–weishaupt–

product

Information on compact gas burners

Digital Combustion Technology

Weishaupt gas burners WG10 to WG40

A burning passion for quality

Ultra-modern research and production methods and rigourous quality control ensures the quality for which Weishaupt is reknowned.

Our motivation is technological progress, which has been driving us for more than 50 years to set new standards for the combustion industry.

Weishaupt's own research and development centre constantly works on both new developments and optimization of existing products.

It is our goal and our responsibility to go above and beyond current legislative requirements in developing combustion systems which generate less emissions, save more and more energy, and in doing so combining ecology and economy in a practical manner.

Furthermore not only do we invest in research and technology but also we only use the best materials and utilize the most advance manufacturing tools.

It has been proven over a million times in the field that heating specialists and customers hold Weishaupt burners to be reliable, long lasting, environmentally friendly and technologically advanced. A fact also documented by numerous design and innovation prizes.

Over 600 burners are manufactured daily at our ultra-modern production facilities in Schwendi. Every single burner is subjected to mechanical and electrical function test. The combination of technology with an effective quality control system ensures Weishaupt's renowned reputation for quality.

A new burner is always an investment in the future. Cost needs to be well balanced against use, but the final deciding factors for long term success are quality, technology and safety. Choosing Weishaupt burners is therefore a safe investment in the future.

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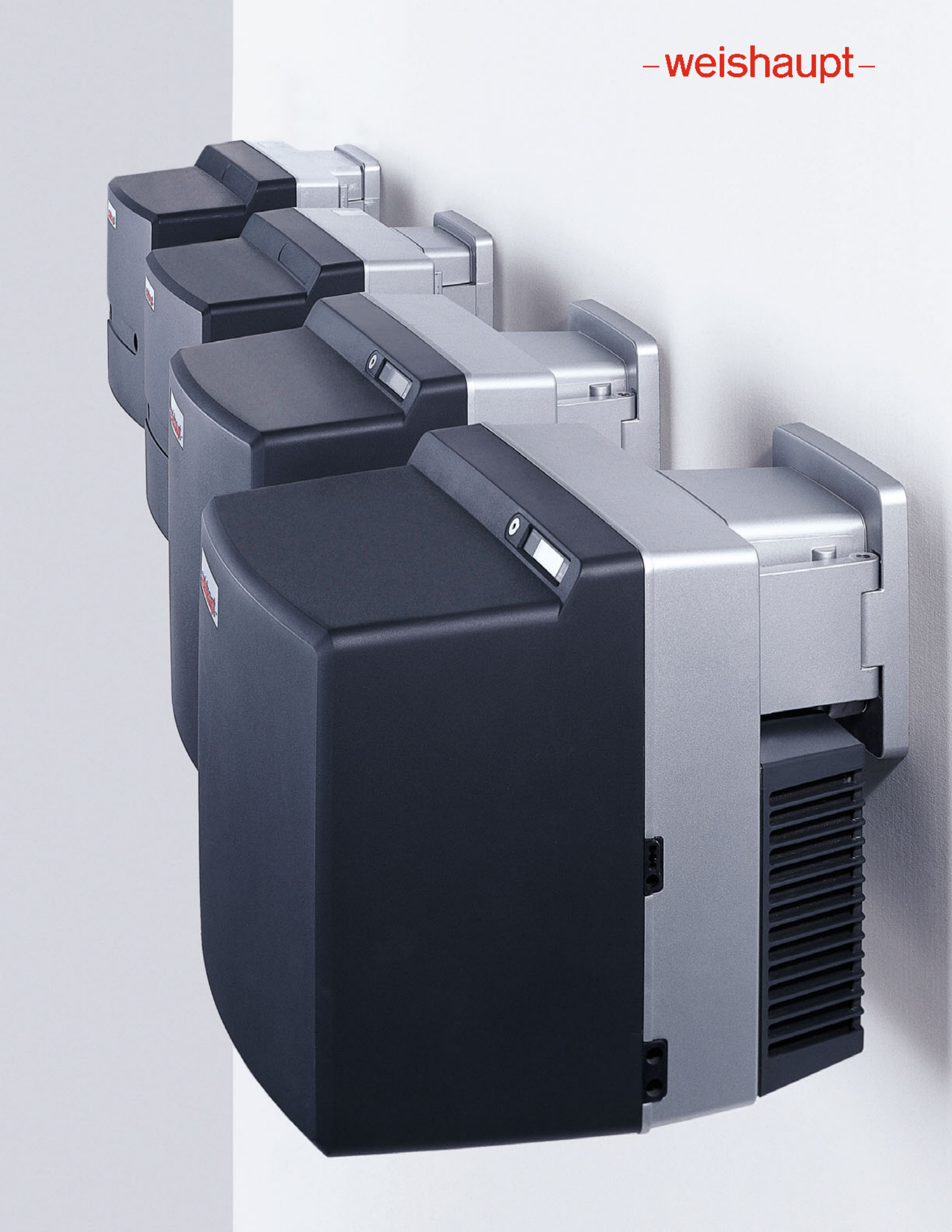
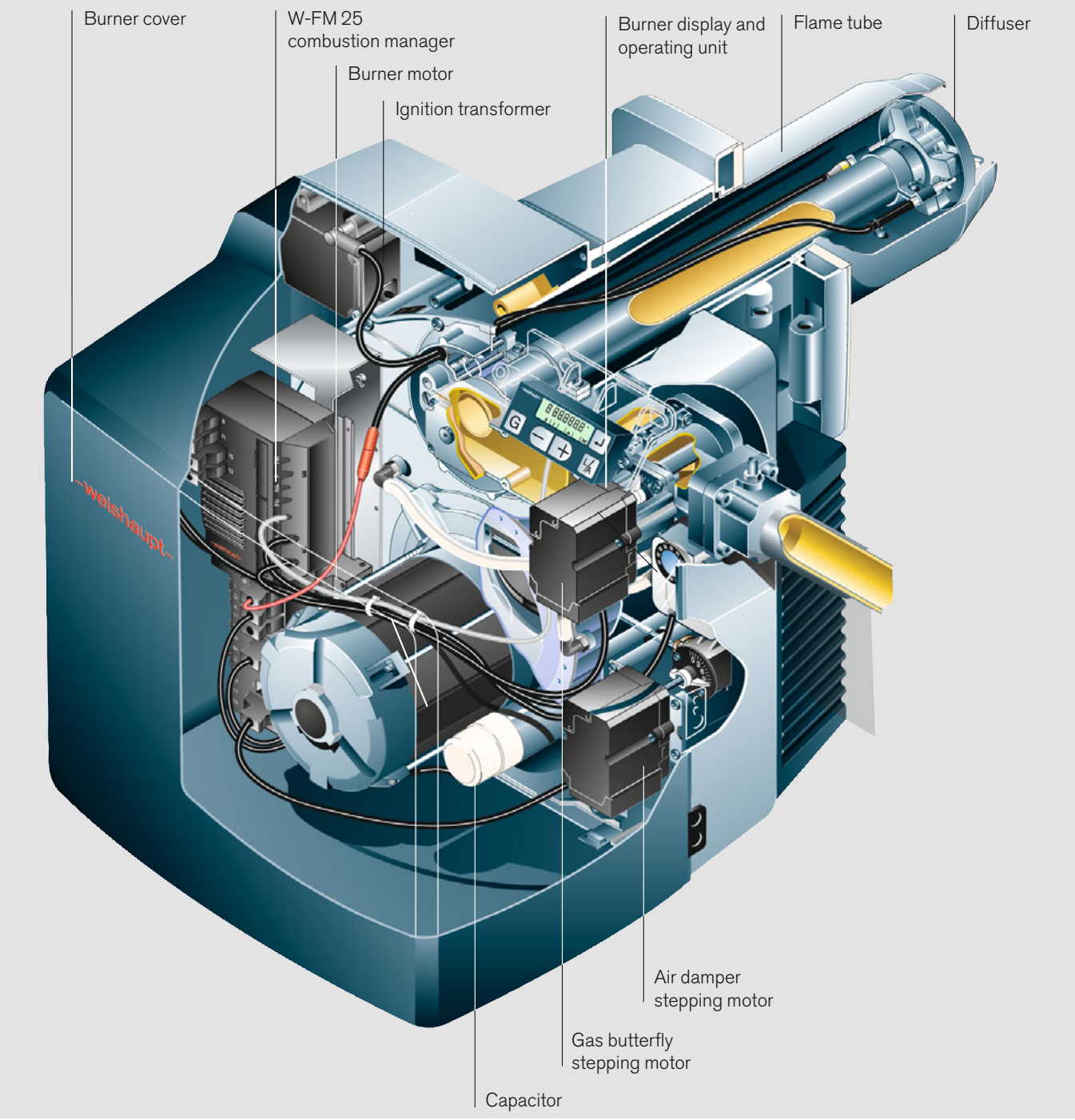
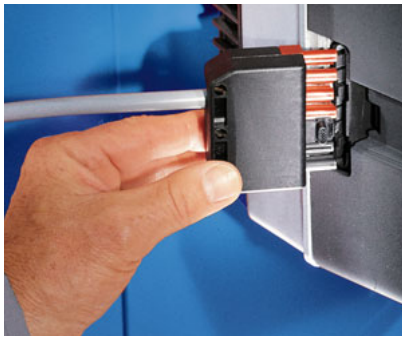


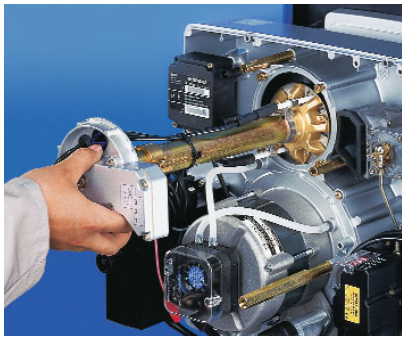


Example: WG40 with W-FM25 combustion manager

A hallmark of practical combustion technology



Coded plugs for safe electrical connection



All components are easily accessible

Simple commissioning and diagnosis

A safe investment in the future
Reliable and economical: The milionfold sucess of the Weishaupt compact burners is the result of orienting without compromise towards quality and the customer. The technology has been constantly developed and improved over decades.

The most advanced production methods and stringent quality checks of all products ensure Weishaupt's reputation for quality. You are making a safe investment in the future.

Large capacity range
The broad capacity range of 85 to up to approx. 1,900 MBTU/h makes the burners suitable for very wide range of heat exchangers.

Electronic ignition
The W-ZG 01 ignition unit used on all Weishaupt W burners is particularly energy efficient and extremely reliable.

Digital combustion management for safe and ease of use
Weishaupt is a pioneer in this field. Digital combustion management offers greater ease of use and simple servicing, even greater reliability in operation, and, last but not least, an extremely attractive price/performance ratio. Furthermore, this intelligent technology enables the burner to be integrated with complex automation systems.

Gas train assembly
The gas train assembly incorporates the following components/functions:
- Gas pressure regulator to ensure constant supply pressure
- 2 safety gas valves
- Gas pressure switch(es)

Outstanding service
Weishaupt has an extensive sales and sevice network worldwide. Customer service is available around the clock. Optimal in-house training at Weishaupt ensures our service engineers are of the highest calibre.

Proven quality
All W series burners are in compliance with most North American and European applicable standards including:
- UL std 795
- CGA std 3.4
- EN 676

The right size Weishaupt burner for every application

Digital combustion management: safe and easy to use

All Weishaupt W series burners are equipped with digital combustion managers as standard, which control and monitor all burner functions. The result: Weishaupt burners are easy to use, precise and efficient.

The digital combustion managers also offer the possibility of communicating with other systems via bus connection. This enables remote monitoring and operation of the burner.

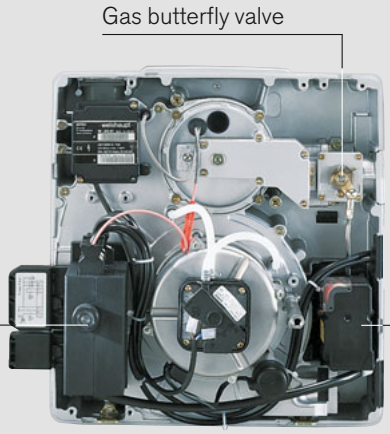
The key points:

- Utilization of identical units for gas and oil burners simplifies commissioning and reduces the number of required spare parts.
- Non-interchangeable plug connections ensure correct electrical connection of all components
- Electrical remote reset is possible
- Safety is ensured with the use of two microprocessors (reciprocal monitoring)
- Multi-coloured LED lamp to indicate burner operational status and fault conditions (WG 10, WG 20 versions Z-LN)
- LCD display for commissioning and operating. The burner is setup directly via the operating and display unit (WG 10 – WG40 version ZM-LN)
- Suitable for continuous operation of hot water boiler (controlled shutdown and restart every 24 hours)
- Suitable for steam boilers and hot air generators

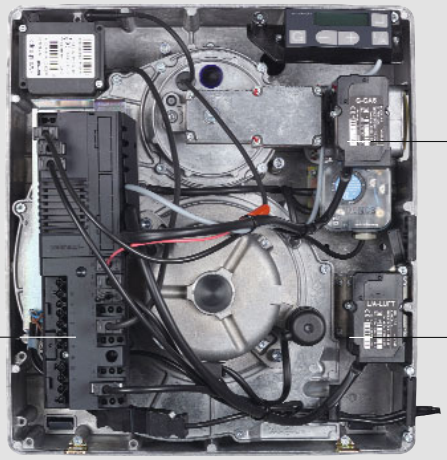
Digital combustion management General overview		**W-FM 10**	**W-FM 25**	**W-FM 25 PO**
Combustion manager for intermittent operation		●	●	●
Combustion manager for continuous operation				●
Flame sensor		Ion	Ion	Ion
Actuators in electronic compound	Air and gas		●	●
Actuator with stepping motor	Air	●		
Removable control unit (max. distance)			10ft (3 m)	10ft (3 m)
Bus connection		eBUS	Modbus/Profibus	Modbus/Profibus
Available on burner models		WG 10 WG 20 single-stage with actuator	WG 10–WG 40 modulating	WG 10–WG 40 modulating

The right mode of operation for every heating application

Gas burners
Single and two stage
With mechanical fuel air ratio control

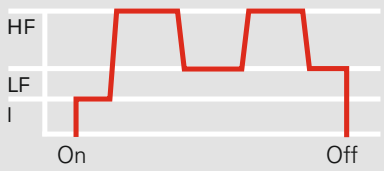


Gas burners
Sliding two stage / modulating
With electronic fuel air ratio control



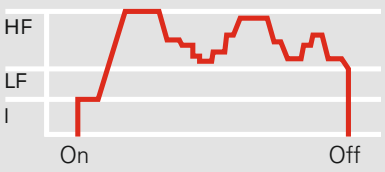
Mode of operation
HF = Highfire
LF = Lowfire
I = Ignition

Two stage with servomotor



Sliding two stage

Modulating



Trustworthy technology

Even the visual impression after removing the burner cover is convincing. All components are clearly arranged, the electrical connections are obvious and non-interchangeable. The technology makes a good impression because it is typical Weishaupt.

Compact construction
The WG burners' compact construction means they can be easily installed by one person. Commissioning costs have been reduced to a minimum.

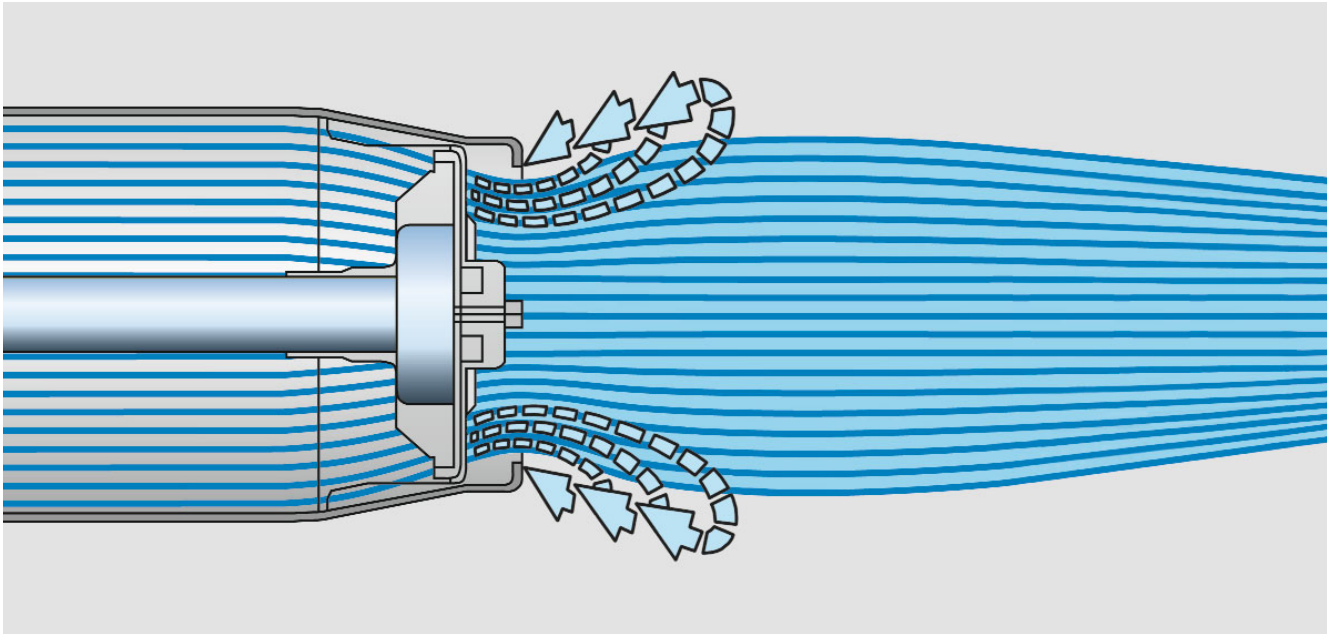
Low NO_x version
All WG burners are available in Low NO_x version as standard. A specially designed mixing head produces an intensive internal flue gas recirculation, resulting in exemplary emission levels.

Sound attenuated air inlet
The transverse fan is sound attenuated on the suction side. These burners therefore operate particularly quiet.

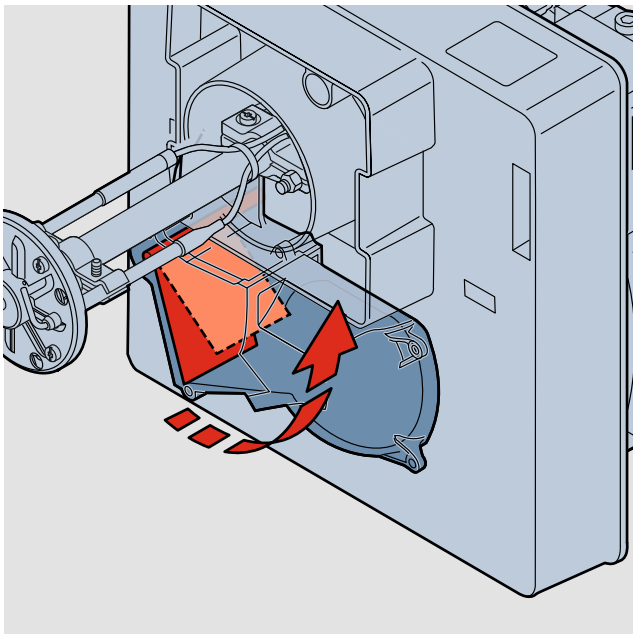
Electronically controlled air damper
The electronically controlled air damper closes at burner shutdown to prevent the cooling-down of the combustion chamber.

Common platform
The common platform principle used with W burners simplifies the provision and storage of spare parts.

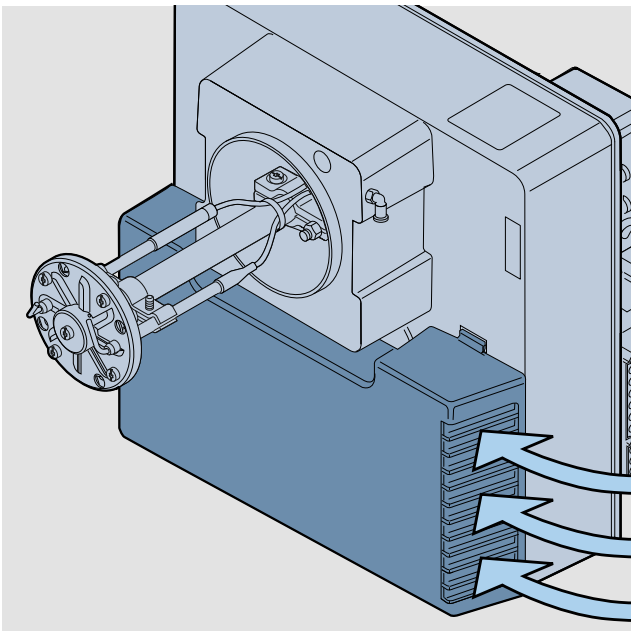
Diagnosis via laptop as an option
A special software package and connection cables are available for communication with the combustion manager. Combustion optimization and fault analysis can thus be carried out easily via a laptop computer.



Recirculation reduces emissions



Electronically controlled air damper



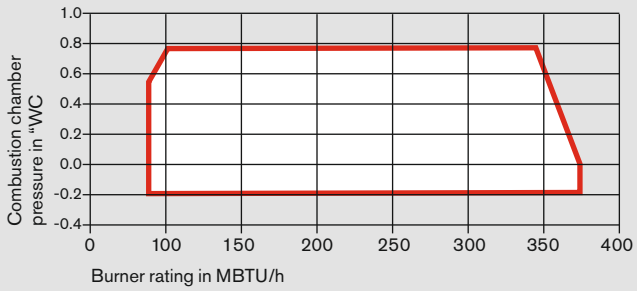
Sound-attenuated air inlet

Model overview

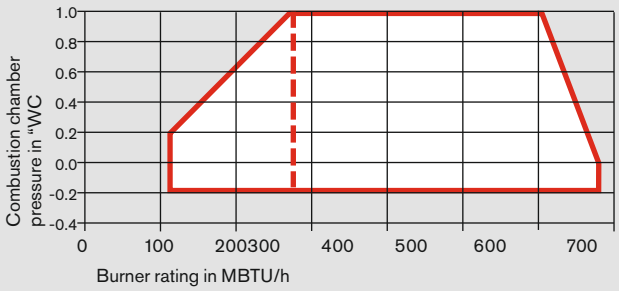
Burner model	Version	Mode of operation	Combustion Manager	Rating MBTU/h	Part No.
WG 10					
Natural gas					
WG 10 N/1-D	Z-LN	single or two stage	W-FM10	85 – 375	232 123 24
WG 10 N/1-D	ZM-LN	sliding two stage or modulating	W-FM25	85 – 375	232 126 24
Propane					
WG 10 F/1-D	Z-LN	single or two stage	W-FM10	85 – 375	233 113 24
WG 10 F/1-D	ZM-LN	sliding two stage or modulating	W-FM25	85 – 375	233 126 24
WG 20					
Natural Gas					
WG 20 N/1-C	Z-LN	single or two stage	W-FM10	120 – 682	232 213 34
WG 20 N/1-C	ZM-LN	sliding two stage or modulating	W-FM25	120 – 682	232 216 34
Propane					
WG 20 F/1-C	Z-LN	single or two stage	W-FM10	120 – 682	233 213 24
WG 20 F/1-C	ZM-LN	sliding two stage or modulating	W-FM25	120 – 682	233 216 24
WG 30					
Natural Gas					
WG 30N/1-C	ZM-LN	sliding two stage or modulating	W-FM25	140 – 1,195	232 326 21
Propane					
WG 30F/1-C	ZM-LN	sliding two stage or modulating	W-FM25	205 – 1,195	233 326 21
WG 40					
Natural Gas					
WG 40N/1-A	ZM-LN	sliding two stage or modulating	W-FM25	190 – 1,875	232 416 21
Propane					
WG 40F/1-A	ZM-LN	sliding two stage or modulating	W-FM25	275 – 1,875	233 416 21

Burner capacities in relation to combustion chamber resistance

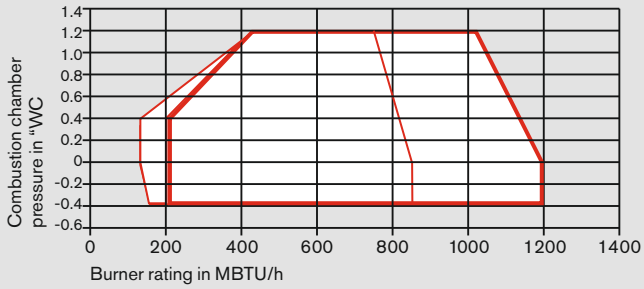
Burner model **WG10…/1-D**
Rating 85 – 375 MBTU/h



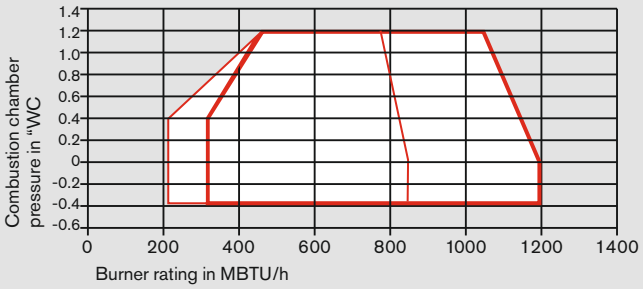
Burner model **WG20…/1-C**
Rating 120 – 682 MBTU/h



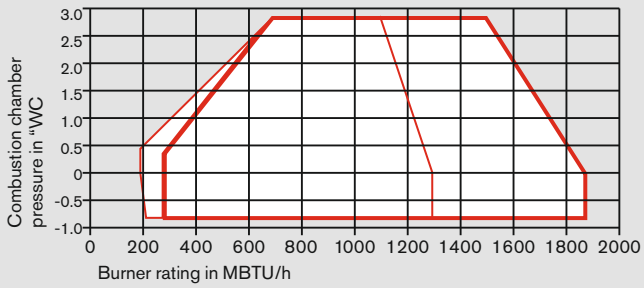
Burner model **WG30N/1-C, Vers. ZM-LN**
Rating 140 – 1,195 MBTU/h



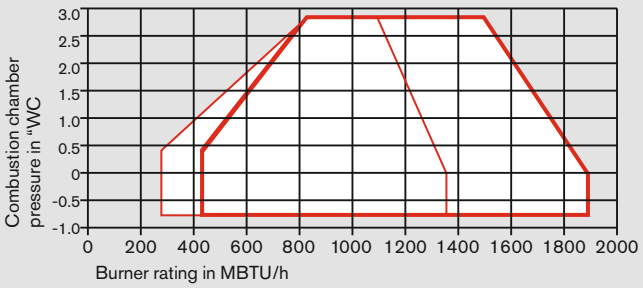
Burner model **WG30F/1-C, Vers. ZM-LN**
Rating 205 – 1,195 MBTU/h



Burner model **WG40N/1-A, Vers. ZM-LN**
Rating 190 – 1,875 MBTU/h

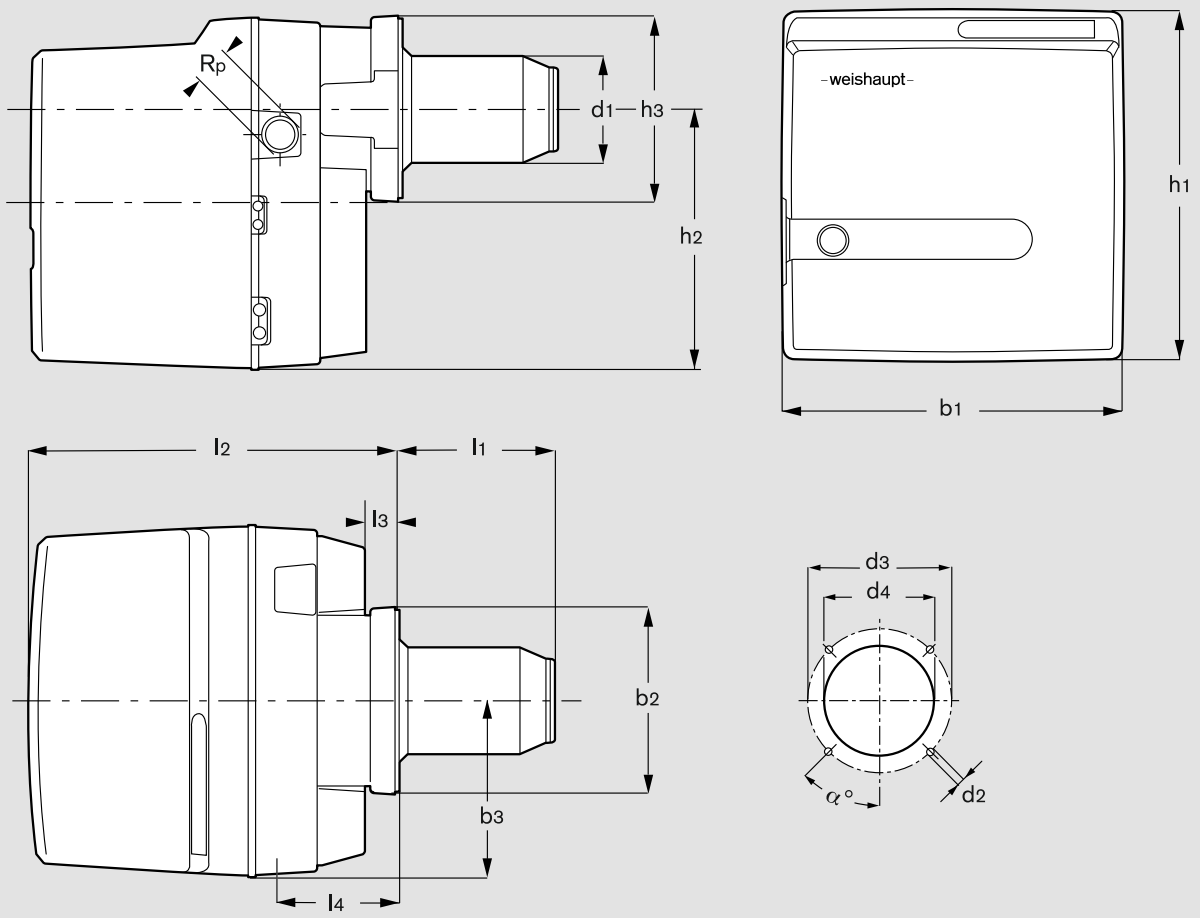


Burner model **WG40F/1-A, Vers. ZM-LN**
Rating 275 – 1,875 MBTU/h



The above capacity graphs are based on sea level. Depending on the altitude of the installation, capacity reduction of approx. 1% per 328 ft (100 m) must be taken into account.

Technical data



Burner dimensions

Burner model	Dimensions in inches and (mm)															
	l_1	l_2	l_3	l_4	b_1	b_2	b_3	h_1	h_2	h_3	d_1	d_2	d_3	d_4	Rp	α°
WG 10	5.5 (140)	13.7 (349)	1.2 (31.5)	4.5 (115)	13.0 (330)	6.5 (165)	6.5 (164)	13.9 (353)	10.6 (270)	6.5 (165)	4.3 (108)	M8	5.9–6.7 (150 – 170)	4.3 (110)	3/4"	45°
WG 20	5.5 (140)	15.6 (397)	1.3 (32)	6.2 (158)	14.1 (358)	7.2 (182)	7.0 (178)	14.8 (376)	11.2 (284.5)	7.2 (182)	4.7 (120)	M8	6.7 (170)	5.1 (130)	1"	45°
WG 30	6.5 (166)	18.9 (480)	2.4 (62)	7.8 (197)	16.5 (420)	8.9 (226)	7.7 (196)	18.1 (460)	13.5 (342)	8.9 (226)	5.0 (127)	M8	6.7–7.3 (170 – 186)	5.1 (130)	1 1/2"	45°
WG 40	9.3 (235)	22.7 (577)	2.8 (72)	9.3 (235)	17.7 (450)	9.6 (245)	8.1 (207)	18.9 (480)	14.2 (360)	9.6 (245)	6.1 (154)	M10	7.3–7.9 (186 – 200)	6.3 (160)	1 1/2"	45°

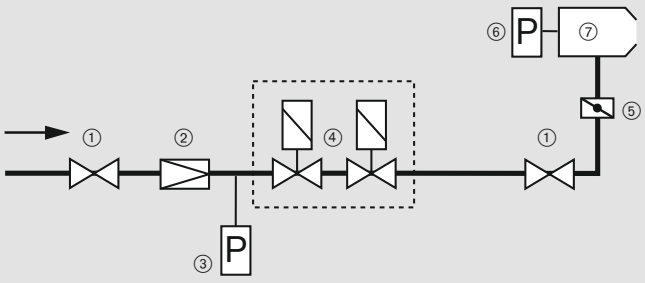
Technical data

Burner Model	Combustion manager	Blower motor	Servomotor	Air pressure switch	Burner weight ①	Gas train Size ②	Flame monitoring
WG 10…/1-D							
Vers. Z-LN **Vers. ZM-LN**	W-FM 10 W-FM 25	ECK 03/H – 2/1 110 V, 60 Hz, 3,400 rpm, 0.14 HP, 1.7A, Cap. 6 µF	STD 4.5 STE 4.5	AA-A2-4-3	30 lbs (13.5 kg)	3/4" 3/4"	Ionization
WG 20…/1-C							
Vers. Z-LN **Vers. ZM-LN**	W-FM 10 W-FM 25	ECK 04/F – 2/1 110 V, 60 Hz, 3,460 rpm, 0.31 HP, 3.7A, Cap. 16 µF	STD 4.5 STE 4.5	AA-A2-4-3	45 lbs (20 kg)	1" 1"	Ionization
WG 30…/1-C							
Vers. ZM-LN	W-FM 25	ECK 05/F – 2/1 110 V; 60 Hz, 3,450 rpm, 0.5 HP, 5.9A, Cap. 25 µF	STE 4.5 BO.36/6-01L	AA-A2-4-3	60 lbs (27 kg)	3/4" 1" 11/2"	Ionization
WG 40…/1-A							
Vers. ZM-LN	W-FM 25	ECK 06/F – 2/1 110 V; 60 Hz, 3,500 rpm, 0.76 HP, 7.8 A, Cap. 30 µF	STE 4.5 BO.36/6-01L	AA-A2-4-3	77 lbs (35 kg)	3/4" 1" 1 1/2" 2" 2 1/2"	Ionization

① All weights are approximate

② Gas train size depends on available gas inlet pressure and required burner's capacity

Gas train schematic (for reference only)



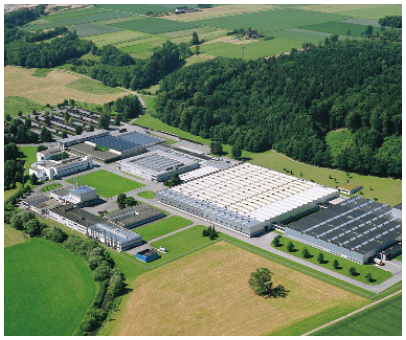
① Ball valve
② Gas pressure regulator
③ Low gas pressure switch
④ Double safety gas valves
⑤ Gas butterfly valve
⑥ High gas pressure switch
⑦ Burner

This gas train schematic is for reference only, actual configuration may vary depending on application and applicable code.

That is not a Facade.
That is Reliability.

Weishaupt is Reliability.
The family business in Schwendi was established by Max Weishaupt in 1932. Represented in 55 countries by branch offices and subsidiaries Weishaupt is now international leader in the areas of combustion technology and heating applications.

Trustworthy, quality, customer service, innovation and experience are values on which the pioneer Max Weishaupt built his company. All this combined in a word is reliability. Therefore stands Weishaupt today.



Weishaupt Forum in Schwendi

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Print No. 83**2141** 16, January 2015

Regular maintenance reduces heating costs and environmental pollution. Only a properly adjusted burner can save energy and be environmentally friendly. Behind each Weishaupt burner stands the whole Weishaupt customer service organization. The outstanding efforts made in maintenance and service justify the enormous trust placed in Weishaupt's burners, for at Weishaupt, product and customer service belong together.

Weishaupt customer service is there for you all year round. Whenever you need help, be it the supply of spare parts, technical advice or a site visit. We are there when you need us.