



UV-C Equipment Brochure



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Introduction to UV-C

Protect yourself, protect others.

The quality of the air you breath and the cleanliness of the surfaces you touch can both affect your health and well-being. In a world where disease is so prevalent, and the risk of contracting or spreading it is easier than ever before, the question is... What are you doing to protect yourself and those around you?

What is UV-C technology?

UV-C light as a disinfectant for air and surfaces mitigates the risk of acquiring infection. It is a tried and tested technology that has been used extensively for over 4 decades. All viruses, molds, bacteria and yeasts tested to date respond to UV-C disinfection. The same energy dosage of Ultraviolet Radiation needed to kill Tuberculosis is recommended to use against coronavirus.

Caution

UV-C light is dangerous when exposed to living beings. While there are built-in safety measures, UV-C equipment must always be used with extreme caution.

Our collection of UV-C equipment...

This brochure contains a collection of UV-C equipment that you can use as part of your protection strategy for your home, business or facility.

Note that the quantity of UV-C equipment required is based on the size of the room in which it is used. A special calculation is done to ensure adequate disinfection capability. We will do this calculation for you! Simply provide us with the room's measurements.

Chat to your Magnet representative for further assistance.

Surface Cleaner



UV-C Surface Cleaner: Overview

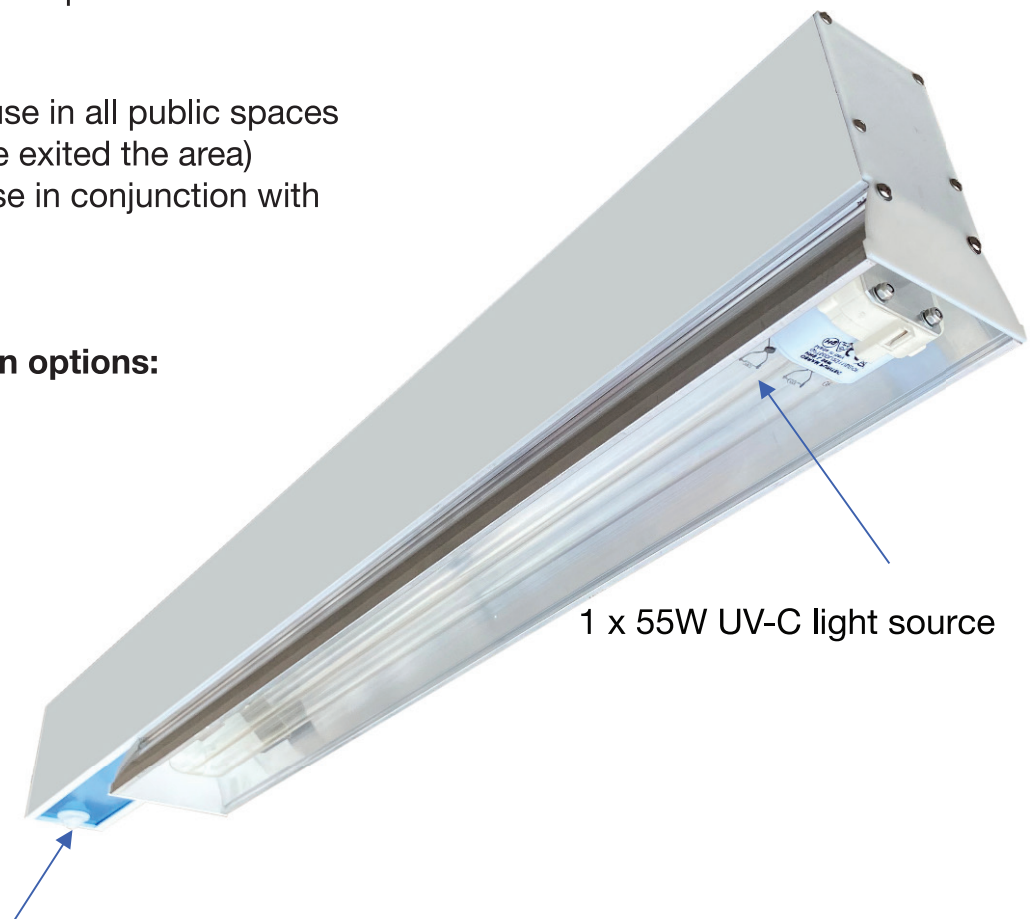
The UV-C Surface Cleaner is for the disinfection of surfaces only.

Germicidal unit for surface cleaning of pathogens:

- Locally manufactured product
- Fixed or portable
- Silent
- Application – for use in all public spaces (once people have exited the area)
- Recommended use in conjunction with air scrubber

Multiple installation options:

Pendant
Surface mount
Recessed mount



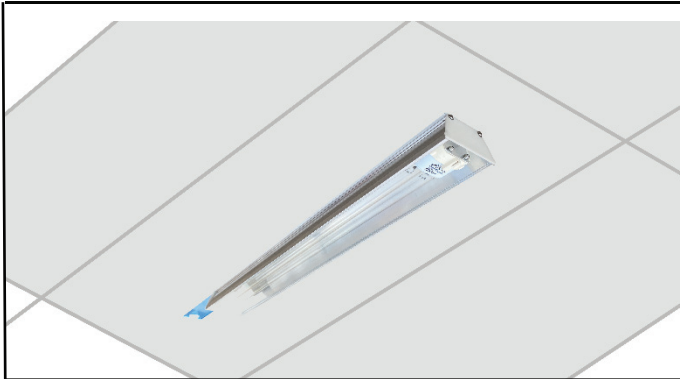
Safety:

When the built-in PIR motion sensor detects a living presence, the entire fitting switches off. When no further motion is detected, the device switches back on.

Rear view

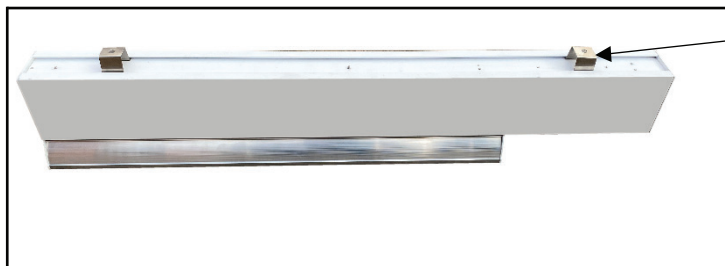


UV-C Surface Cleaner: Installation Options



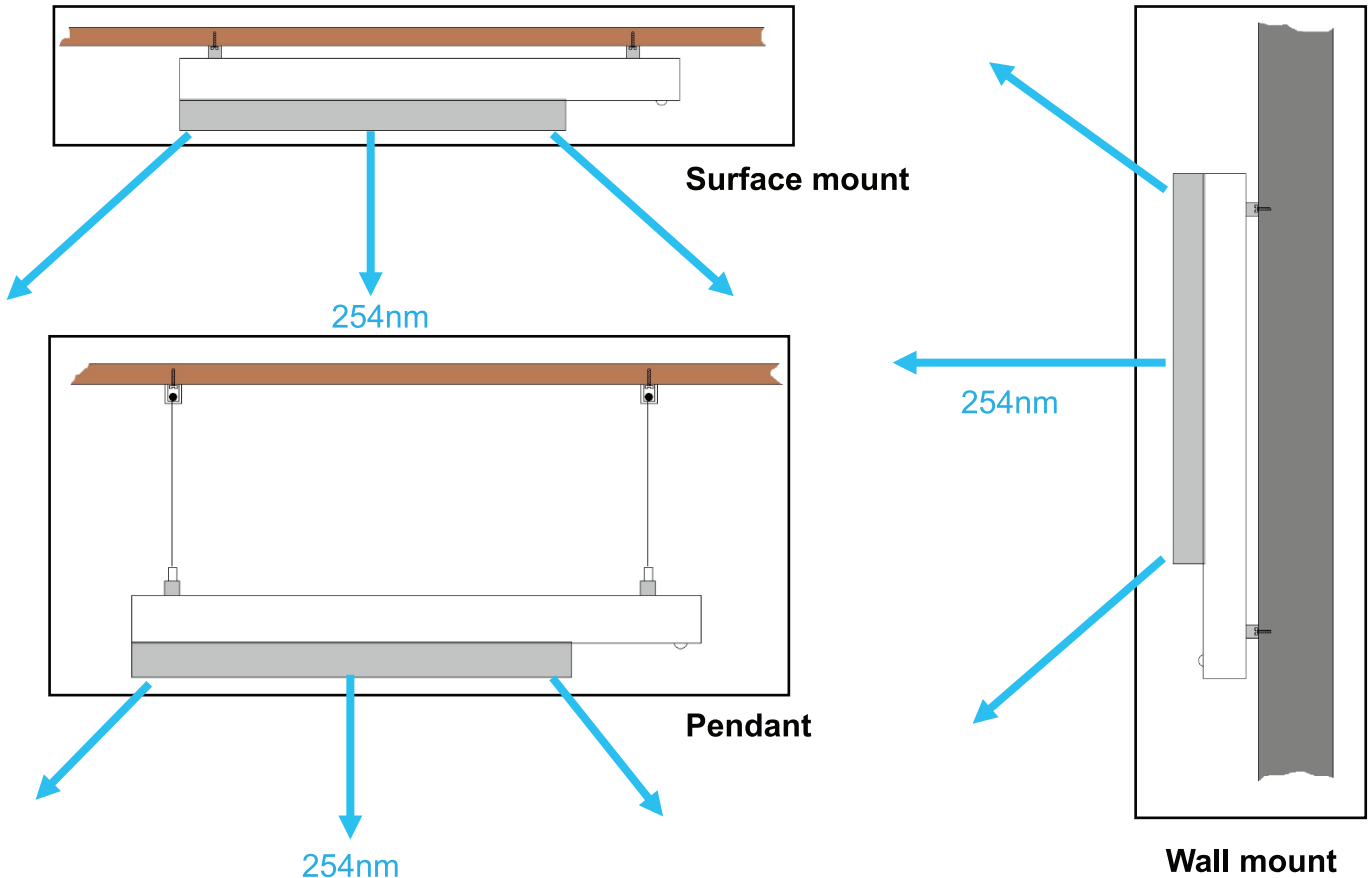
Recessed:

- Fits into lay in 1200 x 600mm ceiling tile
- Requires an additional infill plate



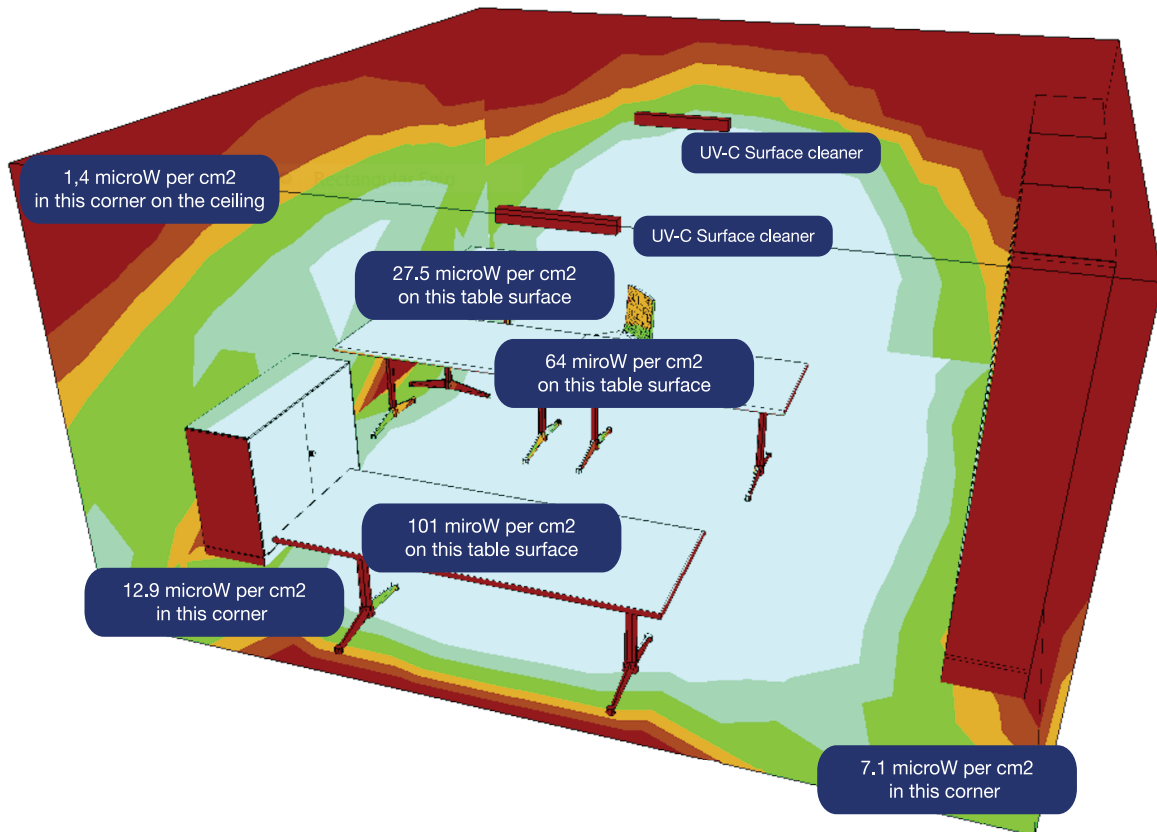
Detachable SS spring clips

- Allows the clips to be easily fixed to a wall or slab
- Pendant cable can also be supplied, for suspension from the ceiling



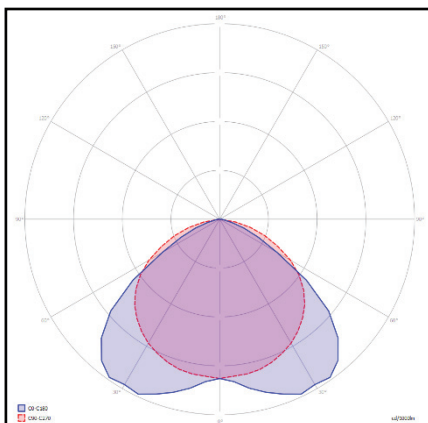
UV-C Surface Cleaner: Installation Example

We can calculate how many fittings are required per area/room – simply provide us with room width x length x height.



Example of a room with 2 surface cleaners installed at ceiling height.

Distribution curve for one single UV-C surface cleaner.



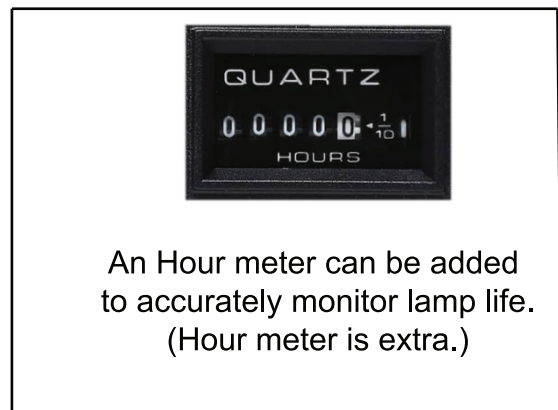
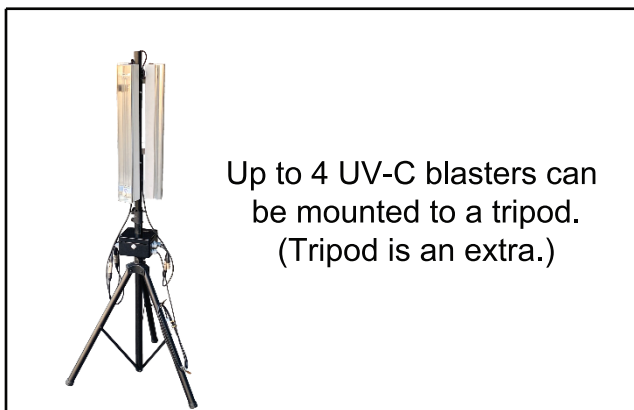
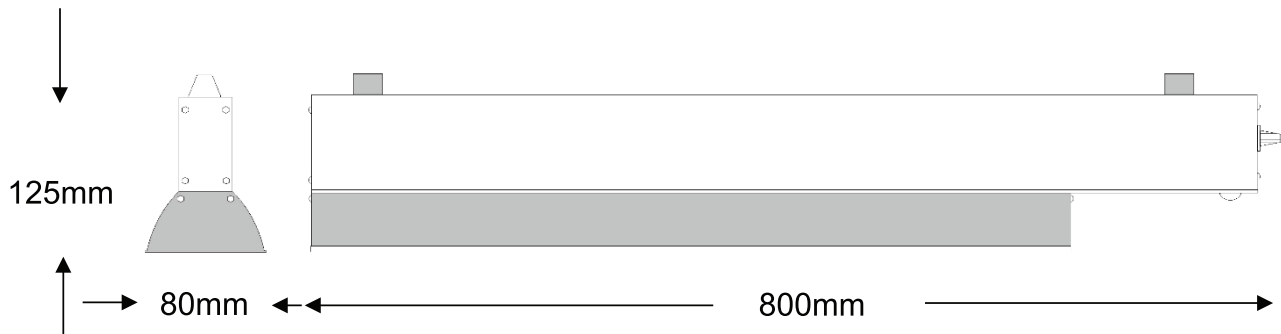
Using TB as an example:

6200 μ W per second per cm² is required to render this bacteria inactive. Then if we take the lowest level achieved in the room:

1,4 μ W in the top left ceiling corner – divide 6200 by 1,4 = 4428 seconds. Therefore it would take 73 minutes to render any TB in the far top left corner of the ceiling inactive.

BUT – if we take the work surfaces – like the main table in the centre of the room at 64 μ W per second per cm² – TB would be rendered inactive in 1,6 minutes.

UV-C Surface Cleaner: Installation Example



	Details
Body construction	Main Body - extruded aluminium (anodised and powder coated)
Sensor Type	PIR sensor – feeding a relay – mounting height not to exceed 5metres
UV-C lamp type	UV-C 55W – in PL or Dulux shape. Wavelength is 254nm
Power supply for lamps	Tridonic or Helvar or TCI – electronic.
Effective lamp life	8000 hours. An hour meter can be added to enable maintenance staff to accurately monitor the lamp life.
Supply voltage	230V AC 50HZ
Wattage and power factor	60W – pf better than 0,97
UV-C effective wattage – when new	32W of 254nm
IP rating	IP 20

**Magnet reserves the right to change information without notice
– due to technology advancements**

Multi-Mount Air Scrubber

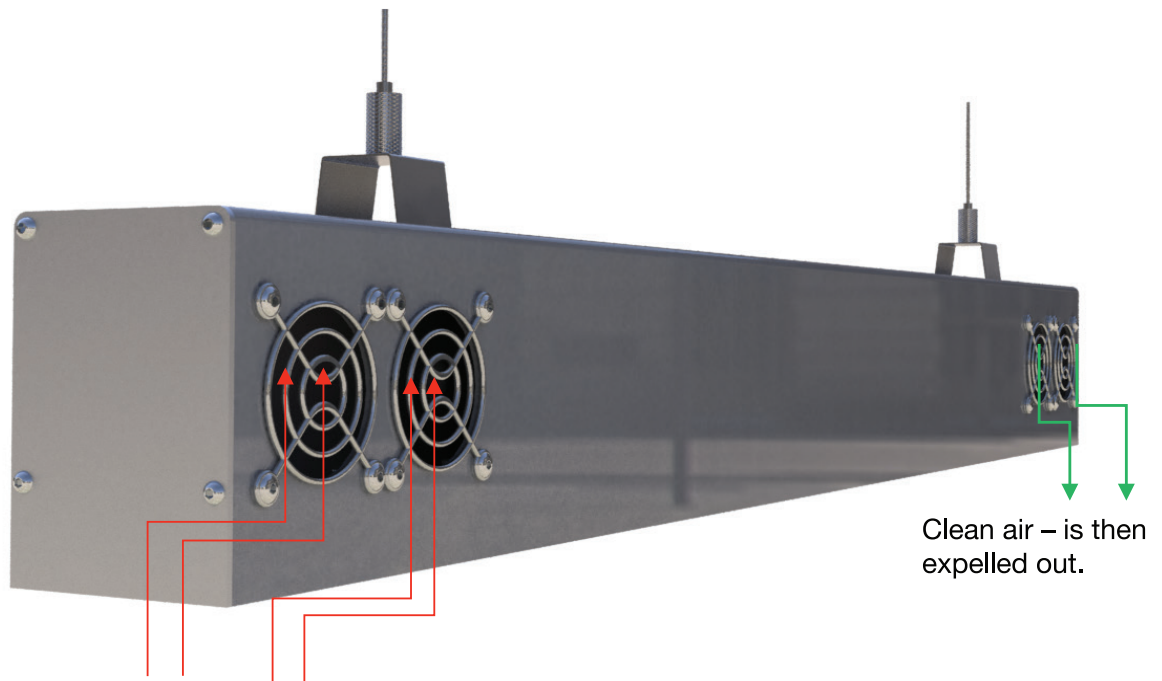


Multi-Mount Air Scrubber: Overview

The Multi-mount Air Scrubber is an air purification device, and does not disinfect surfaces.

Germicidal unit for cleaning of airborne pathogens:

- Locally manufactured product
- Fixed or portable
- Virtually silent (similar sound to the hard drive of a desktop PC)
- Application – for use in all public spaces
- Can be used when people are in the room
- Recommended use in conjunction with surface cleaner
- NIOH test report available



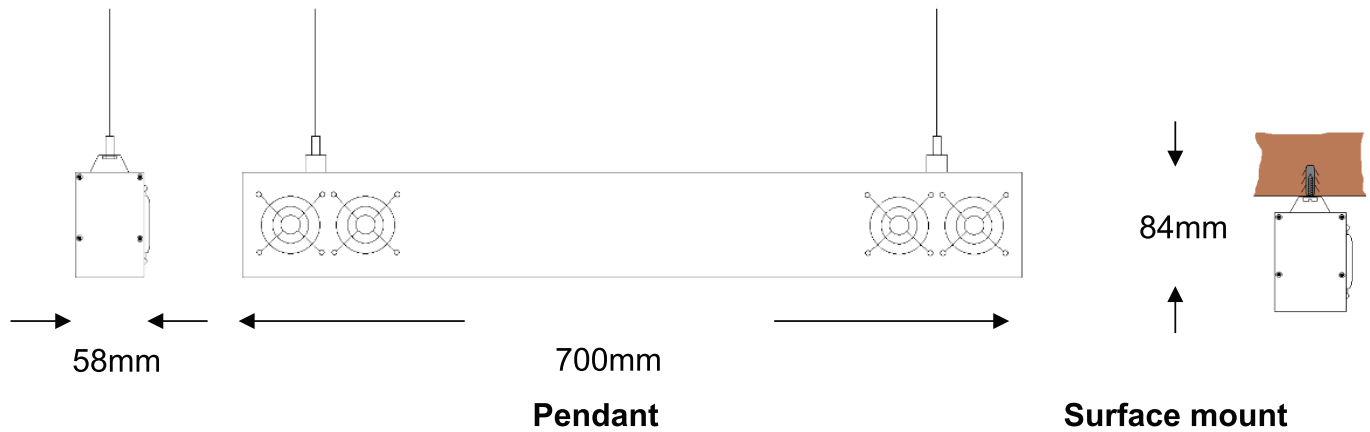
Dirty pathogens are sucked in and destroyed by the UVC (254nm) light within. Clean air is then expelled.

Clean air – is then expelled out.

Pedestal (tripod) mount option



Multi-Mount Air Scrubber: Functionality



How the Air Scrubber works:

- Air is sucked in through the slots on the left side
- Air passes through a sponge filter, then into a chamber
- The chamber contains 2 x UV-C lamps (254nm)
- These UV-C lamps destroy the pathogens in the air
- Finally, purified air is then expelled through the vents on the right

Power:

One UV-C air scrubber can clean a room of 5m x 5m x 2,6m 3 to 4 times an hour

Safety:

This unit is safe to use while humans are in the room, as the UV-C lamps are not exposed

Multiple installation options:

- Pendant
- Surface mount
- Pedestal mount

Multi-Mount Air Scrubber: Product Summary

	Details
Body construction	Extruded aluminium – anodised. End caps are laser cut aluminium.
UV-C chamber	Within the extrusion – not visible to humans.
Colour of body	Standard is natural anodised - special colours (on request)
UV-C lamp type	Osram or Phillips UV-C 18W (x2) – in PL or Dulux shape. Wavelength is 254nm
Power supply for lamps	Tridonic or Helvar or VS – electronic.
Fan Type	2 x MAGLEV fans (Magnetic Levitation – so no ball bearings or bushes – hence the 50 000 hour plus life)
Effective lamp life	8000 hours. An hour meter can be added to enable maintenance staff to accurately monitor the lamp life.
Supply voltage	230V AC 50HZ
Wattage and power factor	72W – including 2 lamps plus 2 MagLEV fans Power factor is plus 0,95
UV-C effective wattage – when new	11W of 254nm
IP rating	IP 20
Surge arrester	Either 10 or 20kVA within – this item will protect up to 20 events (like a transient spike caused by load shedding) thereafter it would need replacing. Once the surge arrester has used up its 20 lives, it disconnects the mains feed to all other control gear, protecting all gear.

Due to the nature of UV-C radiation within the radiation chamber, plastic items (such as plastic finger guards) on the filters will degrade over time and will need replacing on occasion.

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In-Lay Air Scrubber

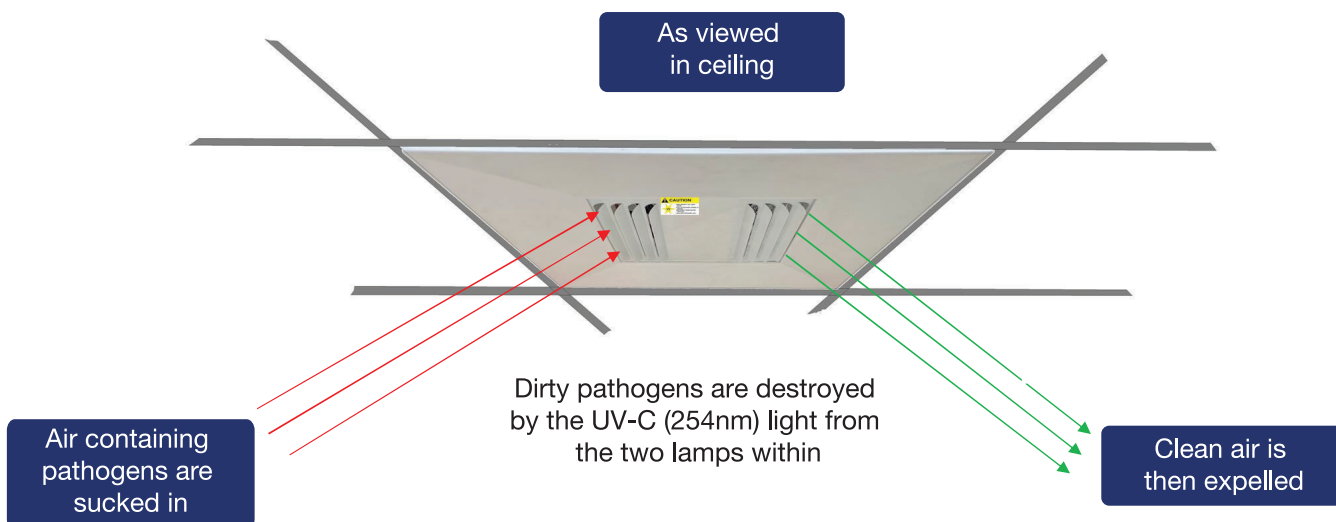


In-Lay Air Scrubber: Overview & Functionality

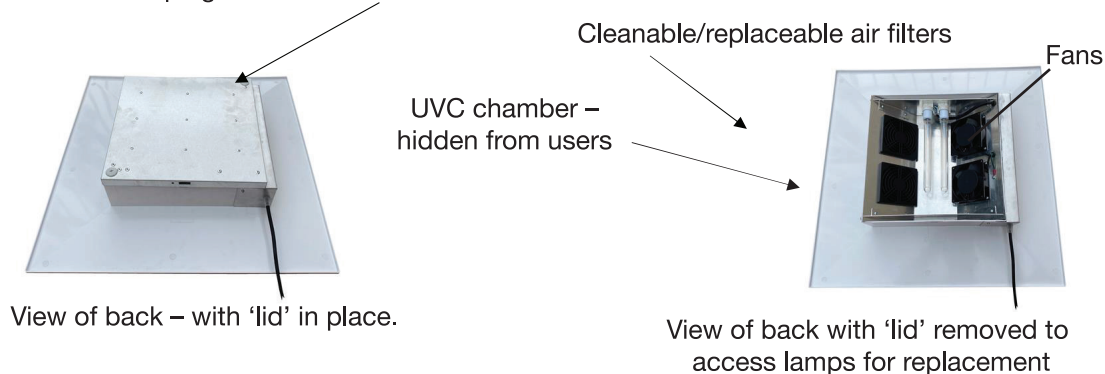
The In-Lay air Scrubber is an air purification device, and does not disinfect surfaces.

Germicidal unit for cleaning of airborne pathogens.

- Locally manufactured product
- 600mm x 600mm
- Simply drops into ceiling grid (like a panel light)
- Virtually silent
- Application – for use in all public spaces
- One UV-C air scrubber can clean a room of 5m x 5m x 2,6m 3 to 4 times an hour
- This unit is safe to use while humans are in the room, as the UV-C lamps are not exposed
- Recommended use in conjunction with surface cleaner
- NIOH test report available



Once lid is removed, a safety switch disconnects, ensuring harmful UV-C lamps are off, keeping maintenance staff safe



Repeated applications may be required – only for use by trained professional users

In-Lay Air Scrubber: Product Summary

	Details
Body construction	Acrylonitrile Butadiene Styrene (ABS - Engineering plastic) – self extinguishing
Louvre and UV-C chamber	Louvre – punched steel – powder coated white. UV-C chamber – aluminium – anodised.
Colour of trim	Standard is ferrograin white – ABS can be wet sprayed for special colours – on request.
UV-C lamp type	Osram or Phillips UV-C 18W (x2) – in PL or Dulux shape. Wavelength is 254nm
Power supply for lamps	Tridonic or Helvar or VS – electronic.
Fan Type	2 x MAGLEV fans (Magnetic Levitation – so no ball bearings or bushes – hence the 50 000 hour plus life.
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