



RADIAL FANS

HOT GAS

RADIAL FANS FOR CONVEYING MEDIA AT UP TO 1,000 °C

Scheuch COMPONENTS hot-gas fans convey media at temperatures of up to 1,000 °C thanks to special design measures and the use of high-quality materials. This makes it possible to equip a heat treatment plant, for example, with heating, annealing and cooling zones from a single source.

FLEXIBLE APPLICATION OPTIONS

Special impeller geometries make it possible to create designs without casings or baffle plates. A range of drive types are available, based on the impeller diameter and the application. Common applications include air circulation in heat treatment furnaces for metals, glass or bricks.

Recirculation fans for aluminium smelting furnaces or casing fans for conveying exhaust gases from combustion plants have also been successfully implemented.



Senftenbacher Ziegelwerk: Reduction in energy expenditure for the heating and cooling phases in the furnace

COMPACT DESIGN

Cr-Ni steels and Ni-based alloys are used to withstand high loads. These are carefully processed at the main plant in Aurolzmünster in Austria.

Special insulating materials and a sophisticated cooling and ventilation system enable – depending on the impeller diameter – a compact design with direct drive and without intermediate bearings.

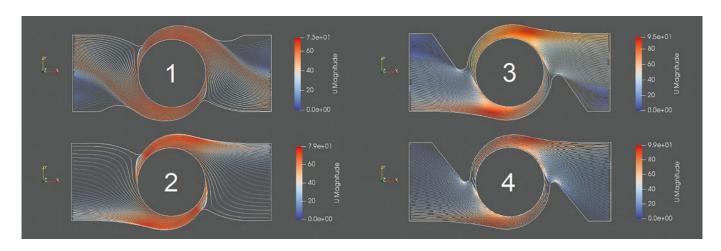


FLOW SIMULATION

In the case of built-in fans, the flow pattern is generally controlled in the space behind the wall or ceiling panels of the furnace. The quality of a heating process depends largely on the evenness of the flow in the furnace chamber; as a result, the fan and the flow control system are crucial to the functioning of the furnace plant and the quality of the batch.

Furthermore, it is important to ensure that the energy supplied by the fan is used as efficiently as possible. Appropriately adapted baffle plates can be used in place of the spiral casing.

The flow control system can be adapted to the spatial conditions in the furnace with the aid of numerical flow simulations, allowing high speed gradients or dead zones to be avoided.





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