Press information

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Efficiency killer machine room?
The design of the blower or compressor room contributes significantly to the efficiency of pneumatic conveying processes.

The efficiency of the blowers and compressors, which ensure the flow of materials in many industrial companies, also depends on the design of the machine room. AERZEN, specialist for trend-setting blower and compressor solutions and market leader in the field of pressure and suction conveying, knows what the correct ventilation of the installation room looks like and advises customers and engineering offices accordingly.

The pneumatic conveying is the ideal solution for transporting large quantities of bulk materials - whether for loading and unloading vehicles and ships or for transfer within the production process - one detail is often neglected - and that is the machine room. This is a big mistake, because if the ambient conditions are not appropriate, the blowers and compressors have to work harder or run for longer. The consequence: the demand for energy is increasing. The key points are a sufficient volume flow, the correct air pressure, the effective limitation of the temperature in the installation room and the alignment of the building according to cardinal direction. As one of the leading international suppliers in the field of blower and compressor technology, AERZEN knows what influence the design of the machine room has on the operation of the process air station and, therefore, offers comprehensive support in the optimum installation of its packages.

Machine room: air pressure and room temperature are decisive
It is completely irrelevant where the blowers or compressors get their suction air from: it is important that there is enough air at correct temperature. Sounds banal at first, but it is by no means trivial. For example, a machine room that is as soundproof as possible can result in too little outside air flowing into the interior due to the sound insulation and an underpressure being created inside the building by forced conveying process air packages such as positive displacement blowers, screw blowers or screw compressors.

When the air pressure decreases, the blowers have to provide significantly more power, in order to ensure the required volume flow at the correct pressure ratio. If the air temperature rises due to inadequate dimensioning of the room ventilation, the same effect occurs: the air-tightness decreases and the total operating time of the blowers and compressors increases. As the temperature rises and the underpressure increases, the package has to do noticeably more work.

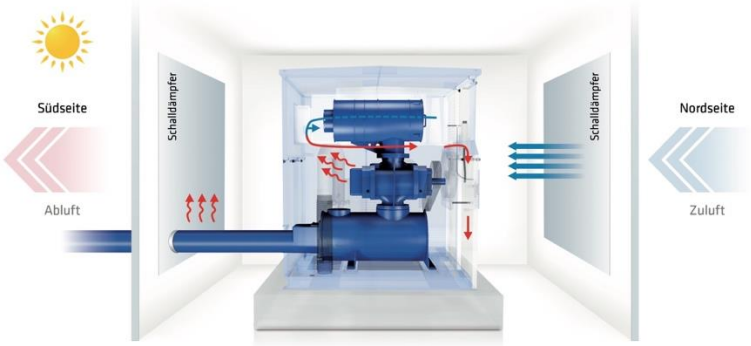
Efficiency losses increase costs
In both cases - insufficiently dimensioned supply and exhaust air ducts and excessively high internal temperatures - the packages must increase their performance in order to provide the necessary quantity of process air. At the end of the day, these reductions in efficiency add up to a drastic loss in energy efficiency and therefore significantly higher electricity costs. Thus, a temperature increase of 3 Kelvin reduces the efficiency by one percent. That quickly adds up to more than €10,000 per year.

The target: the heat has to go out, the sound stays in.
It is therefore important to include the machine building in the efficiency concept and to comply with it, in order to ensure the most economical operation of the blowers and compressors. In concrete terms, this means, no narrow ventilation openings, orientation of the **inlet** air to the north (colder air with a higher oxygen content/m³) and the exhaust air to the south, use of louvre silencers, exhaust ventilators at ceiling height (where the air is warmest) and regular cleaning and maintenance of the suction filters. AERZEN has the relevant know-how and provides comprehensive advice to customers and engineering companies. An initial guide is provided by the room ventilation calculator.

About AERZEN
Industrial plants all over the world are supplied with gaseous media using AERZEN blowers and compressors. The innovative AERZEN machine technology represents experience gained over more than 150 years of company history. The AERZEN product portfolio includes rotary lobe compressors, positive displacement blowers, turbo blowers and screw compressors and, in addition to standard products, also provides customised special solutions. Digital services can be used to increase efficiency, availability and productivity in a sustainable and future-oriented manner. In addition, AERZEN After Sales Service offers the complete range of services - from full maintenance contracts to repairs and modernisations of existing plants.

Press information

Image overview



AERZEN machine room
The design of the blower room makes a significant contribution to efficiency
Image: AERZEN

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Meta title
AERZEN Efficiency killer machine room?

Meta description
The design of the blower room contributes to efficiency. AERZEN advises customers and engineering companies.

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