

Centrifugal blower with mass flow sensor eliminates adjustment

Air volume measurement ensures optimum combustion

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Theoretically, a defined quantity of oxygen is required in order to oxidise or, in other words, burn gas completely. Conventional atmospheric "flame burners" always require exact adjustment on site. However, temperature and air pressure fluctuations continuously change the air volume that is aspirated. A new centrifugal blower from ebm-papst Landshut with integrated mass flow sensor now offers an optimum alternative.

The new blower operates with a restrictor on the intake side, which creates a laminar fresh air flow. Part of the aligned air current, which has a homogenous speed, is routed through a bypass and over a semiconductor element. The mass flow sensor then determines the actual aspirated air mass. The fan aspirates the air that has been combined into a single air flow again and transports it to the duct leading to the oven. The measured values serve to regulate the fan exactly to the specified air volume.

The fan rotor bearings are lubricated for life and allow maintenance-free operation; the aerodynamic air conduction prevents unwanted vortex generation and unwanted operating noise in the air supply. With pipe-in-pipe systems (the fresh air is aspirated outside around the flue pipe) it is possible to bridge a chimney or flue length of up to 40 m without problem. Thanks to a built-in, industry-standard interface, the smooth-running blower can be installed at an easily accessible location in the exhaust gas system. The connection for data transmission to the burner controller may be up to 100 m.



Figure 1: Innovative, blower with integrated mass flow sensor

About ebm-papst

The ebm-papst Group is the world's leading manufacturer of fans and motors and is a pace setter for the ultra-efficient EC technology. In the last fiscal year, 2007/2008, the company achieved a turnover of 1.076 billion EUR. ebm-papst employs nearly 10,000 employees at 17 production facilities (including those in Germany, China and the USA) and 57 sales offices world-wide. Products of the global market leader are represented in many industries, including ventilation, air-conditioning and refrigeration technology, household appliances, heating engineering, in IT/telecommunications applications, as well as those in automotive and commercial vehicle engineering.

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