

Intelligent technologies make tomorrow's mobility possible

Electric compressors for compliance with the Euro 7 emission standard

The European Commission's legislative proposal on the Euro 7 emission standard is due in the first quarter of 2022 and is already casting its shadow. By providing a wide range of solutions for the mobility of tomorrow, ebm-papst is enabling OEMs and suppliers to reduce emissions today and face the new standard with confidence.

Catalytic converter heating for purified exhaust gases over the entire characteristic diagram

Vehicles with internal combustion engines emit an increased amount of exhaust gas, especially in the moments shortly after the engine starts. This is because the catalytic converter has not yet reached its full operating temperature and the exhaust gas aftertreatment is therefore not at its optimum operating point. A catalytic converter heater, equipped with compressors from ebm-papst, ensures compliance with Euro 6d and the anticipated Euro 7 emissions standard. The blower operates in a minimal installation space with equally minimal energy consumption. By heating the catalytic converter to 450 degrees Celsius, it achieves full purification power shortly after engine startup, enabling purified exhaust gases across the entire characteristic diagram.

Active crankcase ventilation, even for the smallest particles

Other parts of the vehicle (car, truck or commercial vehicle) also produce pollutants and particulate matter, which are also expected to be covered by the Euro 7 standard. The newly developed electrical active crankcase ventilation ensures maximum separation rates, even for the smallest particles in the 0.6 µm range. In passenger car applications, the electric blower used sucks the gas out of the crankcase through a passive separator. The separated liquid is recirculated and the purified gas is fed into the intake system. The blowers require up to 90% less installation space and weigh 80% less than previous solutions, and can be integrated into the cylinder head cover or another freely selectable installation location. This saves on avoidable cable routes while also reducing the complexity of the overall system. In commercial vehicles, disc separators perform the task of active crankcase ventilation by means of newly developed separation technology.

Active tank ventilation using purge pump

The active tank ventilation system provided in combustion vehicles can also ensure lower emissions thanks to electric blowers. For this purpose, the fuel vapors are fed into a tank and filtered there. Use of the purge pump from ebm-papst ensures that the required purging takes place at regular intervals as needed, with the resulting mixture delivered to the engine's intake system. Virtually all the fuel vapors produced can be routed out of the tank and into the combustion process. This reduces emissions and protects the environment.

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Image: ebm-papst presents possible solutions for the planned Euro 7 emissions standard with an electric high-revolution centrifugal blower and compressor.

Image ebm-papst
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Link <https://ebmpapst.com/automotive>

About ebm-papst

The ebm-papst Group, a family-run company headquartered in Mulfingen/Germany, is the world's leading manufacturer of fans and drives. Since the technology company was founded in 1963, it has continuously set the global industry standard with its core competences in motor technology, electronics, digitization and aerodynamics. With over 20,000 products in its portfolio, ebm-papst provides the best energy-efficient, intelligent solution for virtually every ventilation or drive-engineering task.

In fiscal year 2020/21, the "hidden champion" generated revenues of € 2.129 billion. The group employs roughly 15,000 people at 29 production sites (in Germany, China and the USA, to name but a few) and in 51 sales offices worldwide. ebm-papst sets the benchmark with their fan and drive solutions which are used in almost all industries, such as ventilation, air conditioning and refrigeration, heating, automotive, information technology, mechanical engineering, household appliances, intralogistics and medical engineering.

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