



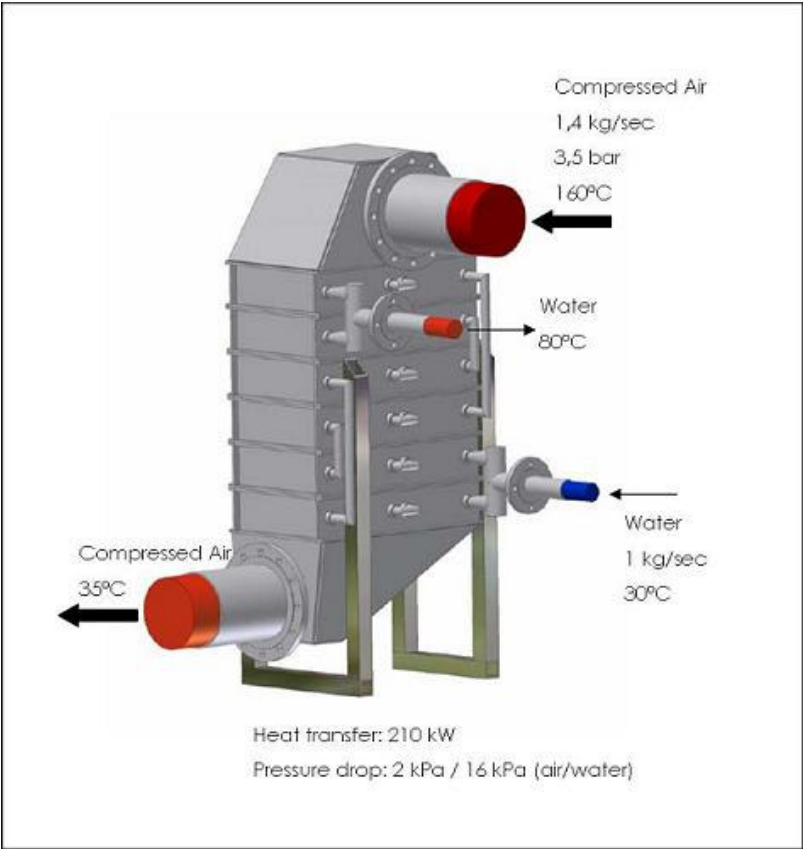
Heat recovery from compressed air to water

The problem

Swarovski in Austria is world-leading producer of glass crystals. In the production system for compressed air are two compressors producing large gas flows. To pre-cool the compressed gas before use is standard. The challenge in this project was not only the requirement to cool the compressed air down to a temperature only 5°C higher than entering water temperature, but to achieve this with a 50°C water temperature increase up to 80°C. This is necessary for feeding Swarovski's heating system. After tests with traditional heat exchangers was this considered impossible with acceptable pressure drop for the compressed air. Tested traditional gasket plate heat exchangers had pressure drops close to 1 bar!



The solution - AirCross 21 in several steps and with the compressed air on the low pressure side



With totally 12 AirCross 20-99/C in counter flow arrangement could the performance be reached with only 2 kPa pressure drop on the compressed air side.

A special challenge was to design the casing to withstand 5 bar total pressure.