

Project: Aluminum profile cooling

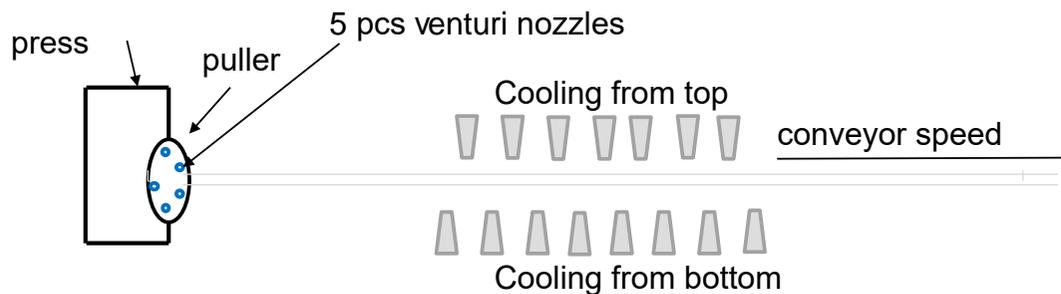


Task:

The customer is an aluminum profile manufacturer. The profiles are pressed, and must then be cooled. They are moved at variable speed (depending on the profile) on a roller conveyor. The temperature directly after the press is 570°C. The aim is to cool down to 250°C.

The temperature at the end of the current cooling section is 538°C. The existing system consists of 5 Venturi nozzles with 6 bar each (power consumption approx. 15kW) and additionally 10 fans (4 kW each).

Status-quo:

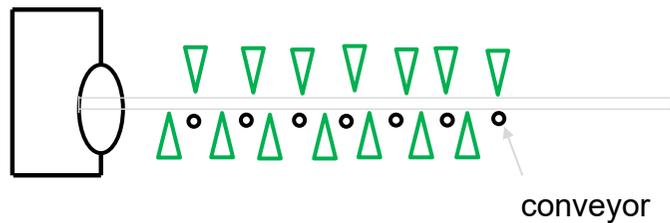


Delivered product:

HTK - Vent created a new concept of cooling using Air Knife nozzles in combination with turbo fans. Nozzles of different sizes were used and these were positioned at different distances from the profiles in order to achieve the optimum cooling for each type of profile and each speed of movement.

Tests confirmed what had been calculated. By using 14 Air Knife and 7 nozzles, cooling was significantly improved compared to the initial situation (up to 20°C per nozzle used).

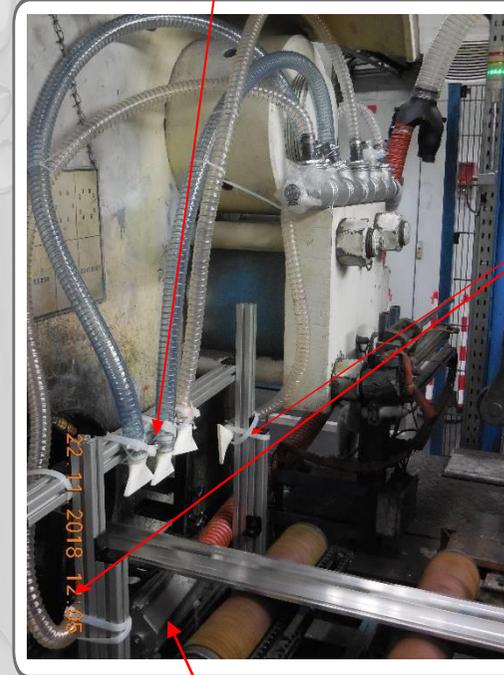
Air Knife solution scheme:



Result:

The customer is highly satisfied and will continue to delegate fluidic challenges to HTK-Vent.

3 x nozzles 100 mm



2 x nozzle 150 mm



1 x nozzle 300 mm