

## User report

### Impermeable to micro particles and bacteria

**Bachem AG Bubendorf hermetically seals controlled production sectors with Efaflex specialist doors for cleanrooms.**

Within the clean room environment of pharmaceutical companies, even micro dust particles can be harmful to the purity of products: errors which Bachem AG as world market leaders cannot afford to make. Cleanrooms and correctly filtered air are major requirements for companies in the biotechnology industry if they want to produce drugs according to GMP standards. Critical areas within the controlled sectors are airlocks for persons and material. This was the reason why Bachem AG chose to use EFAFLEX specialist doors for cleanrooms which have an extremely high level of sealing.

“Already minor impurities in the compartment air may cause high losses in pharmaceutical production,” Daniel Brechbühl says. He is the team leader of the support team at the Bachem AG. This is the reason why requirements with regard to the quality of cleanrooms and their components are continually increasing. “Constant pressure in our cleanrooms and airlocks is very important. The pressure loss within 15 minutes must not exceed 1 millibar per minute”, Brechbühl explains. “If this was not the case, a huge amount of micro particles of dirt would permeate into the cleanroom whenever the door is opened. The wear of filters would be considerably increased and thus the expenses for the failure-free implementation of state-of-the-art production processes. In order to prevent this, it is absolutely necessary that the doors to the controlled production zones and related airlocks are tightly sealed. Due to their closed curtain guides, EFAFLEX high-speed roll-up doors for cleanrooms achieve a very high sealing rate. Pressure gradients within the range of 15Pa ensure air losses of less than 10 m<sup>3</sup>/h for door sizes of 1400mm x 2000mm. Type EFA-SRT®-CR doors meets the common requirement with regard to equipment for cleanrooms. As the team leader of the support team, Daniel Brechbühl attaches great importance to perfectly functioning doors. “In our sector, everything must be clean and operate

without difficulty”, he says. The high-performance and airtight high-speed roll-up doors have a smooth surface structure and no protruding edges. Thus, no dirt particles will deposit on surfaces. Frame and curtain cover is designed in clip technology which is easy to assemble and maintain. The visual appearance, haptics and technology very much benefit from the fact that hardly any conventional screw joints are used for the door covers. The door can be quickly opened and closed thus considerably reducing air loss in airlocks and clean rooms. In practice, the opening speed of 1 m/sec and the closing speed of approx. 0.5 m/sec have proved to be very effective for EFA-SRT®-CR. Before high-speed roll-up doors have been installed, there were only conventional doors in clean room airlocks. “These doors used to be very narrow, in particular when material was delivered to the clean rooms. Since we have the new doors, we have enough space for working.” The doors are large enough to transport huge material to the airlocks and then into the clean rooms. The Bachem AG is operating in the biotechnology sector and is acknowledged worldwide as the most important independent producer of peptides. The company was established in 1971. Thirty years ago, Bachem and its 8 employees started producing peptides for drugs complying with the CGMP guidelines. In the meantime, Bachem has become a world market leader and is listed on the Swiss stock exchange as Stock Corporation. Bachem has six production sites in the USA and Switzerland with a total of 650 employees. In 2007, the total turnover of all branches was CHF 198.3 million.

The good health of employees and the modern and efficient equipment of the production rooms are important for the long-term development of the company. Up to now, the Bachem AG has installed ten high-speed specialist doors for cleanrooms in controlled production sectors. “These doors are essential for us”, Daniel Brechbühl says. “We would recommend them every time.”

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