

Ventilex White Paper
Case Study
Salt Producer in Europe
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Ventilex sees every project as an opportunity to develop a new process, provide new solutions, and work in partnership with the customer to provide bespoke equipment that does exactly what is needed, how it is needed, without compromising on any of the often strict requirements of the buyer.

It is this drive for innovation fueled by specific customer needs that led Ventilex to develop a new process for drying high quality, hand-panned solar salts in Slovenia. Ventilex has dried various forms of sodium chloride salts in their fluid bed process previously, though this product required a new approach.

Due to special preparation methods, the solar salt produced has a very high concentration of minerals such as magnesium and calcium. These 'impurities' are what give the salt its unique flavor and selling potential. Due to the high magnesium content however, the raw salt crystals are too wet to be easily milled into finer products; while the demand for the fine milled products is nearly 5 times that of the coarse salt. The task brought to Ventilex was to provide an industrial drying solution that would reduce the moisture content in this salt far enough to allow milling of the raw crystals without reducing, or damaging, the natural mineral compounds contained in the salt.

In cooperation with the customer, and with extensive bench scale testing in their laboratory, Ventilex developed a process based on long residence time at lower temperatures that achieved an outlet moisture content in the product of 0.5-0.8% without significant reduction in product quality. The delivered installation performed as expected, or better, against all process guarantees, including product outlet moisture content and chemical composition, gas usage, and noise pollution. The specialized controls, developed by Trecom for Ventilex, provided a surprisingly refreshing experience for the customer's operators and management, summed up in the statement: 'At first I expected one or two operators to have to always be watching the drying process for problems and small changes. But now I can come into the control room and there is sometimes no one here at all! The machine effectively runs itself!'

With a relationship built on team work and cooperation with the customer, the end result was a drying and cooling installation that provided the customer with the exact product they required, and Ventilex with a unique and specialized process, proven in the field, that could be applied around the world.

Photos



View of Salt Flats



General view of equipment in situ



Supply air equipment including indirect burner (top), air chiller & reheater (bottom)