

## **The SteriBelt System**

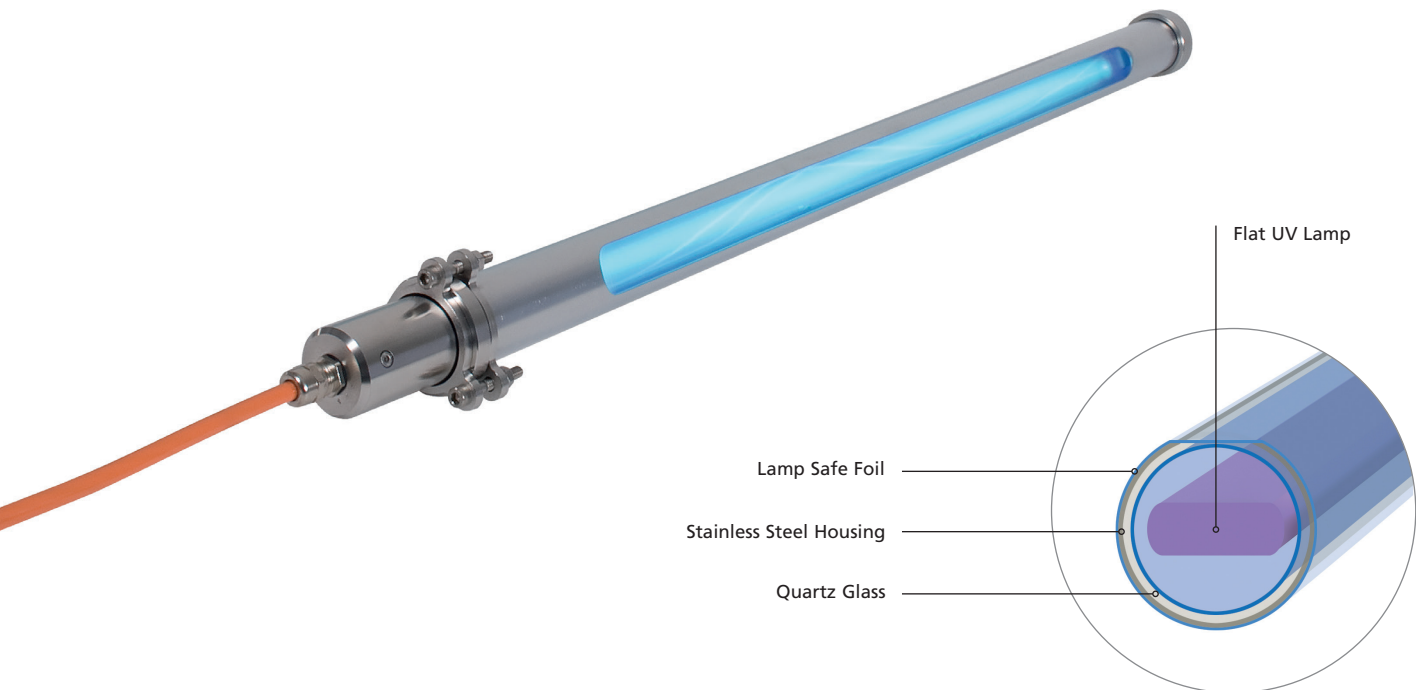
**Germ-free conveyor belts without  
the need of chemicals**

NobleLight

**EXCELITAS**  
TECHNOLOGIES®

# The SteriBelt System

## Innovative Mercury-Amalgam Flat-Emitter Technology



### Areas of Application

The ultraviolet disinfection system is used for the continuous disinfection of conveyor belts in the food processing industry, especially in the meat processing industry.



### Operation

The SteriBelt module is fitted to the conveyor belt at the front face or from below and reliably decontaminates its surface. By exploiting the cumulative disinfection of the continuously circulating belt section, exceptional disinfection rates are achieved for little operating cost.

### Objectives

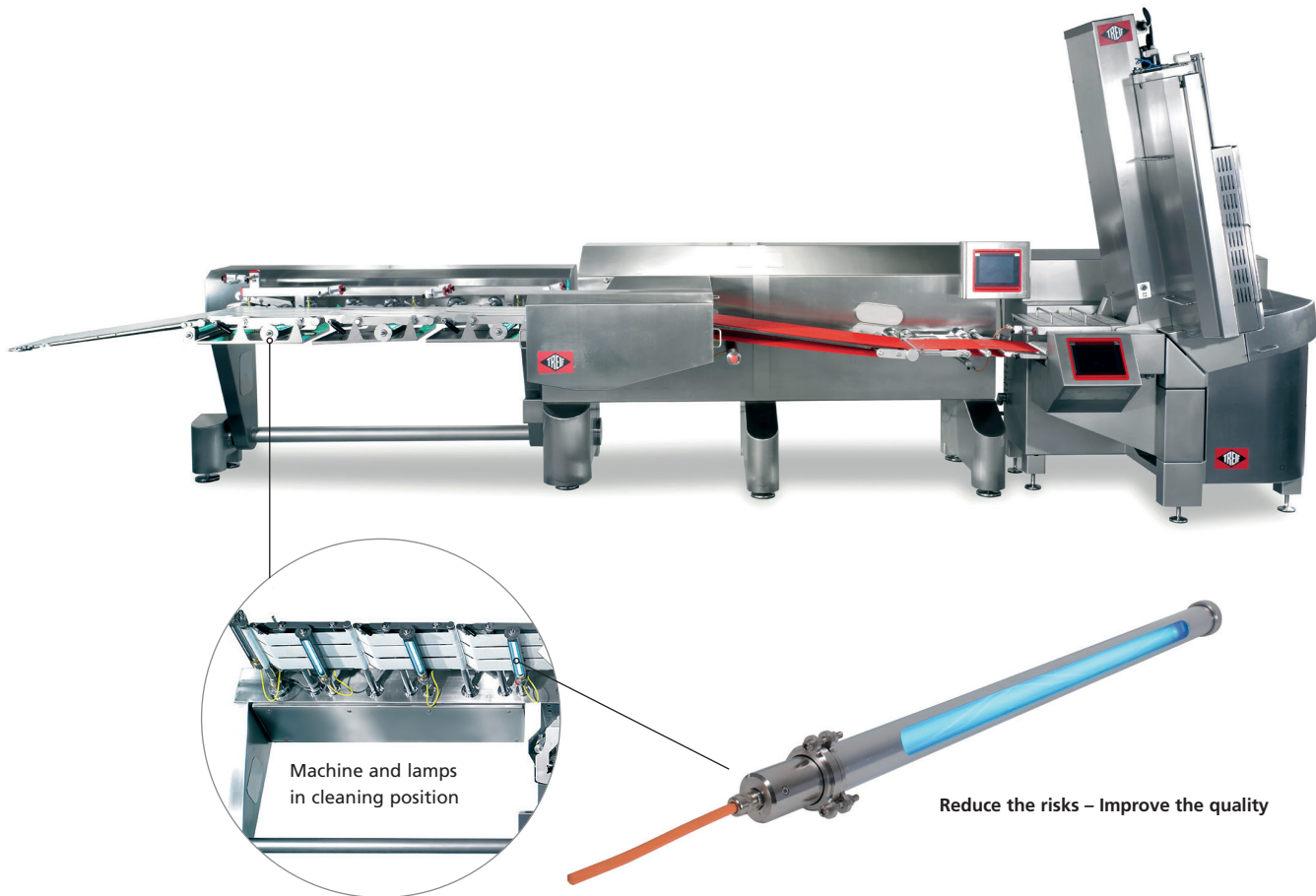
- Improvement in quality and its sustainability in the manufacturing process
- If relevant, extension of product shelf life
- Implementation of hygiene regulations

### Requirements

A major challenge for food manufacturers is to produce products of ever increasing quality with ever fewer production line stoppages. The presence of germs on the conveyor belts can obviously cause line running problems and must be prevented.

Furthermore, increasing market demands to abandon preserving additives, the migration of germs between products on the belt and disinfectant-resistant micro-organisms are deteriorating factors.





#### Standard features

- Rotationally symmetrical, consequently there are fewer deposits of product residuals on the surface than there would be with a flat plate.
- Robust, stainless steel housing, with no external air- or water-cooling, suitable for operation in low temperature environments.
- IP67 design
- LampSafe shatter protection – UV-resistant special foil (no PTFE or similar) with exceptional UVC transmissivity
- The system can be removed for cleaning from the optional holder without the need for tools.
- Reasonable capital cost and low operating costs. It can also be used for several small band segments and it is suitable for retro-fitting in confined spaces. Simple, onsite emitter replacement.
- Maximum emitter power through the optimized application of Indium Amalgam emitters, with flat lamp technology, which have been specially developed for the SteriBelt module.
- There are no chemicals and there is no ozone. This is an environmentally friendly process.
- The efficiency can be measured and documented for quality control purposes.

#### Information of innovative lamp technology

Conventional round emitters are not ideal for surface disinfection as they apply only about 1/3 of the emitted radiation as direct radiation onto the surface. The rest of the UV energy reaching the surface gets there by reflection, which means there is significant energy loss.

Our Mercury Amalgam Flat lamp, because of its shape, ensures that more than 50% of the power is directed straight at the surface so that there is a significant efficiency increase. Moreover, for the same geometry, these lamps offer around 3-times the power, making them even more efficient and cost-effective.

#### Advantages

- Compact construction
- Low capital- and operating costs
- Reliable disinfection power
- Long equipment operating life

## About Excelitas Technologies

Excelitas is a leading provider of advanced, life-enriching technologies that make a difference, serving global market leaders in the life sciences, advanced industrial, next-generation semiconductor, aerospace and defense end markets. Headquartered in Pittsburgh, PA, USA, Excelitas is an essential partner in the design, development and manufacture of photonic technologies, offering leading-edge innovation in sensing, detection, imaging, optics, and specialty illumination for customers worldwide. Excelitas is at the forefront of addressing many of the relevant megatrends impacting the world today, including precision medicine, industrial automation, artificial intelligence, connected devices (IoT) and military modernization.

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