

Protection against corrosion and wear

EC fans for efficient cooling towers

Cooling towers are used for cooling processes, installations, data centers and buildings. The ebm-papst range now includes axial and centrifugal fans with the appropriate corrosion protection specifically for such applications.

Fans dissipate surplus and non-usable heat to the ambient atmosphere. A high air flow rate is required for this purpose. And efficiency is becoming an ever more important criterion, as energy consumption is a significant factor in terms of operating costs.

EC technology marches on

The advantages of EC technology, namely efficiency, infinitely variable demand-based control characteristics and uncomplicated operating state monitoring via MODBUS RTU, guarantee a rapid return on investments. For use in cooling towers, for example, the ebm-papst portfolio contains a new axial fan with double flange housing of size 1,250 mm which is particularly suitable for high pressure ranges and is already available for delivery.

Fans withstand corrosion and wear

The extremely harsh ambient conditions with 100% humidity in combination with high temperatures inevitably lead to corrosion and a high degree of wear. So a particularly robust fan design with a special coating for metal parts and electronics circuit boards is essential. ebm-papst fans for cooling towers are rigorously checked in various tests (thermal cycling/wet test, salt fog test, Highly Accelerated Lifetime (HALT) testing, shock and vibration tests) and are thus ideally equipped to provide reliable operation in cooling towers. The noise level is another reason for using EC technology, as outdoor installations are subject to maximum noise generation regulations in many countries. Reducing the speed to half air flow cuts the noise level of GreenTech EC fans by 15 dB(A), whereas an improvement of only 3 dB(A) is attained with AC fans.

FanGrid as the ultimate solution

The fans are excellently suited to use in FanGrid arrangement, in other words in a system of centrifugal or axial fans operating in parallel. This offers the advantages of a better air flow through the cooling tower and quick and easy fan replacement. Operational reliability is an essential prerequisite for cooling towers. With an appropriate number of fans, the necessary air flow can always be attained even if one fan is out of operation (redundancy). The speed of the other fans is then simply increased to compensate for the missing air quantity, and the same flow through the cooling tower can be maintained.

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Picture 1: Axial fan W3GZ50 with AxiTop diffuser for use in cooling towers.

Picture 1 ebm-papst
Characters approx. 2,700, including headings and sub-headings
Tags EC technology, Axial fan, Centrifugal fan, Energy savings, Cooling tower, Corrosion, Environmental classes, FanGrid, Redundancy
Link <https://www.ebmpapst.com>

About ebm-papst

The ebm-papst Group is the world's leading manufacturer of fans and motors. Since it was founded, the technology company has continuously set global industry standards: from the digital interconnection of electronically controlled EC fans to aerodynamic improvements for fan blades to the use of eco-friendly materials.

In fiscal year 2017/18, the company achieved sales of over € 2 billion. ebm-papst employs over 15,000 people at 27 production sites (e.g. in Germany, China and the US) and in 48 sales offices worldwide. Fans and motors from the world market leader are used in many industries, including ventilation, air conditioning and refrigeration, household appliances, heating, automotive and drive engineering.

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