**With CleanVario, the first ionization-based mixture control from ebm-papst, the company is further expanding its portfolio of combustion systems for gas condensing technology: CleanVario is a modular system that perfectly coordinates the electronics, valve and blower and always “thinks with you” thanks to its intelligent software.**

CleanVario therefore complements the existing CleanEco product range for pneumatic mixture control with fully electronic combustion control. In combination with the RadiMix blower series and the G15/20 F01 electronic gas valve, CleanVario is used as a uniform system in gas and condensing boilers in private households from 35 kW to 150 kW.

**Perfectly coordinated: Electronics, valve and blower**

Ionization-based mixture control systems impress with their continuous clean combustion – with every gas type and changed ambient conditions. This means that they can also be used for future synthetic gases, as well as for mixing with hydrogen. In addition to reducing emissions, CleanVario provides other system advantages: The gas type can be adjusted without changing the gas valve. The valve itself can be installed in the device regardless of position, making installation safer and offering greater flexibility in boiler design. Thanks to the stepper motor integrated into the gas valve, the burner power can be regulated precisely and a high modulation range achieved.

**Smart control**

CleanVario is a GreenIntelligence solution from ebm-papst. GreenIntelligence combines economy and ecology - supplemented by digitalization. With software that logs and evaluates, CleanVaro collects operating data, operating states and disturbances from the heat source, blower and gas valve, and it also performs an evaluation of the combustion quality. The data can not only be read out and transferred for system diagnosis, CleanVario also uses it to derive warnings automatically and constantly optimize the heater’s operating mode. For example, switch-off states can be used at the next start to quickly reach optimal start conditions – GreenIntelligence.

**Modular software and hardware structure**

Thanks to its modular software and hardware structure, CleanVario can be adapted for different versions of a device platform. It ensures great reliability and robustness with the use of solid state technology. Semiconductors prevent wear and result in a small construction volume.

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# Fig. 1 The ionization-based CleanVario perfectly coordinates the electronics, valve and blower at all times and impresses with its GreenIntelligence technology.

Photo ebm-papst

# Characters approx. 2,500, including headings and sub-headings

# Tags CleanVario, mixture control, gas condensing value, RadiMix, gas, combustion control

# Link [www.ebmpapst.com/cleaneco](http://www.ebmpapst.com/cleaneco)

**About ebm-papst**

The ebm-papst Group, a family-owned company in Mulfingen, Germany, is the world market leader in fans and drives. Founded in 1963, the technology leader with its core competences motor technology, electronics and aerodynamics, has set international market standards ever since. With over 20,000 products, ebm-papst offers customized, energy-efficient and intelligent solutions for virtually any ventilation and drive technology requirements.

In fiscal year 2019/20, the hidden champion achieved a turnover of 2.188 billion euros and employed almost 15,000 people in 29 production sites (e.g. in Germany, China and the US) as well as in 48 sales locations. With their fan and drive solutions, ebm-papst defines and sets the benchmark in practically all industries, such as ventilation, air-conditioning and refrigeration, heating, automotive, IT, mechanical engineering, catering and household appliances, intralogistics and medical engineering.