GB

HAUG®

Operating instructions

Air-assisted ionizing unit Accu Jet

Ident number: 04.8800.000, 04.8801.000, 04.8802.000

Keep for future use!

Air Line

Table of contents

1 Scope of delivery

Check the scope of delivery for completeness before first use.

- 1 Battery pack Jet
- 1 Rechargeable battery (Lithium ions)
- 1 Rechargeable battery charger unit
- 1 Operating instructions D-0323-GB

If you find any discrepancy, please contact HAUG GmbH & Co. KG. The address is provided on the back of the envelope.

2 Operator instructions

Before installation and commissioning read these operating instruction in full. Always observe the safety instructions.
These operating instruction is a part of the product; make sure you retain them for later use or subsequent owners.

The product is an air-assisted ionisation unit with integrated high voltage power supply and is referred to hereinafter only as an ionisation unit in this manual.

If operated according to its intended use, the ionisation unit is completely safe.

In this manual, the word "high voltage" is abbreviated HV (for example, HV plug).

The illustrations in this document are a simplified representation of the product. They render only the technical facts and provide support for the text. Departures from the actual product may be noticeable. However, these deviations neither reduce the proper function nor mitigate the specifications of the product.

2.1 Symbols used in operating instructions

⚠ WARNING

Always observe this safety instruction to avoid critical or fatal injuries.

⚠ CAUTION

Always observe this safety instruction to avoid slight injuries.

NOTICE

Always observe this safety instruction to avoid damage to property.

NOTE:
Important notes and additional information.

Never dispose of with household garbage.

Ozone warning!
Device produces ozone!

Caution, danger due to electrical current!

Caution, danger spot warning!

2.2 Symbols on the ionizing unit

WARNING!
High voltage

3 Safety

Only persons authorised by the operating firm are permitted to proceed with tasks on the ionisation unit.

The technician must be an expert in handling and installing compressed air equipment and must wear personal protective equipment. The technician must read the operating manual in its entirety.

The operating and maintenance personnel must be instructed in the handling of compressed air equipment and the resulting dangers. Personnel must wear personal protective equipment and completely read the operating manual.

When working on the ionisation unit, switch off the rechargeable battery and the compressed air supply, and secure the unit to prevent unintentional restart. Depressurise the compressed air system.

Dangers due to compressed air equipment
Ruptured or broken compressed air hoses can move erratically and can injure persons or lead to consequential accidents. Compressed air can enter the bloodstream through the broken skin, resulting in an embolism that can lead to death.

- Always comply with the safety regulations provided by the operating company.
- Before proceeding with maintenance and/or installation tasks, ensure the entire system is de-pressurised.
- Never direct the jet of compressed air at people or yourself (for example, to blow dirt off clothes).
- Never run a compressed air hose across passageways (tripping hazard).
- Never use compressed air equipment without pressure reducer and compressed air filter.
- Never exceed the permissible operating pressure.
- Always use filtered (< 20 μm), dry and oil-free compressed air.
- Always use suitable hose clamps to secure compressed air hoses.
- Wearing personal protective equipment for compressed air-operated products is mandatory (e.g., safety goggles, ear protection, dust mask, etc.).

Dangers due to manipulated or faulty ionisation unit
Unauthorized conversions, moisture entering the ionisation unit or damage to the ionisation unit bear the inherent risk of electric shock or explosion due to spark formation.

- If there is visible damage or suspected electrical faults, immediately take the ionisation unit out of service and secure it to prevent unintentional restart.
- The ionisation unit must be protected from moisture. Only use water to clean the ionisation unit thoroughly, then let it dry.
- Never operate with wet hands.
- Never attempt to repair the ionisation unit without prior authorisation.

Danger of injury from ionizing pins
The ionizing pins are sharp, pointed and carry a high voltage when in operation. Contact can result in puncture or tear wounds, and the high voltage will also cause a tingling sensation. These factors can produce a shock reaction which could lead to accidents.

- Never touch the ionizing pins.
- During maintenance / repair work, disconnect the discharging power pack and wear protective gloves (EN 388 3122).

Physical complaints due to an excess of ozone
During operation, small amounts of ozone are created through the corona at the ionizing pins. A very high ozone concentration and prolonged continuous exposure times may result in headache, irritation to the eyes, circulatory problems etc.

- Always ensure adequate ventilation during operation in order not to exceed the statutory admissible ozone concentration limits at the workplace.
- An expert study concerning ozone emissions from a ionization system is available from HAUG GmbH & Co. KG.

Hazards caused by rechargeable batteries
Incorrect handling of rechargeable batteries may cause leaks. Their corrosive gases and fluids cause personal injury and/or property damage.

- If skin contact with leaking fluid occurs, rinse skin immediately with water.
- If respiratory tract irritation occur due to escaping leaking gases, immediately vent the premises.
- Never discard rechargeable batteries into the fire.
- Only use designated charger units intended for loading rechargeable batteries.
- Never short-circuit rechargeable batteries.
- Always store rechargeable batteries separately and in a dry and cool place. Never store rechargeable batteries together with small parts that could short-circuit the battery's terminals.
- When storing the product for a longer period of time, remove the batteries and store them separately.

3.1 Intended use

WARNING

Risk of explosion!
The ionizing unit may generate sparks which ignite gases, dust or similar substances.

- Never install or use the ionizing unit in areas with potentially explosive atmospheres.

The ionisation unit is used for contactless surface cleaning in industrial production processes. It removes electrostatic charges as well as dust and similar particles.
The ionisation unit is a hand-held device and is particularly suited for assembly work stations and undefined production processes.

Compliance with the installation and operating conditions specified in this operating manual is mandatory.
A guarantee can only be provided for equipment and accessories supplied by HAUG GmbH & Co. KG.

4 Product overview

A LED green (function display)
B LED yellow (short circuit display)
C Hook
D Earth connection and compressed air connection
E Handle
F Battery release latch
G Rechargeable battery
H Trigger

I Insulation profile
J Nozzle
K Ionisation tip

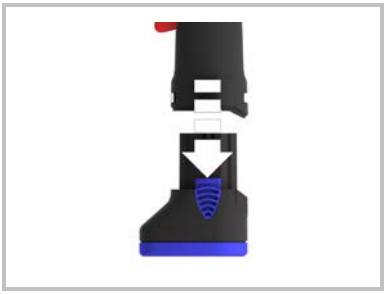
L Charge display LED
M Battery charging slot
N Power cable and plug

5 Preparing for operation

5.1 Charging a rechargeable battery

Before the first operation, the rechargeable battery must be charged.

1. Press the two release tabs on the battery and pull it downwards out of the handle.



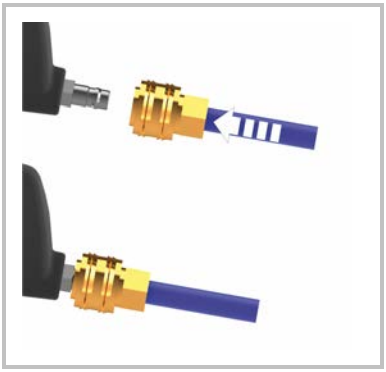
2. Plug the battery charger into a power outlet and insert the rechargeable battery.
   - The charging LED is lit during the charging process.
   - When the charge LED extinguishes, the charging process is finished.
   - The charged rechargeable battery can now be removed.

3. Insert the battery into the handle and press until the release tabs engage.

5.2 Connecting the compressed air line

Connect the compressed air supply to the ionisation unit.

- Press the quick-release coupling of the compressed air hose onto the air connection.



NOTE:
The compressed air hose provides the earth connection. The compressed air hose must be electrically conductive.

6 Operation

⚠ WARNING

Explosion hazard!

Sparks can be generated at the ionization device. These sparks can ignite gases, dusts or the like.

- Never use the ionisation device in potentially explosion-hazardous areas.

⚠ CAUTION

Personal injuries!

When blowing off surfaces, noise emissions can damage the ears and flying particles can cause damage to eyes and lungs.

- Wearing personal protective equipment for compressed air-operated products is mandatory (e.g., safety goggles, ear protection, dust mask, etc.).

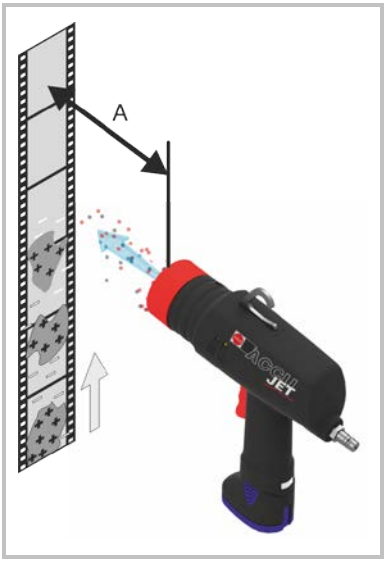
Requirements:

The ionisation unit is connected and installed according to the operating instructions.

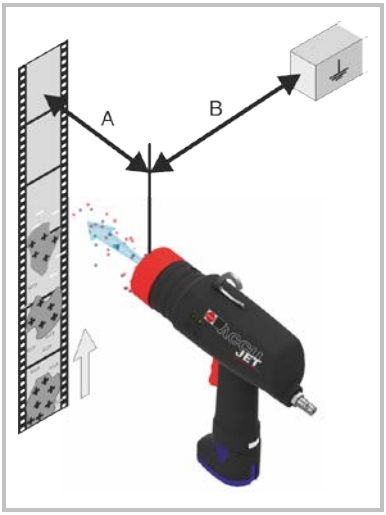
6.1 Normal operation

1. Compliance with the following parameters is mandatory when working on the system.

- The distance (A) to the medium that must be cleaned should be between 20 and 300 mm.



- The selected distance (A) must always be smaller than the distance (B) to a medium that has been connected to earth.



2. Press the control lever and start cleaning.

- The green LED is lit. If the rechargeable battery is heavily discharged, the green LED flashes. Recharge the rechargeable battery.

- The yellow LED blinks if a fault has been detected in the HV generation. Refer page 21.

3. After cleaning, remove the ionisation unit for further use.

7 Maintenance

⚠ CAUTION

Risk of injury!

The ionisation tips are sharp and pointed. When cleaning the ionization unit, there is an inherent the risk of stabbing, laceration or cutting injuries to the hands due to the sharp ionisation tips.

- Always wear protective gloves (EN 388 3122) during maintenance tasks and when cleaning the ionisation unit.

NOTICE

Damage to property!

Unsuitable brushes and improper cleaning agents can damage the ionisation unit.

- We recommendour cleaning accessories. Refer page 23.
- Use a brass wire brush (corrugated Ø 0.15 mm) or plastic fibre brush (hardness grade: soft).
- Use pharmaceutical ethanol.
- Never use aggressive cleaning agents (e.g., acetone, nitro-dilution, toluene, xylene, etc.).

Always switch off the ionisation unit prior to maintenance and cleaning work and de-pressurise the system.

7.1 Cleaning interval

Contamination reduces the ionizing effect of the ionizing units. It can be improved by cleaning.

- Clean the ionizing pins of the ionizing units **at least every 14 days**.
- The higher the degree of ambient contamination, the shorter the cleaning intervals.
- The duration of cleaning depends on the type and degree of contamination.

7.2 Dry cleaning

1. Remove the rechargeable battery from the ionisation unit.
2. Disconnect the ionisation unit from the compressed air supply line.
3. Brush the ionisation tips and the insulation profile with a suitable brush.
4. Vacuum the ionisation unit or blow off with clean compressed air (max. 6 bar).

NOTICE Damage to property and risk of fire!
Contamination of the contacts on the rechargeable battery and ionisation unit can cause short circuits. Short circuits cause faults that damage the ionizer and battery. This can cause a fire.

- Check the contacts of the rechargeable battery and ionisation unit for contamination.
- The contacts must be clean, dry and all grease must be removed.

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5. Reconnect the battery to the ionisation unit and connect the compressed air supply.

NOTE:
If the result of the dry cleaning is not satisfactory, continue with a wet cleaning.

7.3 Wet cleaning

1. Remove the rechargeable battery from the ionisation unit.
2. Disconnect the ionisation unit from the compressed air supply line.
3. Moisten a suitable brush with a suitable cleaning agent. As an optional, use the RS2 special cleaning system for cleaning.
4. Brush the ionisation tips and the insulation profile.
5. Vacuum the ionisation unit or blow off with clean compressed air (max. 6 bar).

NOTICE Damage to property and risk of fire!
Contamination of the contacts on the rechargeable battery and ionisation unit can cause short circuits. Short circuits cause faults that damage the ionizer and battery. This can cause a fire.

- Check the contacts of the rechargeable battery and ionisation unit for contamination.
- The contacts must be clean, dry and all grease must be removed.

6. Reconnect the battery to the ionisation unit and connect the compressed air supply.

8 Troubleshooting

⚠ WARNING

Electric shock hazard!

The ionizing unit is operated with high electric voltage. In the event of any faults, there is a risk of an electric shock.

- Faults may only be eliminated by a trained and qualified electrician.

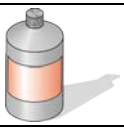
NOTE:
If the defect cannot be eliminated in this way, return the ionizing unit to HAUG GmbH & Co. KG for checking (see back cover for address).

Fault	Cause	Troubleshooting
Ionisation not available	The ionisation unit is contaminated.	Clean the ionisation unit.
	No high-voltage	Charging the battery
		Check the contacts on the rechargeable battery and ionisation unit. Contacts must be clean and bare.
	The yellow LED blinks.	Return the ionisation unit for inspection.
The green LED blinks	Heavily discharged battery.	Charging the battery
The yellow LED blinks	Malfunction in the HV generation.	Return the ionisation unit for inspection.

Fault	Cause	Troubleshooting
Spark-overs	The ionisation unit is malfunctioning.	Shut down the ionisation unit and replace it.
	The ionisation tips are too close to an electrically conductive material.	Increase the gap to object(s) that may cause the fault.
	The ionisation unit is tainted with electrically conductive impurity.	Clean the ionisation unit.
No compressed air	Malfunction in the compressed air supply.	Check compressed air supply (hoses, lines, connections, compressor, etc.).

9 Accessories/spare parts

Accessories and spare parts can be sourced from your authorized sales partner or directly from HAUG GmbH & Co. KG (the address is provided on the back of the envelope).

Item	Figures	Order number
Special cleaning agent **SRM1**		10.7220.000
Brass special cleaning brush **RB1**		10.7218.000
Special cleaning system **RS2**		10.7218.004
Disc brush for special cleaning system		X – 5677
Plastic fibre cleaning brush **RB3**		10.7218.003
Nozzle inserts	Drilling Ø in mm: 0.6; 0.8; 1.2; 1.4; 1.6; 1.8; 2.0	Upon request
Compressed air hose electr. conductive 6 m long		06.8800.010
Compressed air hose electr. conductive 10 m long		06.8800.011
Rechargeable battery replacement		X – 8256
Rechargeable battery charger unit		X – 8258

10 Technical data

10.1 Supply voltage

Rechargeable battery	Lithium ions 10.8 V=

10.2 Key figures and specifications

Reference temperature 23 °C

Generated HV	Approx. 3.5 kV~
Maximum power consumption	350 mA
Operating time with battery fully charged	Approx. 18 h (1.3 Ah) Approx. 26 h (2 Ah)
Battery charging time	Approx. 3 h (1.3 Ah) Approx. 5 h (2 Ah)

10.3 Compressed air supply

Compressed air	Filtered (< 20 μm), dry and oil-free
Maximum pressure	6 bar
Operating pressure	1 – 5 bar
Compressed air consumption at 2 mm nozzle and 3 bar	145 Nl/min

10.4 Ambient conditions

Never use in potentially explosive atmospheres.	
Must only be used indoors.	
Temperature:	
Rated range	0 to 40 °C
Limit range for storage and transport	-15 to 60 °C
Relative humidity:	
Rated range	20% to 65% RF
Limit range for storage and transport	0 % to 85 % RF

10.5 Housing

Protection type	IP 40
Overall dimensions:	
Height	265 mm
Width	250 mm
Depth	70 mm
Weight:	900 g

11 Shut down

1. Switch off the compressed air supply and disconnect it from the ionisation unit.
2. Remove the rechargeable battery from the ionisation unit.
3. Place everything in the original packaging and store the equipment.

11.1 Storing

Always store our products in a dry and cool place.

11.2 Disposing

Never dispose of electrical appliances together with household garbage.
Always collect separately and dispose of in an environmentally responsible way. Always observe national and regional waste disposal regulations for the disposal of electrical appliances.

If proper disposal of our products is not possible, returning the units to us may be an option. We dispose of our products in an environmentally responsible way. The address is provided on the back of the envelope.

Never discard batteries and accumulators with common household waste.
According to the Battery Ordinance, the consumer must recycle the batteries and rechargeable batteries in an environmentally sound manner. Batteries and rechargeable batteries can be delivered to the known collection points of the municipalities or at place of sale (where batteries are sold).

made by HAUG®

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