

# HAUG Ionization - for the elimination of electrostatic charges



## HAUG Ionization systems

are intended to eliminate electrostatic charges. On different surfaces interfering electrostatic charges may form, disturbing production processes and bonding dust particles and other quality-reducing substances to the materials. HAUG has been engaging in research, development and production for more than 45 years to solve these problems.

### EI VC

The HAUG ionizing bar **EI VC** reliably eliminates electrostatic charges in clean rooms. It can be used both directly for the discharge of objects or for enriching laminar air flows with positive and negative ions.

The ionizing bar **EI VC** is characterized by all quality features of HAUG ionizing bars, including the patented contact system X-2000 which can be easily dismantled (ill. 2 and 3), the shielded and EMV compatible high-voltage cable, the absolute safety to touch and the special stainless steel electrodes.

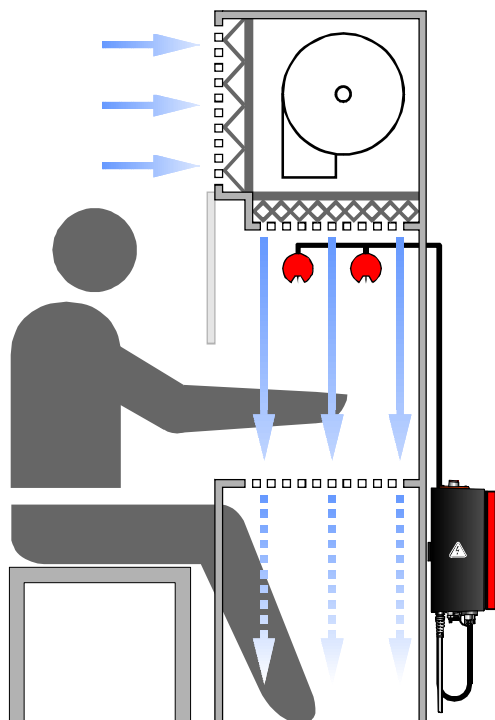


**EI VC**

### Special properties and benefits

The high-performance ionizing bars **EI VC** enrich the laminar air flow with positive and negative ions. Existing or generated charges are thus eliminated and the build-up of charges is prevented. As a result of the minimum particle emission values, the **EI VC** is suitable for use in rooms with "ISO Class 4" in accordance with DIN EN ISO 14644-1. This corresponds to the withdrawn US Federal Standard 209E "Class 10". Its light, aluminum-color profile ensures good visual integration in clean rooms. The ionizing bar **EI VC** has been qualified by the Fraunhofer Institute for Manufacturing Engineering and Automation IPA in Stuttgart (Germany).

**ill. 1**



"Enrichment of vertical air flow with positive and negative ions above a clean room workspace."

### Applications

- Clean production areas in the pharmaceutical, cosmetics and food industries
- Optical industry
- Packaging machines
- Automation technology
- Horizontal and vertical laminar flow systems
- Clean production areas in plastics engineering

**ill.2**

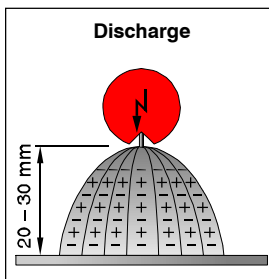


**ill.3**



Plug-and-socket system X-2000

**ill.4**



**ill.5**

"Optimum effective distance for direct discharge with no air-flow support."

### HAUG Ionization systems

consist of the following components:

- a power pack with integrated high-voltage transformer and
- one or several connected ionizing units, such as the ionizing bar **EI VC**, which are supplied with a voltage of 7-8 kV<sub>r</sub> by the power pack.

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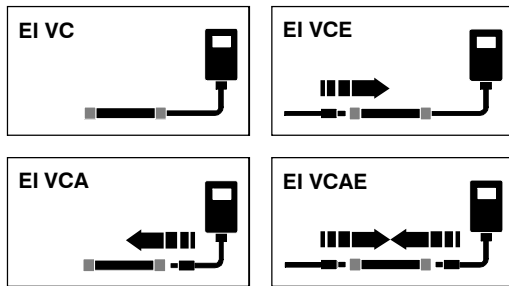
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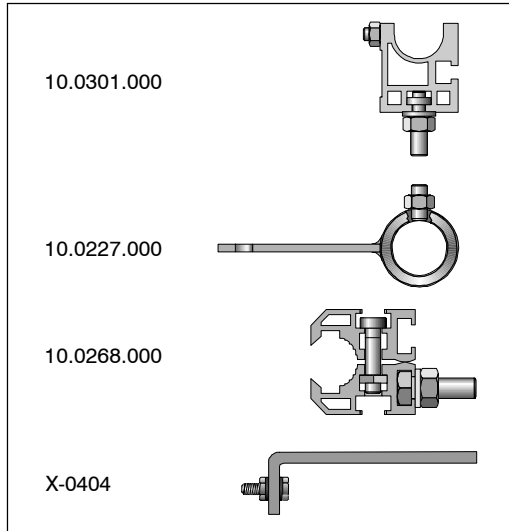
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**Static Line - Ionizing bar EI VC**





**Bar holder**



**EI VC**

**Technical data EI VC**

Types:	<b>EI VC</b>	Order-No.: 03.8410.000
	inseparable HV-cable, attached permanently to the bar	
	<b>EI VCE</b>	Order-No.: 06.0210.000
	HV-cable	
	<b>EI VCA</b>	Order-No.: 03.8411.000
	detachable HV-cable	
	VK Norm 21	Order-No.: 05.8517.000
	VK Norm 22	Order-No.: 02.8522.000
	VK Norm 23	Order-No.: 05.8519.000
	VK Norm 24	Order-No.: 05.8518.000
	<b>EI VCE</b>	Order-No.: 03.8412.000
inseparable HV-cable to power pack, detachable HV-cable for series connection of ionizing units		
	<b>EI VCAE</b>	Order-No.: 03.8413.000
	detachable HV-cable to power pack, detachable HV-cable for series connection of ionizing units	

Diameter:	20 mm
Length:	150 mm – 2500 mm
Operating temperature:	+5 °C to +45 °C
Storage/transport temperature:	-15 °C to +60 °C
Optimum effective distance:	20 – 30 mm
Effective length:	bar length - 120 mm
Smallest bending radius (cable):	R 50

Subject to technical changes!

**Calculation of connectable length(s)**

The ionizing bar EI VC is a high-performance ionizing bar which exerts a load on the power pack of 3x the capacity (3x length of high-voltage cable). The ionizing bar length must therefore be multiplied by 3 and then added to the length of the high-voltage cable.

**Example of a system**

consisting of 2 ionizing bars EI VC, each 1.5 m long with 2 m high-voltage cable

**Calculation**

$$[2 \times (3 \times 1.5 \text{ m})] + (2 \times 2 \text{ m}) = 13 \text{ m total length of the HV-cable}$$

Any one of the power packs **EN 8**, **EN 8 LC**, **Multistat**, **EN 70** or **EN 70 LC** can therefore be selected.

**Accessories**

Bar holder, block half open	Order-No.: 10.0301.000
Bar holder, closed	Order-No.: 10.0227.000
Clamping holder, 2 parts	Order-No.: 10.0268.000
Bracket, large	Order-No.: X-0404 a.o.

**Suitable power packs**

Connectable lengths (ionizing unit incl. high-voltage cable):

EN SL	max. 5 m
EN SL LC / EN SL RLC	max. 10 m
EN 8 / EN 8 LC	max. 18 m
Multistat	max. 18 m
EN 70 / EN 70 LC	max. 2 x 18 m

