

Space and cost reduction through the use of UV solutions in plant manufacturing Jorgensen Case Study

Cooperation between Jorgensen and Heraeus Noblelight in the development of filling and packaging handling equipment to reduce space and cost due to highly efficient, chemical-free disinfection processes.

The challenge

Saving space in clean rooms and reliable, intensive disinfection are key factors when equipping machines in the food packaging industry. Especially when it comes to sensitive products, such as infant formula, efficient and highperformance systems are a must. Jorgensen, a Danish company founded in 1933, develops and manufactures complete filling and packaging handling equipment to the food, infant formula and pharma industries. Depalletizing, lid handling, portioning, clinching, labelling, packaging - the complete machines are a turnkey solution for the overall filling and packaging production process.

An important process step in the production of infant formula is the disinfection of the empty cans, so that the filled powder remains durable and free of germs for as long as possible. To achieve this, UV light provides the can surface disinfection.

The so-called UVC disinfection is a purely dry and chemical-free process, whereby at least 99.9%-99.999% of the germ pollution is reduced. Only a few seconds of the intense light is enough to kill germs such as bacteria, yeasts or molds on packaging materials.

Jorgensen's machines are environmentally friendly, reliable, low-maintenance and easy to handle thanks to the use of the latest technology.

The solution

Every customer has different requirements in his production facility, as certain types of food require different treatment. Regardless of whether it is an existing production line or a newly designed machine, Jorgensen tailors the turnkey solution based on their extensive experience, know-how and the customer's specific needs. For the disinfection process this means adjusting the speed of the conveyors and the UV dose.

However, one requirement is the same for almost every customer – the footprint should be as small as possible. This means the production line should take up as little space as possible. After all, maintaining a cleanroom is expensive since the ventilation air and the objects in the room must be kept ultra-clean.



Heraeus BlueLight in use
Photo: Jorgensen Engineering A/S

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With the installation of the new Heraeus UV module, the "BlueLight Hygienic System", users can reduce the space needed for disinfection by 60%. Due to innovative developments, the Heraeus system is the most powerful UV low pressure system on the market providing the highest kill rates. Compared to equivalent UV technologies, end users can reduce energy costs by 30%.

Why Heraeus?

Comprehensive support, a long-lasting business relationship, robust products and process know-how – these are the ingredients for a good collaboration. After the first product presentation at Jorgensen early in 2018, it was clear that using the new Heraeus BlueLight Hygienic System had the potential to either upgrade the Jorgensen lines to the next higher hygiene class, or to enable significant space savings in the production environment.

In addition, the installation is user-friendly, as it is a closed system with its own air ventilation. Intelligent control and various sensors allow continuous monitoring of the key system parameters. This enables the Hygienic System to adjust itself automatically and ensures a maximum UV output.

Cleaning the BlueLight Hygienic System is simple as well. The special design and carefully selected components follow the latest hygienic design requirements of the food industry. This reduces cleaning time and helps ensure a cleaner processing environment, so important with sensitive products such as infant formula!

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