

World novelty: the first vertically mounted, glass lined steel condenser!

Excellent performance – cost effectiveness

Outstanding distillation performance is given by the excellent heat transfer of the glass lined carbon steel material itself, but also by the increased operating pressure and flow rate of the cooling media, reducing the operational costs.

Safety – reliability - durability

The robustness of its construction, its highly corrosion resistant materials as well as the seal – free U-shaped glass lined steel bundle make it perfect and reliable for daily work in harsh environments. The «büchiflex» connection system allows a stress-free glass assembly an operation.

Clean processes – easy cleaning

Transparent glass shell makes the process visible and shows the internal cleanliness. The vertical mounting position ensures self drain of the condenser. It is dead volume free and therefore very easy to clean.

cGMP

Cost-efficient all in one solution for cGMP small scale production.

Compact

The compact design of the new U-Type heat exchanger enables new possibilities in plant design.

Numerous options

- U-Type Bundle is available in different materials such as stainless steel, Hastelloy, Titanium, Tantalum.

Facts and figures

- -1.0...+2.0 bar (process)
- -1.0...+10.0 bar (cooling media)
- -60°C to +200°C (process/cooling)
- 1.0..10.0m²
- DN200/300/400
- 500....1000 W/m²K (k-Value)
- CE/PED



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Interview with: Alexander Bayer, Head of production at Biosynth AG

Versatile, robust, efficient and space-saving. When Biosynth AG in Staad commissioned Büchi AG to design a new condenser at the beginning of 2010, these were the firm's key requirements. After an intensive development and production phase, Büchi installed the world's first vertically mounted, glass lined steel condenser in early 2011.

In an interview, Alexander Bayer, Head of Production at Biosynth AG, tells us what he thinks are the greatest advantages of the new generation of condensers:

What types of cooler have you used until now?

Until now at Biosynth, we've been using spiral coolers made of glass. Despite the high-quality manufacture and the good visibility of the cooler contents, these coolers had the disadvantage that cooling water could only be supplied at limited pressure. Büchi's innovative proposal to develop a glass lined steel condenser, and in this way to optimise the flow of cooling water and the heat transfer with increased pressure, had us on board right from the start.

What are the advantages of the new condenser?

In addition to the outstanding condenser capacity of up to 150 l/h ethanol at a vapour temperature of 50°, the condenser also meets our needs with an improved cooling water exchange system under pressure, and its compact design. Furthermore, the vertical mounting position permits downflow condensation, which is ideal for the vacuum distillation process.

The flexible sealing and the vertical construction have minimised material deposits, thus avoiding prolonged down times caused by time-consuming cleaning procedures. In the long term, this gives us enormous cost savings.

How do you use the new condenser?

For chemical reactions in the reflux operation and for the thermal separation of organic solutions, including under vacuum. Due to the many product changes, these applications place great demands on material and condenser capacity.

How high are the process pressures?

The processes take place in a vacuum or under slight over-pressure. In the coolant circuit, we have a flow pressure of 3.5 bar.

How did you find working together with Büchi?

The Büchi team was very professional to work with. From the preparation and development of the condenser to its installation, right up to the after-sales service, we were always kept up to speed and we were well looked after. Not only did the high-quality equipment meet our standards – Büchi AG also proved to be the perfect partner.

