Press Release

EC Technology for Sophisticated Applications

Fans for Oil-cooled High-power transformers

Large high-power transformers are cooled with fans in addition to oil. This avoids damage from overheating despite cooling surfaces that are as compact as possible. 

ebm-papst has developed special fans for this application that satisfy rigorous requirements for service life and salt spray resistance. And thanks to EC technology, “hot spots” on the heat exchanger can be prevented.

Requirements according to DIN EN 50216-12

The special transformer fans satisfy all the requirements for demanding large transformer cooling systems according to DIN EN 50216-12. They meet the requirements of a long service life and high salt spray resistance (corrosion protection class C5M as per DIN EN ISO 12944). The fans are also suitable for deployment in high salt content coastal areas.

Prevention of “hot spots” with EC technology

Switching off individual fans can lead to the oil developing “hot spots.” Thanks to EC technology, it is possible to use the fans in partial-load operation. The consequence is a more even flow through the radiator. Another positive effect: the motor does not heat up as dramatically, which extends the fan's service life. Partial-load operation not only saves energy and lowers operating costs, but also results in less waste heat. After all, heat that is not created does not have to be dissipated. The commutation and stator design also ensure extremely smooth operation, which makes them suitable for areas of application where the noise protection regulations must be obeyed.

Simple commissioning and worldwide use

Installation and mounting are possible directly on the fan housing, with a horizontal or vertical installation position as required. The fans are perfectly equipped for worldwide use. They work with power supplies between 200-240 V and 380-480 V, and satisfy all the relevant standards (CE, UL, CSA, EAC, CCC) as well as the degree of protection IP55 requirements. The fans come in sizes 500 mm to 1250 mm with air performance of up to 13 m³/s.
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Fig. 1: The transformer fans satisfy all the requirements for sophisticated large transformer cooling and come in sizes ranging from 500 mm to 1250 mm.

Photo: ebm-papst
Characters: approx. 2,100, with headlines, subheads and captions
Keywords: EC technology, axial fan
Tags: EC fans, energy saving, HyBlade, transformer fans
Link: www.ebmpapst.com/transformercooling

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 market standards. Developments have ranged from electronically controlled EC fans, through aerodynamic improvements of fan blades, and on to the resource-conserving selection of materials, with sustainable materials being just one option.

In fiscal year 2015/16, the company achieved sales of almost €1.7 billion. ebm-papst employs approximately 12,500 people at 18 production sites (in Germany, China, the United States and elsewhere) and in 57 sales offices worldwide. Fans and motors from the global market leader can be found in many industries, including ventilation, air conditioning and refrigeration, household appliances, heating, automobiles and drive engineering.