

# Zantingh Burner systems

Reliable energy-saving and  
environmentally friendly heating solutions

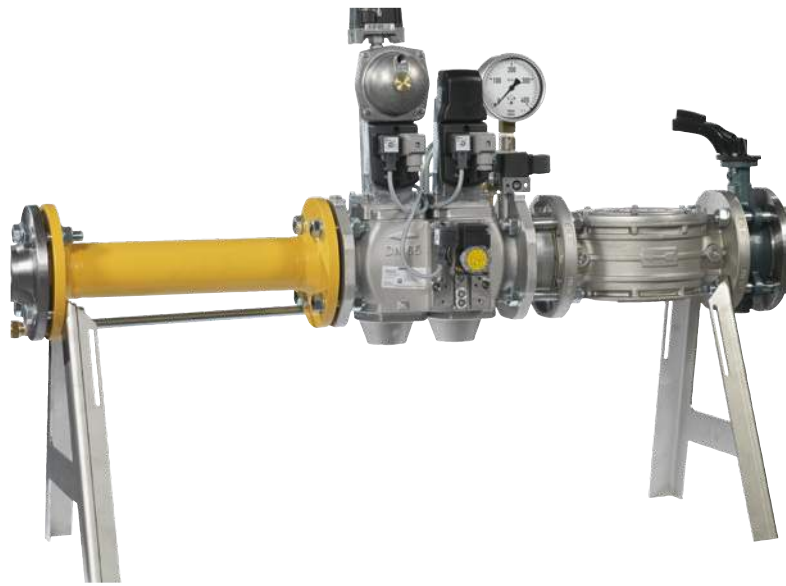




## Zantingh **burner systems**

Zantingh has manufactured gas burners since 1970. The acquired expertise is evident in our current range of burner systems. Innovation comes first! Our customers know we provide the modern high-quality burner system to meet their requirements which is both energy efficient and environmentally friendly!

All Zantingh burners have the CE marking in accordance with the Gas Appliances Regulation (GAR) and EAC (former GOST) for Russia and surrounding countries. In addition, we offer burners with panels that are built in accordance with CSA/UL guidelines for deliveries to the US and Canada.



### A suitable burner system for every capacity

We produce burners in capacities up to approx. 20 MW. All our burners are primarily for natural gas and can be modified for all other gas types with sufficient calorific value. The burners can be modified into combination burner systems. The most common combination burner uses gas and light fuel oil. The oil section can be either for emergency operation (2 x 24 hours maximum) or for continuous use. Other combinations (natural gas/propane or biogas/oil) are also possible.

### Standard version is quite complete

A Zantingh burner is always delivered as a complete package, which includes a combustion air fan, gas train, switch panel and boiler control equipment.

The gas train ensures the burner is supplied with the correct amount of gas at the correct pressure throughout the entire load range. For a gas pressure higher than 300 mbar, the system can be delivered complete with gas pressure regulator and shut-off and blow-off options.

The Zantingh **TR burner** is a monoblock burner system for boilers with a nominal capacity of 2.3 MW at most. The burner housing and combustion air fan in this model are directly linked and the switch panel and gas train are supplied separately.

A Zantingh **RKB series** burner can be supplied up to approx. 20 MW boiler power capacity. For burners up to approx. 6 MW the burner

housing has an integrated switch panel (does not count for Canada and the USA). The electrical installation on-site is, therefore, very simple. Burners with a higher capacity have a separate switch panel.

The Zantingh burner panel includes all the burner's control and safety equipment. A variety of options can be added to all our burners. This further improves the performance and communication with your climate computer or building management system.

The gas train and combustion air fan for this burner series are also supplied separately. The fan is equipped, as standard, with a frequency control. This keeps the energy consumption and the noise level low. The savings start immediately!





### **Low NOx: less emission and more yield**

Efficient combustion and less emission is what modern burner technology is all about. Our experience and know-how, combined with continuous research during the last 30 years, have resulted in modern, innovative "in-furnace" low NOx technology on the basis of internal flue gas recirculation. All Zantingh burners are currently provided with an advanced low NOx combustion head as standard which more than meet legal requirements in the European EN 676 – NOx class 3 standard.

Our gas burners are usually used in the greenhouse horticultural sector for boilers with a low load with spacious furnaces (furnace load < 1 MW/m<sup>3</sup>), which results in far lower emissions than the legal maximum values. Since the flue gases are often used for CO<sub>2</sub> fertilisation in the greenhouse horticultural sector, the low NOx emission is a great benefit and a CO-free combustion is an absolute 'must'!



### **Electronic burner management: reliable control, that's for sure**

All Zantingh gas burners have a fully automatic and electronic modulating control as standard and, therefore, the burner load connects seamlessly to the demand for heat resulting in the highest efficiency possible.

The heart of the system is the Siemens LMV5x burner management system (burner capacity > 6 MW) that is included in the burner's switch panel. The burner control box (start procedure and flame safety), gas leak detection, controlling the burner load and correct fuel-air ratio are integrated in this advanced controller. A Siemens LMV2x is added to lower power capacity burners (up to 6 MW) to ensure a separate PID regulator supports burner load regulation.

The ratio between the fuel and combustion air is programmed in the burner management system using a fuel curve. Several curves can be programmed for one burner, making the combination of gas and oil possible. Programming the curves is fast and simple and is fully repetition accurate.

The burner management system can be driven in two ways: by using a temperature or pressure sensor in the boiler or externally through a climate computer or building management system.

### **Full-colour touchscreen**

The burner management system has an LCD display on the burner's switch panel. System users can retrieve all information, but cannot change settings that are important with regard to safety. As an option, the display can be fully graphic and can be linked to a full-colour touchscreen on which the system status can be read at a glance.

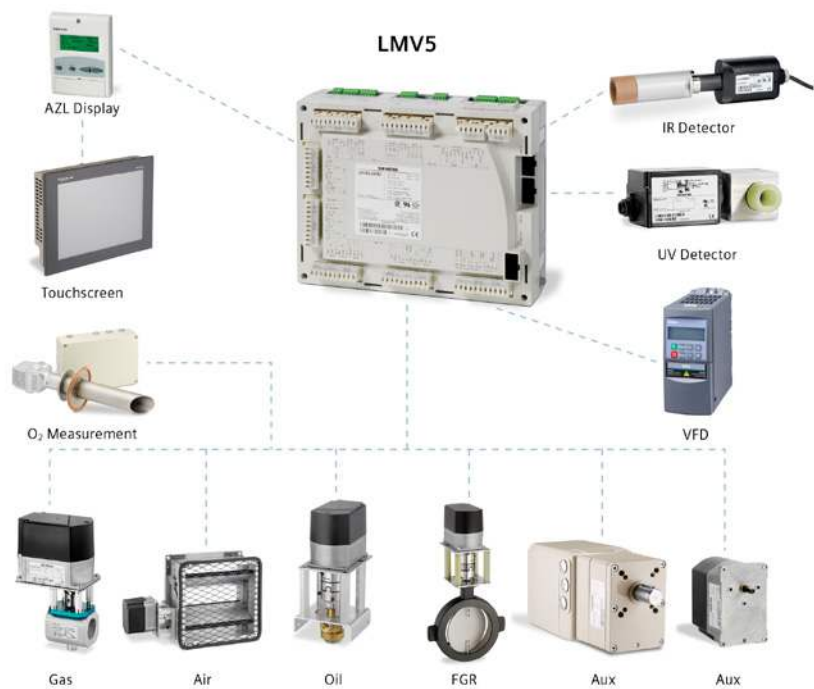




## The burner management system in a nut shell

**Maximum control because of exceptional accuracy and, therefore, reliable and safe:**

- Integrated modular PID load regulator for accurate control and maximum efficiency.
- Drives 6 servomotors in 900 potential positions to an accuracy of up to 0.1 degree.
- Digital feedback for full repetition accuracy and a safe operation within the set conditions.
- 15 programmable points on every fuel curve for high flexibility.



### Better burner performance:

- Automatic gas leak test at every burner start, which means that starting without pre-purging is possible and energy loss is restricted.
- Response time in case of flame malfunction can be programmed to prevent frequent breakdowns.
- Frequency controlled drive for efficient operation.
- Suitable for programming of several fuel curves.

### User-friendly interface that can be programmed and used quickly and easily:

- LCD display with a simple menu structure for smooth operation and, optionally, a full-colour touchscreen to read the burner status even faster.
- More than 500 text error messages for fast and accurate problem resolution.
- Passwords at various levels to protect specific settings.
- (Measured) values can be read remotely using a computer or building management system.

Worldwide approval and technical support provided by the manufacturer.



# ZANTINGH



Zantingh  
reliability

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