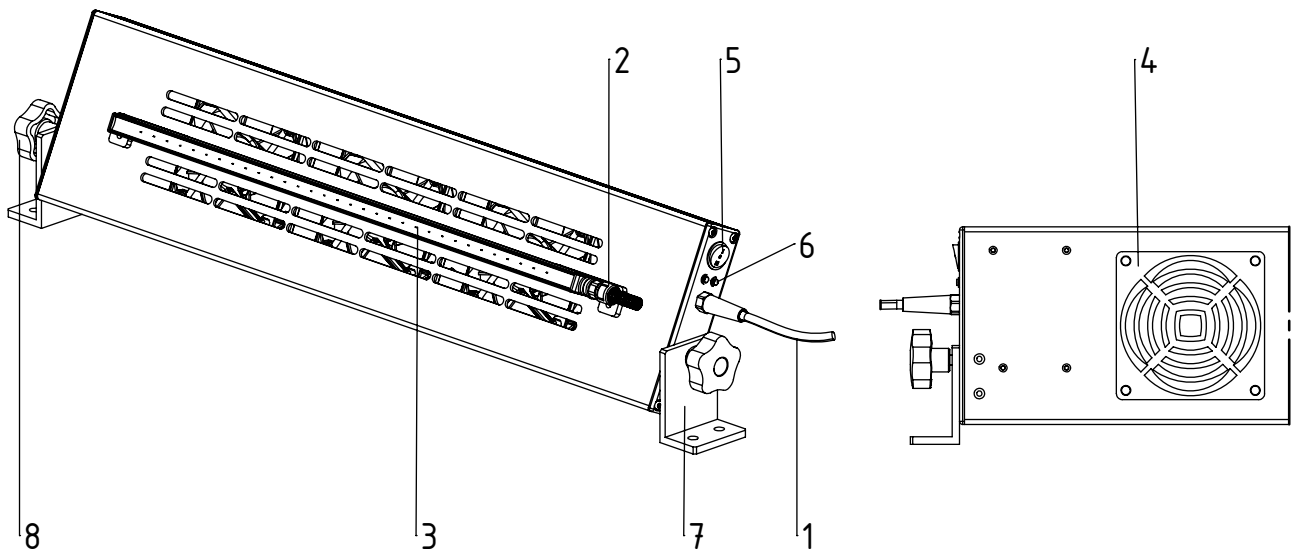


Fig. 1: CombiBlow

Z-114696ay

- 1 Power Supply 230 V / 50 Hz
- 2 High voltage connection for the discharging bar
- 3 Discharging bar R50
- 4 Filter cartridge / Fan
per fan / 1 input filter with replaceable filter cartridges
- 5 Twin-stage switch
- 6 LED
- 7 Fastening angle / fixing holes
- 8 Locking screw - angle of incidence continuously adjustable

2. Safety

The units have been designed, built and tested using state-of-the-art engineering, and have left the factory in a technically and operationally safe condition. If used improperly, the units may nevertheless be hazardous to personnel and may cause injury or damage. Read the operating instructions carefully and observe the safety instructions.

For warranty conditions, please refer to the General Terms and Conditions (GTC), see www.eltex.de.

2.1 Proper Use

The CombiBlow must be used only for eliminating static charges from material surfaces or workpieces.

The CombiBlow is suitable for the limited purpose of industrial production.

The manufacturers will not assume any liability and warranty if the units are used improperly or used outside the intended purpose.

Modifications or changes made to the devices are not permitted.

Use only original Eltex spare parts and equipment.

2.2 Identification of risks and hazards

Possible risks and hazards resulting from the use of the units are referred to in these operating instructions by the following symbols:



Warning!

This symbol appearing in the operating instructions refers to operations which, if carried out improperly, may result in serious personal injuries.



Caution!

This symbol appearing in the operating instructions refers to operations which, if carried out improperly, may result in damage to property.



Ex Warning!

For units with EX approval only.

This symbol denotes the special conditions which must be observed when operating the system in explosion hazard areas as specified in the EX approvals.

2.3 Work and operational safety



Warning!

Carefully observe the following notes and the complete [chapter 2 "Safety", page 7!](#)

- Before carrying out repairs, cleaning or maintenance work and before resetting the unit after malfunctions, switch off the high power supply and disconnect the supply voltage (see [chapter 5 "Maintenance", page 12](#), [chapter 6 "Troubleshooting", page 14](#)).
- Before carrying out any work involving the units, the machine which has the units fitted must not be in operation (see [chapter 5 "Maintenance", page 12](#), [chapter 6 "Troubleshooting", page 14](#)).
- Any work involving the units must be carried out by qualified electricians (see [chapter 5 "Maintenance", page 12](#), [chapter 6 "Troubleshooting", page 14](#)).
- Connect / disconnect the high voltage cables only if the power supply unit is switched off.
- Please note the operating instructions of the power supply unit.
- The CombiBlow must be operated using a supply voltage of 230 V / 50 Hz only and the discharging bars must be operated only in connection with the Eltex power supplies with 5 kV AC output (see [chapter 4 "Operation", page 11](#)).
- Do not insert any objects into the unit. This may damage the fans (see [chapter 4.1 "Startup", page 11](#)).
- Before switching on the unit, the user has to make sure that installation and connections have been properly made. If yes, the unit can be switched on (see [chapter 4.1 "Startup", page 11](#)).
- Check the units and the high voltage cables at regular intervals and before start of operation for any damage. Any damaged components must be repaired or replaced before continuing to operate, or the appropriate units must be disabled.
- Make sure that all units are clean at all times. Dirt results in malfunctions and in premature wear of the units.
- Do not damage the emission tips when cleaning. Brush only in longitudinal direction (see [chapter 4 "Operation", page 11](#)).
- Do not touch the emission tips - risk of injury.
If the high voltage supply is connected, reflex responses to electrical irritation may increase the risk of secondary accidents; the charging bar as such is safe to touch. If contact is made (≤ 10 tips), the energy transferred is so low that there is no risk of injury
- Potential risk for wearers of cardiac pacemakers
Making surface contact with emission tips can result in a temporary switchover of the cardiac pacemaker into the fault mode. If it is likely

that emission tips are touched, the appropriate warning notices must be displayed.

- Mechanical or electrical modifications of the discharging bars are not permitted. Shortening the shielded high voltage cable on the connecting side of the power supply is permitted. Extending the cable is permitted only when using the Eltex distributor as well as original high voltage cables and glands.
- The operation of the bars can generate ozone. The ozone concentration levels developing near the bars depend on many different factors such as site of installation, bar current and voltage, air circulation, etc., and can therefore not be specified in general terms.

If the maximum allowable concentration of ozone must be observed at the site of installation of the bar, the concentration must be measured on site. The AGW value (maximum admissible concentration) serves to assess the ozone concentration at the workplace. The user must make sure that the appropriate national AGW value is at no times exceeded, e.g. in Germany the ozone concentration occurring during the operation of the system must not exceed the recommended value based on international limits of 0.06 ml/m^3 (0.12 mg/m^3).

2.4 Contact protection

The site of installation and/or use of the units is outside the control of Eltex, contact protection against inadvertent contact of the bars and of live components by personnel as specified by the employer's liability insurance association may have to be provided (e.g. DGUV V3 in Germany). Contact protection devices made of conductive material must be grounded.

2.5 Inspection of the protective resistors - contact protection

The function and the appearance of the protective resistors must be inspected at regular intervals. The inspection intervals are specified in the accident prevention regulations, as amended (e.g. in Germany DGUV V3).

The function of the series resistors must be checked using a suitable measuring device. The measured resistance between the high voltage connection and the individual emission tip must not fall below 120 MOhm and not exceed 180 MOhm.

2.6 Technical advance

The manufacturer reserves the right to make changes to the technical specifications without prior notice in order to adapt the units to state-of-the-art engineering. Eltex will provide the latest information on any changes or modifications in the operating instructions on request.

3. Installation and Assembly

The CombiBlow will be already operational supplied and installed by the operator of the appliance.

The CombiBlow must be screwed securely to the appliance at the intended fixing holes. Preferably, it should be mounted on a solid machine frame or a stable machine side frame. Use M8 screws and nuts for this purpose.

For achieving the best result, mount the device in such a way to enable the air flow to hit the material at the steepest possible angle or to counter-act slightly with the material flow. Which position and calibration is most suitable for your application must be determined on the basis of practical experience.

Connect the Eltex discharging bar with the power supply (see operating instructions of the power supply).



Warning!

Observe the operating instructions of the power supply.

Connect the CombiBlow with the mains supply. The supply voltage must have 230 V / 50 Hz.

4. Operation



The CombiBlow must be operated using a supply voltage of 230 V / 50 Hz only and the discharging bars must be operated only in connection with the Eltex power supplies with 5 kV AC output.

Do not insert any objects into the unit. This may damage the fans.

4.1 Startup



Before switching on the unit, the user has to make sure that installation and connections have been properly made. If yes, the unit can be switched on.

4.2 Function control

Use the Eltex Volt Stick or a glow-lamp voltage tester to check the proper function of the emission tips. Quote Article No. 109136 when ordering the Volt Stick from Eltex.

The two LEDs below the multiple-contact switch light up either red or green depending on the switch setting during the operation of the Combi-Blow.

Level I = low air flow (for manual hand places)

Display = green LED lights up

Level II = high air flow (for wide ranges)

Display = red LED light up

If the CombiBlow is switched off, the LEDs will not light up.



Warning!

Observe the operating instructions of the power supply unit.

5. Maintenance



Warning!

Electric shock hazard!

- Do not carry out any maintenance or repair work without first switching off the power supply unit and disconnecting the supply voltage.
- The machine which has the units fitted must not be in operation.
- Any work involving the units must be carried out by qualified electricians.

To ensure the trouble-free function of the discharging bars, clean the bars at least once a week with compressed air free of oil and water (max. 6×10^5 Pa and standard compressed air pistol) and a brush with soft plastic bristles (Eltex-Article RBR22).

Clean grease, ink, glue, paper dust, etc. off the discharging bar using a suitable solvent (benzine). Do not soak the bars and the high voltage cable in solvent!

To ensure the proper function of the CombiBlow, replace the filter cartridges if required.

Filter cartridge replacement:

- Remove the black filter cover with a flat object, e.g. a slotted screwdriver. Insert it into the intended recess and lift up the filter cover gently.
- Take out the black filter cartridge.
- Insert a new filter cartridge.
- Click the filter cover back into the frame.
- Check if the complete air passage is covered via the filter cartridge.



Caution!

Do not damage the emission tips when cleaning. Brush only in longitudinal direction.



Warning!

Observe the operating instructions of the power supply unit.

Inspection of the protective resistors - contact protection

The function and the appearance of the protective resistors must be inspected at regular intervals. The inspection intervals are specified in the accident prevention regulations, as amended (e.g. in Germany DGUV V3).

The function of the series resistors must be checked using a suitable measuring device. The measured resistance between the high voltage connection and the individual emission tip must not fall below 120 MOhm and not exceed 180 MOhm.

6. Troubleshooting



Warning!

Electric shock hazard!

- Do not carry out any maintenance or repair work without first switching off the power supply unit and disconnecting the supply voltage.
- The machine which has the units fitted must not be in operation.
- Any work involving the units must be carried out by qualified electricians.

Malfunction:

The effectiveness of the application is declining.

Cause:

Soiled filter cartridges or dirty discharging bar.

Remedy:

Replace the soiled filters with new cartridges.

Clean bar with compressed air and a brush.

7. Technical Specifications CB161

CE



Discharging bar R50

Material / bar element	Encapsulation material PU
Emission tips	Stainless steel
Operating ambient temperature	0...+80 °C (+32...+176 °F)
Ambient humidity	max. 70 % RH, non-dewing
Operating voltage	max. 5 kV AC, 50/60 Hz
High voltage supply	via Eltex power supplies
Contact protection	according to EN 61140

8. Dimensions

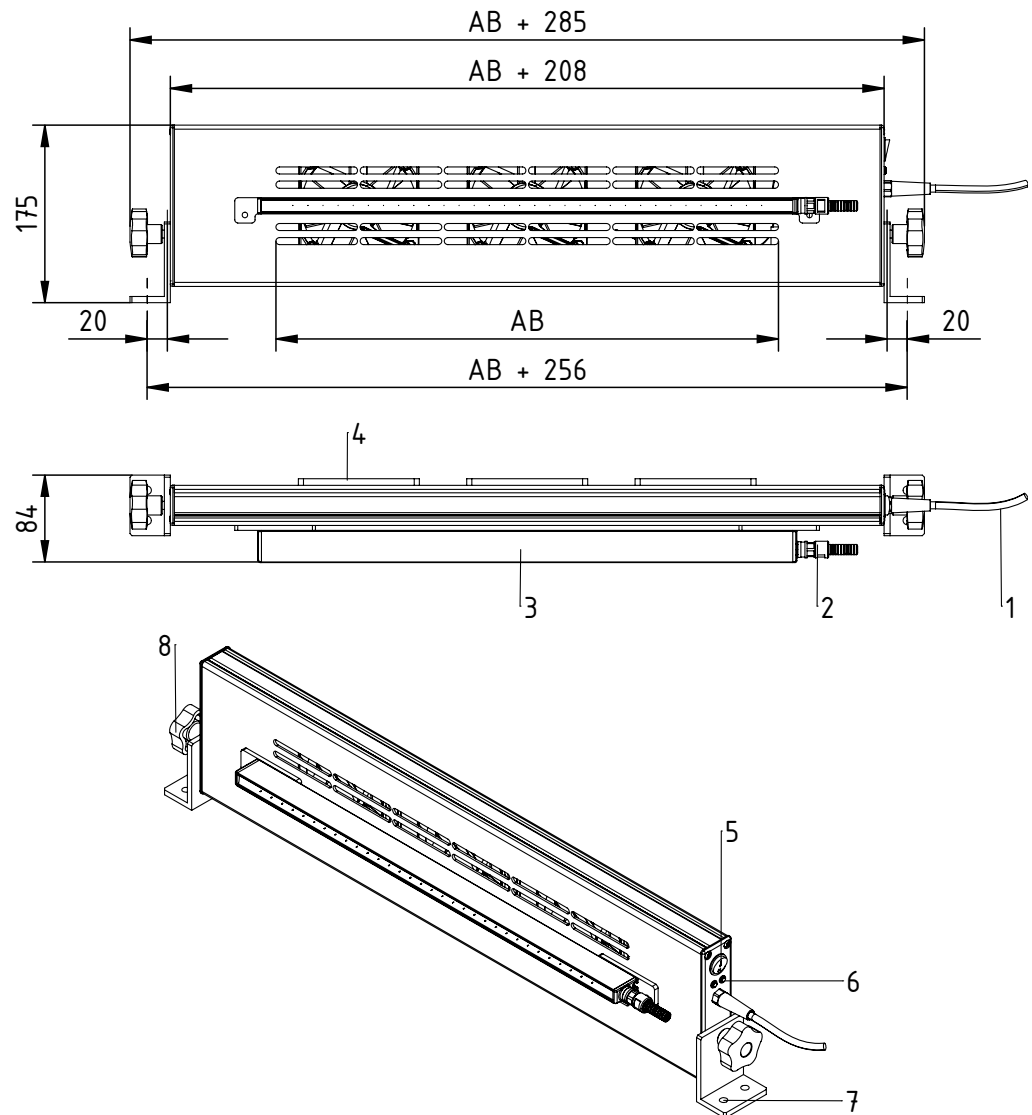


Fig. 2:
Dimensions
CombiBlow

- 1 Supply voltage 230 V / 50 Hz
- 2 Bar connection
- 3 Discharging bar
- 4 per fan / 1 input filter with replaceable filter cartridges
- 5 Twin-stage switch
- 6 LED
- 7 Fixing holes $\varnothing 8.4$ - the fastening angle can be placed to external or internal
- 8 Locking screw - angle of incidence continuously adjustable

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9. Disposal

The appliance must be disposed under the local rules of your country.

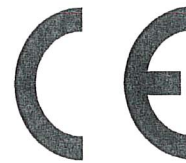
EU-Declaration of Conformity

CE-2047-en-2207



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declares in its sole responsibility that the product

CombiBlow Type CB161

complies with the following directives and standards:

Relevant EU-Directive:

2006/42/EG

Machinery Directive

Harmonized standard applied:

EN 60204-1:2018

Safety of machinery – Electrical equipment of machines –
General requirements

Relevant EU-Directive:

2014/30/EU

EMC Directive

Harmonized standards applied:

EN 55014-1:2017 + A11:2020

Electromagnetic compatibility – Requirements for household
appliances, electric tools and similar apparatus - Emission

EN 55014-2:2015

Electromagnetic compatibility – Requirements for household
appliances, electric tools and similar apparatus –
Immunity – Product family standard

Relevant EU-Directive:

2011/65/EU

RoHS Directive

in the version effective at the time of delivery.

Eltex-Elektrostatik Gesellschaft mbH keep the following documents for inspection:

- proper operating instructions
- plans
- other technical documentations

Weil am Rhein, 12.07.2022
Place/Date

A handwritten signature in black ink, appearing to read "Lukas Hahne".
Lukas Hahne, Managing Director

Eltex offices and agencies

The addresses of all
Eltex agencies can be
found on our website at
www.eltex.de



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