



Press Release

Thanks to ebm-papst, hybrid ferry saves 2 million kWh annually

Full Speed Ahead To Sustainability

Scandlines ferries operate between Germany and Denmark, in fact, 6 out of 8 ferries are hybrid ferries. Zero emissions – this is the ambitious goal of the ferry operator. For this reason, Scandlines redesigned the hybrid ferries' ventilation system and now saves over 80% of the previously required energy. Instead of the old AC fans, now efficient EC fans from ebm-papst are in operation there.

LED instead of conventional illumination, hybrid propulsion systems, exhaust scrubbers, new water pumps and courses on driving frugally: Scandlines relies on sustainability down the line. This also includes air conditioning the ferry car deck efficiently. Alongside the drive, this system consumes a large amount of energy. Since trucks transporting flammable substances also cross the Fehmarn Belt, the fans must be explosion protected.

Ventilation with potential

The ferries have two bridges to avoid having to turn around outside the ports. Before the retrofit, a total of eight large AC fans supplied fresh air for the closed car deck's 12,000 m³. However, some of the fans always ran backward for incoming and waste air. This is a particularly inefficient way of working, as fans are always designed for a specific airflow direction and reverse operation drastically increases power consumption.

Fresh air in the car deck

Together with ebm-papst in Denmark, the ship operator developed a completely new concept. Clusters of four explosion-protected EC axial fans are mounted to a pivoting metal plate in a FanGrid. The plate with the fans can easily be rotated to the airflow direction required. With this system, the fans always move the air in the direction for which they are ideally designed and operate with maximum efficiency. The fact that four fans are taking on the work of one also has an advantage: the surface the air is moved across is enlarged. This optimizes the air exchange on the car deck even more. And there is no need to make any structural modifications to the ship.

Tremendous savings

The measures enable savings of 2 million kilowatt hours annually: an amount equal to the annual consumption of over 65 single-family homes. Now the ship operator has also replaced the fans for cabin air conditioning with EC fans. An upgrade for three more ferries that go between Puttgarden and Rødby has been planned.

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Figure 1: Scandlines' Prinsesse Benedikte hybrid ferry serves the Baltic Sea between Puttgarden and Rødby. Thanks to ebm-papst, it realizes energy savings of over 80%.



Figure 2: The pivoting metal plate with four fans provides the car deck with energy-saving ventilation.



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Fig. 3: EC axial fans can easily be adapted to the output actually required and are approved for use in potentially explosive atmospheres.

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Figure 1	Scandlines/Jukka Huotari
Figure 2	ebm-papst/Henrik Petit
Figure 3	ebm-papst
Characters	approx. 2,400, with headings and sub-headings
Keywords	axial fan, air conditioning
Tags	EC Technology, save energy, FanGrid, car deck, upgrade
Link	Article from customer magazine mag
Film	Film from ebm-papst media center Film from YouTube



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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 2016/17, the company achieved sales of almost €1.9 billion. ebm-papst employs over 14,000 people at 26 production sites (e.g. in Germany, China and the US) and in 49 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.

About Scandlines

Scandlines stands as a symbol of a historical and close cooperation between Denmark, Germany and Sweden since 1872. Under the names Scandlines and Scandlines Helsingør-Helsingborg three short ferry routes are marketed with high capacity and frequency and with a green vision for the future. The core business is to provide an efficient and reliable transport service for both passengers and freight customers. The main focus for all activities in Scandlines is to create value for our customers on board the ferries as well as in the shops of Scandlines.

With more than 90,000 departures on 12 ferries, in 2016 Scandlines transported 15 million passengers, 3.2 million cars, 1 million freight units and 64,000 busses on the routes Puttgarden-Rødby, Rostock-Gedser and Helsingør-Helsingborg.

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