Customized Bag In/Bag Out to Protect Technicians from Contaminated Filters

CASE STUDY - INDUSTRY

Customer Profile

- Location: **Industrial area, Jeddah, Saudi Arabia**
- One of the leading pharmaceutical companies of Saudi Arabia
- Aimed to become centre of excellence for safe and effective pharmaceuticals
- AAF partner: Well-known of Saudi Arabia

Filtration Situation

The pharmaceutical company whose state-of-the-art facility complies with international standards and uses equipment procured from top-of-the-range suppliers in Europe and the US wanted to build a new cleanroom as a part of their new project. The company has always adopted new manufacturing technologies and practices and integrated those into their existing systems.

The client's cleanroom manufactures a wide range of dosage forms such as optha multidose and unit dose, injectables, ointments and creams, oral liquids and solid dosages, such as tablets and hard softgel capsules.

The company was aware that the use of chemicals in their cleanroom is inevitable and the experiments may result in excretion of harmful gases and particulate matters. They found out that the lab technicians were exposed to numerous hazards which include physical, chemical and biological or radioactive hazards in cleanrooms while changing the HEPA filters. This can put the technicians under threat while changing the filters and they wanted a solution for the same. The customer took this initiative and connected to their consultant for a solution to dispose the filter without the direct contact of the technician in their cleanroom.

AAF International Solutions

The pharmaceutical company needed the best solution for this challenge for its new cleanroom project.

AAF was the company to invent Bag In/ Bag Out (BIBO) product, which is safe, simple, reliable and utilizes a method for removing contaminated particulate filters and/or gases in hazardous environments.

AAF educated them about the product and gave the demo session on how the lab technician can change the HEPA filters, dispose of it and install the new HEPA. This housing should be placed as a terminal filter in the terminal section.

But, the exhaust space in the terminal area of the cleanroom was comparatively smaller and the product BIBO could not be installed. AAF considered this as a special case and customized the BIBO unit. The customized BIBO was tested, analysed and commissioned with the special housing made for them.

Then, with this solution, the maintenance personnel are protected from direct contact with the interior of the housing and hazardous contaminants during filter change-out and testing.

In this system, each removal bag is cinched to a collar inside the housing door to prevent any leakage of contaminants during filter replacement. Similarly, new filters are installed with the aid of a protective plastic bag. At no time during the change-out is the external atmosphere exposed to contamination from within the filter housing.

AAF has suggested mini-pleat AstroCel I HEPA filters best suitable for this customized BIBO. AstroCel I filters are used primarily in cleanrooms and clean zones, which require the very highest levels of contamination control. The filter consists of water-proofed, fire-retardant fiberglass media formed into a series of pleats. Corrugated sheets of aluminum separate the pleats to permit maximum usage at minimum resistance. Gasketing is available on the upstream, downstream, or both faces. Extractor clips are available for gel seal Astrocel I HEPA filters, for Bag In/Bag Out housings.

Results

AAF customized BIBO unit for their cleanroom. The customer found this as a perfect solution for their requirement and appreciated AAF for the customized design. This time and again, AAF proved its expertise and excellence in satisfying the customer.

AAF India Pvt Ltd, 117&118, Bommasandra Jigani Link Road, Anekal Taluk, Bangalore 560 105 marketing@aafindia.net I +91 80 2 7839903

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