

# Soft X-ray Ionizer

## Electrostatic Total Solution

### SXH-05S / 10S

Suitable Ionizer for super clean process as there is no dust, electromagnetic wave, ozone.

Module structure type makes tube replacement easy on site as it can be separated or combined. Furthermore, purchase by individual part is economical. Also, slim size makes installation simple in narrow space.

### Key Features

- Easy attachable/detachable Module structure
- Prompt replacement is possible on the spot
- Cost saving due to individual Tube module purchase
- Suitable for small and limited area
- Serial Number of the Head is displayed on controller
- When the communication status between Head and controller is not normal, it stops automatically
- Individual control for 4 heads to turn on/off using RS-485 communication protocol
- With RMS(Real Monitoring System), possible to check operation status in real time (Option) Patent



### Specifications

| Parameter              |         | Description / Value                     |
|------------------------|---------|---|
| Ion Generation Method  |         | Soft X-ray                              |
| Source                 |         | Soft X-ray Tube                         |
| Tube Voltage           | SXH-05S | 4.9kV                                   |
|                        | SXH-10S | 11kV                                    |
| Beam Angle             |         | 150°                                    |
| Power Consumption      |         | Max. 10W (Based on 1 Head)              |
| Operation Circumstance |         | 0°C ~ +50°C(32°F ~ 122°F), 35% ~ 85% RH |
| Weight                 |         | 0.52kg                                  |
| Warranty               |         | 1 year                                  |

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

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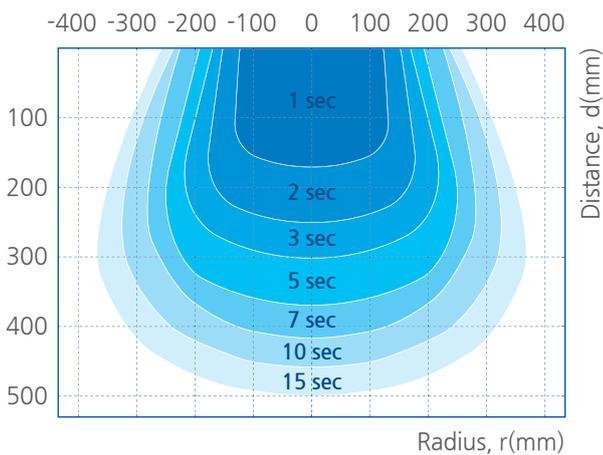
### Connectable Controller & Functions

| Function   | Controller |          |          |
|--|------------|----------|----------|
|  | SXC-104N   | SXC-104S | SXC-104T |
| Product Monitoring (RS-485)                                    | O          | O        | O        |
| Resetting usage time after head replacement                    | O          | O        | X        |
| Stop when communication is not possible. (Function for Safety) | O          | X        | X        |
| Checking the individual head position                          | O          | X        | X        |
| Controlling the individual head                                | O          | X        | X        |
| Number of Heads can be connected                               | 1 ~ 4      | 1 ~ 4    | 1 ~ 4    |

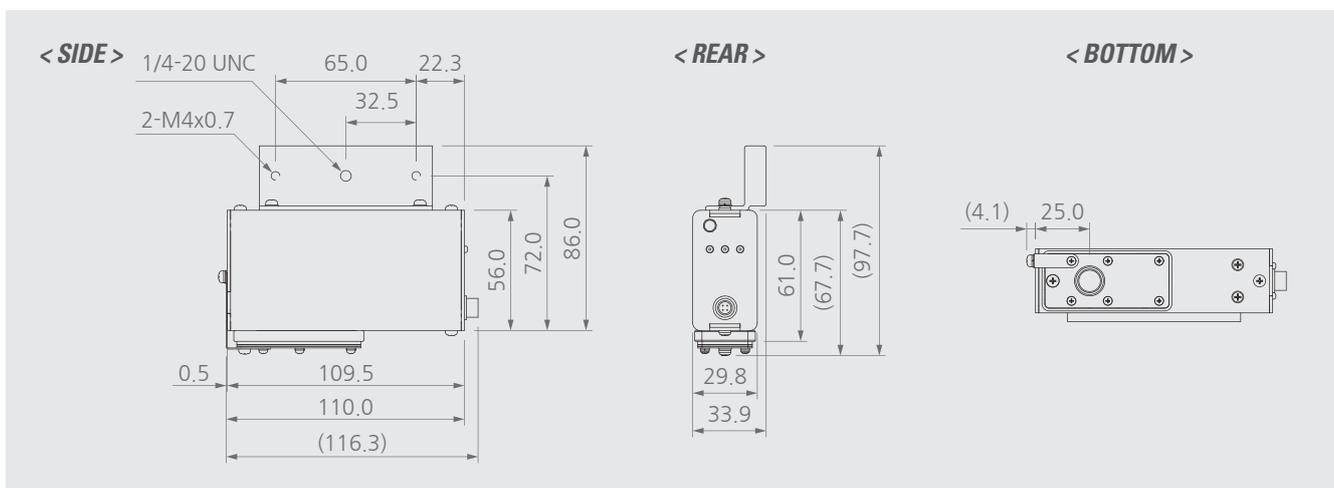
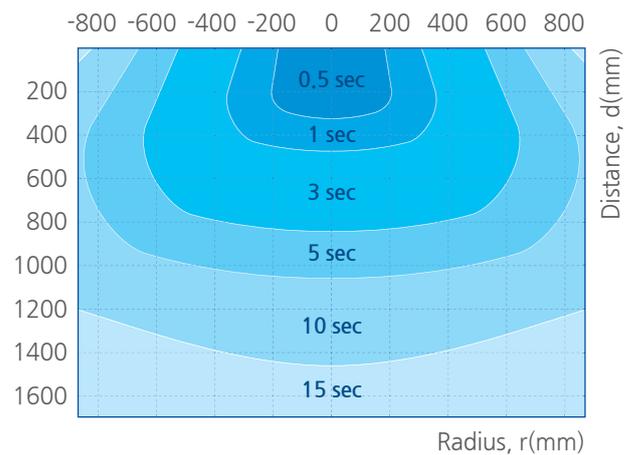
### Performance

- Decay Time :  $\pm 1,000V$  to  $\pm 100V$
- Charge Plate Capacitance : 20pF (150 X 150mm)
- Temperature & Humidity : 24°C, 50%RH

Model : SXH-05S



Model : SXH-10S



# Radiation Shielding methods

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## What are soft X-rays?

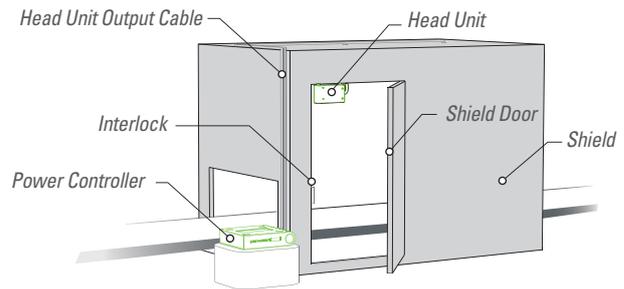
X-ray can be sorted according to its penetrating power, and an X-ray which has weaker penetrating power that can be absorbed easily in thin layer of the air is called the soft X-ray.

### Benefits of Soft X-ray Ionizer

- Perfect Ion Balance ( $\pm 0V$ )
- No CDA (Clean Dry Air) required
- No dust generation
- No ozone (O<sub>3</sub>) generation
- High ion generation density
- Static electricity can be removed even under inert gas conditions such as N<sub>2</sub> and Ar

## Shield installation compositions

- \* Please be careful to avoid direct exposure from the soft X-ray, since it may cause any skin problems. Therefore, you need to shield the area where X-ray emits in order to protect yourself.
- \* Please keep in mind that allowed leakage level for radiation dose is 1 $\mu$ Sv/hr(SXH-05S), 10 $\mu$ Sv/hr(SXH-10S) or under, So keep your area under the mentioned level all the time.  
(The leakage level of radiation dose might differ in countries)
- \* Please refer to the below chart for possible materials of shielding and its acceptable thickness.



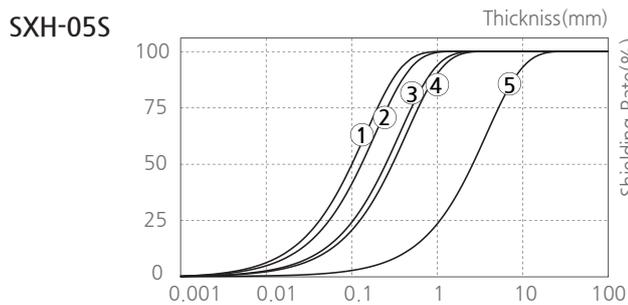
### Radiation

With radiation You can ionize some substance, Energy flow that radiated substance generates.

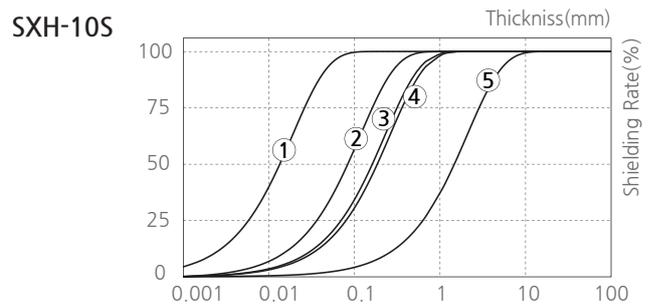
Radiation is neither accumulated nor contaminated. Due to uncertainty that human cannot judge by five senses, its danger is exaggerated than the actual. Radiation can be made intentionally, but also stays in the nature at all times just like other energy flow.

## Shielding methods

See the following graph for references. Select the ideal tickness and quality of shielding material.



| No. | Shield Material | Thickness [mm] |
|-----|-----------------|----------------|
| ①   | SUS             | Over 0.2       |
| ②   | Aluminium       | Over 0.25      |
| ③   | Glass           | Over 0.5       |
| ④   | PVC             | Over 0.6       |
| ⑤   | Acrylic         | Over 5.0       |



| No. | Shield Material | Thickness [mm] |
|-----|-----------------|----------------|
| ①   | SUS             | Over 0.3       |
| ②   | Aluminium       | Over 2.0       |
| ③   | Glass           | Over 4.0       |
| ④   | PVC             | Over 4.5       |
| ⑤   | Acrylic         | Over 40.0      |

### ⚠ Warring

- \* Please shield the area where the customer is willing to install the soft X-ray device for safety issue.
- \* After shielding process, please connection to your own interlock system to operate the X-ray device On/Off when the door is opened/closed.