

In Duct Irradiation: UV-DUCT-SQ

UV-DUCT-SQ

UV-DUCT-SQ by Light Progress is an Indoor Air Quality disinfection system for HVAC installations and plant, that adapts to different duct spaces in a grid format. Suitable for retrofit applications the UV DUCT-SQ can be installed into just about any ventilation duct for both residential and/or commercial grade applications.

The UV-DUCT-SQ works by treating the air in the duct as it passes through with a constant high dosage of UVC light of 253.7 nanometres wavelength. This process creates a UV-C barrier that inhibits the proliferation of viruses, bacteria, moulds and spores, which commonly nest and re-circulate within Air Conditioning systems and are very harmful to our health.

Validation

Germicidal Ultraviolet irradiation has a proven, strong germicidal effect against micro-organisms (moulds, bacteria and viruses).

In controlled testing environments, UVC usage has shown reductions of over 99.9% on live bacteria strains such as Bacillus, Coli, Clostridium, Legionella, Vibrio, Salmonella, Pseudomonas, Staphylococcus etc.

The concept and the effectiveness of it has been well documented by ASHRAE and others.

Traditional filtration methods

Traditional facility air filtration alone is often not sufficient to ensure high levels of hygiene. In HVAC systems the growth of an unpleasant biofilm usually covers inner surfaces of ducting. This is a result of favourable conditions for their proliferation, such as temperature changes, high humidity, moisture, and deep darkness. The UV-DUCT-SQ inhibits the creation of this biofilm increasing overall efficiency, Indoor Air Quality and comfort. The best part is there are no chemicals involved, providing a healthier environment for all.

Operation of UV-DUCT-SQ

The UV-DUCT-SQ series consists of modules with batteries of 4 or 6 UVGI used in air-conditioning systems (HVAC) for the disinfection of air in the AHU (Air Handling Unit), or in the cooling channels. The modules consist of a parallel battery of UV-C lamps, interconnected and inserted within a stainless-steel frame. Apart from the device a supply and control box is linkable through a multipolar cable.

As the UV-DUCT-SQ is mounted inside the ducting and no occupants is exposed to the UV light, it can operate 24/7 if necessary, to provide a higher level of disinfection.

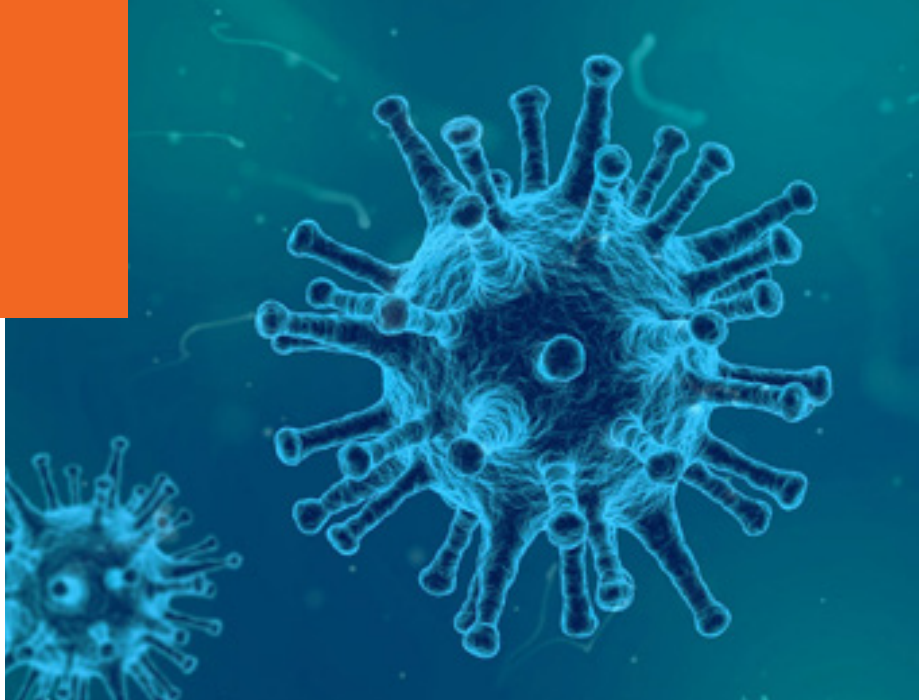
No Ozone

The use of UVC light in the 253.7 nanometres wavelength means there is no ozone produced. This is particularly important as ozone is hazardous to humans.

Applications

UV-DUCT-SQ is a versatile in direct irradiation device that is cost effective, simple to install and operate within just about any indoor environment. It can be used in the commercial, industrial or healthcare sectors. Applications include:

- Aged Care Facilities
- Hospitals, Medical & Dental clinics, Pharmacies
- Offices, Shopping centres
- Restaurants and Hospitality venues
- Educational facilities, Laboratories
- Abattoirs, food processing centres



WHAT ARE UV-C RAYS?

Light in a broad sense can be divided into the following, visible, infra-red and ultraviolet rays.

Ultra-violet rays (invisible) can be classified in:

- UV A (with tanning properties)
- UV B (with therapeutic properties)
- UV C (with germicidal properties)

UV-C technology is a physical disinfection method with an optimal cost/benefit ratio, it's ecological and unlike chemicals it works against every micro organism without creating any resistance, therefore there are no nasty chemicals required.





Key Benefits

PHYSICAL ACTION AND ENVIRONMENTAL PROTECTION.

- Treatment by UV-C rays is purely physical without the use of any chemicals.
- Results are consistent as microorganisms do not develop resistant to UV light.
- No residual effects, therefore, no long-term contamination.
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TOTAL SAFETY

- Ultraviolet rays are confined to the HVAC ducting and plant when installed in the correct manner. Airflow within the ductwork can be treated even when operators are present.
- External LED Alarm to indicate operational status, option to link to BMS.

BEST QUALITY AIR

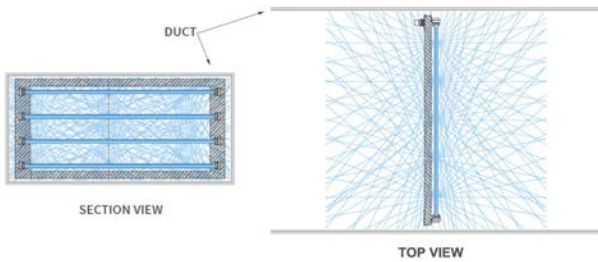
- This system can operate 24/7 together with the air conditioning or ventilation system, without any contraindications for people. The level of environmental microbial load is thus maintained constantly low and the "indoor air" quality (IAQ) is improved, as prescribed, and recommended by the W.H.O. (World Health Organization).

PRACTICABILITY AND SAVINGS

- The treatment is immediate and ready for use. The maintenance is minimal with low costs of both energy consumption and maintenance.

STOP CROSS CONTAMINATION

- The contamination in one area may spread to another through air conditioning systems. UV-C devices can assist to prevent the spread of Airborne infection throughout facilities.



UV-DUCT-SQ	4/40H	4/90H	4/120H	6/40H	6/90H	6/90H
Average Lamp lifetime (hours)*	≤ 18000	≤ 18000	≤ 18000	≤ 18000	≤ 18000	≤ 18000
Consumption (W)	40x4 = 160	80x4 = 320	100x4 = 400	40x6 = 240	80x6 = 480	100x6 = 600
UV-C Emission (W)	13x4 = 52	26x4 = 104	32x4 = 128	13x6 = 78	26x6 = 156	32x6 = 192
Module Dimensions (mm)	73x450x496	73x450x953	73x450x1234	73x600x496	73x600x953	73x600x1234
Dimensions (A)(mm)	496	953	1234	496	953	1234
Dimensions (B)(mm)	450	450	450	600	600	600
Supply box Dimensions (mm)	314x394x128	314x394x128	314x394x128	314x394x128	314x394x128	314x394x128
Weight (Kg)	5.00	5.50	6.00	6.00	6.50	7.00
SPARE PARTS						
Replacement Lamp	N° 4 CHS-40WH	N° 4 CHS-90WH	N° 4 CHS-120WH	N° 6 CHS-40WH	N° 6 CHS-90WH	N° 6 CHS-120WH

*Continuous operation

- Selective UV-C lamp (at 253.7 nm.) with high efficiency lighting.
- Body in Stainless Steel AISI 304.
- All the used materials are tested for resistance to intense UV-C rays.
- Power Supply and lamps control is made by the supply box with LED Synoptic Board
- Electronic ballast.
- Single lamp alarm for default (in terminal board).
- Digital hour alarm counter to check lamps exhaustion with visual alarm and in terminal board.



Why choose LAF Technologies?

LAF Technologies (Laftech) is an Australian owned and operated company that has been in the forefront of contamination control since 1987. Laftech has now teamed up with Light Progress of Italy to bring into Australian a high quality, tested and proven solution. We offer the widest product range of UVGI Devices on the market with renown Italian quality.

Benefits to the client:

- Widest range of UV products providing the most appropriate solution.
- Products validated through University testings.
- Local team to assist in presales and aftersales.
- Service and Spares support.

laftech
Contamination Control Solutions
Call: 1300 306 002

