

The key element for the perfect combustion mixture Gas valves for condensing boilers

In condensing boilers, the gas valve is a key component for combustion control. It ensures safe, reliable operation and is crucial for providing the optimum combustion mixture. The gas valve range from ebm-papst offers the ideal solution for both pneumatic and electronic composite systems.

Natural gas is a natural product and has a different calorific value depending on its origin. However, these sources will dry up at some stage and new fuels will come along. Therefore, finely balanced systems are required to set the optimum combustion mixture.

Key role within the network

The gas valve prevents uncontrolled escaping of gas while simultaneously ensuring an optimum air/gas mixture, thereby satisfying a key function in condensing boilers. In practice, electronic combustion control is gaining in importance due to fluctuating gas qualities. Pneumatic combustion control has also been proven as an alternative for many years. ebm-papst offers both variants as a complete solution under the names CleanEco (pneumatic) and CleanVario (electronic).

CleanEco: Valve types for all requirements

For pneumatic assemblies, the interaction of the valve with blower, venturi and control unit is very important for optimum function. That is why, since 2011, the manufacturer ebm-papst has included the E01 and D01 gas valves in its product range and has continuously expanded and refined these so that a large power range of 1.5 to 150 kW can now be supplied. The new version of the E01 valve now controls from 1.5 kW and ensures the correct ratio of gas and air fully mechanically.

CleanVario: More flexibility

In an electronic composite system, the mixture ratio is determined by electronic actuation of the gas valve. To actively determine the gas quantity to be supplied, ebm-papst uses ionization technology which makes use of the electrical conductivity of the flame. The F01 series offers valves suitable for all power classes from 1.8 to 762 kW. With CleanVario, manufacturers don't have to worry as much about different gas types and qualities. Combustion always runs optimally, efficiently and is environmentally friendly and will in future be suitable for the addition of up to 20 percent hydrogen. Certification for this is in progress.

Katrin Lindner
Trade press coordinator
Phone: +49 7938 81-7006
Katrin.Lindner@de.ebmpapst.com

Corinna Schittenhelm
Trade press coordinator
Phone: +49 7938 81-8125
Corinna.Schittenhelm@de.ebmpapst.com

January 24, 2022 - page 1 of 2

Press office contact
ebm-papst Group

phone +49 7938 81-7105
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www.ebmpapst.com

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Fig. 1: The gas valve range from ebm-papst offers solutions for pneumatic and electronic combustion systems.

Characters approx. 2,300, including headings and sub-headings
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Link <https://www.ebmpapst.com/de/en/products/valves.html>

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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Trade press coordinator
Phone: +49 7938 81-7006
Katrin.Lindner@de.ebmpapst.com

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January 24, 2022 - page 2 of 2

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