

HAFFMANS PSF CPM® STERILE FILTERS

CASE STUDY



KEY FACTS

Brewery

Hertog Jan, Arcen, Netherlands

Filter type used

CPM® Sterile Filter, type PSF

Application

- Sterile filtration of CO₂ in the filling line
- Supply of sterile air
 - for wort aeration
 - for displacement of priming water from tanks or pipes

Benefits

- Certainty on condition of filter membranes
- Robust, temperature-resistant stainless steel filter elements
- Replacement of just the filter membrane

HERTOG JAN - PERFECTION DOWN TO THE DETAILS

Hertog Jan, based in the Dutch town of Arcen, is part of the global AB InBev group and one of the leading specialty breweries in the Netherlands. Gerard van den Broek (photo), First Line Manager at Hertog Jan, is not only involved in developing the beers but also gives the company its face in the media. In TV spots, on the internet and to more than 14,000 on-site brewery visitors a year, he explains the credo of Hertog Jan: "Only the highest quality in raw materials and processes can provide true specialty beers."

Perfection down to the smallest detail is an obvious prerequisite for a dedicated brewer such as Gerard van den Broek. Every medium that comes into contact with the beer must meet highest standards. Air and CO₂ are no exception. "To achieve this we have been relying on CPM sterile filters for years", said van den Broek. Important areas of use, for example, are the sterile filtration of CO₂ in the filling line and the supply of sterile air for wort aeration as well as displacement of priming water from tanks or pipes. "In these areas it is crucial that the particular gas is filtered just ahead of the place of operation in order to safely rule out recontamination. There must be no undetected filter ruptures or particle emissions, otherwise we would literally be inoculating our beers with germs," is how van den Broek illustrates the challenge.

To be specific, the CPM sterile filters, type PSF 60 and 82 are used at Hertog Jan. The standard housing of these filters is made of stainless steel, in which the PTFE filter membranes are mounted between two

stainless steel segmented filter elements. The filter membranes made of water-repellent PTFE offer no growth medium at all for bacteria. They have an absolute retention rate of 0.2 µm and an extremely high pore distribution of 95 percent. This allows high flow rates against very little pressure loss.

Actual condition of filter membranes is openly on display

The unique CPM filter design is also of key importance to van den Broek: "When you open up the CPM filter, you can see straight away what the membrane looks like. The actual condition of the membrane is openly on display, for instance whether there are particles deposited or if the membrane is damaged. This is not the case with plastic cartridges as depth filters. Here you can't really look into them. They more or less remain a 'black box'. With a view to sterilization, the great operational reliability of our filters should additionally be stressed. Plastic cartridges can actually warp at high temperatures. By comparison, the stainless steel components with the membranes lying in between are much more robust, simply more reliable. In addition, the membrane is cheaper than a plastic cartridge as both do have to be replaced as wear parts."

Experience emphatically bears out what van den Broek says on that last point: compared with conventional filter cartridges, the potential savings with a CPM filter are reflected in as much as 50 percent lower overall operating costs.

HAFFMANS BV

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