smiths detection

PRODUCT HIGHLIGHT / **UV-C Light Tray Disinfection**

EFFECTIVE DISINFECTION OF CHECKPOINT TRAYS

Smiths Detection Ultraviolet (UV) Light Upgrade Kits were developed to reduce transmission of bacteria and viruses by automatically disinfecting checkpoint trays.

FEATURE HIGHLIGHTS

- Eliminates up to 99.9% of bacteria/viruses on trays
- Reduces transmission of contagious diseases
- Protects staff and passengers
- Increases confidence
- Completely safe design
- Quick, easy installation
- Adaptable to various tray handling systems

RESTORING PASSENGER AND STAFF CONFIDENCE

Elevated hygiene standards will be crucial as the aviation industry seeks to rebuild passenger and staff confidence and encourage people to take to the air once again. Security procedures at the passenger checkpoint often require close interaction between passengers and operators plus physical contact with surfaces – particularly trays. The International Civil Aviation Organization (ICAO) therefore recommends routine enhanced cleaning and disinfecting of frequently touched/exposed surfaces and security screening equipment, including trays, in their recently released COVID-19 recovery guidance*.

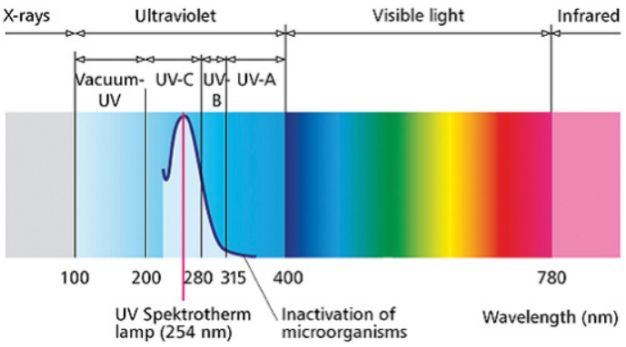
A very effective way of minimising the risk of contagion, the UV Light kits have been designed to disinfect baggage trays from all sides, killing bacteria and viruses within seconds.

PROVEN TECHNOLOGY

Ultraviolet germicidal irradiation has been used in disinfection applications for over 100 years, often in medical sanitation and sterile work facilities with high hygiene requirements.

The same, proven technology was leveraged by Smiths Detection to develop the UV light kits for tray disinfection.

Short-wavelength UV-C light is used to kill or inactivate microorganisms by disrupting their DNA or RNA, leaving them unable to perform vital cellular functions. Wavelengths between about 200 nm and 300 nm are strongly absorbed by nucleic acids, with 254 nm achieving the highest germicidial effect.



To achieve deactivation of up to 99.9% of viruses and bacteria, the system is designed to expose the trays to very high levels of UV-C light. We have modelled different micro-organisms and tailored the system performance balancing exposure time and irradiance levels to achieve high doses while maintaining optimal lane throughput.

The system has been designed to place the lamps around the tray, allowing the tray to be disinfected from all sides.

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*https://www.icao.int/covid/cart/Pages/Airport-Module---Security-Screening.aspx

SAFE AND EFFICIENT OPERATION

As UV-C light can be harmful, the kits are safely shielded from any leakage using robust metal housing and following relevant safety standards such as BS EN ISO 15858:2016. Compared to X-ray radiation UV-C light has a low penetrating ability and therefore does not require lead shielding. Interlocks automatically shut off the UV-C lamps in the event of an emergency stop, tray blockages on the conveyor or opening the module.

Wavelengths shorter than 240nm, that are mainly responsible for the potentially harmful generation of ozone by UV light, are blocked by special materials within the construction of the lamps.

The system is fully automatic, only requiring occasional cleaning and an annual service. Spare parts supply is straightforward as the UV-C light lamps are a standard item.

The kits can be seamlessly integrated into the tray flow without affecting the overall speed of the tray return system, the length of the lane or the operational efficiency. This automatic system provides a very advantageous alternative to manual cleaning.

Embedding the UV light kits into our checkpoint management solution Checkpoint.Evo^{plus} and our preventive maintenance system will add further efficiencies by automatically monitoring and reporting their health condition and operational performance.

Reduces risk of transmission

Increases confidence

Designed for safety

Efficient operation

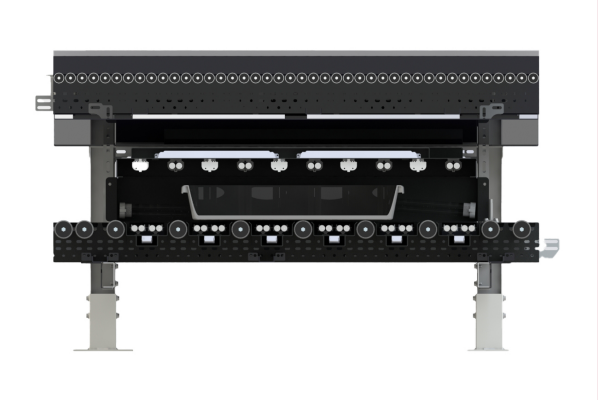
FLEXIBLE OPTIONS FOR YOUR REQUIREMENTS

The UV-C light kits have been designed to be vendor-agnostic and can be rapidly retrofitted into most existing tray handling systems. For checkpoints with passive conveyor systems we have developed a standalone solution.

Integrated solutions leverage your existing automatic conveyor systems, rapidly adding disinfection capability to your operation. These systems are designed to maintain high lane throughputs while ensuring passenger and staff safety.

Our standalone solution offers turnkey disinfection capability. The deployment onsite requires no assembly or commissioning. Once unpacked and connected to a power source, the unit is ready to disinfect trays within 15 minutes. The standalone solutions are available with automatic tray de-nesting and stacking for automated unattended operation and processing of trays.

AVAILABLE SYSTEMS



Integrated system

Standalone system

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