Centrifugal fans are the method of choice for cooling switch cabinets when it comes to overcoming a comparatively high back pressure in the inner circuit of heat exchangers or for roof-mounted fans. In order to benefit from the advantages of EC technology in this field as well, the fan and motor specialist ebm-papst has developed a new centrifugal compact module.

Previous solutions

In switch cabinet cooling, free-running centrifugal fans are often combined with nozzles or guard grills, which is not to be recommended. The components, which are bought separately, are not optimally coordinated and the fan does not then behave as expected during application. This means losses and a higher noise level have to be accepted, for example. Users are therefore recommended to buy complete centrifugal fans, in which all components are already integrated and aerodynamically optimized.

Efficient compact module with immunity to interference up to 3 kV

With the K1G190, ebm-papst has developed a new plug & play compatible centrifugal compact module, which is perfectly coordinated to the requirements of such switch cabinet applications. It also facilitates easy entry into energy-efficient EC technology for the user, as there are considerable advantages compared to conventional solutions due to the new design measures. In contrast to AC variants, the EC fans operate in a much more efficient manner due to their higher efficiency. They are also quieter and the speed can be controlled in accordance with requirements. Due to their immunity to interference up to 3 kV, the electronics do not have any problems with interference in the supply network.

Durable and future-proof

The design of the new centrifugal compact modules promises a high level of availability and reliability for the future: This means a service life of 10 years (90,000 operating hours) is guaranteed. Currently, an extended voltage input of 100-240 V is being developed, with which the centrifugal compact module can then be used globally. In addition to the basic variant, depending on requirements, the electronics can be expanded with additional features such as condition monitoring and predictive maintenance. The conversion to EC technology is therefore the first step toward the future.



Photo: Centrifugal fan for switch cabinet cooling as a compact module that is ready to install

# Photo ebm-papst

# Characters approx. 2,400, including headings and sub-headings

# Tags EC technology, centrifugal compact module, switch cabinet cooling, roof-mounted fan, plug & play

# Link [https://www.ebmpapst.com](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.