



## Eaton Filters Find the Cure for Antibiotics Manufacturer

**Location:**  
Germany

**Problem:**  
Improve capacity and efficiency in the carbon removal process from active pharmaceutical Ingredients

**Solution:**  
Eaton's BECO Integra Plate EP, a completely enclosed filtration system

**Results:**  
Improve efficiency, safer working environment, and significant cost savings.

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*"The prognosis is good, and the company was very pleased with the features and benefits that the Integra Plate system has to offer."*

### Background

A global manufacturer of generic pharmaceuticals strives to make the world a healthier place by developing medicines that are accessible and affordable to people throughout the world. The company consistently provides only the highest quality products since its inception more than 120 years ago. With their medicines currently available to 90% of the world's population, the company continues to keep the patient at the center of its mission.

Generic medicines, such as antibiotics, are produced by maintaining the same active ingredients as the original product, while also maintaining the same rigorous standards of quality and safety. Through this process, the company can offer medicines with the same therapeutic benefits, but at a lower cost to the consumer.

### Challenge

The development of antibiotics involves a complex process of chemically binding amino acids as base material to enzymes. Carbon powder is an essential component in this process and is used for adsorption of impurities and decolorization. After the decolorization process is completed, a filter must be used to remove the carbon from the active pharmaceutical ingredient (API).

The company's old open-filter press was leaking and difficult to handle, making the entire process cumbersome, inefficient and costly.

With demand for its drug currently showing substantial growth, the company wanted to plug the leaks and replace the old filter press with a cleaner enclosed system that would improve throughput and increase capacity, allowing a higher output of product.



BECO  
Integra Plate

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## Solution

Once the problem was diagnosed, the company turned to Eaton to find a remedy. They were presented with Eaton's BECO Integra® Plate EP, a completely enclosed filtration system that guarantees much safer operation and easy cleaning in place (CIP). The unique design of the system also ensures optimal performance and simple handling.

With a wide variety of sizes available from which to choose, the drug manufacturer purchased the BECO Integra Plate EP equipped with a 6.48 m<sup>2</sup> filtration area and cake capacity of 192 L. The system is highly flexible and can expand to a filtration area of 10.26 m<sup>2</sup> and cake capacity of 304 L.

Benefits of the system include:

- Flexibility — Accommodates variable filtration area and cake volume
- Safe operation to meet pharmaceutical requirements
- No leakage
- No product loss
- CIP capability provides for reliable cleaning validation
- Enclosed design eliminates emissions during opening the filter
- Automatic hydraulic pressure regulation
- Two-hand operation of the function switches
- Pilot-open able non-return valve (prevents the filter pack from opening under operating pressure)
- Simple handling and ease of cleaning:
- Ergonomic design
- Downwards cleaning into a collecting tray
- Hanging support of the BECO depth filter sheet

## Result

According to the drug manufacturer, the prognosis is good. The company is very pleased with the features and benefits that the BECO Integra Plate system offers.

Due to the success of the system, the company also conducted trial runs with Eaton's depth filter sheets and ultimately switched to Eaton's brand. Currently using approximately 2,000 depth filter sheets per year, the company now projects significant increases over the next several years.

Eaton provides a range of depth filter sheets, such as the KD3, which provides the company with the same level of quality as their old filter sheets at a more attractive price, and the mineral-free BECOPAD® 450, which provides improved throughput.

The company will continue to use Eaton's filtration systems and plans to replace their current radium filter with a second Integra Plate system.

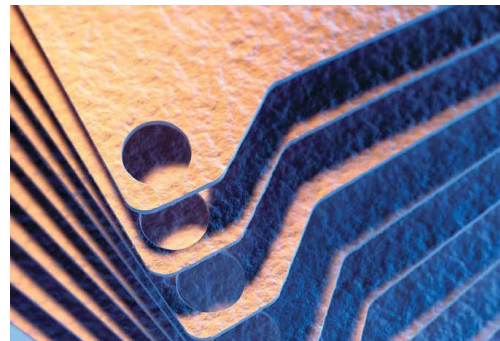
The drug manufacturer's new filtration setup promises to improve efficiency, ensure a safer working environment and help generate significant cost savings. Now that's good medicine.



BECO Integra Plate



BECOPAD Depth Filter Sheet



BECO Depth Filter Sheets

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