AIR Disinfection: UVC System for Cold Rooms

UV-REFLEX

UV-REFLEX is a high output UV-C ultraviolet germicidal device specifically designed for cold rooms and food processing areas.

The UV-REFLEX performs a progressive action of decontamination from airborne bacteria and mould present in the air of the cold rooms, improving the conditions of preservation of products. It works by treating the air with a constant high dosage of UVC light of 253.7 nanometres wavelength.
As only the air is treated, it does not alter the organoleptic features of food and its quality, but rather, it prevents product loss due to the proliferation of bacteria and fungi and enhances the freshness, taste and appearance of food, without dehydration and weight loss.

WHAT ARE UV-C RAYS?

Ultraviolet Germicidal Irradiation is known since the 60's as a good physical method to control growth and distribution of microbial organisms, pathogens, spores, moulds, etc.

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)

Validation

Germicidal Ultraviolet irradiation has a proven, strong germicidal effect against micro-organisms (moulds, bacteria and viruses).
The device does not affect the normal aging of the product, as it works to minimize the growth of unwanted microorganisms, i.e. those found in the air. UV-REFLEX achieves the elimination (99%) of bacteria such as Bacillus, Coli, Clostridium, Legionella, Vibrio, Salmonella, Pseudomonas, Staphylococcus, etc. in just a few minutes of operation.
The concept and the effectiveness of it has been well documented by ASHRAE and others.

Traditional cleaning/filtration methods

Traditional cleaning methods and facility air filtration alone are often not sufficient to ensure high levels of hygiene. UVC technology is a simple and cost-effective solution that can enhance facility hygiene, comfort and workplace sanitation regimes. The best part is there are no chemicals involved, providing a healthier environment for all.

Operation of UV-REFLEX

UV-REFLEX can be safely operated 24/7 without contraindications. The treatment takes place by exploiting the constant forced air circulation, (due to the flow generated by the fan of the ventilation system), which pass next to the device and is decontaminated from microbes, before they enter into contact with the products inside the cold rooms.

Owing to the use of the UV-C technology, it is possible to increase the shelf life of food preserved in cold rooms, without developing resistant microorganisms and without the use of chemicals, risky to employ and hard to biodegrade.

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-REFLEX is a versatile Air Germicidal Device that is cost effective, simple to install and operate. Applications include:

- Abattoirs
- Smallgoods factory
- Food processing centres
- Cool rooms

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LIGHT PROGRESS

Key Benefits

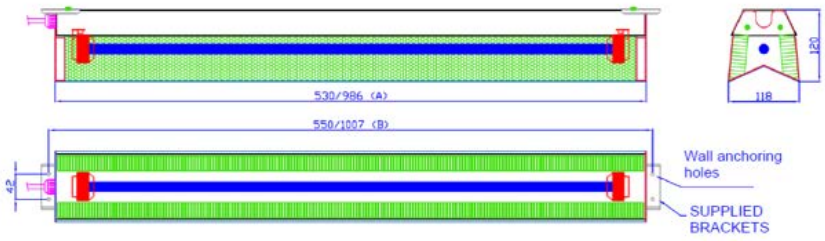
PHYSICAL ACTION AND ENVIRONMENTAL PROTECTION.
- Treatment by UV-C rays is purely physical without the use of any chemicals.
- Results are consistent as microorganisms do not develop resistant to UV light.
- No residual effects, therefore, no long-term contamination.

TOTAL SAFETY
- Directional black honeycomb filter channels the flow of UV-C rays.

BEST QUALITY AIR
- Designed to operate 24/7, without any contraindications for people.
- Works at temperatures down to -20°C.

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-REFLEX	E40H-SC/B-NX	E75H-SC/B-NX
Lamp lifetime (hour)*	≤ 18000	≤ 18000
Power (W)	40	75
Dimensions LxSxH (mm)	530 x 118 x 120	986 x 118 x 120
Weight (kg)	2.5	4.0
TREATED COLD ROOM VOLUME (m^3)	30 to 40	60 to 90
TREATED SURFACE (m2)	7 to 10	15 to 22
SPARE PART		
UV Lamp Code	n°1 CHS-40WH	n°1 CHS-90WH

* continuous operation

- Highly efficient selective UV-C lamp (at 253.7 nm), pure quartz.
- Stainless steel AISI 304 body.
- All used materials are tested to resist to intense UV-C radiation
- Specific electronic ballast for UV-C rays lamps.
- Protected against dust and water (IP55).
- Pure bright mirror aluminum reflector.
- CE trademark (LVD 73/23 - EMC 89/336 - MD 93/42).
- Complies with the noise standards of Directive 2006/42/EC
- Values measured according to UNI EN ISO 3746
- Non-detectable and non-transmissible vibration values
- Suitable for class 1 installations - protected areas

Why choose LAFtech?

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.

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ISO 9001 certified - Quality Assurance
ECO Warranty
NATA Accredited Laboratory