Weishaupt gas burner WG5
New range, new price

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The concept:
A price advantage thanks to new technology

The Weishaupt W5 model is an all new development from the Weishaupt Research and Development Institute for Gas and Oil Burners. Our aim was the realization of an especially competitive, advanced and efficient burner series that utilized technology from larger burners.

Both gas and oil burners are of very similar construction and share many components. They offer all of the latest combustion technology equipment and meet all safety standards, as one would expect from Weishaupt burners.

Economy through digital technology
The best technology, functional design and proven quality have always been the hallmarks of Weishaupt products. With the WG5 gas burner, we are introducing a new burner that continues this tradition in an exemplary fashion. It fulfils the demand for economical and environmentally friendly operation combined with a low purchase cost.

Fully automatic operation
The burners function fully automatically. They reliably cater for multifarious heat exchangers for heating and hot water.

Application
The WG5 model is suited for a diverse range of heat exchangers as well as, for example, air heaters.

Operational safety and reliability.
Proven technology makes the new gas burners safe and reliable. The individual components as well as the completed product are comprehensively tested, guaranteeing safe operation for many years.

LowNO_x version as standard
An outstanding detail of the low emissions LN burners is the newly developed mixing head. The specific way in which combustion air and gas are introduced leads to intensive flue gas recirculation.

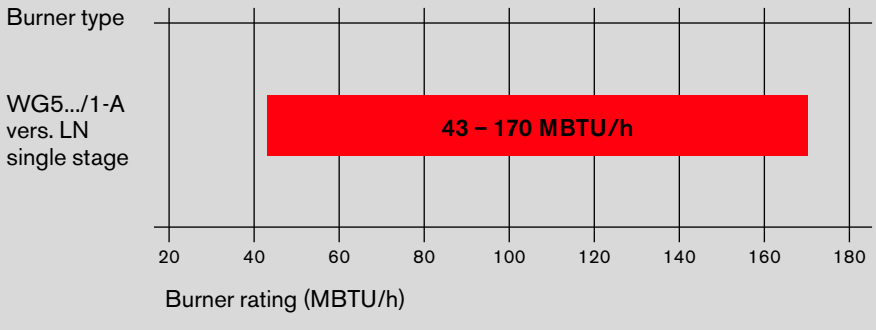
Various tests and results from the field have shown that the NO_x limit of ≤ 40 ppm (calculated as NO_2), which is required in many countries for natural gas, can be improved upon as long as certain combustion chamber conditions are adhered to. With corresponding combustion chamber conditions, figures of ≤ 58 ppm can be achieved with LPG.

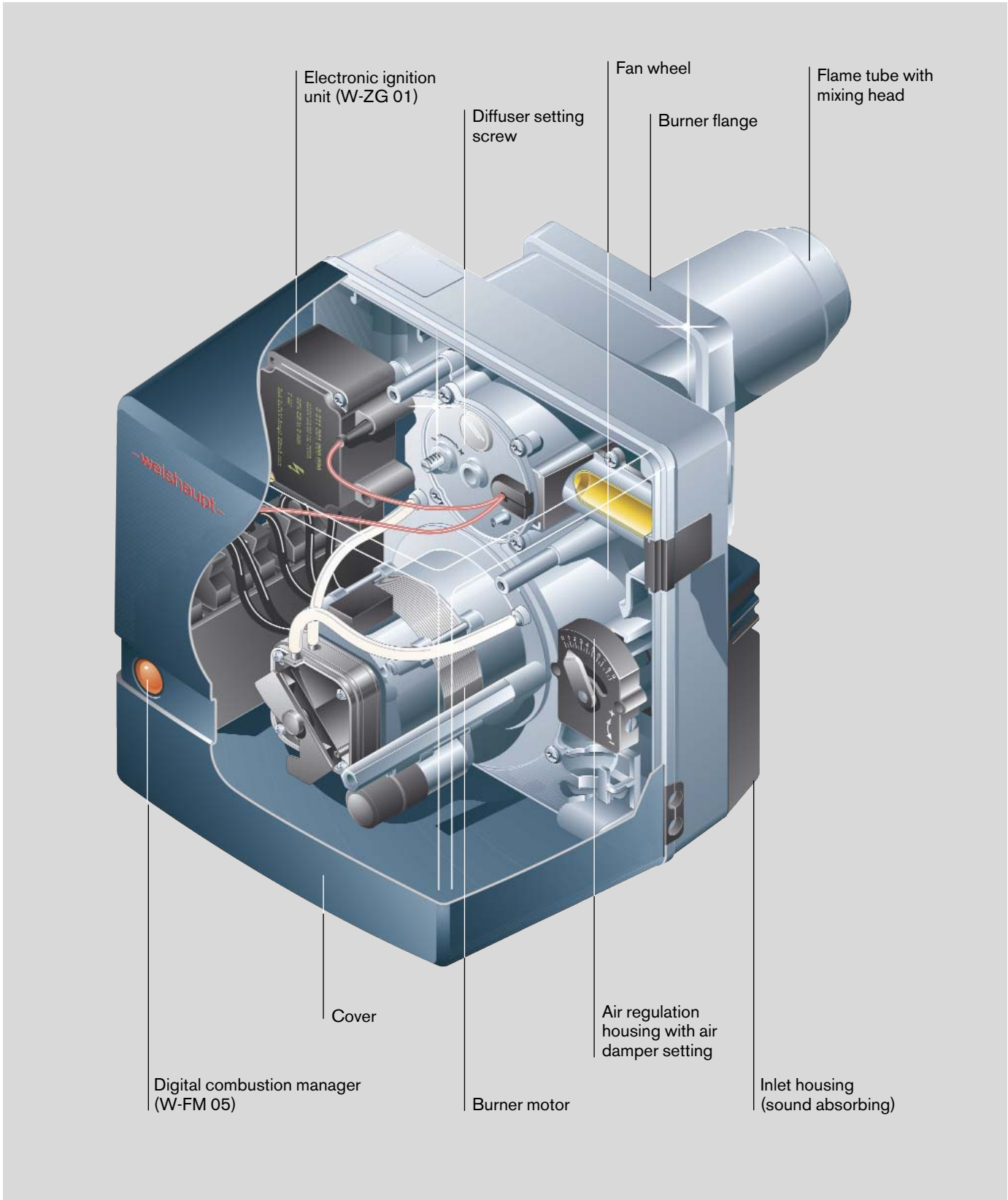
Test procedures
The WG5 gas burners comply with European and North American applicable standards including:
- UL std 795 - 1999
- CGA std 3.4-1973
- CAN/CSA std C22.2 No.3-1988
- CGA std 3.0-1968

Fuels
The following fuels can be fired: Natural Gas as well as Liquid Petroleum Gas.

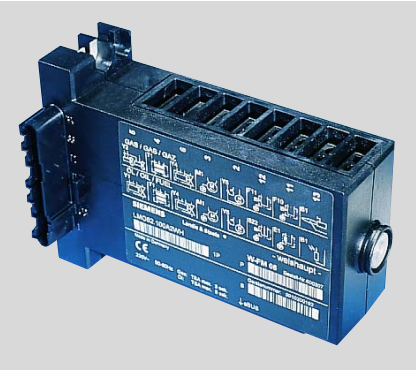
In standard version, the burners are suitable only for indoor operation.

Burner operating range




Electronic ignition unit (W-ZG 01)
Diffuser setting screw
Fan wheel
Burner flange
Flame tube with mixing head
Cover
Air regulation housing with air damper setting
Digital combustion manager (W-FM 05)
Burner motor
Inlet housing (sound absorbing)

Digital combustion management

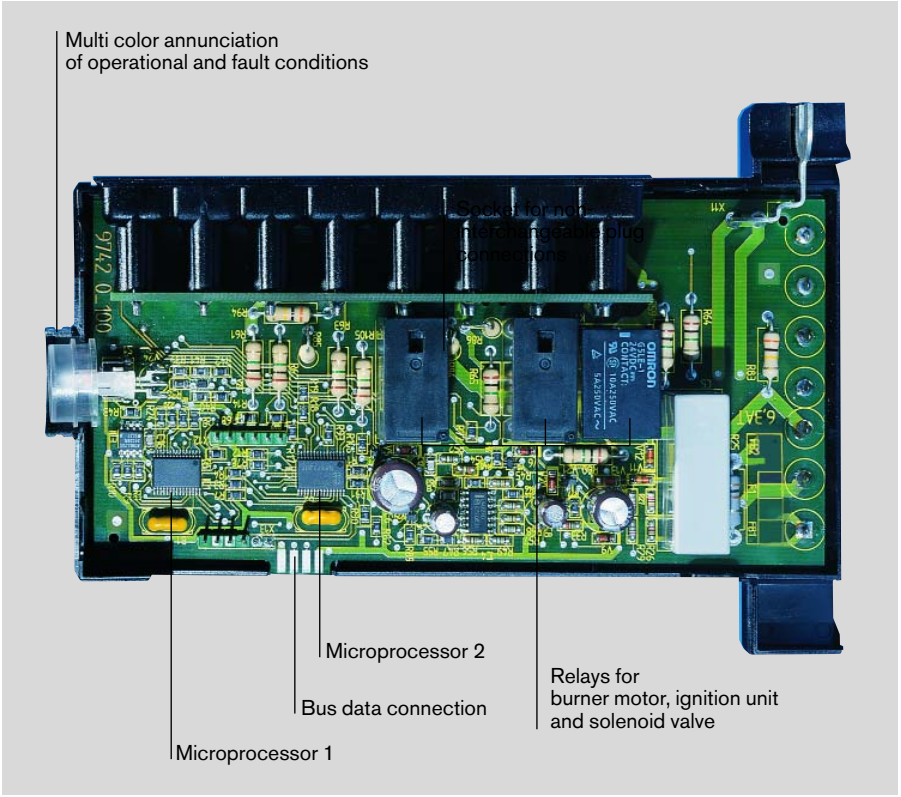


W-FM 05 combustion manager

Digital combustion manager
A central innovation is the microprocessor controlled W-FM 05 combustion manager. It independently monitors and controls all of the burner's functions. Digital combustion management makes communication with other systems possible. The Bus connection allows the engineer to monitor the sequence of operations and diagnose any fault conditions.

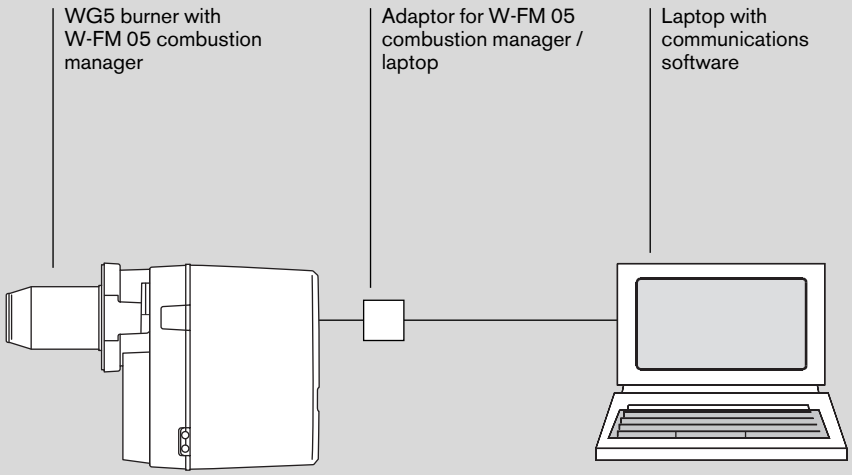
The main details:

- Microprocessor controlled combustion manager for single stage burners
- Identical for both oil and gas burners
- Oil burner equipped with photocell sensor, gas burner fitted with ionization monitoring
- 7 pole connection plug integrated into burner housing
- Electrical remote reset
- Bus connection
- Prepurge time can be set by computer via the Bus
- Safety via two microprocessors (reciprocal monitoring)
- Multi color LED to indicate operational stage and fault conditions
- Suitable for hot water plant, including continuous operation (After 24 h operation a necessary short shutdown takes place automatically)
- Suitable for air heaters



W-FM 05 combustion manager, opened

Possible Bus connection



- Burner lockout enquiry
- Error memory enquiry (remote diagnosis)
- Burner hours run enquiry
- Number of start ups enquiry
- Sequence of operations monitoring
- Adjustable pre-purge time
- Adaptor and communications software available optionally
- Fault reporting for burner service via self dialling modem

Further important details

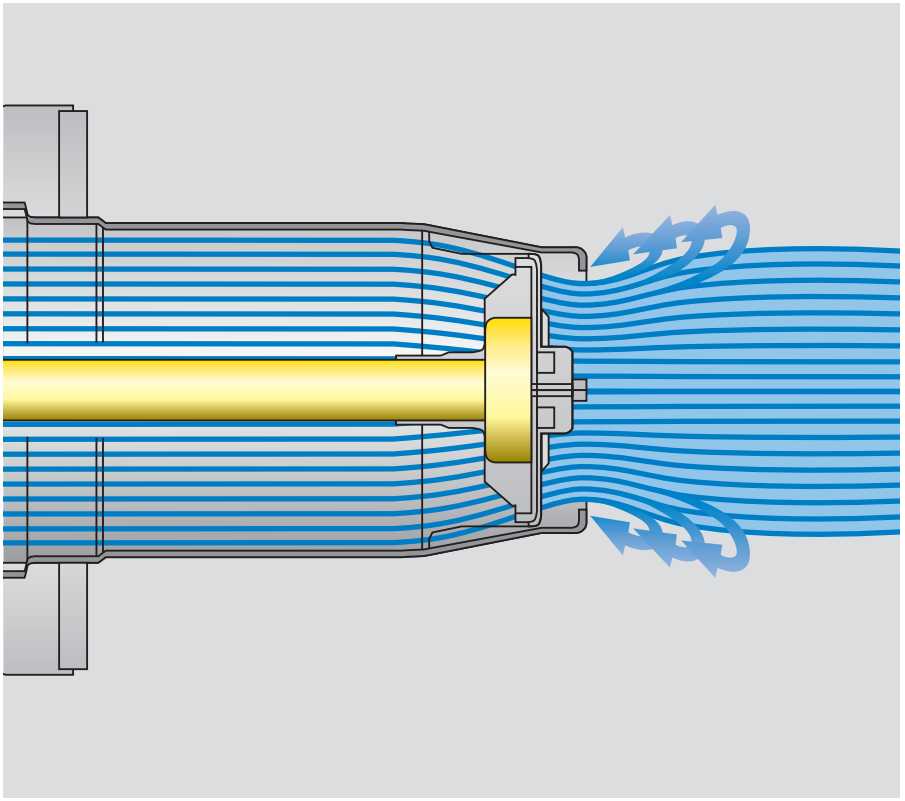
Low emission levels
Not only do Weishaupt Low NO_x burners improve on the requirements for NO_x emissions from new equipment, they also return excelent results with all their other test figures. A sure sign of its well balanced construction.

The specific way in which combustion air and gas are introduced leads to intensive flue gas recirculation.

Compact construction
All of the burner's components are brought together into a compact space.

The fuel and air regulating components are clearly laid out and easily accessible. Upon removing the cover plate, the mixing head is also easily accessible. An easily removable cover protects all the components and electrics.

Noteworthy points: The radial fan, the sound absorbing air inlet housing, the air damper for suction side air regulation (servomotor available as an option) and the microprocessor controlled combustion manager. The new electronic ignition unit W-ZG 01, which has replaced the ignition transformer on all W series Weishaupt burners, provides reliable ignition.



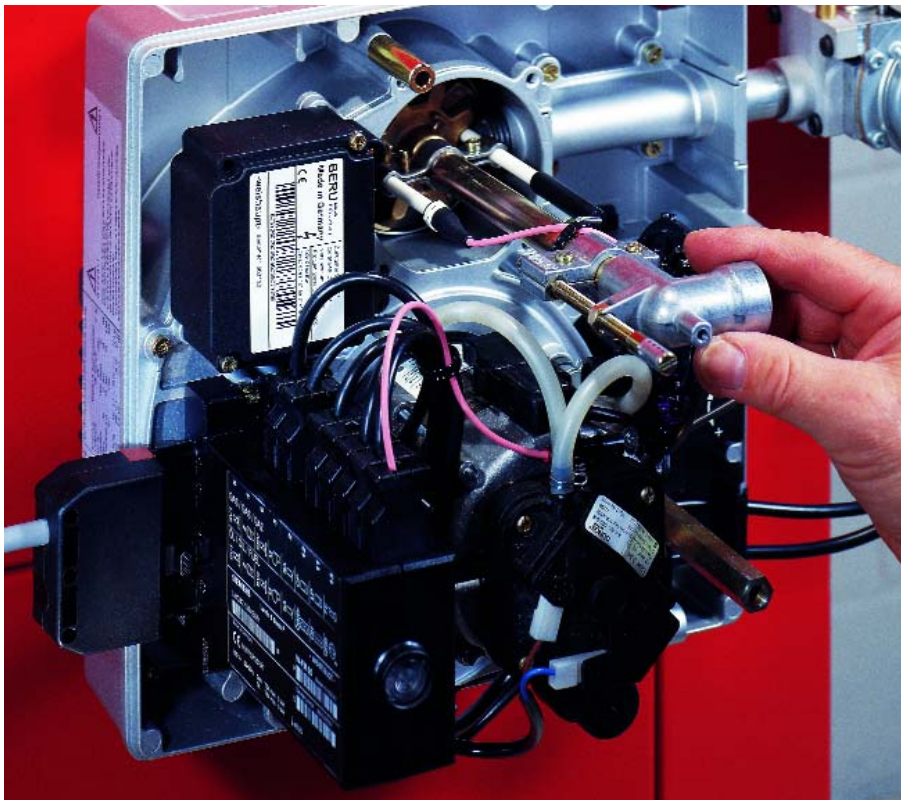
Mixing assembly for burner type WG5N/1-A LN

A Low NO_x flame

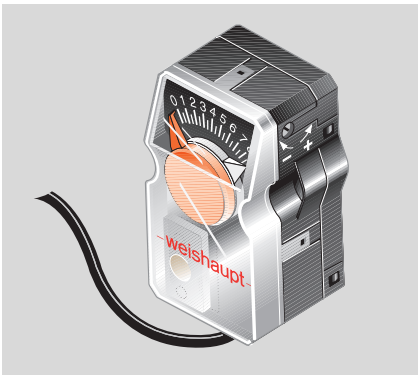
Installation and servicing: Easier and faster than ever before

Further details
The new WG5 burner generation is notable for its ease of installation and servicing. Even the visual impression after removing the burner cover is convincing. All components are clearly arranged, the electrical connections are obvious and non-interchangeable. This state of the art technology is typical of Weishaupt products.

Access to the components during servicing is equally simple. All parts, and especially the mixing head, are easily accessible.

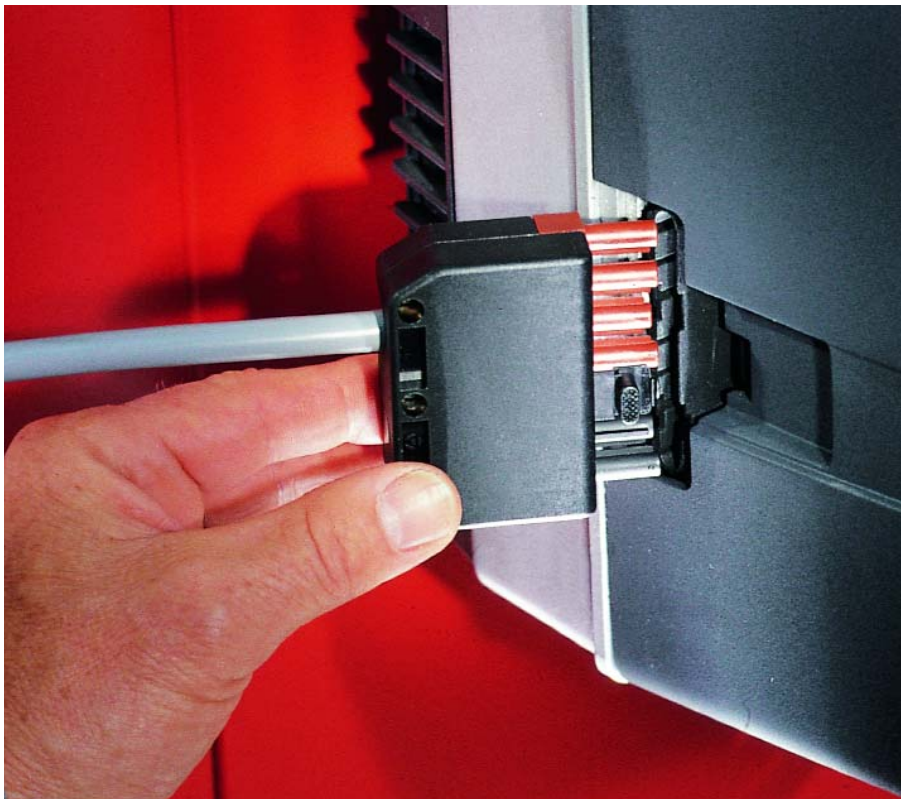


Easy to remove mixing head



Servomotor for the air damper

Version with fully automatic air damper control by electromagnetic servomotor
This version, available as an option, fully closes the air damper on burner shutdown.



Electrical connection via a multi-pole plug from the boiler (available as an option)

Technical data

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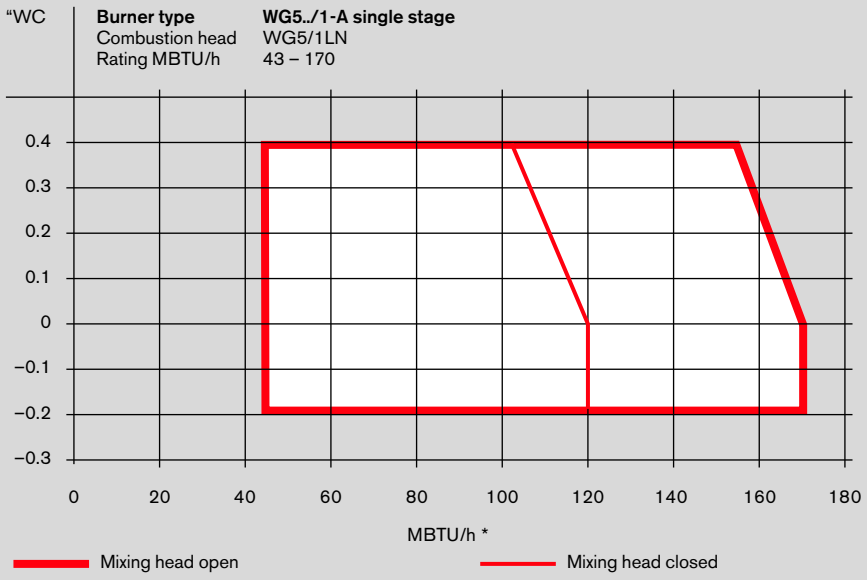
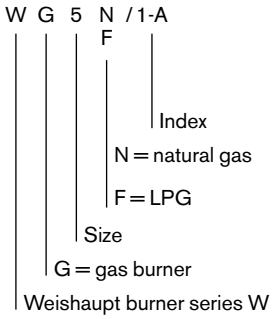
Capacity graph: WG5../1-A single stage gas burner



The ratings depending on combustion chamber pressure are limit values, which have been measured on idealized test flame tubes.

All ratings data given relate to sea level. Depending on installation altitude, a ratings reduction of approx. 1% per 328 ft above sea level must be taken into account.

Explanation of type designation



Gasburner Type	Version	Gas train size	Connection pressure in "WC before isolation cock	Regulation	Order No.	Rating MBTU/h *	Combustion head
Natural Gas, calorific value = 1,000 BTU/cu-ft							
WG 5 N/1-A	LN	1/2"	8 – 20	Single-stage	232 050 11	43 – 170	WG 5/1LN
WG 5 N/1-A	LN, with servomotor	1/2"	8 – 20	Single-stage	232 050 10	43 – 170	WG 5/1LN
Liquid Petroleum Gas, calorific value = 2,500 BTU/cu-ft							
WG 5 F/1-A	LN	1/2"	8 – 20	Single-stage	233 050 11	43 – 170	WG 5/1LN

Optional equipment	WG5N/1-A Order No.	WG5F/1-A. Order No.
110V 60Hz version	240 003 60	240 003 60
Gas train for connection pressure > 20 to 118"WC		
4" (100 mm) head extension	240 003 59	240 003 62
W-St 02/1 servomotor for fully automatic air damper control	–	240 003 21
1 3/16" (30 mm) spacer ring with gasket and screws	240 003 22	240 003 22
Plug St 18/7, 7 pole for connection to boiler	240 003 24	240 003 24
Hours counter, fitted	240 003 61	240 003 61
Solenoid valve for air pressure switch test on cont. running fan and post purge	240 003 63	240 003 63

Technical equipment	Combustion manager	Motor	Servomotor	Fan	Ignition unit	Combi-Valve assembly	Approx. weight	Flame sensor
WG 5/1-A	W-FM 05 110V	ECK 02/F – 2/1 110 V, 60 Hz 50 W, Cap. 8 µF	W-St 02/1 (optional)	Type S 1 60 Hz 120 x 43	W-ZG 01	W-MF 055 R 1/2"	26.5 lbs	Ionization

* The burner ratings are based on lower calorific value

Dimensions, scope of delivery
Valve train layout

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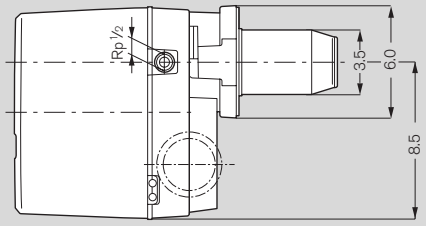
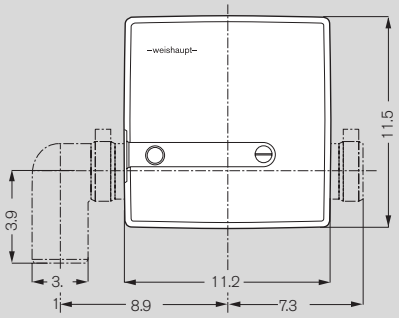
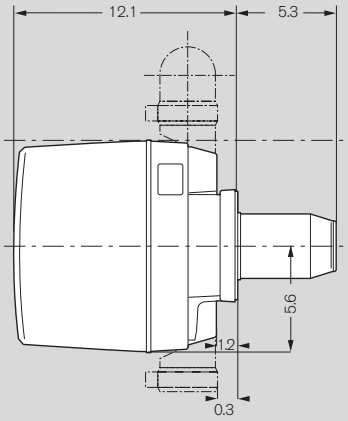
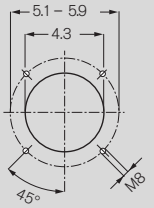
Burner dimensions (Inches)



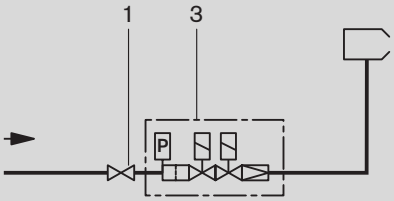




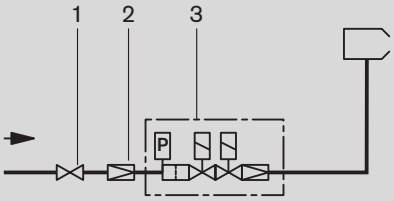
Burner plate drilling dimensions



Gas train layout
Supply pressure up to 20”WC



Gas train layout
Supply pressure 20 to 118”WC



Legend

1 Isolation cock
2 FRS gas regulator
3 Combi-Valve assembly comprising:
- 2 main gas valves
- Integrated gas regulator
- Coarse filter
- Gas pressure switch

Included in delivery, WG5 burner

- Burner with sound absorbing inlet housing
- Housing with burner motor and fan wheel
- Flange, fixing screws and gasket
- Air regulation housing with air damper setting - No servomotor (servomotor for air damper control available as an option)
- LN (LowNO_x) mixing head with diffuser and ignition and ionization electrodes
- Combustion head
- W-ZG 01 electronic ignition unit with shielded ignition line
- Sensor line (ionization) with test point facility
- Microprocessor controlled W-FM 05 combustion manager with integrated plug console and 7 pole connection socket, Bus connection
- Cover
- Complete gas train
- For further detailed information please refer to the technical documentation provided with the burner

Weishaupt Corporation
6280 Danville Road
Mississauga, ON L5T 2H7, Canada
Tel: (905) 564 0946
Fax: (905) 564 0949
Email: sales@weishaupt-corp.com
www.weishaupt-corp.com

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