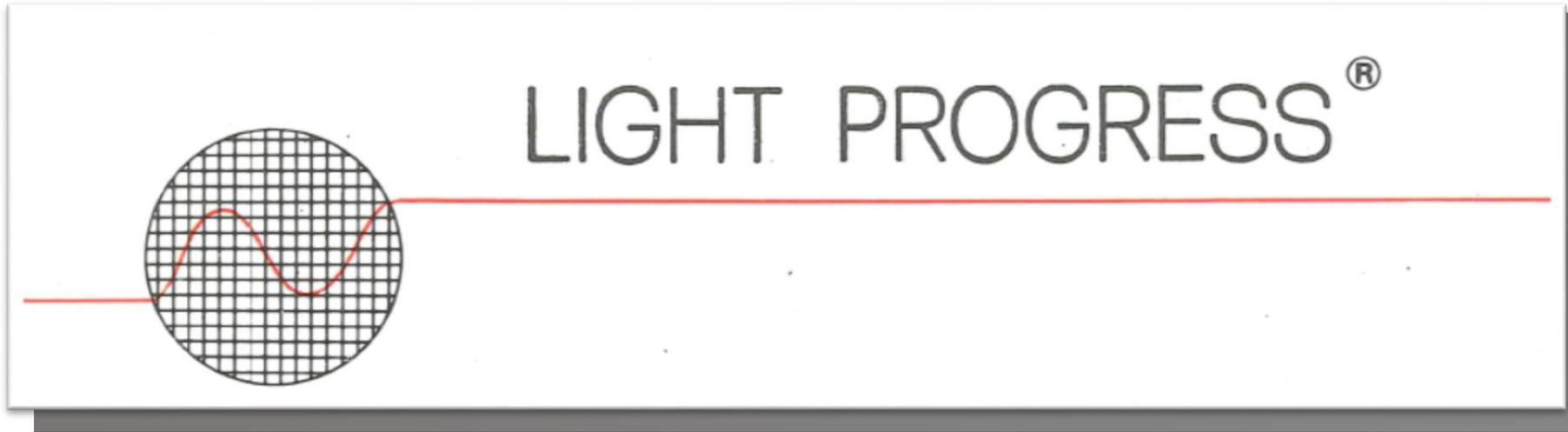




food



studies, develops, projects and produces

Ultraviolet Germicidal Irradiation

devices, since

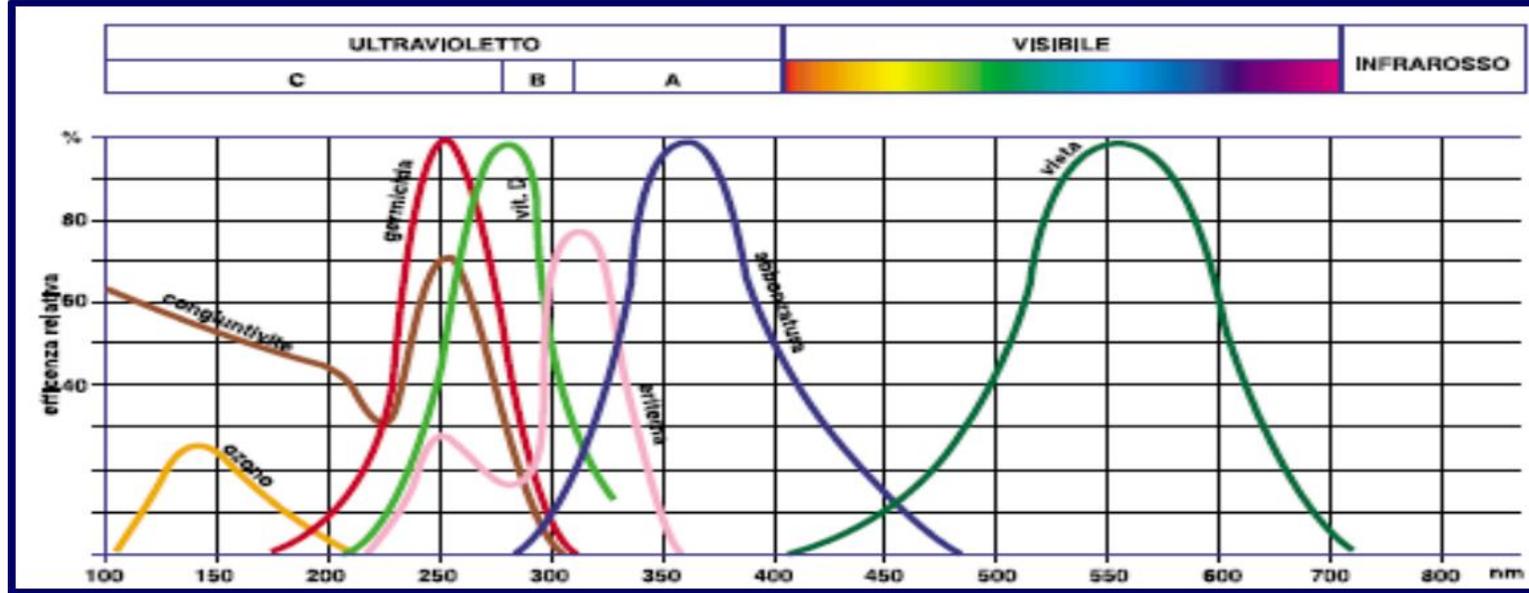


What does UVGI mean?

Light in a broad sense can be divided in 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 (short-wave) from 100 to 280 nm

The absorption of a UV photon by the DNA of microorganisms causes a destruction of a link in the DNA chain, and consequently the inhibition of DNA replication.

The germicidal effects of the UV-C radiation **destroy DNA** of **Bacteria, Viruses, Spores, Fungi, Moulds** and **Mites** avoiding their growth and proliferation.

UVGI technology is a physic disinfection method with a **great costs/benefits** ratio, it's ecological, and, unlike chemicals, it works against every microorganisms without creating any resistance.



operates in different fields and turns Ultraviolet Technology into real Solutions, providing a Specific Device for every application needed.



HVAC



Water



Health



Food



Smell reduction



What are most common issues in food industry?

Contamination, cross-contamination, Air Quality level, Surfaces Hygiene, are strictly connected with Product Safety and Quality Control in Food environments. Set up a sanitization program is part of the overall picture of “**Food Safety**” and the Hazard Analysis Critical Control Point (**HACCP**).

But often it is not enough.



What are most common issues in food industry ?



Environments, devices, tools, equipment, containers and everything that is in contact with foods must be adequately cleaned and disinfected.

A good sanitization procedures enables food production to be free from **pathogenic microorganisms** and consequently, increase foods' shelflife .

Microorganisms arrive through the air, raw materials, employees, packaging, etc.

They spread through the air, by sedimentation or by vectors (animated) or vehicles (inanimate).

Microorganisms settle in areas that offer a favorable environment for proliferation.

These areas become potential sources of **contamination for the whole environment.**

What is important in Food Industry ?

-  To set **ideal hygienic** conditions in every environment.
-  To **avoid Risks**, increasing control of critical **HACCP** points.
-  To have a **programmable** and possibly automated **cleaning process**.
-  To **cut cleaning time and consumption of chemicals** for disinfection.
-  Increase Food products **Quality and Shelf-Life**.



devices



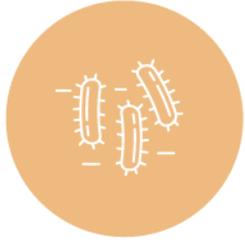
are EASY to APPLY



improve FOOD QUALITY



make you SAVE MONEY



IT ELIMINATES COMPLETELY ALL PATHOGENS

UVGI eliminates: bacteria, viruses, spores, Fungi, molds and mites, without creating resistant forms as chemical disinfectants and antibiotics do usually. It ensures safety and quality of food products enhancing their shelf-life.



GOOD COSTS/BENEFIT RATIO

UVGI devices interact with cleaning operations improving their effectiveness, and do not require special maintenance, they just need periodic lamp replacement.



IT IS A PHYSICAL PROCESS, SAFE AND ECO - FRIENDLY

It requires little time to achieve microbial reduction of over 99%. UVGI treatment, unlike ionizing radiation (gamma rays), does not have to be indicated on food product label.



IT IS A DEEP, CONTINUOUS, PROGRAMMABLE DISINFECTION

UVGI method maintains ideal hygienic conditions in food processing environments, both in presence and in absence of employees and in all the different phases of production activities.



IT'S EASY TO APPLY, YOU CAN TRUST ON US!

Our expert team works with both big and small food industries, from production to distribution, obtaining always great results. We will help you to choose the best product between our complete range of over 300 different models offering you the custom solution that will satisfy your needs.

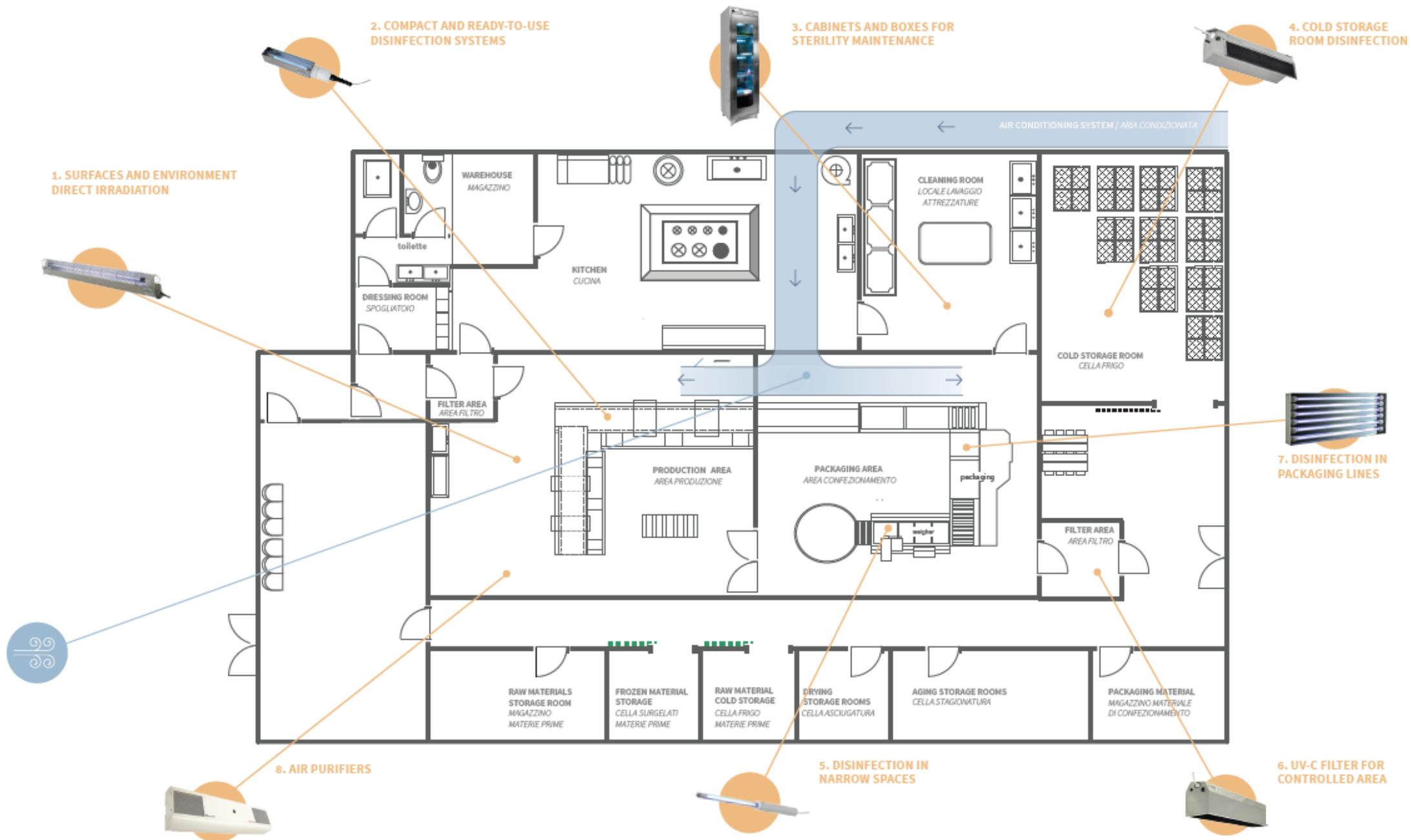
What are  **LIGHT** *PROGRESS* devices

designed to improve

Hygiene and Quality

in Food Industry ?





Environmental Disinfection

- Direct Irradiation (absence of people)
- Air Purifiers (presence of people)



UV-DIRECT



It can be easily applied as a common ceiling light fixture.

Special mirror bright reflector to increase UVGI power.

Switched ON during work breaks, it treats both air and surfaces

Made in high quality SS.

Control board available to set up programmable disinfections.

External Grid to protect the lamp.



UV-STICK-NX



It can be easily applied as a common ceiling light fixture, but smallest models could be also used inside processing and packaging machines .

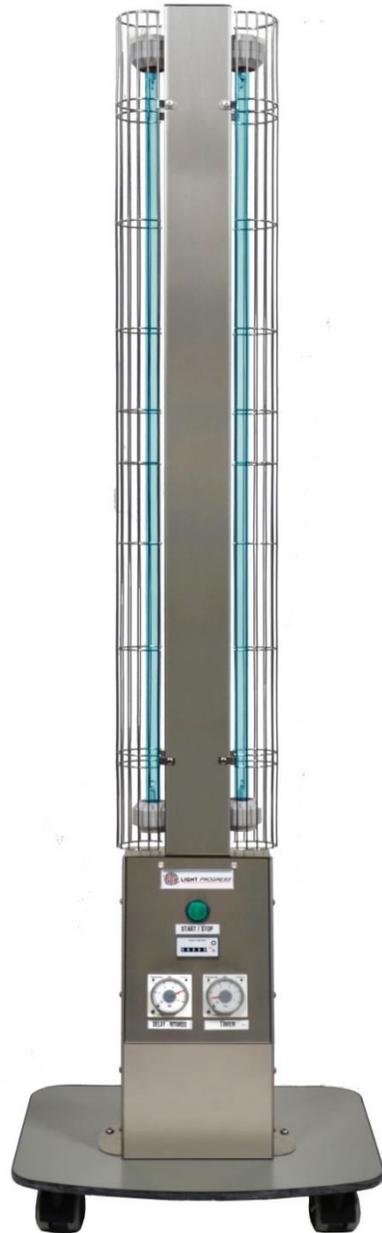
Super flexible, versatile and simple application.

Made in high quality SS.

Special mirror bright reflector to increase UVGI power.

Control board available to set up programmable disinfections.

External Grid to protect the lamp.



-ST model with double lamp and a four-wheels stand is available to treat surfaces all around food industry different environments.



Its compact sizes and the wide range of models allow endless applications' solutions.

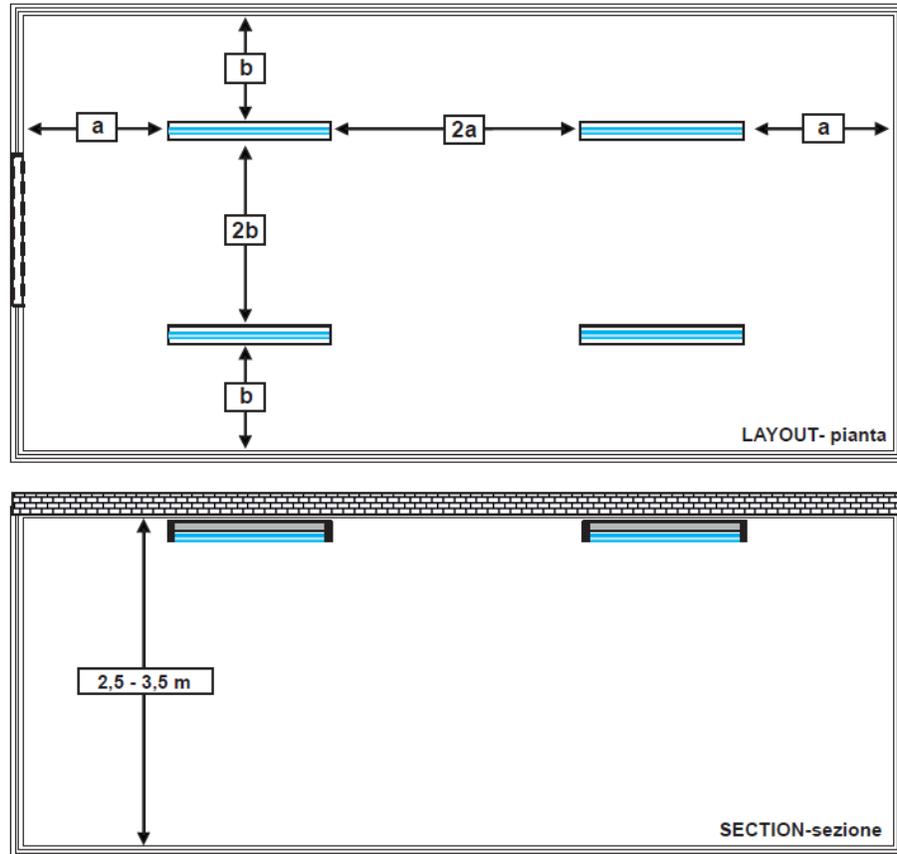
UV-DIRECT UV-STICK-NX



When staff leaves during work breaks, direct irradiation of surfaces allow a deep disinfection treatment.

The natural recirculation of air currents allows air disinfections as well.

The combination of surface + air disinfection creates the ideal environment for food production.



We help you designing the **application layouts** to fit the specific area that has to be treated.

The solution provided will fit exactly clients' need, according to our know-how in UV-C employment methods and our 30 years experience specific in food industries applications, as well as several tests made with a University Research center;



UV-FAN



Air Purifier, it treats the air 24 hours a day, without any contraindications for the staff present.

A silent built-in fan conveys the air to pass inside its germicidal chamber.

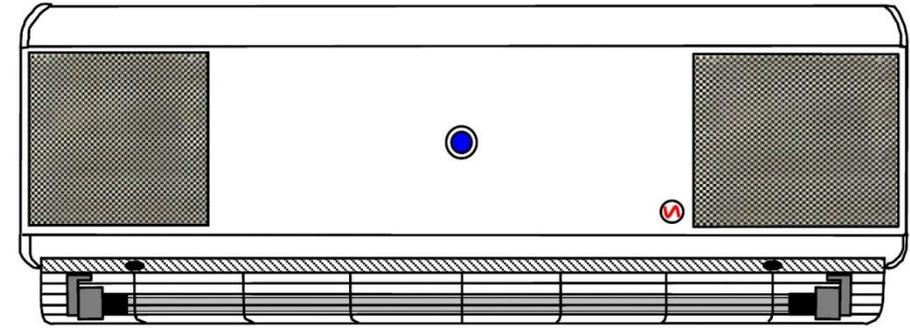
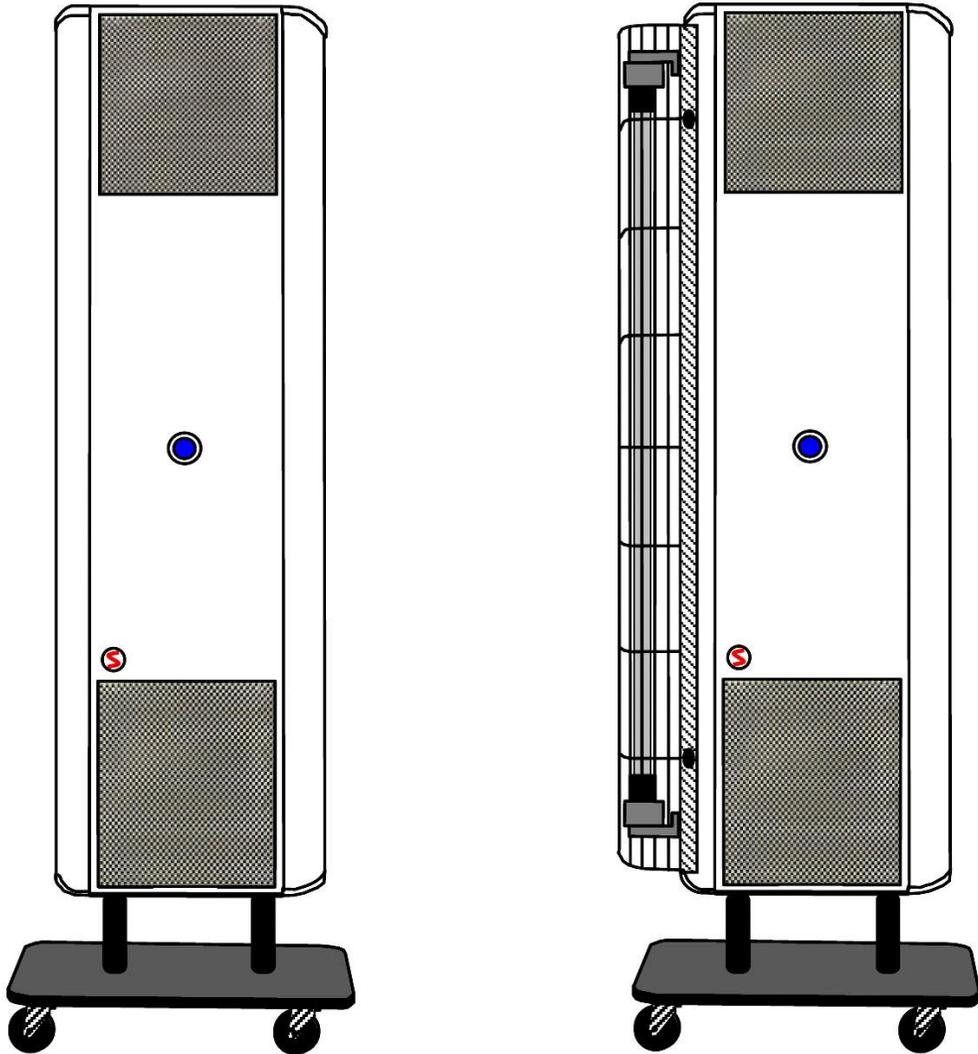
External body in extruded Aluminum, coated with epoxy-powders.



TiOX Filter included.

Titan Dioxide Nanoparticles with silver salts enhance the germicidal effect of UV-C light; Its photocatalyzation allows the elimination of VOCs and NOXs, too.





-BD model with integrated external lamp. Besides the normal purifying action, it provides the possibility of having a deeper disinfection treatment during non operational hours (i.e. night).

-ST model with four wheels stand available.

Special Areas Environments

- Controlled Areas (clean rooms, filter passages, etc)
- Cold Storage Rooms (seasoning, refrigerators, etc.)



UV-FLOW

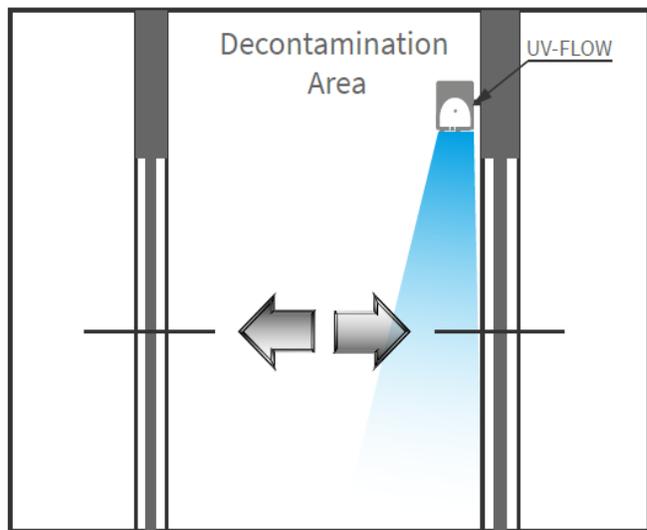


Monodirectional UV-C flow device;

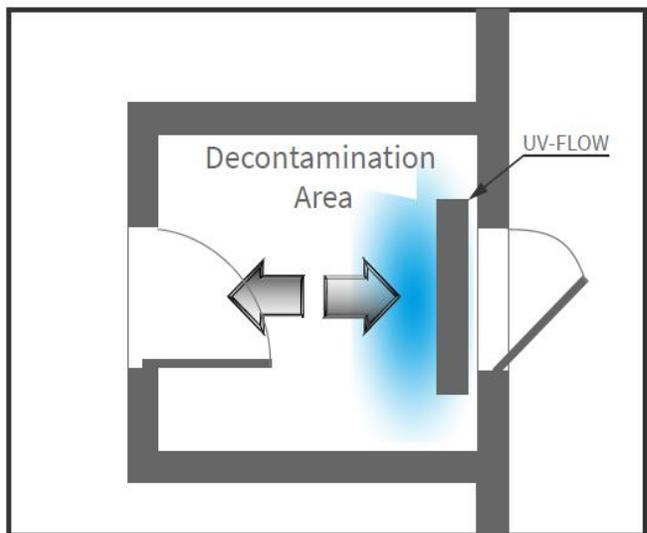
it creates a UV-C barrier if placed above an opening (door) and/or it treats the upper air layers when installed pointing toward the ceiling.

Made in high quality SS.

Directional honeycomb filter to create a «UV blade»



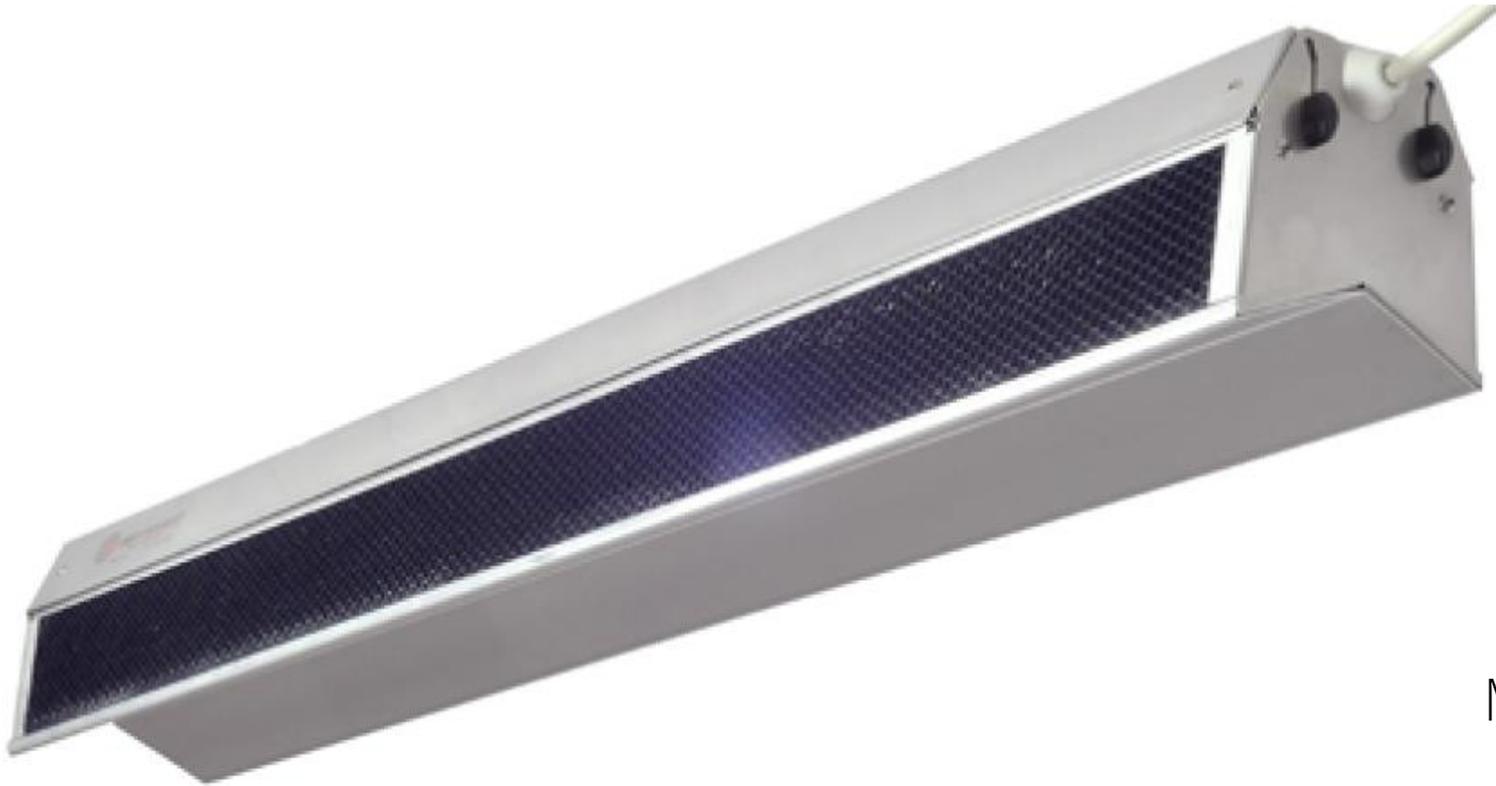
SECTION / SEZIONE



Filter Room are very important to separate areas with a different grade of microbiological control (i.e. Clean Rooms).

Treating upper air layers enables a general enhancement of air decontamination, thanks to air natural convective motions.





Specific for Cold Storage Rooms, it improves foodstuff preservation preventing bacteria, fungi and moulds proliferation.

Made in high quality SS.

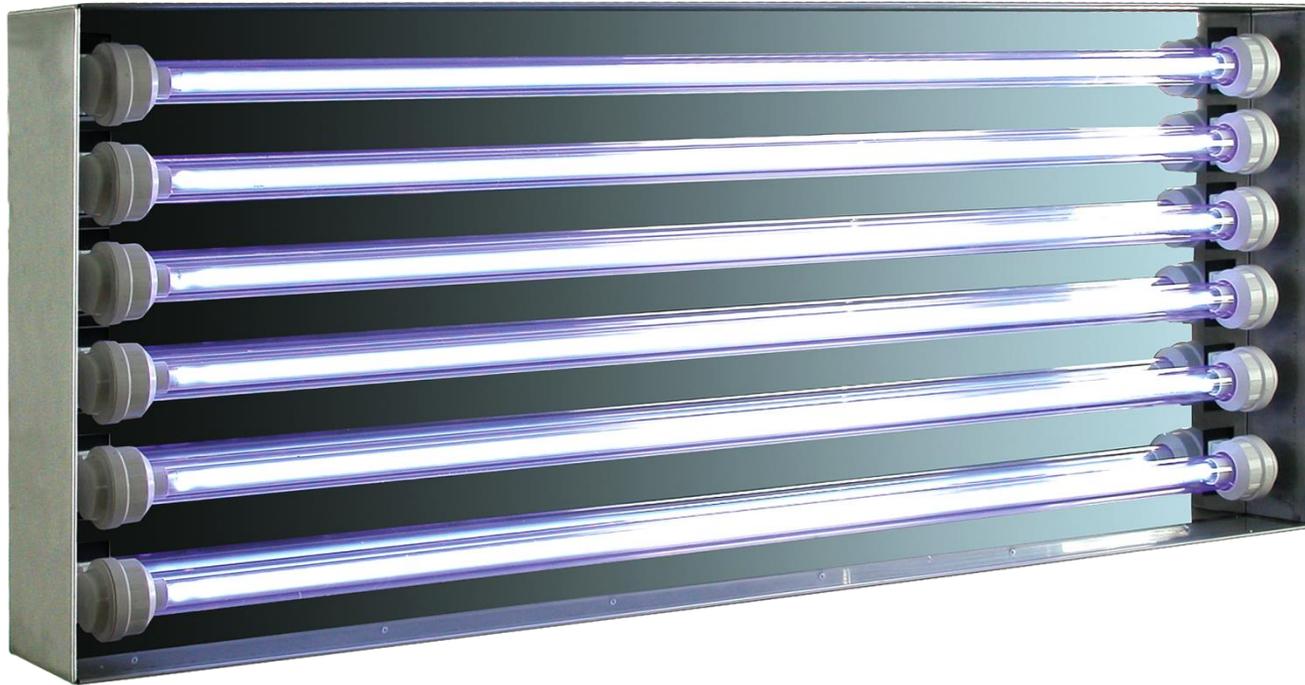
Honeycomb filter to channel the UV-C rays' flow.



Inside the cold storage room, due to the air flow generated by the ventilation system, air is forced to pass through the germicidal chamber of UV-REFLEX-SCB. With its action, microbes and spores are eliminated before entering in contact with foodstuff surfaces, consequently product freshness is increased, taste and appearance of food are improved, weight loss and dehydration are avoided.

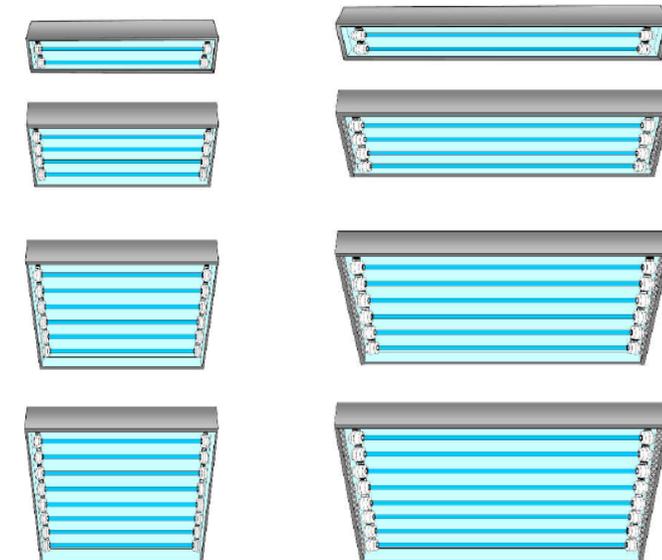
Food Production and Packaging Lines

- Disinfection Section in conveyor belts
- Disinfection in narrow spaces



Made in high quality Stainless Steel AISI 304.

Many sizes and wattage available

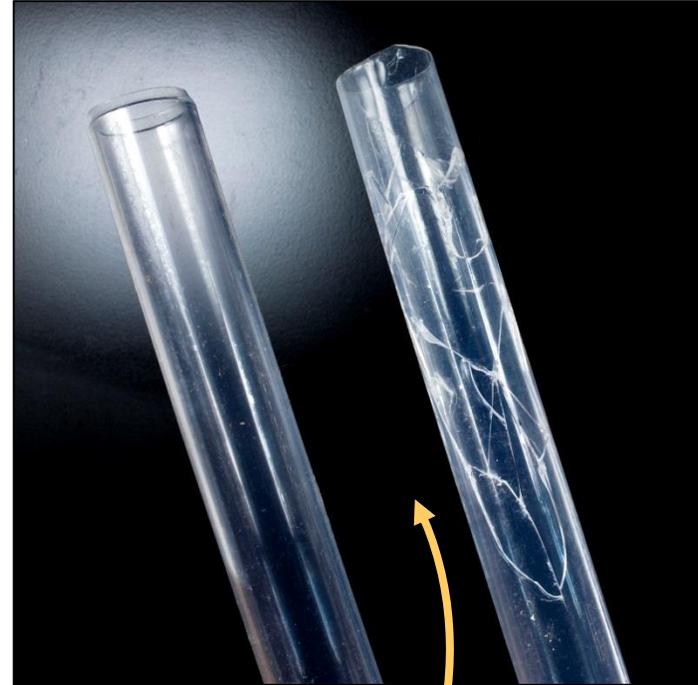


Modules with UV lamps in series and compact sizes.

It is usually applied on conveyor and packaging lines in food industry, like flow pack, thermoformed tub, weighing machines, and more generally conveyor belts.



Model ...-SH: SHUTTER avoids exposition in case of direct operation of personnel, ordinary or extraordinary maintenance activities on the production lines etc. It works closing the irradiating window through a mechanical shutter activated with compressed air.



UVLON® Special FEP sleeve (Fluorinated Ethylene Propylene).
 UV transparent, in case of breakings, it avoids glass fallings.

Fit on lamp or quartz sleeve = UVLON PIPE
 mounted on a frame = UVLON FRAME



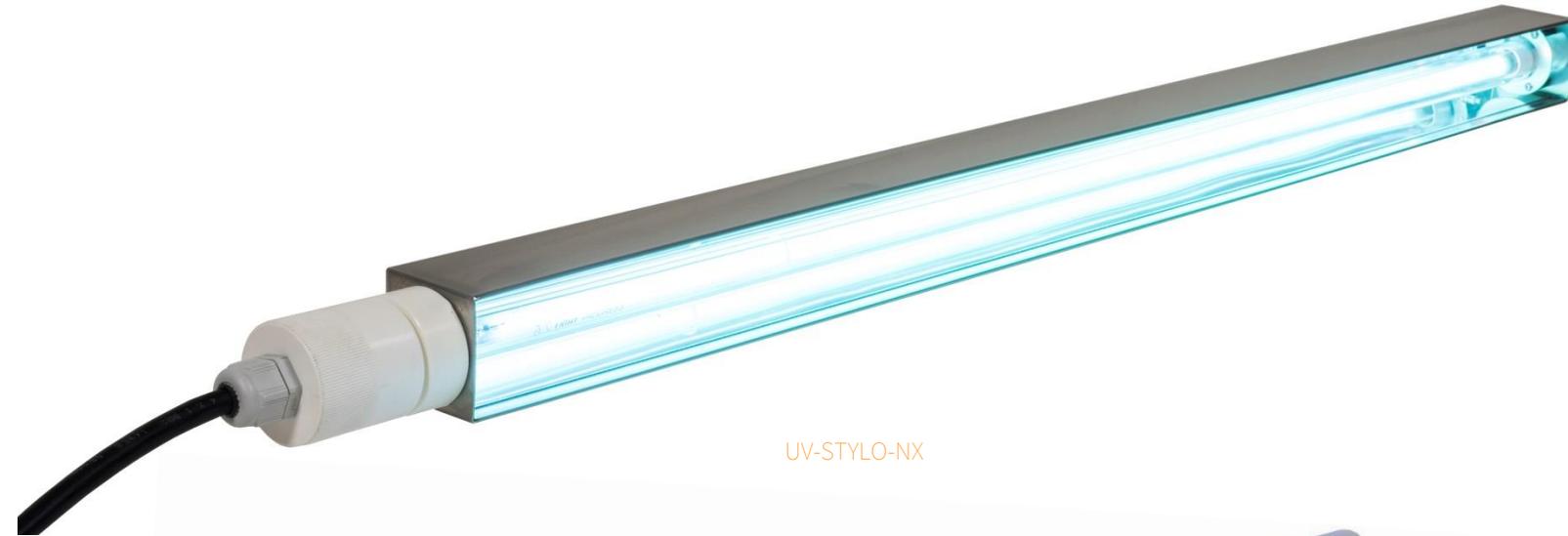
Some examples:

- Dried fruits: we obtain a strong reduction of moulds using a vibrating belt to irradiate uniformly the surfaces eliminating shadow zones.
- Pre-cooked bread: using a special belt with a stainless steel net, we improve the irradiation level until covering all the surfaces at 360° (addition medium of shelf life +150%).
- Fresh Pasta: (gnocchi, ravioli, tortellini, etc.) we obtain an high level of shelf life (min. 20 days, max. 60 days) irradiating the products in cooling tunnels or in multilevel falls.

- Industrial bottling lines: we apply UV-C modules both irradiating the bottle's neck right before the filling and the cap on the conveyor belt .
- Product treatment before clean room: we apply a belt right before the entry of the products in the processing room eliminating the risks of contamination.
- Spices and drugs: we find the best solution irradiating a small quantity of products in a thin coat right before the packaging so that we improve the shelf life value



UV-STYLO



UV-STYLO-NX



UV-STYLO-F

Specifically designed for food industry, perfect for narrow spaces.

Quartz sleeve to protect lamp from temperature fluctuations and optimize UV-C output.

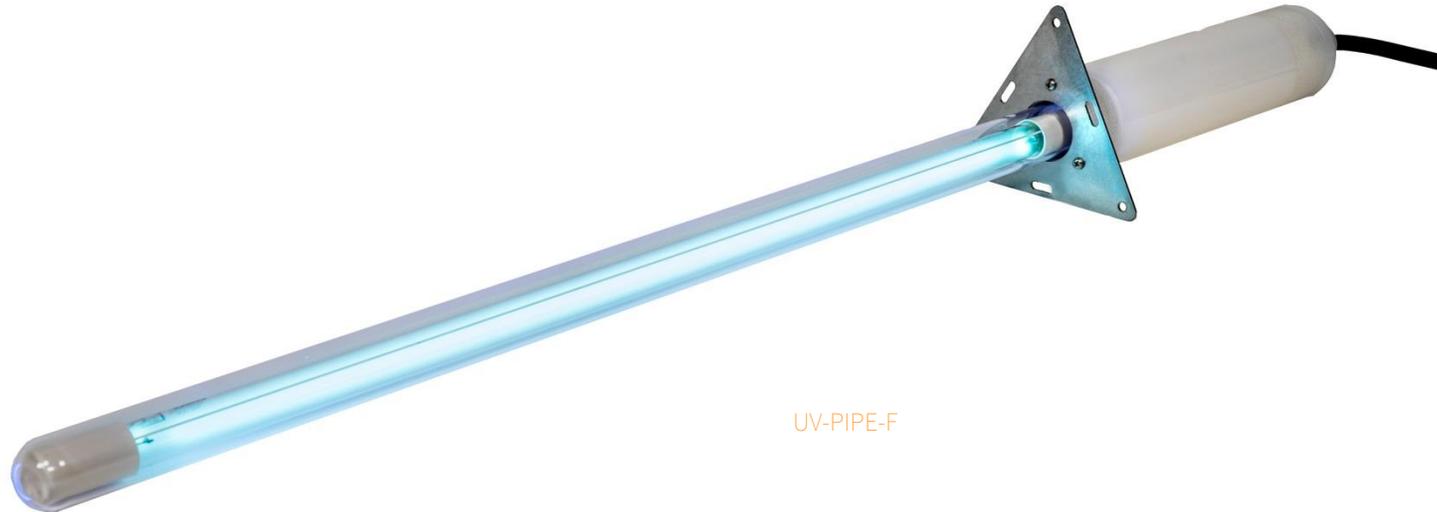
Separate power supply, «naked» ballast or control board «MASTER-STY» needed.



UV-PIPE



UV-PIPE-NX



UV-PIPE-F

Specifically designed for food industry, perfect for narrow spaces.

Quartz sleeve to protect lamp from temperature fluctuations and optimize UV-C output.

Power supply ballast on-board, just need to be plugged-in.





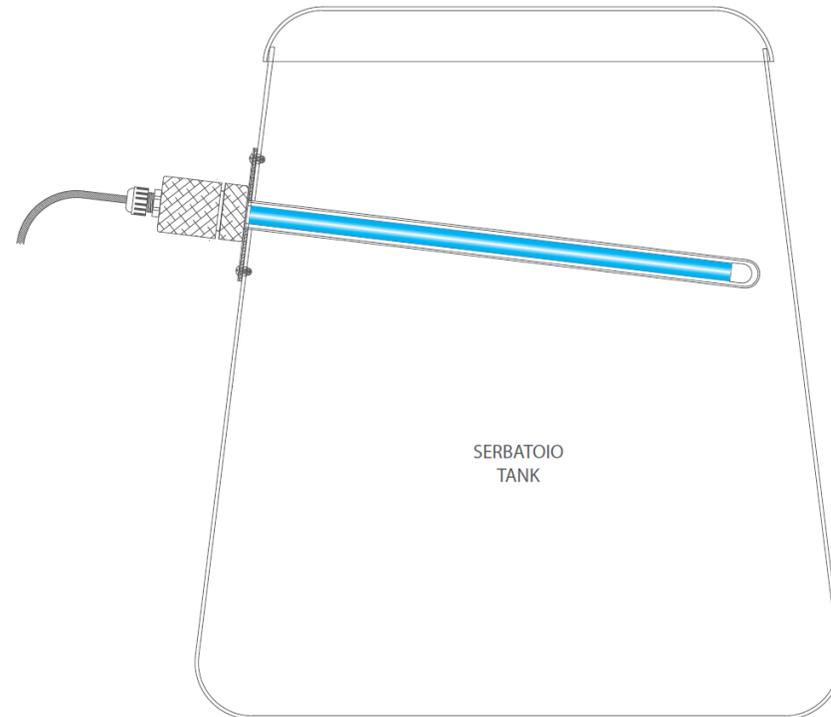
Their super-compact sizes make them fitting in every machine.
All UV-STYLO and UV-PIPE models can be applied with one single device or combined «in team».

IP protection is IP68 for UV-STYLO (-NX and -F) and IP-65 for UV-PIPE (-NX and -F), to fit the devices with damp environments and water splashes, common in Food Industries.

Flanged models -F can be use to treat the internal surfaces of a silos, a tank or any other food storage containers.

The Stainless Steel triangular flange allow an easy application of the device using just 3 screws to fix it.

With this kind of application you get an all-around radiation of the surfaces and a very deep disinfection.



UV-PIPE-BV



Specifically designed for groceries' display counters. It treats the circulating refrigerated air avoiding food cross contamination.

Quartz sleeve to protect lamp from temperature fluctuations and optimize UV-C output.

Power supply ballast on-board, just need to be plugged-in.

Tools Sterility Maintenance

- Germicidal Box
- Germicidal Cabinet

UV-CABINET



Cabinet to preserve sterility maintenance, for any type of equipments, tools, containers.

Automatic switching ON-OFF to set disinfection cycles with a settable timer.

Available with multiple doors, wall-mounted or floor standing.

High quality Stainless Steel AISI 304.

UV-BOX



Box to preserve sterility maintenance, for any type of equipments, tools, containers.

Automatic switching ON-OFF to set disinfection cycles with a settable timer.

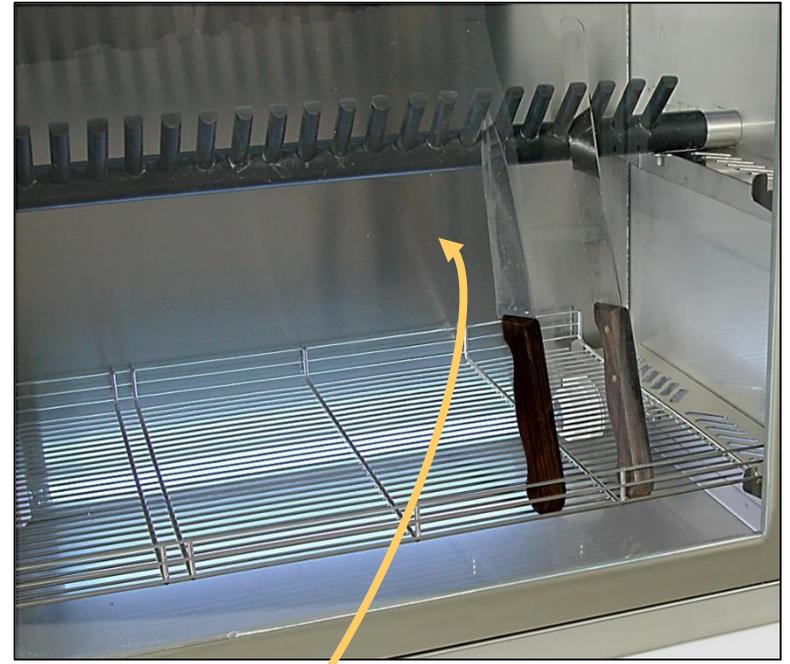
Table model available (UV-BOX-E2/40H).

High quality Stainless Steel AISI 304.





The transparent door with the anti-UV LEXAN® window allow you to check the proper operation at any time.



-C model includes a special knives-holder rack to treat knives without any shadows on the blades (both UV-BOX and UV-CABINET).

Why **LIGHT** *PROGRESS* ?

We offer the **widest product range** of UVGI Devices on the market, providing different solutions, specifically designed for FOOD INDUSTRY application.

Our Team sizes and projects every application designing a **custom solution** for each specific case.

Our products are born answering **real market issues coming from Food Industry** companies, our first mission is to fit UV-C in already existing environments, satisfying exactly the clients requests.

Why **LIGHT** *PROGRESS* ?

30 years of foodstuff quality improvements, **30 years of happy customers.**

Air, Surfaces, Water disinfection. Over 200 products within the same catalogue, 360° solutions.

Good **value for money**, great Quality level, devices are 100% Made in Italy and CE marked.



LIGHT PROGRESS

CE

DECLARATION OF COMPLIANCE

We, LIGHT PROGRESS S.r.l., hereby declare under our own responsibility that the following units of own production:

⇒ are in accordance with EEC directive 2014/30/EU (Electromagnetic Compatibility)
 ⇒ are in accordance with EEC Machinery Directive dispositions 2006/42/EU
 ⇒ are in accordance with EEC Low Voltage Directive 2014/35/EU
 ⇒ are in accordance with EEC (RoHS) directive 2002/95/EU and 2011/65/EU

TECHNICAL STANDARDS APPLIED

UNI EN ISO 12100:2010 Safety of Machinery - Basic Concepts, General Principles for Design - Risk assessment and risk reduction
UNI EN ISO 13857:2008 Safety of Machinery - Safety Distances to prevent danger zones being reached by the upper and lower limbs (2008)
ISO 14120:2015 Safety of Machinery - Guards - General Requirements for the Design and construction of fixed and movable guards
UNI EN ISO 13849-1:2016 Safety of Machinery - Parts of the Control System related to the Safety - Part 1: General Design Principles
UNI EN ISO 14119:2013 Safety of Machinery - Interlocking devices associated with guards - Principles for design and selection
CEI EN 60204-1/EC Safety of Machinery - Electrical Equipment of Machines. Part 1: General Rules (2010)
EN 61439-1:2011 Low-voltage Switchgear and Control Gear Assemblies. Part 1: General rules

FURTHER TECHNICAL STANDARDS APPLIED:

IEC EN 60335-1 "Safety of household electrical appliances and similar"
 Electronic Ballasts for the control of the lamps in accordance with the standard EN 60928.
 Germicidal UV-C Lamps in accordance with EN 61199.
 Electrical Protective Measures in accordance with IEC 70-1, EN 60229.

Anghiari, 05 January 2017

Responsible for Standards: Dr. Aldo Santi

LIGHT PROGRESS S.r.l. Via G. Marconi, 81 - 53031 ANGIARI (AR) - ITALY - <http://www.lightprogress.com>

Jan-2017 Pag. 22/24

kiwa
Partner for progress

Reg. Number	6950 - A	Valid From	2016-07-26
First issue date	2007-12-21	Last modification date	2013-07-24
Following renewal date	2019-07-29	EA Sector	EA: 19

Quality Management System Certificate
ISO 9001:2015

We certify that the Quality Management System of the Organization:

LIGHT PROGRESS S.r.l.

Is in compliance with the standard UNI EN ISO 9001:2015 for the following products/services:

Design and production of UV-C rays disinfection systems

Chief Operating Officer
Giampiero Belcredi

Maintenance of the certification is subject to annual survey and dependent upon the observance of Kiwa Cermet Italia contractual requirements.

This certificate consists of 1 page.

LIGHT PROGRESS S.r.l.
Registered Headquarters
- Via Guglielmo Marconi, 81 52031 Anghiari (AR) Italia
Certified sites
- Località San Antonino 40 52043 Castiglion Fiorentino (AR) Italia
- Via Guglielmo Marconi, 81 52031 Anghiari (AR) Italia

CEMET

Kiwa Cermet Italia S.p.A.
Società con socio unico, soggetta all'attività di direzione e coordinamento di Kiwa Italia Holding Srl
Via Cefalano, 23
40057 Granarolo dell'Emilia (BO)
Tel: +39 051 692 31111
Fax: +39 051 763 382
E-mail: info@kiwacermet.it
www.kiwacermet.it

SGS N° 007A SSI N° 006G
SQA N° 016D FSQ N° 0041
PRD N° 009B



UNIVERSITÀ
DI SIENA
1240

University Tests - Air Treatment



Dpt of Physiopathology, Experimental Medicine and Public Health University of Siena Via Aldo Moro 3, 53100 - SIENA - ITALY Tel +39 0577 234134 - Fax +39 0577 234090 e-mail: epidmol@unisi.it	MOLECULAR EPIDEMIOLOGY Research Division 
---	---

Valutazione dell'effetto che purificatori d'aria a raggi UV-C prodotti da **LIGHT PROGRESS®** hanno sulla carica microbica e fungina presente nell'aria.

University of Siena
Department of Physiopathology,
Exp. Medicine and Public Health
Lab. Molecular Epidemiology
Prof. Emanuele Montomali

Emanuele Montomali
Luca Biondi

Grafico 1

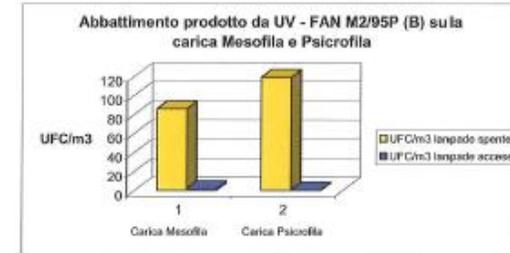
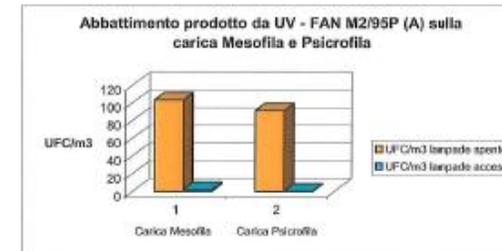


Grafico 2



University of Siena
Department of Physiopathology,
Exp. Medicine and Public Health
Lab. Molecular Epidemiology
Prof. Emanuele Montomali

Luca Biondi



University Tests - Microbial Load Reduction



UNIVERSITÀ
DI SIENA
1240

Dpt of Physopathology, Experimental Medicine and Public Health University of Siena Via Aldo Moro 3, 53100 - SIENA - ITALY Tel +39 0577 234134 Fax +39 0577 234090 e-mail: epidmol@unisi.it	MOLECULAR EPIDEMIOLOGY Research Division EpidMol
---	---

Valutazione dell'effetto battericida, sporicida e fungicida dei raggi UV-C emessi da apparecchi LIGHT PROGRESS®

University of Siena
Department of Physopathology,
Exp Medicine and Public Health
Lab. Molecular Epidemiology
Prof. Emanuele Montomali

Emanuele Montomali
Antonio Pozzi

Aspergillus niger

Aspergillus niger su Sabouraud dextrose Agar, a sinistra la piastra non irradiata, a destra la piastra irradiata con UVC

University of Siena
Department of Physopathology,
Exp Medicine and Public Health
Lab. Molecular Epidemiology
Prof. Emanuele Montomali

Escherichia coli

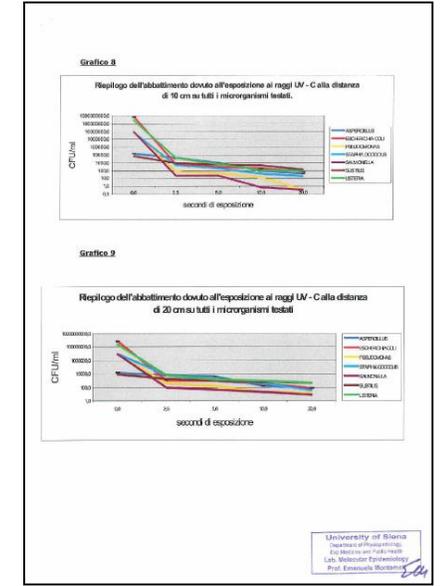
Escherichia coli su Macconkey Agar n.3, a sinistra la piastra non irradiata, a destra la piastra irradiata con UVC

University of Siena
Department of Physopathology,
Exp Medicine and Public Health
Lab. Molecular Epidemiology
Prof. Emanuele Montomali

Staphylococcus aureus

Staphylococcus aureus su Mannitol salt agar, a sinistra la piastra non irradiata, a destra la piastra irradiata con UVC

University of Siena
Department of Physopathology,
Exp Medicine and Public Health
Lab. Molecular Epidemiology
Prof. Emanuele Montomali



Some



References





Spazio del Distributore





Loc. San Lorenzo, 40
52031 - ANGHIARI (AR) - ITALY
Tel. +39.0575.74.92.55
Fax +39.0575.78.99.29

www.lightprogress.com
info@lightprogress.it

