New technology enables surfaces to be disinfected automatically

Jimco A/S of Denmark now launches a new system which enables automatic, chemical-free disinfection of surfaces in e.g. factories, laboratories and hospitals. This saves resources and environmental impacts are avoided.

Since 1993, Jimco has developed and manufactured advanced air purification systems used to eliminate odour, improve indoor air quality, reduce the risk of fire and prevent infections. Now, another dimension is added to the technology, namely a solution which disinfects surfaces that would otherwise have to be processed manually. According to Managing Director Jimmy Larsen, this implies a number of advantages.

– Manual disinfection is time consuming, and it is impossible to get completely into corners and crevices. At the same time, the process has hitherto required the use of harsh chemicals that create an undesirable working environment for users. Our new technology fully automates the process. Thus, manual work becomes superfluous, and more effective sterilization is achieved – especially inside the ducts. Furthermore, water and energy is saved and chlorinated wastewater does not have to be drained.

UV lamps kill microorganisms
Based on Jimco's patented UV-C technology, which has received the EU Environmental Award, the new disinfection module may advantageously be paired with the Jimco air cleaning solutions typically installed in conjunc-

tion with existing ventilation systems. This provides a total solution that both cleans the air and disinfects surfaces in the room. – The air purification unit sterilizes supply air before it is blown out. The air is treated with UV-C light, applying the ultraviolet rays for burning viruses and fungi. Bacteria that pass through the air purifier are killed, and according to laboratory tests the concentration of microorganisms is reduced by 99%, which also contributes to extending the durability of fresh food, Jimmy Larsen explains. The disinfection is then performed when there are no humans in the room. – When to commence can be automated through pre-programming, for example when a specified process ends.

According to Jimmy Larsen, two different kinds of UV-C technology are applied for purification of air and for disinfection. – For disinfection of surfaces, ozone-producing UV lamps are used, and therefore no person is to stay in the room before the ozone concentration has decreased to normal levels, he explains. Should someone enter the room while disinfection is in progress, however, system power is automatically switched off. Operation can be programmed to suit workplace routines, for example two or three shifts. The installation as such should be performed in close cooperation with local working environment authorities. In addition to industry and laboratories, Jimmy Larsen particularly recognises social and healthcare institutions as potential customers. – Here, the technology could contribute to higher efficiency particularly much, e.g. when a whole ward is to be disinfected in the case of infections. Tests carried out in cooperation with the SSI (Danish National Serum Institute) demonstrate that using our technology, the amount of listeria and salmonella bacteria can be degraded almost completely within one hour.

Process accelerated by EU directive
Jimco has been researching UV-C based disinfection for years. A new EU directive on the contents of chlorine in food, which comes into effect in 2013, has accelerated the process. – We have for a long time been carrying out full-scale tests at various companies in cooperation with the Technical University of Denmark. The experience is positive and we now introduce off-the-shelf products incorporating the new technology, concludes Jimmy Larsen, who estimates the typical payback period to be around one year.

In the case of questions or for referral to the nearest dealer, Jimco A/S may be contacted on phone (+ 45) 62 51 54 56 or jimco@jimco.dk. Please also refer to www.jimco.dk.