

Project: Drinkglass Cooling

Engineering of a cooling system with accurate air nozzles



Task:

Design and planning of a cooling system for a leading company in the beverage glass industry.

The aim was to substantially reduce the required electrical cooling capacity of approx. 1 MW, supplied with compressors, and (in the best case) to simplify cooling result and air control as well as to minimize annual maintenance costs for the client



Is state:

Up to this point, the customer had been using compressor air with the corresponding nozzles.

On-site measurements, such as velocities, temperatures, etc., were carried out by HTK-Vent, so that a comparable stronger system could be successfully designed on the basis of this data



Delivered products & services:

Consultation and assistance of the necessary project parameters, material selection, respectively test mobile use and measurements.
Design of the required piping and nozzle geometry (pressure losses) so that the cooling result got maximized.

The 37 kW blower circulates industrial hall air 24/7 or applies it to glass when necessary. The included adjustment possibility for different glass products by means of potentiometers and control dampers is extremely helpful for the machine operator of the plant.



High-power blower generating required airstream

Result with the Air Knife System:

Currently, an energy saving with the 1st part of the plant is expected to be approx. 150,000 kW/h.

HTK-Vents design and installed system meets all necessary requirements after the first tests.

Further production lines of similar nature but with additional water drying is planned for the next year.

This will eliminate 70% of the previously required compressor power and leads to significant lower energy consumption and cost.



14 stainless steel nozzles were installed in the machine



distribution part for nozzle connections