



UVGI Accessory

for Daikin Standard Duct Unit FBA and FXSQ/FXSA

UK.SF-UVC

UVGI Accessory for Ducted Units

This accessory provides a UVC solution for Daikin ducted units. The specially designed plenum houses UVC tubes, which irradiate the air stream and deactivate pathogens.* The accessory can be attached to a Daikin ducted unit in new installations or as a retrofit.

These plenums have been designed to be attached to Daikin slim and standard ducted units on the supply air side for Split and VRV systems. The plenums are provided as separate accessories and can be fitted to the duct; ductwork is then attached to the spigots. Access hatches on the top and bottom of the box allow the UVC tubes to be added or changed as required.

What is UVC? And what is its impact on pathogens?

Daikin has collaborated with the UK distributor of US-manufactured UVC tubes; e-co. Working together, using each other's expertise, Daikin and e-co have created a UVC solution that can be safely and effectively added to a DX system.

UVC operates in the 200 NM wavelength. Irradiation with UVC disrupts pathogen cell structures, rendering them harmless.*

Direct exposure to UVC can cause reddening of the skin and eye damage. However, the UVC tubes are fully enclosed within the accessory structure, offering a completely safe and reliable solution.

*specific claims regarding the effectiveness of UVC and its ability to deactivate Pathogens are made solely by Sterile Air (through its UK distributor e-co), and not verified or endorsed by Daikin UK.



UV GI Accessory for Ducted Units

Specifications

| FCU Model | Material Code | No. of spigots | Plenum Width (mm) | Plenum Height (mm) | Air Volume M3/s (Nom) | Air Velocity M/s (Nom) | Single UVC EGTS Emitter length (inches) | Av. % Single pass Covid-19 Reduction rate (90%) | Av. % Single pass Covid-19 Reduction rate (99%) |
|-----------|---------------|----------------|-------------------|--------------------|-----------------------|------------------------|---|---|---|
| FXSQ15A | UK.SF1 UVGI | 1 | 550 | 245 | 0.125 | 0.947 | 16 | 100% | 93% |
| FXSQ20A | UK.SF1 UVGI | 1 | 550 | 245 | 0.125 | 0.947 | 16 | 100% | 93% |
| FXSQ25A | UK.SF1 UVGI | 1 | 550 | 245 | 0.125 | 0.947 | 16 | 100% | 93% |
| FXSQ32A | UK.SF1 UVGI | 1 | 550 | 245 | 0.133 | 1.008 | 16 | 100% | 77% |
| FXSQ40A | UK.SF2 UVGI | 2 | 680 | 245 | 0.208 | 1.275 | 20 | 100% | 55% |
| FXSQ50A | UK.SF2 UVGI | 2 | 680 | 245 | 0.208 | 1.275 | 20 | 100% | 55% |
| FXSQ63A | UK.SF3 UVGI | 2 | 980 | 245 | 0.300 | 1.276 | 36 | 100% | 74% |
| | UK.SF3A UVGI | 3 | | | | | | | |
| FXSQ80A | UK.SF3 UVGI | 2 | 980 | 245 | 0.325 | 1.382 | 36 | 100% | 63% |
| | UK.SF3A UVGI | 3 | | | | | | | |
| FXSQ100A | UK.SF4 UVGI | 4 | 1380 | 245 | 0.450 | 1.359 | 50 | 100% | 68% |
| FXSQ125A | UK.SF4 UVGI | 4 | 1380 | 245 | 0.525 | 1.585 | 50 | 100% | 50% |
| FXSQ140A | UK.SF4L UVGI | 4 | 1530 | 245 | 0.567 | 1.712 | 50 | 96% | 48% |
| FBA35A9 | UK.SF2 UVGI | 2 | 700 | 245 | 0.208 | 1.238 | 24 | 100% | 69% |
| FBA50A9 | UK.SF2 UVGI | 2 | 700 | 245 | 0.208 | 1.238 | 24 | 100% | 69% |
| FBA60A9 | UK.SF3 UVGI | 2 | 1000 | 245 | 0.250 | 1.042 | 36 | 100% | 99% |
| | UK.SF3A UVGI | 3 | | | | | | | |
| FBA71A9 | UK.SF3 UVGI | 2 | 1000 | 245 | 0.250 | 1.042 | 36 | 100% | 99% |
| | UK.SF3A UVGI | 3 | | | | | | | |
| FBA100A | UK.SF4 UVGI | 4 | 1400 | 245 | 0.433 | 1.289 | 50 | 100% | 75% |
| FBA125A | UK.SF4 UVGI | 4 | 1400 | 245 | 0.483 | 1.438 | 50 | 100% | 60% |
| FBA140A | UK.SF4 UVGI | 4 | 1400 | 245 | 0.483 | 1.438 | 50 | 100% | 60% |

Calculations are based on medium fan speed, values will vary depending on fan speed. UVC reduces in effectiveness with age and it is recommended that the tubes are changed after 9000 hours of operation.

As well as the accessory pack above to complete the solution you also need to order the UVC tube module from the table below:

| FCU Model | Material Code | Single UVC EGTS Emitter length [inch's] |
|--|---------------|---|
| FXSQ15/20/25/32A & FXSA15/20/25/32A | UK.UVE16 | 16 |
| FXSQ40/50A & FXSA40/50A & FBA35/50A9 | UK.UVE20 | 20 |
| FXSQ63/80A & FXSA63/80A & FBA60/71A9 | UK.UVE36 | 36 |
| FXSQ100/125A & FBA100/125/140A | UK.UVE50 | 50 |
| FXSQ140A & FXSA140A | UK.UVE50 | 50 |
| FDXM25/35F9 & FXDQ15/20/25/32A3 & FXDA15/20/25/32A | UK.UVE24 | 24 |
| FXDQ40/50A3 & FXDA40/50A | UK.UVE42 | 42 |
| FDXM50/60F9 & FXDQ60A3 & FXDA60A | UK.UVE30 | 30 |

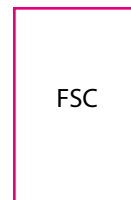
UVC emitter details

EGTS emitter class SE number based on length in inches, the tubes produce no ozone or other secondary contaminants. UVC tube is included with the plenum.

Terms and conditions

Pathogen reduction claims and report provided by e-co. Daikin does not warranty against the effectiveness of UV technology in reducing Pathogens nor does it warranty against the specific reductions that are indicated in the reports provided by e-co. Daikin accessory will only function with e-co UVC tubes and Daikin does not warranty the equipment for use with other UVC tube makes.

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UK. PA604

Plasma Ionisation Accessory

Daikin's plasma ionisation unit provides a continuous stream of ionised particles. Using Plasma Air's Bi-Polar Ionisation system, it neutralises pathogens such as bacteria, viruses, moulds and odours. The unit can be fitted into the return air side of most Daikin's indoor units.

The Plasma Air 600 Series Model 604 is a needlepoint brush-type ioniser. It produces an equal amount of positive and negative ions to neutralise harmful pollutants and odours. Each ionisation unit is capable of ionising a supply airflow of 4000 m3/hr.

The plasma Air Bi-Polar Ionisation system

The 600 Series is a versatile choice and can be installed at the fan inlet of the majority of Daikin's fan coils. The unit is self-contained in a potted ABS box with a moulded flange and mounting holes and is protected with an inline 500mA glass cartridge fuse.



Features and benefits

- › Silent and invisible
- › Independently proven safe and effective for continuous use
- › Easy to install in existing or new HVAC systems*
- › Requires no replacement parts
- › 3-year standard warranty
- › Tested and passed UL 867 for ozone and safety

* the UK.PA604 must be installed as defined by Daikin installation instructions.

Applicable Daikin units



Ducted units



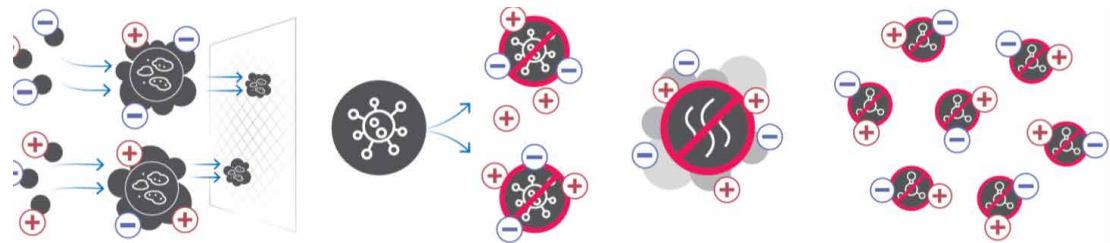
Roundflow Cassettes

Fully Flat Cassettes

Plasma Ionisation Accessory

How bipolar ionisation improves indoor air quality

Plasma Air technology produces a natural bio-climate rich in positive and negative oxygen ions. The negative ions contain an extra electron while the positive ions are missing an electron, resulting in an unstable condition. In an effort to restabilise, these bipolar ions seek out atoms and molecules in the air to trade electrons with. This action effectively neutralises particulate matter, bacteria and viruses, odorous gases and aerosols, and VOCs.



Particulate

Airborne particles, such as smoke, dust, pollen and spores are charged by the ions through ionic bonding. These charged particles stick together increasing their size and allowing them to be easily removed by low-grade filters.

Bacteria and viruses

As they divide to reproduce, bacteria and virus cells bond with oxygen ions and are destroyed.

Odorous gases

Odorous gases and aerosols oxidise on contact with oxygen ions and are neutralised.

Volatile organic compounds

Oxygen ions cause a chemical reaction with VOCs breaking down their molecular structure.

Comparison information provided by PlasmaAir*

| | Bipolar Ionisation | PCO | Ozone Generators | Traditional Filtration | HEPA/Fine Grain filters | Carbon |
|----------------------------|--------------------|-------------|------------------|------------------------|-------------------------|----------|
| Effectiveness | 99% | Marginal | 99% | Minimal | 0-99.7% | Marginal |
| Particle Size | Small < 2.5µm | Large > 5µm | Small < 2.5µm | Large > 5µm | Small < 0.3µm | N/A |
| Treats in Room Air | YES | YES | YES | NO | NO | NO |
| Replacement Parts Needed | NO | YES | YES | YES | YES | YES |
| Maintenance Required | NO | YES | YES | YES | YES | YES |
| Produces Harmful Byproduct | NO | YES | YES | NO | NO | NO |
| Energy Costs | £ | ££ | £ | ££ | £££ | £££ |

Terms and conditions

Daikin does not warranty against the effectiveness of Plasma Air Bi-Polar Ionisation system in reducing pathogens. Daikin Duct will only function with Plasma Air Bi-Polar Ionisation system and Daikin warranty the equipment for a period of 3 years from the date of purchase based on failed or malfunctioning product purchased.

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