

# Case Study

## HELSINN ADVANCED SYNTHESIS

BIASCA, SWITZERLAND

### THE OBJECTIVE:

**To meet the demand of anticancer molecules, HAS built a dedicated cytotoxic site solely for the production of cytotoxic compounds requiring safe product handling in a contained area for operator and product protection.**

Helsinn Advanced Synthesis, located in Biasca, Switzerland, is the chemical manufacturing business unit of the Helsinn Group. They requested that PSL partner with them to produce a high containment filtration and milling system.

### THE SOLUTION:

**PSL's FilterBox, a contained filtration and drying solution for handling cytotoxic compounds. The FilterBox allows the following operations to be performed in one unit in a completely contained environment:**

- Filtration and drying
- Contained sampling
- In line milling with Comil (Quadro)
- Discharging, dispensing and packing

The FilterBoxes supplied to Helsinn Biasca new cytotoxic site consists of two production size Hastelloy filter dryers (0.125m<sup>2</sup> and 0.3m<sup>2</sup>) surrounded by a high containment glovebox isolator for the ultimate containment solution.

The PSL's filter dryer have been engineered over the year to provide the best process equipment when processing cytotoxic powder. They benefit from a minimum volume clamp base design, tapered filter plate for optimum seal, full heating jacket to maximise heat transfer and one piece agitator equipped with omega wave bellows.

Even with the efficient CIP and reflux cleaning systems incorporated into PSL's filter dryers, HAS required higher containment with an OEL test result of <50ng/m<sup>3</sup> during the sampling period for their cytotoxic facility 3b category.

Due to the characteristics of their products, it was crucial that they could open the vessel base completely and manually clean some critical areas in a contained manner. PSL developed in partnership with Helsinn the first FilterBox in 2000 to enable cleaning procedure to be performed safely and thoroughly as the complete vessel base, filtration media and discharge plug can be accessed in a completely contained environment. In 2013, PSL and HAS will install the two additional FilterBoxes and inline Comil in their new cytotoxic plant.

