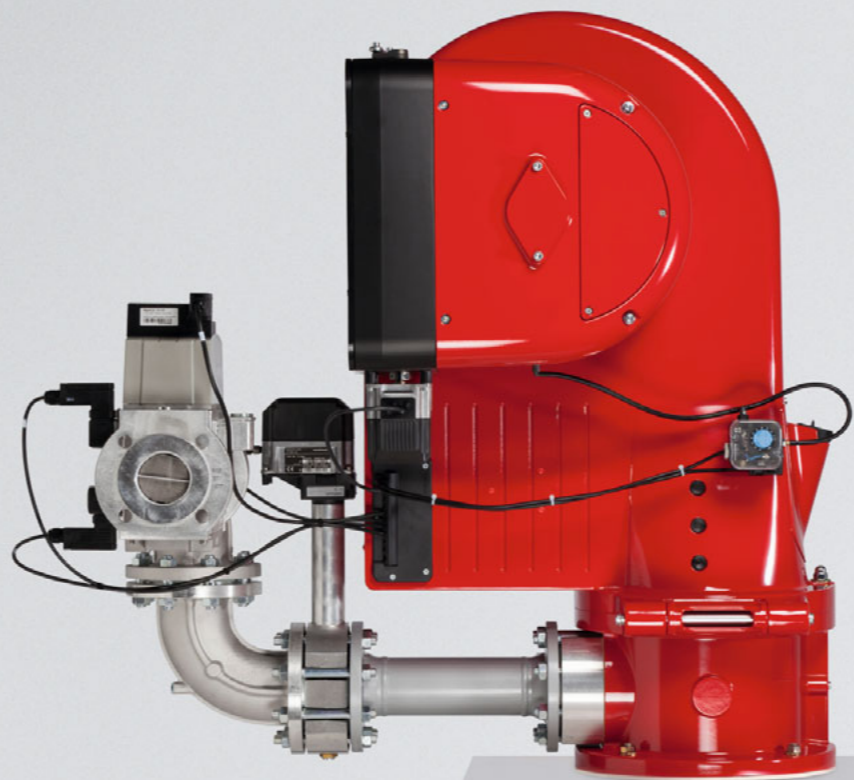


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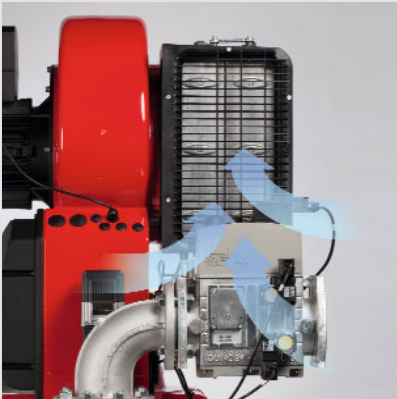
Information on vertically firing burners



Vertically firing burners

For steam, thermal-fluid and process plant (55–10 700 kW)

Vertically firing burners for any application



The gas valve assembly is ideally positioned and benefits from additional cooling, thanks to its proximity to the air inlet



The ABE control and display unit should ideally be located in a control station close to the burner



An additional solenoid valve enables the W-FM to also test the air pressure switch on burners with a continuous-run fan or post-purge facility, ensuring maximal safety

Vertical heat generators can often place additional demands on burner equipment. Weishaupt offers a special vertical-firing execution for these applications.

Reliable operation

Safety-critical components, such as the gas butterfly valve, actuator, gas valve assembly, and gas pressure switches, are securely located away from high-temperature zones to ensure their reliable operation.

This single measure alone results in a considerable increase in operational readiness.

Simple installation

The burner's gas valve train is supplied pre-assembled from the gas butterfly valve to the double gas valve assembly, ensuring the various components will be correctly located at the burner's air inlet. The ready-to-connect cables will likewise be precisely the right length.

A further benefit of the vertical execution is that the burner can be rotated about the heat generator's vertical axis to any desired angle. Consequently, the burner can be easily aligned to any gas supply handing.

Burner cooling with post-purge or continuous-run fan

The vertical arrangement of the heat generator, and the associated backflow of heat, mean that improved cooling is necessary to protect the burner when it is idle. A longer post-purge time, or continuous-run fan, can effectively prevent the mixing assembly from overheating. The required run-on times and air-damper position can be set via the combustion manager

The burners can be equipped with a mains contactor or an integrated star-delta combination

The combustion manager can be mounted on the burner or in a control panel as required

Optimal placement of the actuators ensures their precise and reliable operation

The side-mounted air inlet provides ambient air circulation and component cooling

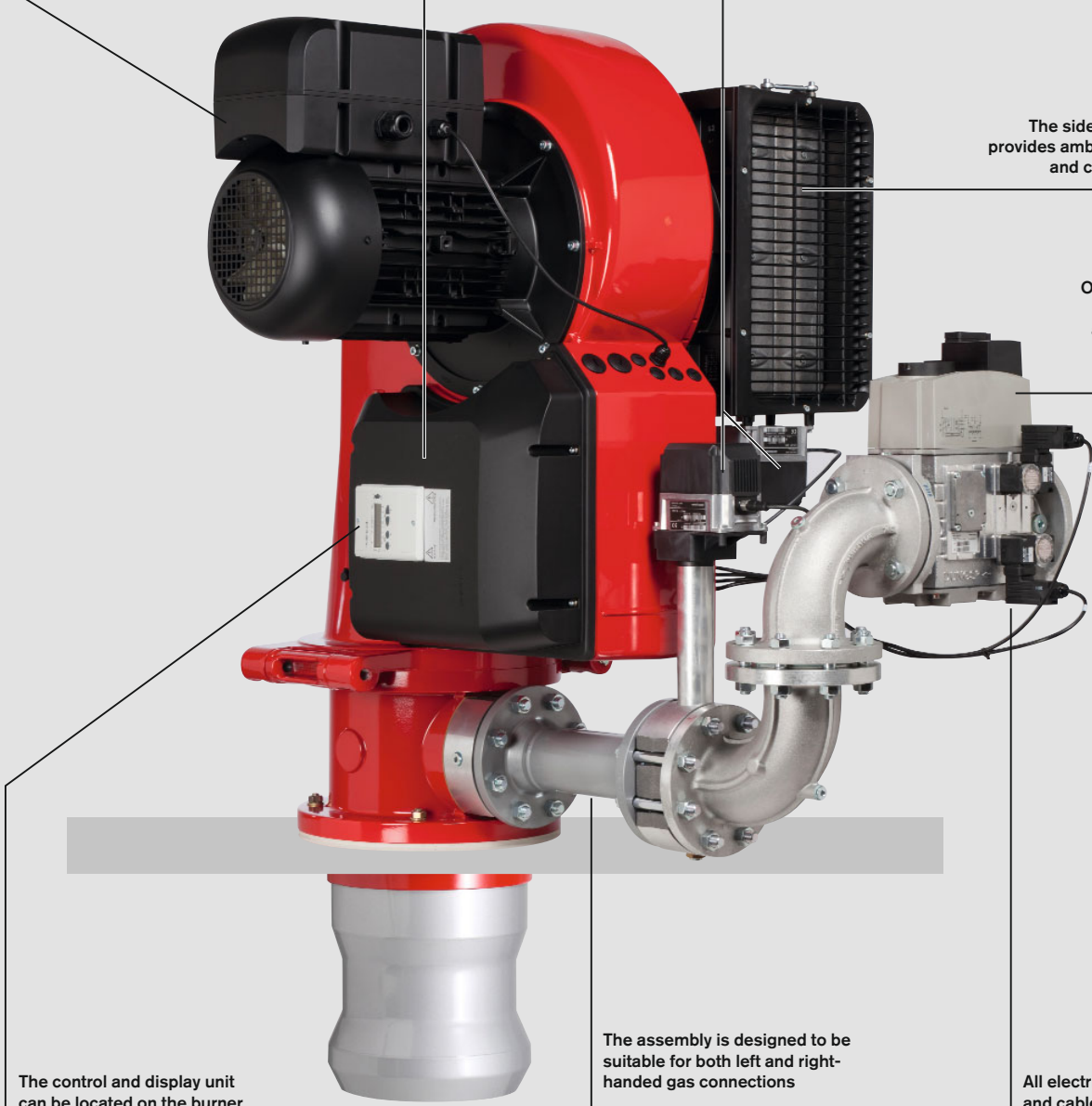
Optimal positioning of the gas valve assembly ensures safe and reliable operation

The control and display unit can be located on the burner or, ideally, in a control station close to the burner

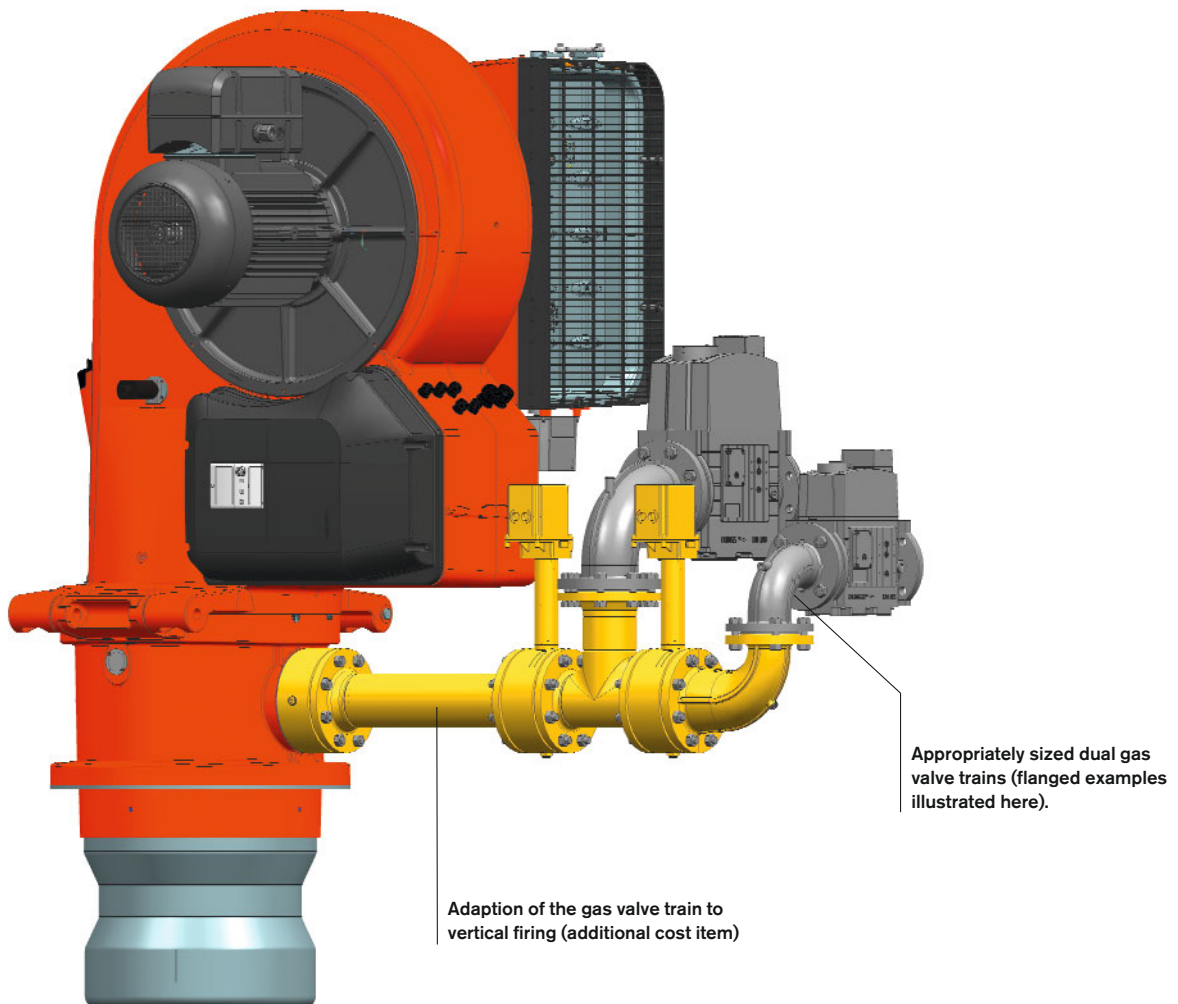
The assembly is designed to be suitable for both left and right-handed gas connections

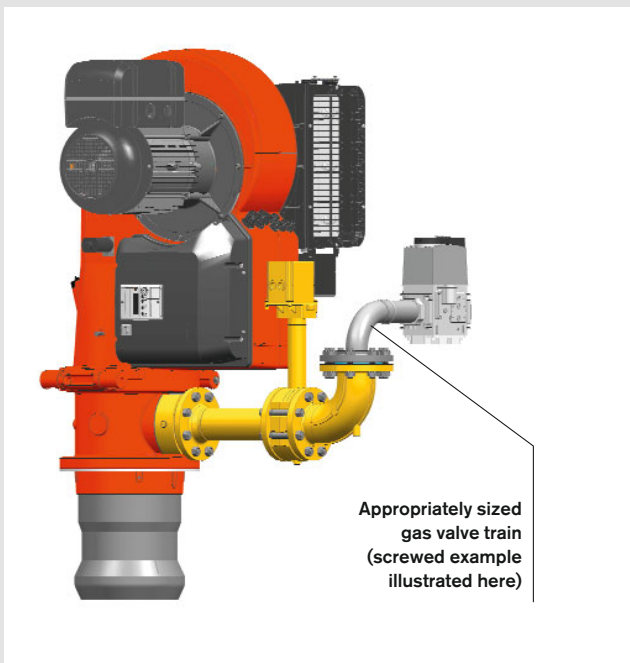
Gas supply handing is determined by the orientation of the burner

All electrical components and cables are sited in secure, servicing-friendly positions



Vertically firing WM-series burners: Gas and dual-gas valve train arrangements



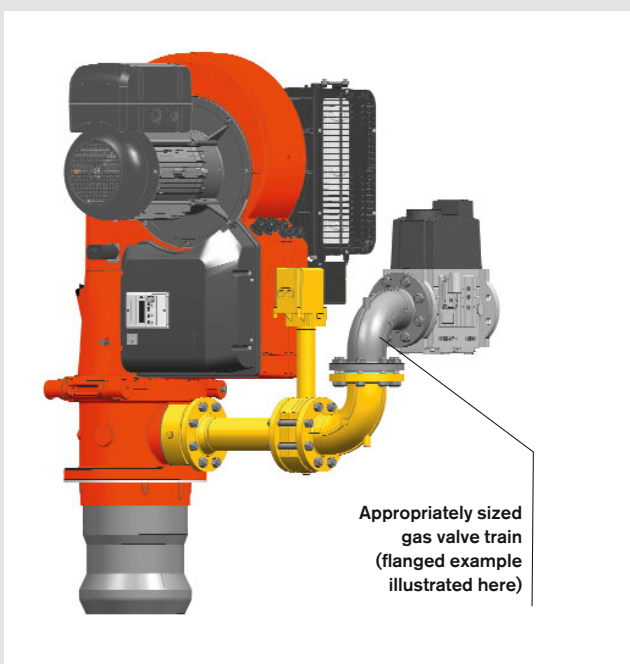


Vertically firing Weishaupt burners¹⁾
Additional equipment to standard burner

Burner series	Offset gas butterfly valve and double gas valve assembly Order No.
monarch® WM-G(L) 10	250 032 96
monarch® WM-G(L) 20	250 032 95
monarch® WM-G(L) 30	250 032 93
monarch® WM-G(L) 50	250 034 32

Burner series	Solenoid valve for air pressure switch test with post-purge or continuous-run fan Order No.
monarch® WM-G(L) 10	250 030 21
monarch® WM-G(L) 20	250 030 21
monarch® WM-G(L) 30	250 030 21
monarch® WM-G(L) 50	250 030 21

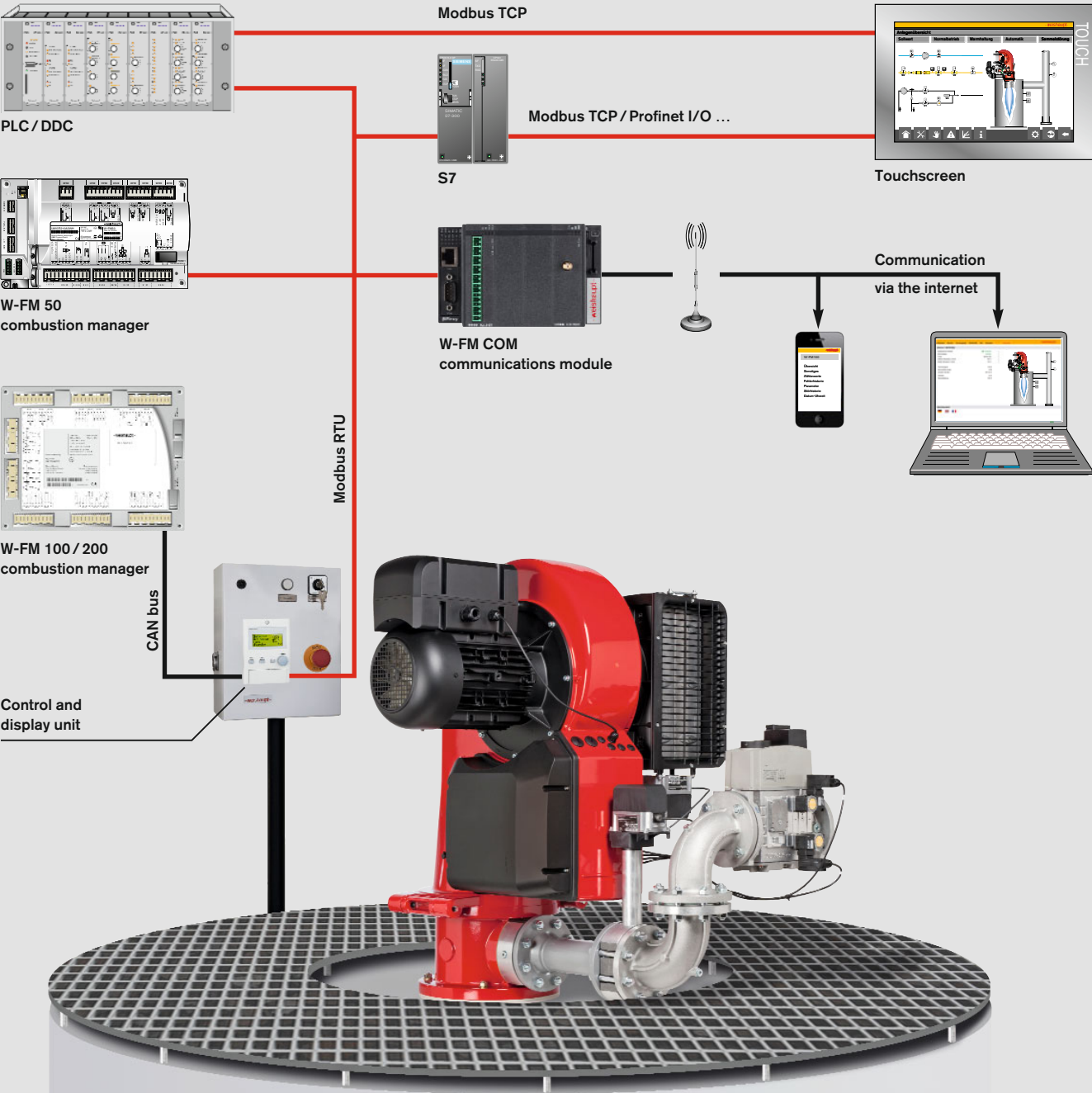
¹⁾ The burners are labelled with a CE Mark, the relevant CE-PIN per 2009/142/EC, DIN-CERTCO, and the identification number of the notified body.



This brochure on vertically firing WM-series burners is a supplement to the product brochures for the WM 10 to WM 50 monarch® burners.

The burner and valve train selection charts and special equipment lists in those brochures apply equally to vertically firing burners.

Flexible communications: Compatible with building management systems



The digital combustion manager is the basis of communications with other superordinate systems. This is generally achieved using the eBus or Modbus protocols.

All the usual burner and boiler functions can be monitored and controlled through a direct connection with a building management system.

A graphical HMI is available as an option to provide a user-friendly overview of the boiler. The touchscreen display allows numerous functions to be adjusted and monitored, such as system parameters

and setpoints of individual and multi-boiler plant and ancillary equipment.

The controls specialists, Neuberger, who are a part of the Weishaupt Group, are able to design and implement complex control solutions.

Further optional components enable connections to be made to systems using commonplace industrial standards, such as Profibus-DP, LON-Bus, and Modbus RTU, and network protocols such as Profinet I/O, Modbus TCP, BacNet, etc.

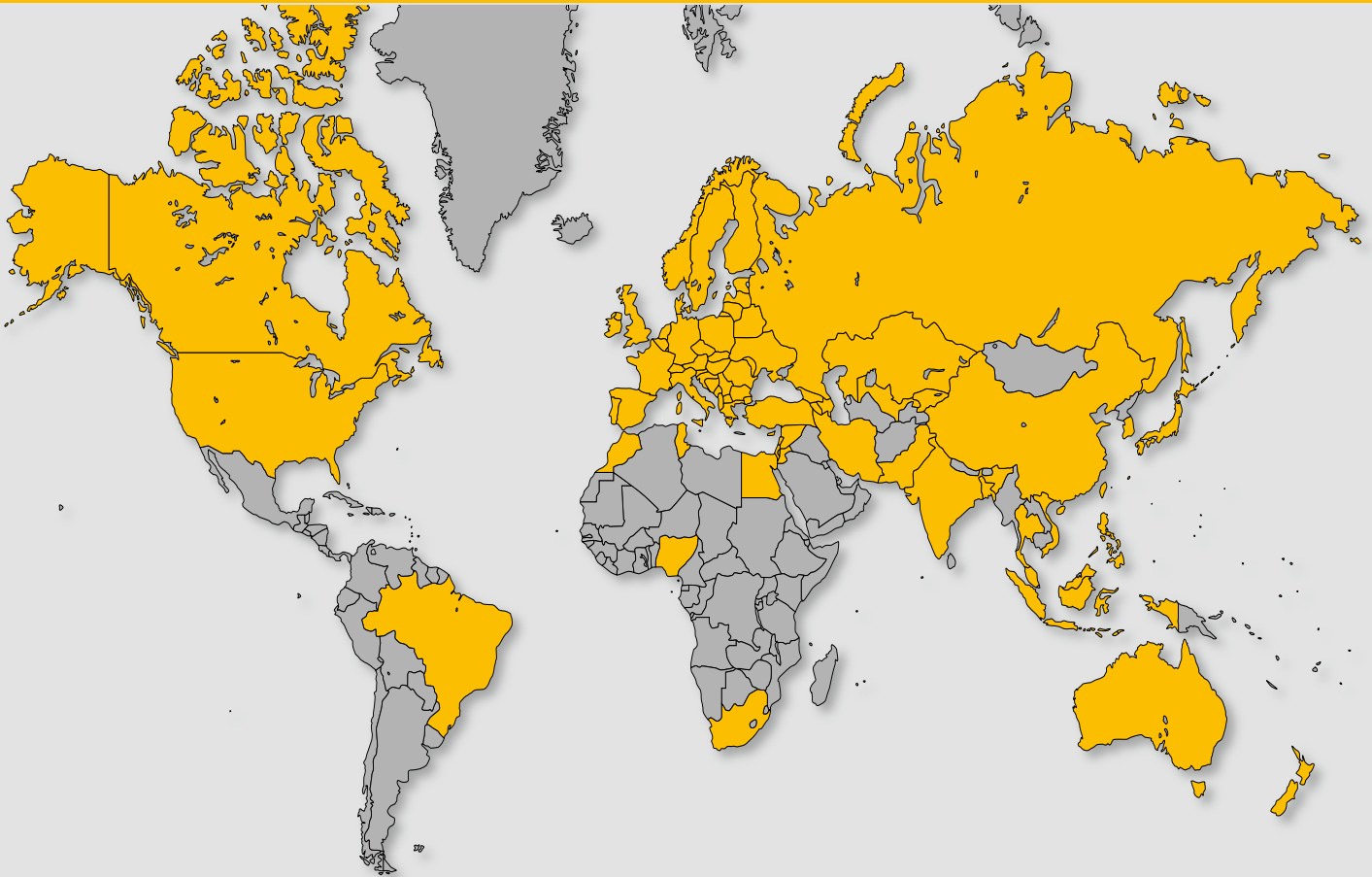
A recent addition to Weishaupt's portfolio is the W-FM COM communications module. It transmits data securely over the internet so that it can be called up and displayed in a browser window on a computer, tablet, or smartphone, facilitating accurate service planning for example. Even away from the internet you can be kept up to date with the operation of the burner: In the event of a safety shutdown or other predefined trigger, an SMS text message is sent automatically.

Overview of digital control variants
(Equipment must comply with local regulations)

Burner types	Combustion manager		ABE			Features							Options	
	Burner-mounted	In an external control panel	Burner-mounted	In an external control station (ABE within 20 m of the burner)	In an external control station / panel (ABE within 100 m of the burner)	Post-purge time adjustable via W-FM (Factory presets in parentheses) Recommended > 15 min	A separate timer relay is required to achieve longer post-purge times	Direct start ¹⁾ set via the W-FM (Factory preset: normal start)	Suitable for intermittent firing	Suitable for continuous firing	4–20 mA input signal for load control	Data transfer via Modbus interface	Gas valve proving	Variable speed drive with externally located frequency converter
WM-G 10–50	W-FM50 W-FM100 W-FM200	● ● ●	● ● ●	● ● ●	● ● ●	0.2 s–108 min (0.2 s) 0.2 s–1092 h (5.0 s) 0.2 s–1092 h (5.0 s)		● ● ●	● ● ●	● ○ ●	● ● ●	● ● ●	○ ○ ○	○ ○ ○
WM-L 10–50	W-FM50 W-FM100 W-FM200	● ● ●	● ● ●	● ● ●	● ● ●	0.2 s–108 min (0.2 s) 0.2 s–1092 h (5.0 s) 0.2 s–1092 h (5.0 s)		● ● ●	● ● ●	● ○ ●	● ● ●	● ● ●	○ ○ ○	○ ○ ○
WM-GL 10–50	W-FM54 W-FM100 W-FM200	● ● ●	● ● ●	● ● ●	● ● ●	0.2 s–108 min (0.2 s) 0.2 s–1092 h (5.0 s) 0.2 s–1092 h (5.0 s)		● ● ●	● ● ●	● ○ ●	● ● ●	● ● ●	○ ○ ○	○ ○ ○

ABE = Control and display unit ● Standard ● Recommended ○ Optional

¹⁾ In the event of a call for heat during the post-purge time, the burner restarts without a motor shutdown



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