

CXS DRY VACUUM PUMP A RELIABLE PERFORMANCE PARTNER

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Optimising a highly specialised pharmaceutical vacuum system on an industrial scale

Birken AG is a small, yet rapidly growing company based in Pforzheim, Germany manufacturing a range of pharmaceutical products which are used to treat skin conditions, such as those susceptible to developing allergies. These products include an effective, yet natural ingredient called betulin, a white extract found in birch tree bark and renowned for its natural skin care properties which accelerate the healing process. Also known for its Imlan range of skin care products, Birken AG has developed the highly specialised process of extracting and refining betulin (or betulsion) as it plays the essential role of emulsion stabiliser combined with antiseptic properties and zero surfactants. To meet the growing demand for its products Birken AG has continued to develop the patented extraction and refining process up to an industrial scale, a crucial stage of which incorporates solid / liquid extraction followed by crystallisation, filtration and vacuum drying.



KEY FACTS

Customer	Birken AG
Region	Germany
Sector	Industrial Vacuum - Pharmaceutical

DRY VACUUM SYSTEMS

1. Challenge

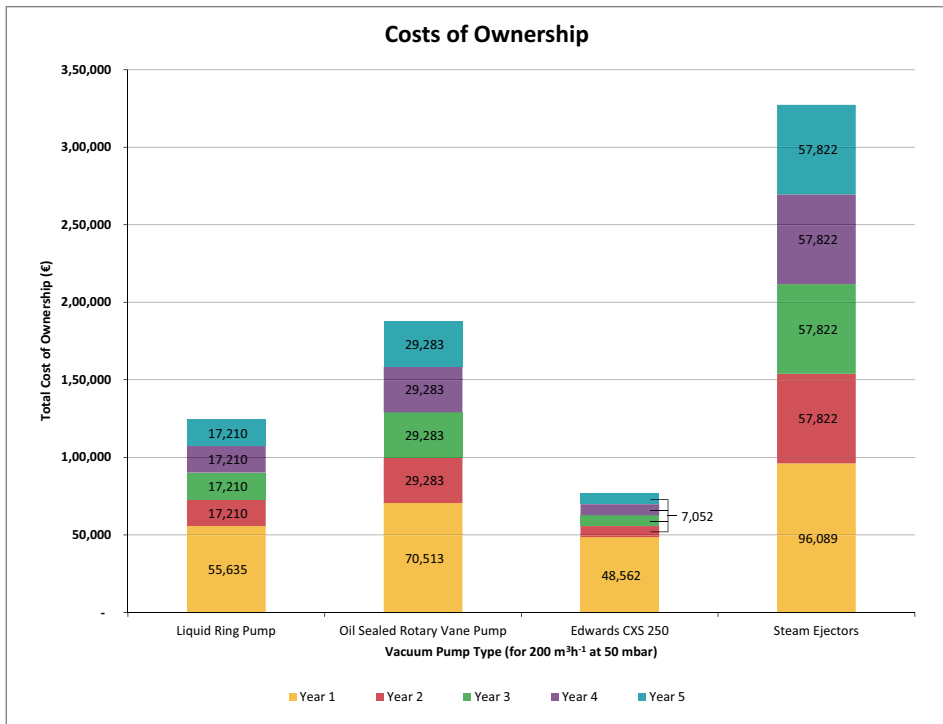
Provide a cost-effective pumping solution with sufficient power, volumetric capacity and precision control to meet the increasing demands of a process which had outgrown existing smaller, laboratory pumps. Also, meet the future demands of further vacuum processes, be capable of generating reliable vacuum pressure and be certified for use in a hazardous zone.

2. Solution

Following a careful selection process involving five different types of dry-running screw vacuum pumps, Edwards was chosen by Birken AG to supply a CXS 250 pump. Birken was impressed by Edwards' advanced CXS screw technology, which would provide high reliability, lower installation costs along with minimal ongoing maintenance and longer service intervals. Delivery of the pump in November 2011 took just six weeks, and after initial testing and calibration the full integration of the pump into the production process was handled efficiently, allowing the benefits of the new pump to be realised promptly.

3. Main Benefits

Birken AG confirmed that the Edwards CXS pump has become a reliable partner ever since it was integrated into their production process. They acknowledge that the pump generates powerful, yet flexible vacuum pressures down to 10^{-3} mbar without contaminating the flow of process material or cooling water and without creating any waste. Prior to the installation of the CXS pump there had been issues with poor vacuum supply resulting in downtime and ultimately a loss of production. With batches of product valued at 15,000 Euros these were serious consequences. Birken AG also confirmed that since the CXS pump was installed they have never suffered a loss of production as a result of poor vacuum supply and they also now achieve superior control at both high and low pressures. They also appreciate how quiet the CXS pump is during operation because when fitted with an exhaust silencer, noise levels have been reduced to less than 64 dB (A).



According to Mr. Scheffler, Technical Development Manager at Birken AG, "The Edwards CXS pump provides the combination of performance, technology with competitive pricing". He added, "We really appreciate design features such as the bearing mounts and the pump's ability to provide very precise vacuum through integrated active control and frequency inverter control logic".

