GB

HAUG®

Operating instructions

Ionizing unit U-Electrode DC compact

Ident number: 03.5080.000

Keep for future use!

DC Line

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1 Scope of delivery

Check the scope of delivery for completeness before first use.

- 1 U-Electrode DC compact
- 1 wide-range plug-in power supply unit (12 V_{DC})
- 2 supporting feet
- 4 silicon pads
- 1 operating manual D-0398-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 ionization unit and will be referred to in this Operating Instruction only as “ionizing unit”.

The ionizing unit is operationally safe when used as intended.

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.

Do not touch!

Caution! Device generates ozone!

Caution, danger due to electrical current!

2.2 Symbols on the ionizing unit

WARNING!
High voltage

WARNING!
Ionisation unit is not safe to touch.
Caution: high voltage!

3 Safety

Only the persons authorized by the operator may carry out tasks on the ionizing unit.

The installer must be a trained and qualified electrician and must have basic knowhow in the field of mechanical engineering. He must read the operating instructions in full.

The operator or maintenance personnel must read the operating instructions in full.

When working on the ionizing unit, switch off the voltage supply and secure against inadvertent switching on.

Danger when touching during operation
The ionisation pins are under high voltage during operation. Touching them can cause painful electric shock and burns. This can trigger shock reactions and lead to secondary accidents.

- Never touch the ionisation pins during operation.

Dangers due to manipulated or faulty ionisation unit
Unauthorised conversions, moisture entering the ionisation unit or damage to the ionisation unit bear the inherent risk of electric shock or fire 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 twist or bend the ionisation unit.
- Never attempt to repair the ionisation unit without prior authorisation.

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.

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.

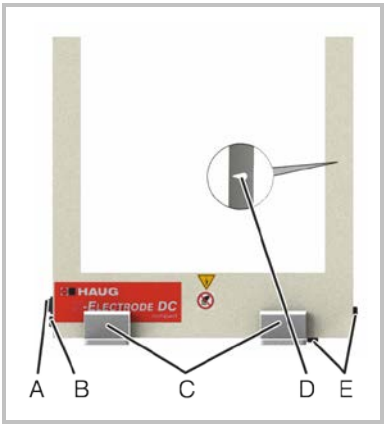
The ionisation unit is used for installation in manufacturing processes and as a tabletop unit in the laboratory. It eliminates electrostatic charging in industrial production and on weighing vessels with sample for laboratory balances.
Scope of application:

- In research
- In the pharmaceutical industry
- In winding and unwinding machines
- In the plastic and packaging industry
- In the printing industry
- On transport and conveyor belts

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 On/off switch
B Green function display LED
C Supporting feet with silicon pads
D Ionisation needles
E Connection sockets for plug-in power supply unit



5 Installing

WARNING

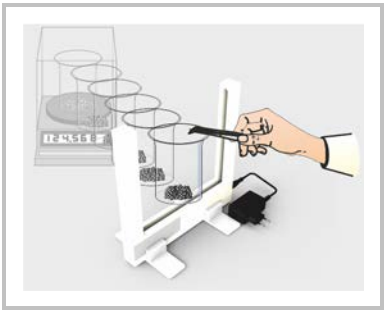
Explosion hazard!

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

- Never install or use the ionisation device in potentially explosive atmospheres.

1. Checking whether the ionizing unit corresponds to the ordering data. In the event of any damage to the ionizing unit, contact HAUG GmbH & Co. KG.

2. Install the ionisation unit at the workplace.
   - Attach the silicone pads to the supporting feet.
   - Fasten both supporting feet to the crossbar or to the leg with the connection socket.
   - Install the ionisation unit on site.
   - Connect the plug-in power supply unit to the free connection socket and plug it into a socket with a functioning earth conductor.

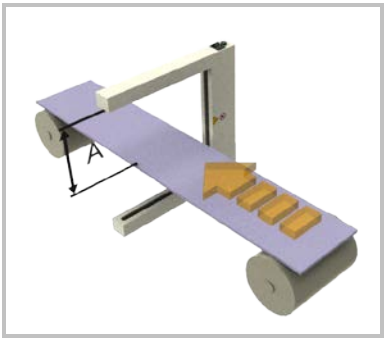


NOTICE Damage to equipment and risk of fire!

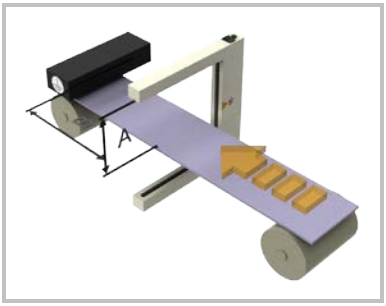
After installation, the ionizing pins must not be covered. This would prevent ionization from taking place at this point and electrical sparks could be generated. The ionizing unit would be damaged and fire could break out.

- Never covered the ionizing pins by mounting brackets or machine parts.

1. Install the ionisation unit in the manufacturing process.
   - Fasten the ionisation unit with holder (accessory) during the manufacturing process.
   - Distance A must be >40 mm.



   - Distance B to an earthed machine part must be greater than the distance A.



   - Connect the plug-in power supply unit to a connection socket and plug it into a socket with a functioning earth conductor.

3. The ionizing unit is ready to operate.

6 Operation

⚠ CAUTION

Risk of electric shock!
The ionisation pins are under high voltage during operation. Touching them can cause a painful electric shock. This can trigger a shock reaction and lead to secondary accidents.

- Never touch the ionisation pins during operation.

Requirements:
The ionisation unit is installed and connected according to the operating manual.

Use the ON/OFF switch to turn on the ionisation unit. The LED lights up green.

7 Maintenance

NOTICE

Risk of damage to the device!
Unsuitable brushes and improper cleaning agents can damage the ionisation unit.

- We recommend **our cleaning accessories**.
- Use a plastic fibre brush (hardness level: soft).
- Use pharmaceutical ethanol.
- Never use a high-pressure cleaner.
- Never use aggressive cleaning agents (e.g., acetone, nitro-dilution, toluene, xylene, etc.).

Always disconnect ionizing unit from supply when carrying out maintenance and cleaning works.

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. Switch off the ionisation unit and secure it against unintentional switch-on.
2. Disconnect the ionisation unit from the socket.
3. Brush off the ionisation pins with a suitable brush.
4. Vacuum the ionisation unit or blow off with clean compressed air (max. 6 bar).
5. Plug the ionisation unit into the wall socket again.

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

7.3 Wet cleaning

1. Switch off the ionisation unit and secure it against unintentional switch-on.
2. Disconnect the ionisation unit from the socket.
3. Moisten a suitable brush with a suitable cleaning agent. As an optional, use the **RS2** special cleaning system for cleaning.
4. Use a brush to clean the ionisation device.
5. Use compressed air (max. 6 bar) to clean the ionisation unit, and then let it dry.
6. Plug the ionisation unit into the wall socket again.

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.

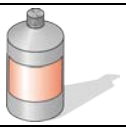
- Faults may only be eliminated by a trained and qualified electrician.

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 supply voltage	Check the plug-in power supply.
	The green does not light up	Check the plug-in power supply.
Spark-overs	The ionisation unit is tainted with electrically conductive impurity.	Clean the ionisation unit.
	The ionisation unit is malfunctioning.	Shut down the ionisation unit and replace it.

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	Images	Order number
Special cleaning agent **SRM1**		10.7220.000
Plastic fibre cleaning brush **RB3**		10.7218.003
Special cleaning system **RS1**		10.7218.001
Disc brush for special cleaning system		X – 6822
Supporting foot		10.0401.000
Silicon pad	–	X – 9499
Mounting bracket	–	10.0402.000
Plug-in power supply		On request

10 Technical data

10.1 Key figures and specifications

Reference temperature 23 °C

Plug-in power supply	Input: 100 – 240 V_{AC} Output: 12 V_{DC}, 630 mA
High voltage	±6.5 - 8 kV_{DC}

10.2 Supply voltage

Rated value	**Power consumption**
12 V_{DC} ±10 %	P_{max} = 2 W

10.3 Ambient conditions

Never use in areas with potentially explosive atmospheres.	
Use in interior only.	
Temperature:	
Rated application range	+5 °C to +45 °C
Extreme range for storage and transport	-15 °C to +60 °C
Luftfeuchte:	
Rated application range	20 % to 65 % RF
Extreme range for storage and transport	0 % to 85 % RF

10.4 Housing and dimensions

Protection type	IP 20
Protection class	I
Mains connection	Plug-in power supply 12 V_{DC}
Dimensions:	
Height	260 mm
Width	260 mm
Depth	30 mm
Weight:	0.8 kg

11 Shut down

WARNING

Risk of electric shock!
The ionisation unit is operated with electrical voltage and generates a high electrical voltage. Improper decommissioning can lead to electric shock.

- Only a certified electrician shall be permitted to shut down the device.

1. Switch off the ionisation unit.
2. Disconnect the plug-in power supply unit from the power supply.
3. Remove the ionisation unit from the manufacturing process.

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.

made by HAUG®

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