



## Clean room technology

Have you ever heard the term cleanroom in the context of medical technology or the pharmaceutical industry? Do you know what technology and what necessity are hidden behind it? A clean room is a room with an extraordinarily low concentration of airborne particles. Airborne particles are all particles and substances that are suspended in the air and are usually invisible to the naked eye. Such clean rooms are always necessary when particles from the ambient air would disrupt work and production.

Among other things, pharmaceutical products, sterile medicines and wound dressings or bandaging materials are manufactured in cleanrooms. Meanwhile, implants, medical devices and components that must not be contaminated under any circumstances are also manufactured in them. Furthermore, a distinction is made between different cleanroom classes 1-9, which are subject to different standards.

Clean rooms reduce the number of particles and eliminate pollutants and microorganisms in the room air within a few minutes. The mobile clean room technology from Skan works with the help of a specially developed non-thermal catalysis. By combining various modern technologies, the destruction rate of microbiological and chemical pollutants is 99.8 percent. Another advantage is that the catalysts are able to regenerate themselves and ensure long-lasting, efficient decontamination.

But how does the technology behind it work? There are three steps in non-thermal catalysis. First, pollutants are separated by special absorbents, which are then destroyed by a catalyst activated by UV light. Finally, the clean room is treated at room temperature by an active catalyst. In the process, the absorbent acts like a sponge that absorbs the contaminants on the surface and prevents them from penetrating. A radical reaction occurs on the catalyst surface, destroying contaminants that come into contact with the surface. In addition, the UV light used to activate the catalyst also has a germicidal effect. Finally, a complete transformation into water vapour and carbon dioxide in small quantities takes place in the process. Furthermore, various filters can additionally contribute to reducing the number of particles in the room air.

### INNOVATIVE PROCEDURES

- ◇ **Company:**  
SKAN AG
- ◇ **Product:**  
Calistair R4000
- ◇ **Areas of applications:**  
Laboratories &  
Research  
  
Life Science & Biotech  
  
Medical Technology  
  
Hospital & Pharmacy
- ◇ **Advantages:**  
Improvement of the  
indoor air  
  
Reduction of the  
number of particles  
and binding of odours  
  
Quiet and easy to use
- ◇ **Website**  
<https://skan.com/>

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