

**ER-X Series High and Low Temperature Resistant Head  
ER-XHC**

CMJECK-ERXHC No.0052-42V

Thank you very much for purchasing Panasonic products. Read this Instruction Manual carefully and thoroughly for the correct and optimum use of this product. Kindly keep this manual in a convenient place for quick reference.

**WARNING**

- This product produces high voltages.
- Do not use this product in places where there may be a danger of flammable or combustible items being present.
- To prevent electric shock and to conduct proper discharge, be sure to ground a frame ground (F.G.) terminal of a controller.
- Do not place hands near the discharge needle. Doing so may cause electric shock.
- Since the tip of the discharge needle is sharp, take sufficient care in handling the discharge needle, or injuries may result.
- The high-voltage cable between the head and the high-voltage unit must be fixed and the minimum bend radius is R30mm or more.
- In case of using at the bend radius R30mm or less and using at moving part may cause fire and break down, etc. of the high-voltage cable.
- Clean the discharge needle regularly (about once a week). Otherwise, optimum charge removal performance may not be achieved, and accidents or operating problems may occur.
- If this product is used in a confined space, ozone emitted from this product may be detrimental. Be sure to provide ventilation.
- Do not direct ionized air toward the face. Ozone may cause irritation to places such as the nose and throat.
- When the product has been used under very high or low temperatures, do not touch the product with a bare hand. Failure to observe this caution can result in burn or injury. Be sure to let the product cool sufficiently when touching the product for maintenance or other purposes.

**1 STANDARDS AND REGULATIONS**

- This product conforms to the standards and regulations below.

**<European Directives>**

EMC Directive, RoHS Directive

**<Standards in US / Canada>**

UL Standard, CSA Standard

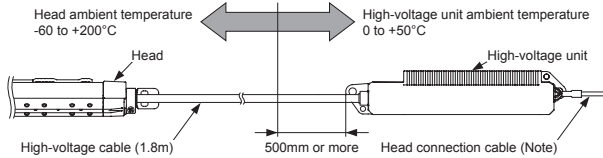
**• Contact for CE**

Panasonic Marketing Europe GmbH Panasonic Testing Center  
Winsberging 15, 22525 Hamburg, Germany



**2 INSTALLATION**

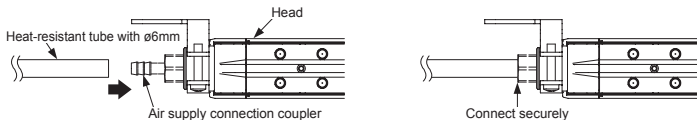
- To prevent damage to the high-voltage unit, mount it in such a way that a section longer than 500mm is exposed to room temperature, as shown below.



Note: This product cannot be used with ER-XCCJ10H (head connection cable length: 10m).

**3 PIPING**

- Air supplied to this product will reduce contamination of the discharge needle and improve the charge removal speed.
- When supplying air to the product, attach the provided air supply connection coupler. When air is not supplied to the product, attach the provided seal cap. The tightening torque is as follows:
  - Air supply connection coupler: 2.0N·m
  - Seal cap: 0.5N·m
- Use a heat-resistant tube with an outside diameter of 6mm for connection to the air supply connection coupler.
- Make sure that clean air (air containing no water, no oil and no dust) should be supplied.
- Since the pressure will drop when the air piping from the main pressure supply is extended or pneumatic components (e.g., needle valve, speed controller, mini filter) are added, keep an eye on the pressure supply to the ionizer making sure it is not in short supply. For the pneumatic components, select those that can accommodate the air supply flow rate.



Note: After connecting the tube to the air supply connection coupler, make sure the connection is secure. If the tube is not connected firmly, air can leak.

**4 CAUTIONS**

- This product has been developed / produced for industrial use only.
- Use this product with controller of ER-X series (optional) and head connection cable (optional).
- Do not use this product for purposes other than electric charge removal.
- Do not use this product in environments which are outside the specification range, otherwise operating problems or damage may occur. In addition, the operating life of the product may become significantly reduced.
- This product is a precision device. Do not apply a shock to it by dropping, for example. Accidents or operating problems may occur.
- Never disassemble, repair or modify this product. Accidents or operating problems may occur.
- Do not throw this product in fire. It may explode or toxic fumes may be generated.
- Do not run the wires together with high-voltage lines or power lines or put them in the same raceway. This can cause malfunction due to induction.
- When connecting/removing the head or performing wiring or inspection work, be sure to turn off the power first. Not doing so may result in accidents, electric shock or operating problems.

- After connecting the cables, check that the connections are correct before turning on the power. If the cables are connected incorrectly, operating problems or accidents may occur.
- Do not use any cables which have any damage (such as splitting or cracking), otherwise operating problems or accidents may occur.
- Avoid using the product in places where there are high levels of steam or dust in the air or where it might be directly exposed to water, oil or welding spatter.
- Do not touch the discharge needle with hard objects such as tools. If the discharge needle becomes broken, it will not provide sufficient charge removal performance, and moreover operating problems or accidents may occur.
- When cleaning or replacing the discharge needle, take care not to damage the tip of the discharge needle.
- During installation, fasten the product securely. If it is not securely fastened or it is subjected to continuous vibration or shock, accidents or operating problems may result.
- When disposing of this product, treat it appropriately as industrial waste.
- Use the correct combination of head, discharge needle unit and controller.

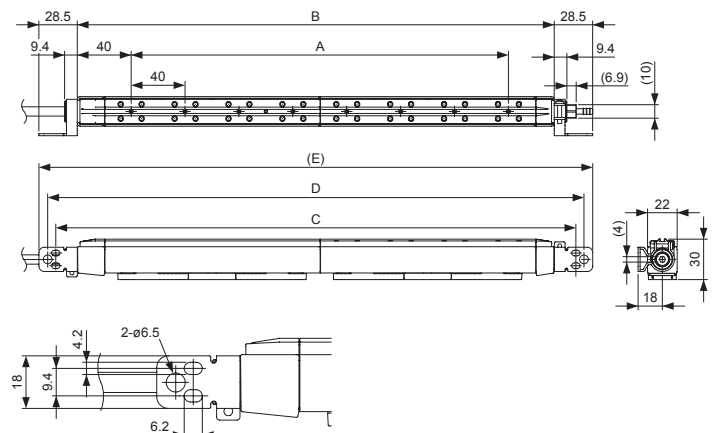
**5 SPECIFICATIONS**

Model No.	ER-X008HC	ER-X016HC	ER-X032HC	ER-X048HC	ER-X064HC
Compatible discharge needle unit	ER-XANT2HC	ER-XANTHC			
Applicable controller	ER-XC02				
Applicable head connection cable	ER-XCCJ2H, ER-XCCJ5H				
Effective charge removal width	80mm	160mm	320mm	480mm	640mm
Charge removal time	1 second or less (Note 1)				
Ion balance	±30V or less (Note 1) (Note 2)				
Discharge method	Pulse AC method				
Discharge frequencies	30Hz (Note 3)				
Discharge output voltage	Approx. ±7,000V				
Ozone generation	0.01ppm or less (Note 1)				
Maximum air pressure	0.1MPa				
Applicable fluid	Air (dried clean air) (Note 4)				
Pollution degree	2				
Ambient temperature	Head: -60 to +200°C (No dew condensation) (Note 5), Storage: -10 to +65°C High-voltage unit: 0 to +50°C (No dew condensation), Storage: -10 to +65°C				
Ambient humidity	35 to 65%RH, Storage: 35 to 85%RH				
Operating altitude	2,000m or less (Note 6)				
Vibration resistance	10 to 55Hz frequency, 0.75mm (MAX. 50m/s <sup>2</sup> ) amplitude for 2 hours in each of XYZ directions				
Shock resistance	Resistance 100 m/s <sup>2</sup> (approx. 10G) 3 times in each of XYZ directions				
Overvoltage category	I				
Enclosure grounding method	Floating				
Material	Head unit case: PPS / Stainless steel (SUS304), Head mounting bracket: Stainless steel (SUS304) Discharge needle: PPS / Tungsten, High-voltage unit case: ABS				
High-voltage cable length	Heat-resistant shielded cable: 1.8m				
Weight	Approx. 420g	Approx. 490g	Approx. 620g	Approx. 760g	Approx. 900g
Accessory	Air supply connection coupler: 1 pc., seal cap: 1 pc.				

- Notes: 1) In condition of discharge distance 100mm, center of the product, discharge wavelength 30Hz and no air supply.  
2) Ion balance is average of plus and minus. Also, the specification value is typical value in condition of less than ±10°C ambient temperature change, set the ion balance after 30 minutes of the discharge starting, switching on the ion balance control function.  
3) Set the discharge frequency to 30Hz. Do not use other frequencies.  
4) The dried clean air is dried (dew point: equivalent of -20°C) and filtered (mesh-size: equivalent of 0.01µm) air.  
5) Discoloration of the head may occur during use under high temperatures, but it does not affect the electricity removing performance.  
6) Do not use or store in an environment pressurized to atmospheric pressure or higher at an altitude of 0m.

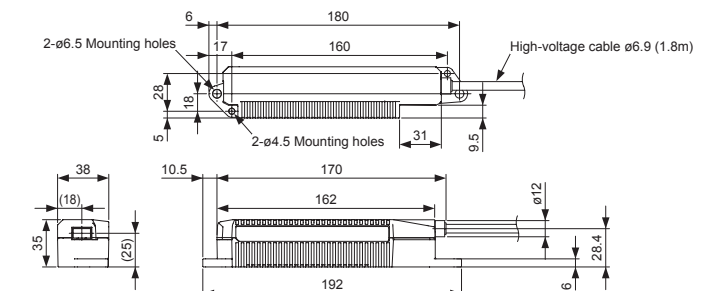
**6 DIMENSIONS (Unit: mm)**

**• Head part**



Model No.	ER-X008HC	ER-X016HC	ER-X032HC	ER-X048HC	ER-X064HC
A	40	120	280	440	600
B	106	194	354	514	674
C	138	226	386	546	706
D	150	238	398	558	718
(E)	163	251	411	571	731

**• High-voltage unit**



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