

– weishaupt –

product

Information on gas and dual fuel burners



Flexible operation

Weishaupt monarch® gas and dual fuel burners WM 10 (55 – 1250 kW)

Progress and tradition: The new monarch[®] burner



For more than 50 years the monarch[®] trademark has stood for power and quality

For more than five decades Weishaupt's monarch[®] series burners have been used on a wide variety of heat exchangers and industrial plant, forming the basis of Weishaupt's outstanding reputation.

This successful series is now continued with new monarch[®] burners. Ultra-modern technology in conjunction with a compact construction make this a powerful burner universally employed.

Digital.

Digital combustion management for economical and safe burner operation. The controls are easy to use.

Compact.

The aerodynamic housing and special air feed enable a higher capacity within smaller dimensions.

Quiet.

The new monarch burners operate with considerably reduced noise levels, thanks to the newly developed fan unit.



Digital

Digital combustion management means optimal combustion figures, continually reproducible setting figures and ease of use.

Weishaupt gas and dual fuel burners series WM 10 are equipped as standard with electronic compound regulation and digital combustion management. Modern combustion technologies demand a precise, continually reproducible dosing of fuel and combustion air. Only in this way can optimal combustion figures be ensured over extended periods.

Simple operation

Setting and control of the burner is achieved using a control and display unit. This is linked to the combustion manager via bus system, enabling the user friendly setting of the burner.

Flexible communication possibilities

The integral interface enables all necessary information and functions to be relayed to a superordinate control system. If required, a modem enables a telephone connection to be installed for remote operation, monitoring and diagnosis.

Bus communication with external systems and building management systems

Several bus systems are available via E-Gate or Mod-Gate if data from the burners are to be exchanged with a PLC unit, or if the control of the burners is to be integrated into a building management system. For the control and management levels Weishaupt offers ProGraf NT, a real time software product to meet any and all requirements.

New technology advantages

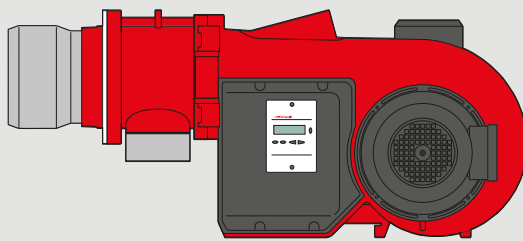
Digital combustion management makes burner operation simple and reliable. The most important advantages:

- No additional burner controls are necessary as control is effected by the combustion manager. Only a motor protection switch for burner motor and control fusing are required externally.
- Reduced installation expense: Each burner is tested and supplied by the factory as a complete unit.
- Commissioning and service work takes less time. The burner's basic parameters are set at the factory. Adjustment to site conditions and combustion emission checks are effected via the combustion manager's menu controlled commissioning program.

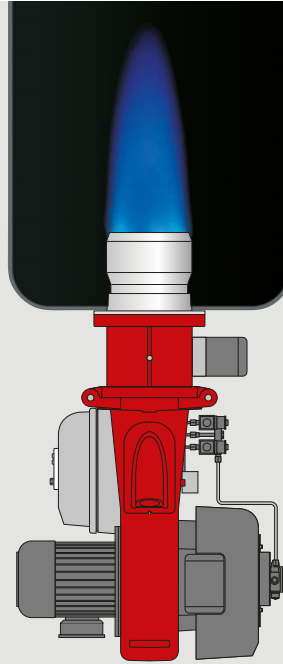
System overview	W-FM 50	W-FM 54	W-FM 100	W-FM 200
Digital combustion management				
Combustion manager for intermittent operation	●	●	●	●
Combustion manager for continuous operation			●	●
Flame sensor for intermittent operation	ION/QRA2/QRB	QRA2	ION/QRI/QRB/QRA	ION/QRI/QRB/QRA
Flame sensor for continuous operation			ION/QRI	ION/QRI
Servomotors in electronic compound (max.)	2 off	3 off	4 off	6 off
Servomotors with stepping motors	●	●	●	●
Speed control available	●	●		●
O ₂ trim available				●
Single fuel operation	●		●	●
Dual fuel operation		●	●	●
Valve proving of gas valves	●	●	●	●
Integrated self checking PID controller for temperature or pressure			optional	●
Removable control unit (max. distance)	20 m	20 m	100 m	100 m
Fuel consumption meter (switchable)	● ¹⁾	● ¹⁾		●
Display of combustion efficiency				●
eBUS / MOD BUS interface	●	●	●	●
PC supported commissioning	●	●	●	●

Connection possibilities for additional functions such as flue gas valves, oil shut off devices etc. on request

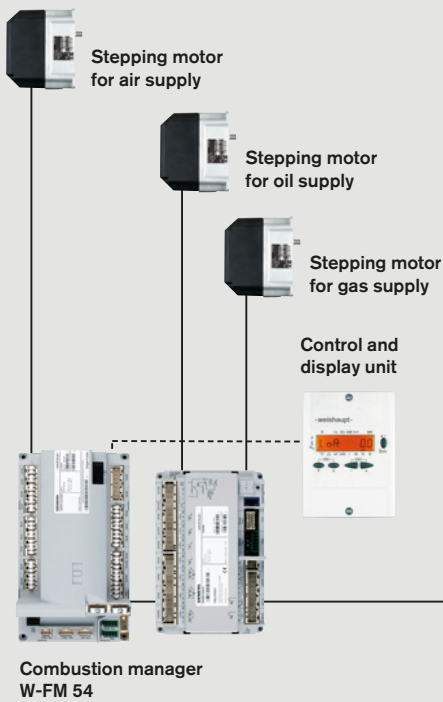
¹⁾ Not in combination with speed control



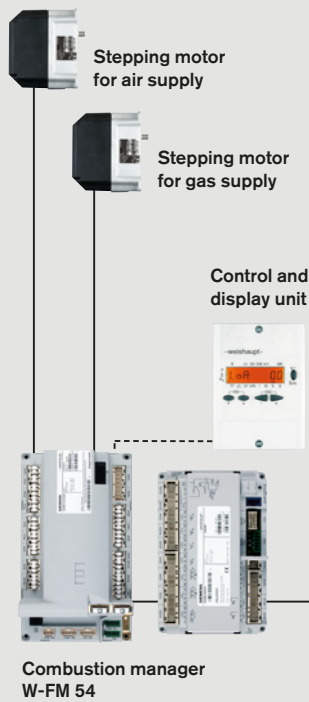
Burner with inbuilt digital combustion manager



Version ZM-R



Version ZM-T



Visualisation via PC / Touch Panel



System networking via PLC / DDC



W-FKM wireless modem



Wireless connection via fixed or mobile phone network

Modbus

Compact and quiet

The newly developed Weishaupt burner monarch® WM 10 is compact, powerful and quiet. It continues the 50 year long success story of the legendary monarch® series.

Futuristic fan technology

Right from the earliest developmental stages of this new burner generation, particular emphasis was placed on a compact, aerodynamic construction and low operational noise levels.

To realise this goal, a completely new air inlet and air damper control were developed. The special housing design with the self opening air inlet, together with the new air damper technology, results in increased fan pressure and thus more capacity from a more compact form.

The air damper control provides a high degree of linearity even at the lower end of the operating range and combined with the sound attenuated air inlet, which is included as standard, ensures quieter operation.

Fast commissioning, simple servicing

All WM 10 burners are delivered with the mixing head preset for the required output of the burner. Individual adjustments are made using the combustion manager's menu controlled commissioning program.

All the burner's components, such as the mixing head, air damper and combustion manager, are readily accessible despite its compact construction, enabling maintenance and servicing work to be carried out quickly and easily. This is further helped by the standard hinged flange, which provides a perfect servicing position for the burner. Adjustments to suit different combustion chamber conditions can be easily carried out on the burner in its installed position. The integral sight glass enables ignition and flame to be observed.

Flexible control possibilities

WM 10 burners are available with 3 stage (oil part) or sliding two stage / modulating (oil + gas) operation, enabling numerous control possibilities and making the burner universally employable. Both versions ensure a gentle, problem free start up and high operational reliability.

Version ZM-T:

Oil firing WM-GL 10 (3 stage):
A change in firing rate is effected by opening and closing the oil solenoid valves with the relevant air quantity.

Gas firing (fully automatic sliding multi stage or modulating depending on the type of capacity regulation):
Within its operating range, the burner's output is matched to the current heat demand.

Version ZM-R:

Oil and gas firing (fully automatic sliding multi stage or modulating depending on the type of capacity regulation):
Within its operating range, the burner's output is matched to the current heat demand.

Fuels

Natural Gas E
Natural Gas LL
Liquid Petroleum Gas B/P
Fuel oil EL (<6 mm²/s at 20°C)
to DIN 51 603, Part 1

The suitability of differing fuel qualities must be confirmed in advance by Weishaupt.

Applications

The EN 267 and/or EN 676 approved Weishaupt gas and dual fuel burners WM-10 are suitable for:

- installation on heat exchangers to EN 303-2
- hot water plant
- steam boilers and high pressure hot water plant

- intermittent and continuous operation
- installation on air heaters

The combustion air must be free of aggressive substances (Halogens, Chlorides, Fluorides etc.) and impurities (dust, debris, vapours etc.). For many applications the use of an extraneous air supply is recommended (additional cost).

Permissible ambient conditions

- Ambient temperature during operation
-10 to + 40 °C (dual fuel burners)
-15 to + 40 °C (gas burners)
- Humidity: max. 80% relative humidity, no dewpoint
- Suitable for use indoors only
- For plant in unheated areas certain additional measures may be required (please enquire)

Use of the burner for applications or in ambient conditions not detailed above is not permitted without prior written agreement of Max Weishaupt GmbH. The service intervals will be reduced in accordance with the more extreme operational conditions.

Certification

The burners are tested by an independent body and conform to the following standards and EU directives:

- EN 267 and EN 676
- Machinery Directive 98/37/EG
- Electromagnetic Compatibility EMV 89/336/EU
- Low Voltage Directive 73/23/EU
- Gas Appliance Directive 90/396/EU
- Pressure Vessel Directive 97/23/EU
- The burners carry the CE and CE-PIN label

The most important advantages at a glance:

- Easy fuel change over between gas and oil on dual fuel burners
- Digital combustion management with electronic compound regulation at all ratings

- More compact than previous burners of similar rating
- Sound attenuated air inlet as standard for quieter operation
- Powerful fan due to the specially developed fan geometry and air damper control
- All WM 10 burners are delivered with the mixing head preset for the required output of the burner
- IP 54 protection as standard
- Easy access to all components, such as: mixing head, air damper and combustion manager
- Safe operation with three stage, sliding multi stage or modulating operation, depending on version and capacity regulation
- Computer controlled function test at the factory of each individual burner
- Burners can be supplied pre-wired with plug connections
- Excellent price / capacity ratio
- Well established, global service network

Trademark

Weishaupt WM 10 monarch® burners are registered as a trademark throughout Europe.

Outstanding design

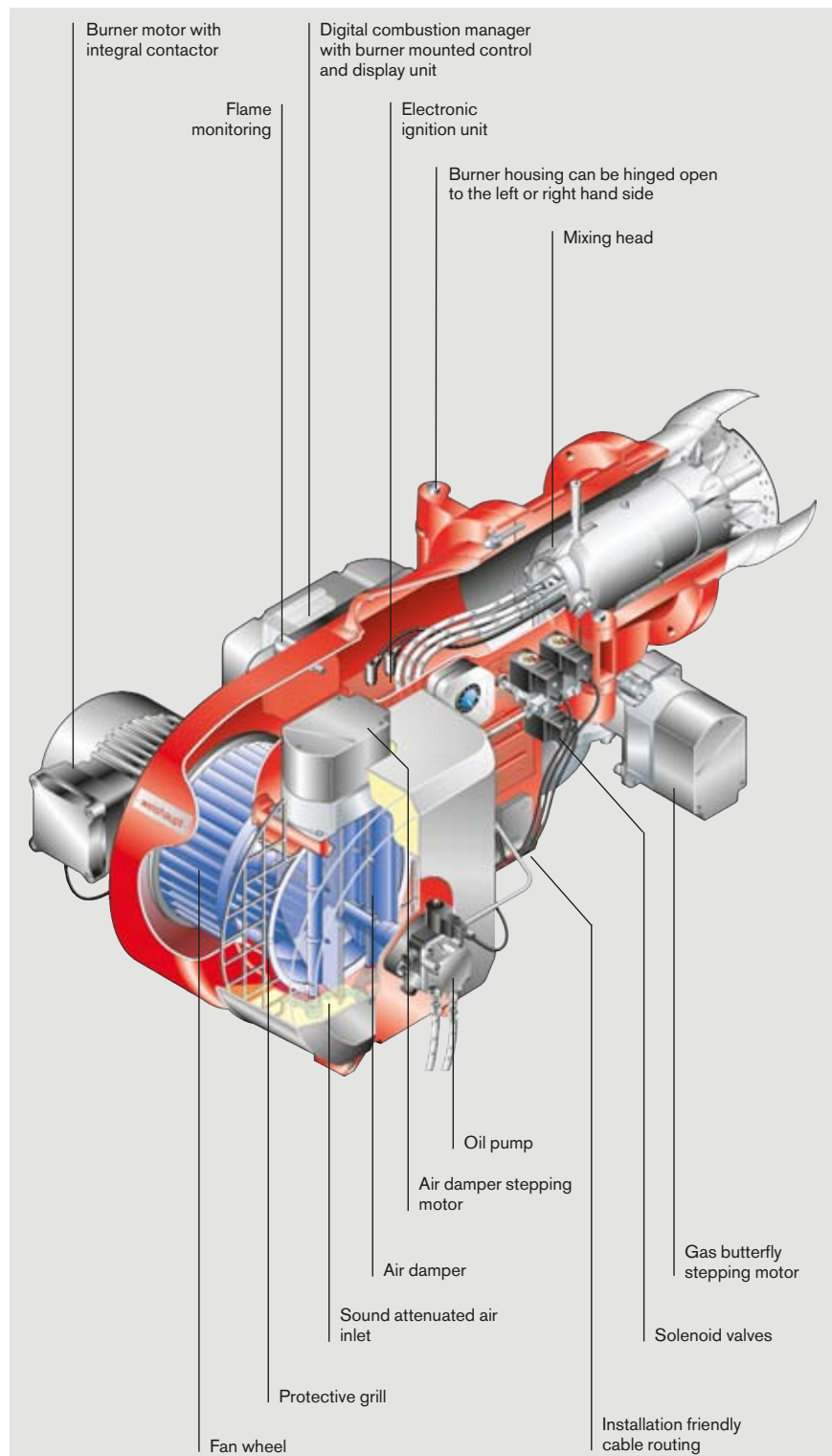
Making quality visible has been our standard since the company was founded by Max Weishaupt.

This standard is applied in all areas of the business: in its architecture, its design ethos and its products.

Numerous design prizes document our success. Der monarch® WM 10 burner for example, received the red dot award for its good product design.



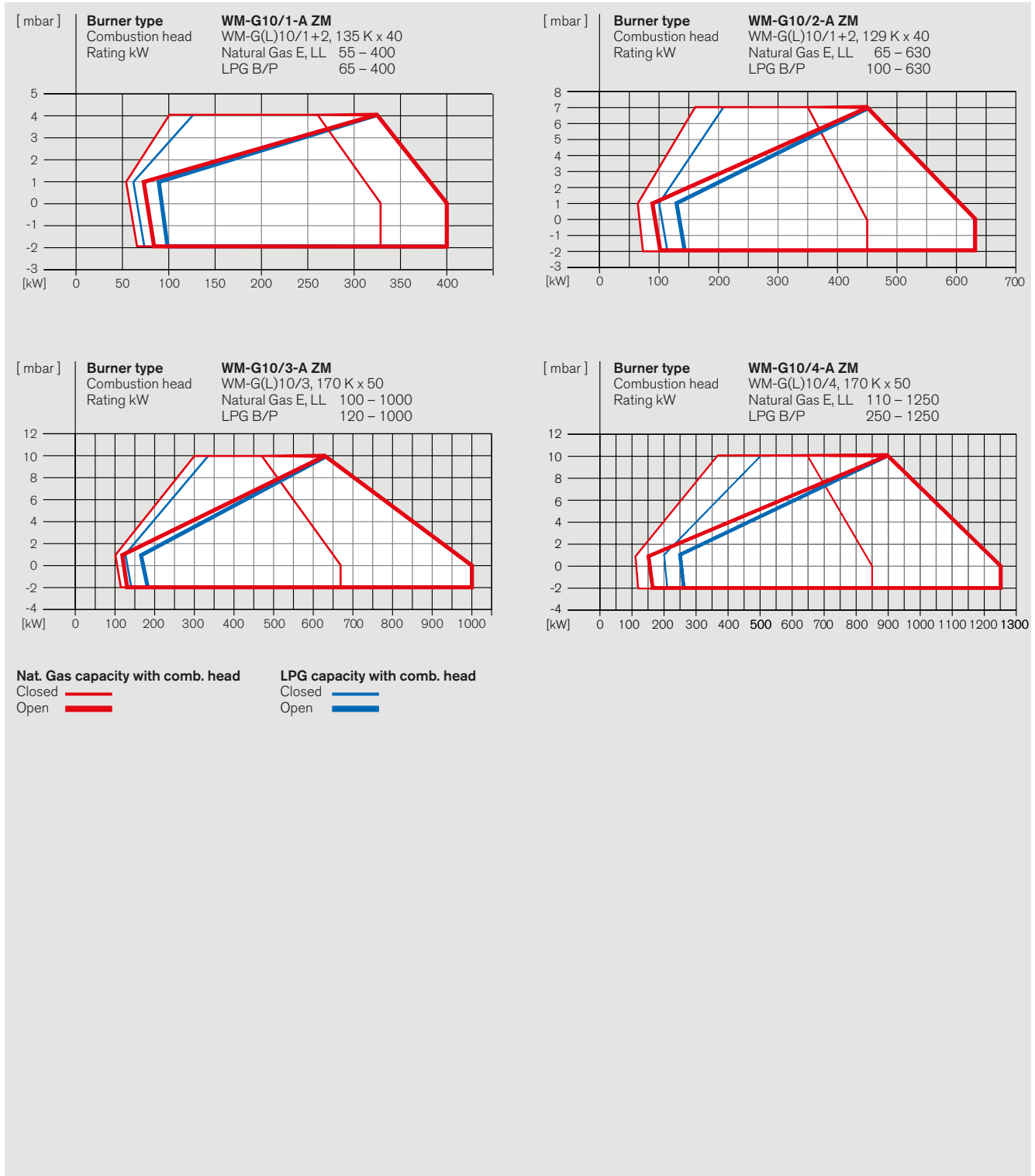
reddot award
product design



WM-GL10 version ZM-T

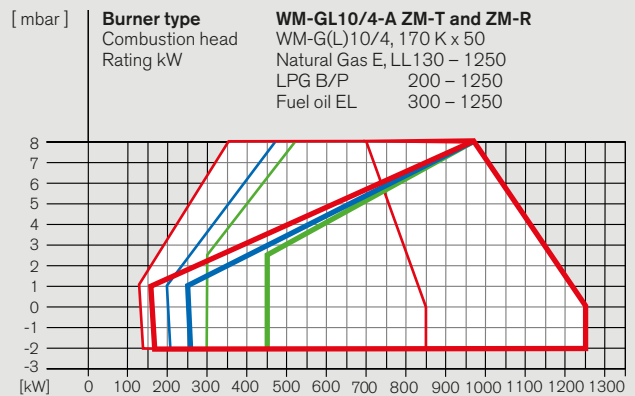
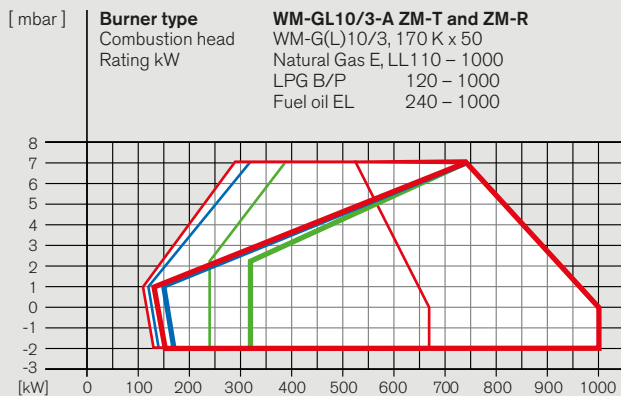
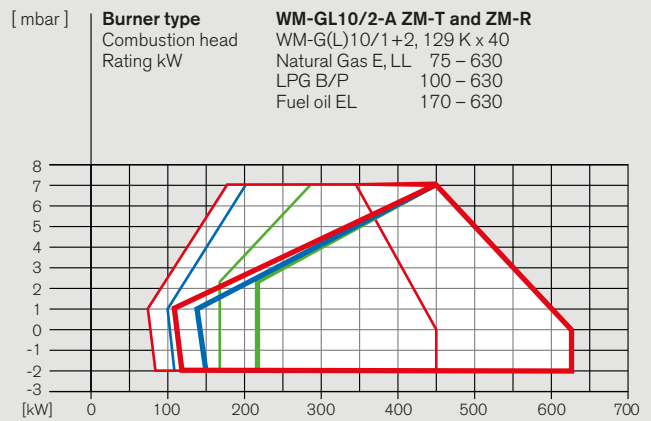
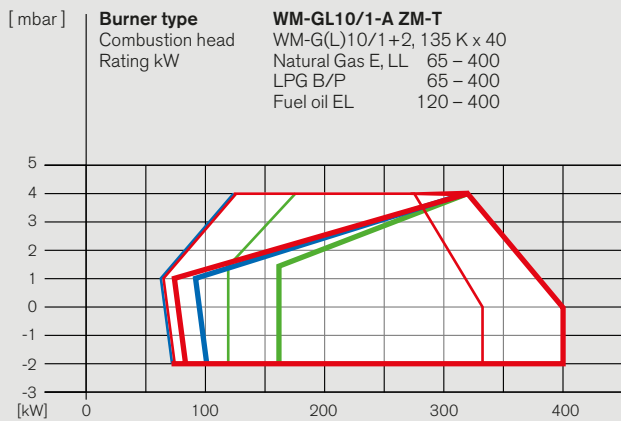
Burner selection WM-G 10

Gas burner version ZM



Burner selection WM-GL 10

Dual fuel burners version ZM-T and ZM-R



Nat. Gas capacity with comb. head
 Closed Open

LPG capacity with comb. head
 Closed Open

Fuel oil EL capacity with comb. head
 Closed Open

The capacity graphs are type tested to EN 267 and EN 676.

The ratings given are based on installation altitude of 0 m. Depending on the altitude of the installation, a reduction on capacity of 1% for every 100 m above sea level should be taken into account.

Gas valve train sizing

Gas and dual fuel burners vers. ZM-T and ZM-R

WM-G(L)10/1-A, vers. ZM-T

Burner rating kW	Low pressure supply (with FRS) (flow pressure in mbar into shut off valve, $p_{e,max} = 300$ mbar)	High pressure supply (with HP controller) (flow pressure in mbar into double gas valve)
	Nominal diameter of valve train 3/4" 1" 1 1/2" 2"	Nominal diameter of v/train 3/4" 1" 1 1/2" 2"
	Nominal diameter gas butterfly 40 40 40 40	Nominal diameter gas butterfly 40 40 40 40

Natural Gas E (N) $H_i = 10,35$ kWh/mn ³ ; $d = 0,606$; $W_i = 13,295$ kWh/mn ³	
150	12 - - -
175	14 9 - -
200	16 10 - -
225	19 11 - -
250	22 12 - -
275	26 14 8 -
300	31 16 9 -
350	41 20 12 9
400	52 25 14 10

Natural Gas LL (N) $H_i = 8,83$ kWh/mn ³ ; $d = 0,641$; $W_i = 11,029$ kWh/mn ³	
150	15 10 - -
175	18 11 8 -
200	22 12 9 -
225	26 14 9 -
250	31 16 10 -
275	37 18 11 8
300	43 21 12 9
350	57 27 15 11
400	73 34 18 13

LPG B/P (F) $H_i = 25,89$ kWh/mn ³ ; $d = 1,555$; $W_i = 20,762$ kWh/mn ³	
150	8 - - -
175	9 - - -
200	10 - - -
225	11 - - -
250	12 8 - -
275	14 9 - -
300	16 10 - -
350	21 12 9 -
400	26 15 11 9

Screwed	
R3/4	W-MF507
R1	W-MF512
R1 1/2	W-MF512
R2	DMV525/12

WM-G(L)10/2-A, vers. ZM-T, R

Burner rating kW	Low pressure supply (with FRS) (flow pressure in mbar into shut off valve, $p_{e,max} = 300$ mbar)	High pressure supply (with HP controller) (flow pressure in mbar into double gas valve)
	Nominal diameter of valve train 3/4" 1" 1 1/2" 2" 65	Nominal diameter of v/train 3/4" 1" 1 1/2" 2" 65
	Nominal diameter gas butterfly 40 40 40 40	Nominal diameter gas butterfly 40 40 40 40

Natural Gas E (N) $H_i = 10,35$ kWh/mn ³ ; $d = 0,606$; $W_i = 13,295$ kWh/mn ³	
300	29 14 8 - -
350	39 19 11 - -
400	51 24 13 9 8
450	63 29 16 11 10
500	77 35 18 12 11
550	92 41 21 14 12
600	109 48 24 15 13
630	119 53 26 16 14

Natural Gas LL (N) $H_i = 8,83$ kWh/mn ³ ; $d = 0,641$; $W_i = 11,029$ kWh/mn ³	
300	42 20 11 - -
350	56 26 14 10 9
400	72 33 17 12 10
450	90 41 21 14 12
500	110 49 24 16 14
550	132 58 28 18 15
600	155 68 32 20 17
630	171 74 35 21 18

LPG B/P (F) $H_i = 25,89$ kWh/mn ³ ; $d = 1,555$; $W_i = 20,762$ kWh/mn ³	
300	15 9 - - -
350	20 11 - - -
400	25 14 10 8 -
450	31 17 11 9 9
500	37 20 13 10 10
550	44 23 14 12 11
600	51 26 16 13 12
630	55 28 17 13 12

Screwed		Flanged	
R3/4	W-MF507	DN65	DMV5065/12
R1	W-MF512		
R1 1/2	W-MF512		
R2	DMV525/12		

WM-G(L)10/3-A, vers. ZM-T, R

Burner rating kW	Low pressure supply (with FRS) (flow pressure in mbar into shut off valve, $p_{e,max} = 300$ mbar)	High pressure supply (with HP controller) (flow pressure in mbar into double gas valve)
	Nominal diameter of valve train	Nominal diameter of v/train
	3/4" 1" 1 1/2" 2" 65 80 100	3/4" 1" 1 1/2" 2" 65 80 100
	Nominal diameter gas butterfly	Nominal diameter gas butterfly
	50 50 50 50 50 50	50 50 50 50 50 50

Natural Gas E (N)	$H_i = 10,35 \text{ kWh/mn}^3$; $d = 0,606$; $W_i = 13,295 \text{ kWh/mn}^3$
500	73 31 14 8 - - - 24 10 8 4 - - -
550	88 37 17 10 - - - 29 12 9 5 - - -
600	104 44 19 11 9 - - 34 14 11 6 5 - -
650	121 51 22 12 10 9 8 40 16 12 7 6 6 5
700	140 58 25 13 10 9 9 46 19 14 8 7 6 6
750	160 66 28 15 11 10 9 53 21 16 9 7 7 7
800	182 75 32 16 12 11 10 60 24 18 10 8 8 7
850	205 84 35 18 13 12 11 67 26 20 11 9 8 8
900	229 93 39 19 14 13 12 75 29 22 12 10 9 9
950	255 103 42 21 16 13 12 84 32 25 13 11 10 9
1000	282 114 46 23 17 14 13 92 36 27 14 11 11 10

Natural Gas LL (N)	$H_i = 8,83 \text{ kWh/mn}^3$; $d = 0,641$; $W_i = 11,029 \text{ kWh/mn}^3$
500	105 44 19 11 8 - - 34 14 11 6 5 - -
550	126 52 23 12 10 9 - 41 17 13 7 6 6 -
600	149 62 26 14 11 10 9 49 20 15 8 7 6 6
650	175 72 30 16 12 11 10 58 23 17 9 8 7 7
700	202 82 35 18 13 12 11 67 26 20 11 9 8 8
750	231 94 39 20 15 13 12 76 30 23 12 10 9 9
800	262 106 44 22 16 14 13 86 34 25 13 11 10 10
850	296 119 49 24 17 15 14 97 37 28 15 12 11 11
900	- 133 54 26 19 16 15 108 42 31 16 13 12 12
950	- 148 60 28 20 17 16 120 46 35 18 14 13 12
1000	- 163 65 31 22 18 17 133 51 38 19 15 14 13

LPG B/P (F)	$H_i = 25,89 \text{ kWh/mn}^3$; $d = 1,555$; $W_i = 20,762 \text{ kWh/mn}^3$
500	33 16 9 - - - 12 6 5 - - -
550	40 19 11 - - - 14 7 6 - - -
600	47 22 12 8 - - - 17 8 7 5 - - -
650	54 25 13 9 8 - - 19 9 8 6 5 - -
700	62 29 15 10 9 9 8 22 11 9 6 6 6 6
750	71 32 17 11 10 9 9 25 12 10 7 7 6 6
800	80 36 18 12 10 10 10 29 14 11 8 7 7 7
850	90 40 20 13 11 11 10 32 15 13 9 8 8 8
900	100 44 22 14 12 11 11 35 17 14 9 9 8 8
950	111 49 24 15 13 12 11 39 18 15 10 9 9 9
1000	122 53 26 16 14 13 12 43 20 16 11 10 10 9

Screwed		Flanged	
R3/4	W-MF507	DN65	DMV5065/12
R1	W-MF512	DN80	DMV5080/12
R1 1/2	W-MF512	DN100	DMV5100/12
R2	DMV525/12		

WM-G(L)10/4-A, vers. ZM-T, R

Burner rating kW	Low pressure supply (with FRS) (flow pressure in mbar into shut off valve, $p_{e,max} = 300$ mbar)	High pressure supply (with HP controller) (flow pressure in mbar into double gas valve)
	Nominal diameter of valve train	Nominal diameter of v/train
	1" 1 1/2" 2" 65 80 100	1" 1 1/2" 2" 65 80 100
	Nominal diameter gas butterfly	Nominal diameter gas butterfly
	50 50 50 50 50 50	50 50 50 50 50 50

Natural Gas E (N)	$H_i = 10,35 \text{ kWh/mn}^3$; $d = 0,606$; $W_i = 13,295 \text{ kWh/mn}^3$
600	45 20 12 10 9 8 15 12 7 6 6 6
700	60 27 15 12 11 11 20 16 10 9 8 8
800	77 34 19 15 14 13 26 21 13 11 10 10
900	95 41 21 17 15 14 31 24 14 12 11 11
1000	115 48 24 18 15 14 37 28 15 13 12 11
1100	137 55 26 19 16 15 43 32 17 13 12 12
1200	160 64 29 21 17 15 49 37 18 14 13 12
1250	173 68 31 21 18 16 52 39 19 15 13 12

Natural Gas LL (N)	$H_i = 8,83 \text{ kWh/mn}^3$; $d = 0,641$; $W_i = 11,029 \text{ kWh/mn}^3$
600	62 27 15 12 10 10 20 16 9 8 7 7
700	84 36 19 15 13 12 28 22 12 10 10 9
800	109 46 24 18 16 15 36 28 16 13 13 12
900	135 56 28 21 18 16 43 33 18 15 14 13
1000	164 66 31 23 19 17 51 39 20 16 15 14
1100	195 77 35 25 21 18 60 45 22 17 16 15
1200	230 90 40 27 22 19 69 51 24 19 17 16
1250	249 96 42 28 23 20 74 55 25 19 17 16

LPG B/P (F)	$H_i = 25,89 \text{ kWh/mn}^3$; $d = 1,555$; $W_i = 20,762 \text{ kWh/mn}^3$
600	22 12 8 - - - 8 7 5 - - -
700	28 14 10 8 - - - 10 8 6 5 - - -
800	35 17 11 9 9 8 13 10 7 6 6 6
900	42 20 12 10 9 9 15 12 8 7 7 6
1000	51 23 13 11 10 9 17 14 8 7 7 7
1100	60 26 14 11 10 10 20 15 9 8 7 7
1200	69 30 16 12 11 10 22 17 9 8 7 7
1250	75 32 16 12 11 10 24 18 10 8 8 7

The combustion chamber pressure in mbar must be added to the minimum gas pressure required. The minimum gas pressure should not be less than 15 mbar.

Screwed		Flanged	
R1	W-MF512	DN65	DMV5065/12
R1 1/2	W-MF512	DN80	DMV5080/12
R2	DMV525/12	DN100	DMV5100/12

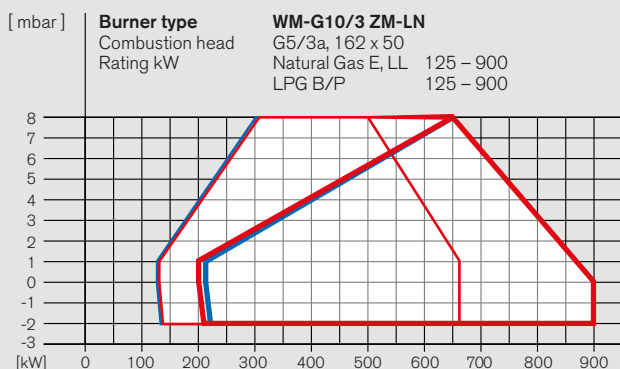
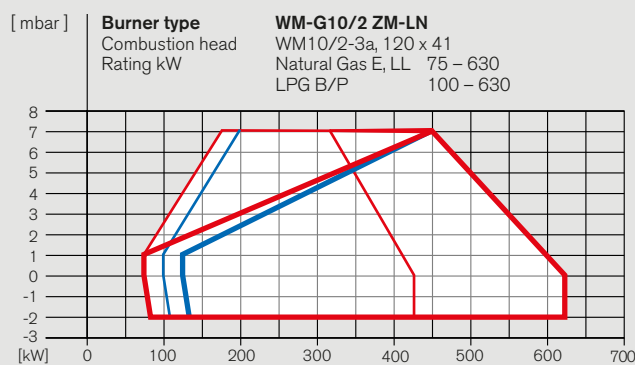
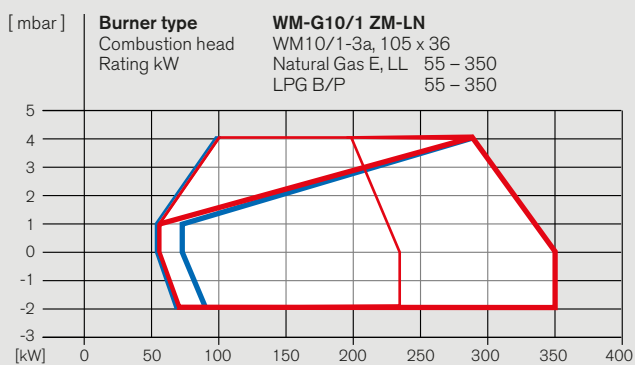
For low pressure supplies, pressure regulating devices with safety membrane in accordance with EN 88 are used. The maximum permissible supply pressure into the shut off valve for low pressure installations is 300 mbar.

For high pressure supplies, high pressure regulators to EN 334 can be selected from the brochure "Pressure regulators with safety devices for Weishaupt gas and dual fuel burners". This details high gas pressure sets for supply pressures of up to 4 bar..

See burner name plate for maximum connection pressure.

Burner selection WM-G 10

Gas burners version ZM-LN



Nat. Gas capacity with comb. head **LPG capacity with comb. head**
 Closed ——— (red line) Closed ——— (blue line)
 Open ——— (red line) Open ——— (blue line)

The capacity graphs are type tested to EN 676 .

The ratings given are based on installation altitude of 0 m.
 Depending on the altitude of the installation, a reduction on capacity of 1% for every 100 m above sea level should be taken into account.

Gas valve train sizing

Gas burners version ZM-LN

WM-G10/1, vers. ZM-LN				WM-G10/2, vers. ZM-LN														
Burner rating kW	Low pressure supply (with FRS) (flow pressure in mbar into shut off valve, $p_{e,max} = 300$ mbar)			High pressure supply (with HP controller) (flow pressure in mbar into double gas valve)			Burner rating kW	Low pressure supply (with FRS) (flow pressure in mbar into shut off valve, $p_{e,max} = 300$ mbar)			High pressure supply (with HP controller) (flow pressure in mbar into double gas valve)							
	Nominal diameter of valve train			Nominal diameter of v/train				Nominal diameter of valve train			Nominal diameter of v/train							
	3/4"	1"	1 1/2"	2"	3/4"	1"	1 1/2"	2"	3/4"	1"	1 1/2"	2"	65	3/4"	1"	1 1/2"	2"	65
	Nominal diameter gas butterfly			Nominal diameter gas butterfly			Nominal diameter gas butterfly			Nominal diameter gas butterfly			Nominal diameter gas butterfly					
	25	25	25	25	25	25	25	25	40	40	40	40	40	40	40	40	40	40
Natural Gas E (N) $H_i = 10,35$ kWh/mn ³ ; $d = 0,606$; $W_i = 13,295$ kWh/mn ³																		
150	12	9	–	–	6	4	–	–	32	17	10	8	–	12	7	6	5	–
175	16	11	9	–	7	6	5	–	350	42	21	13	10	17	10	9	7	7
200	19	13	10	9	9	7	7	6	400	54	27	16	12	21	12	11	9	8
225	23	14	11	10	11	8	8	7	450	66	32	18	14	26	14	12	10	9
250	27	16	12	10	12	9	8	8	500	80	38	21	15	30	16	14	11	10
275	31	18	13	11	14	10	9	8	550	95	44	23	16	36	18	16	12	11
300	35	20	14	12	16	11	10	9	600	111	50	26	18	41	21	18	13	12
325	40	22	15	13	18	12	11	10	630	121	55	28	19	45	22	19	14	13
350	45	25	16	14	20	13	12	10										
Natural Gas LL (N) $H_i = 8,83$ kWh/mn ³ ; $d = 0,641$; $W_i = 11,029$ kWh/mn ³																		
150	16	11	8	–	7	6	5	–	300	44	22	13	10	17	9	8	7	6
175	20	13	10	9	10	7	7	6	350	58	28	16	12	22	12	11	9	8
200	25	15	12	10	12	9	8	7	400	75	36	20	14	29	16	14	11	10
225	30	18	13	11	14	10	9	8	450	92	43	23	16	35	18	16	12	11
250	35	20	14	12	16	11	10	9	500	112	51	27	18	42	21	18	13	12
275	41	23	16	13	18	12	11	10	550	134	60	30	20	49	24	20	15	13
300	48	26	17	14	21	13	12	11	600	157	69	34	22	57	27	23	16	15
325	55	29	19	15	24	15	14	12	630	172	76	37	23	62	29	24	17	15
350	62	32	20	16	26	16	15	12										
LPG B/P (F) $H_i = 25,89$ kWh/mn ³ ; $d = 1,555$; $W_i = 20,762$ kWh/mn ³																		
150	8	–	–	–	4	–	–	–	300	16	10	–	–	6	4	–	–	–
175	10	–	–	–	5	–	–	–	350	21	12	9	–	9	6	5	–	–
200	12	9	8	–	6	5	5	–	400	27	16	11	10	12	8	8	7	7
225	14	11	9	9	8	7	6	6	450	31	17	12	10	13	9	8	7	7
250	16	12	10	9	9	7	7	7	500	37	19	13	10	15	9	8	7	7
275	18	13	11	10	10	8	7	7	550	42	22	13	10	17	10	9	7	7
300	20	14	11	10	10	8	8	8	600	49	24	14	11	19	10	9	7	7
325	22	15	12	11	11	9	9	8	630	53	26	15	11	20	11	10	7	7
350	24	16	13	11	12	10	9	9										

Screwed

R3/4	W-MF507
R1	W-MF512
R 1 1/2	W-MF512
R2	DMV525/12

Screwed

R3/4	W-MF507
R1	W-MF512
R 1 1/2	W-MF512
R2	DMV525/12

Flanged

DN65	DMV5065/12
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Gas valve train sizing

Gas burners version ZM-LN

WM-G10/3, vers. ZM-LN

Burner rating kW	Low pressure supply (with FRS) (flow pressure in mbar into shut off valve, $p_{e,max} = 300$ mbar)							High pressure supply (with HP controller) (flow pressure in mbar into double gas valve)						
	Nominal diameter of valve train							Nominal diameter of v/train						
	3/4"	1"	1 1/2"	2"	65	80	100	3/4"	1"	1 1/2"	2"	65	80	100
	Nominal diameter gas butterfly							Nominal diameter gas butterfly						
	50	50	50	50	50	50	50	50	50	50	50	50	50	50

Natural Gas E (N) $H_i = 10,35$ kWh/mn ³ ; $d = 0,606$ $W_i = 13,295$ kWh/mn ³														
450	63	29	16	11	10	9	9	23	11	10	7	6	6	6
500	77	35	19	13	11	11	10	28	14	12	9	8	8	8
550	93	42	22	15	13	12	12	34	17	14	10	10	9	9
600	110	50	25	17	15	14	13	40	20	17	12	11	11	11
650	128	57	29	19	16	15	15	47	23	19	14	12	12	12
700	147	65	32	20	17	16	15	53	25	21	15	13	13	13
750	167	73	35	21	18	17	16	60	28	23	16	14	14	13
800	189	81	38	23	19	18	17	67	30	25	17	15	14	14
850	212	90	42	25	20	18	18	74	33	27	18	16	15	15
900	236	100	45	26	21	19	18	82	36	29	19	17	16	15

Natural Gas LL (N) $H_i = 8,83$ kWh/mn ³ ; $d = 0,641$ $W_i = 11,029$ kWh/mn ³														
450	89	39	20	12	11	10	10	31	15	12	8	7	7	7
500	109	48	23	15	13	12	11	39	18	15	10	9	9	9
550	131	57	28	17	15	14	13	46	21	18	12	11	10	10
600	155	67	32	20	16	15	15	55	25	21	14	13	12	12
650	181	78	37	22	18	17	16	64	29	24	16	14	14	13
700	208	89	41	24	20	18	17	73	32	26	17	15	15	14
750	238	100	45	26	21	19	18	82	36	29	18	16	16	15
800	269	113	50	28	22	20	19	93	40	32	20	17	17	16
850	-	126	55	30	24	21	20	103	44	35	21	18	18	17
900	-	140	60	32	25	22	21	115	48	38	23	19	19	18

LPG B/P (F) $H_i = 25,89$ kWh/mn ³ ; $d = 1,555$ $W_i = 20,762$ kWh/mn ³														
450	30	16	10	8	-	-	-	12	7	6	5	-	-	-
500	36	19	12	10	9	9	9	15	9	8	7	6	6	6
550	43	23	14	11	11	10	10	18	11	10	8	8	8	7
600	51	26	16	13	12	12	11	21	13	11	10	9	9	9
650	59	30	19	15	14	13	13	25	15	13	11	11	10	10
700	68	34	21	16	15	14	14	28	16	15	12	12	11	11
750	76	37	22	16	15	14	14	31	17	15	12	12	12	12
800	85	41	23	17	15	15	15	34	19	16	13	12	12	12
850	94	45	25	18	16	15	15	37	20	17	13	13	12	12
900	104	49	26	18	16	16	15	40	21	18	14	13	13	13

The combustion chamber pressure in mbar must be added to the minimum gas pressure required. The minimum gas pressure should not be less than 15 mbar.

Screwed		Flanged	
R3/4	W-MF507	DN65	DMV5065/12
R1	W-MF512	DN80	DMV5080/12
R1 1/2	W-MF512	DN100	DMV5100/12
R2	DMV525/12		

For low pressure supplies, pressure regulating devices with safety membrane in accordance with EN 88 are used. The maximum permissible supply pressure into the shut off valve for low pressure installations is 300 mbar.

For high pressure supplies, high pressure regulators to EN 334 can be selected from the brochure "Pressure regulators with safety devices for Weishaupt gas and dual fuel burners". This details high gas pressure sets for supply pressures of up to 4 bar.

See burner name plate for maximum connection pressure.

Mode of operation

Model designation

Oil fired operation

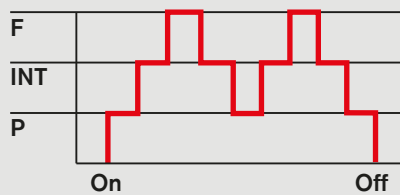
ZM-T capacity regulation

- Oil is released during start up by the opening of solenoid valve 1 and the safety solenoid valve
- Full load is reached by the opening of solenoid valves 2 and 3
- Capacity is reached by opening and closing solenoid valves 2 and 3

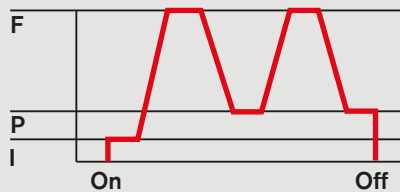
ZM-R capacity regulation

- On opening the solenoid valves the correct rate of oil for start up is released
- A digital stepping motor sets the oil regulator to full load
- Capacity regulation between partial and full load through the opening and closing of the oil regulator
- Modulating operation:
 - W-FM 54 with additional load controller
 - W-FM 100 with integrated analogue module
 - W-FM 200
- Alternatively, a regulator can be fitted into the control panel.

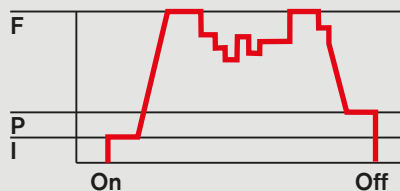
3 stage



sliding multi stage



modulating



Gas fired operation

ZM capacity regulation (sliding multi stage or modulating)

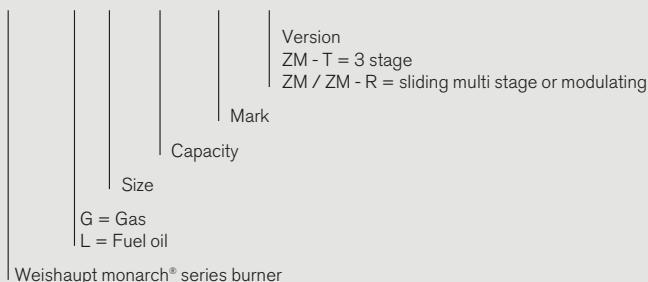
- Stepping motors adjust the capacity between partial load and full load depending on the heat demand
- There is a gradual change between both load points. There are no sudden large changes in fuel throughput.
- Possible modulating operation:
 - W-FM 50 with additional load controller
 - W-FM 54 with additional load controller
 - W-FM 100 with integrated analogue module
 - W-FM 200
- Alternatively, a regulator can be fitted into the control panel.

F = Full load (nominal load)
 INT = Intermediate load
 P = Partial load (min. load)
 I = Ignition load

Fuel Version	Oil			Gas	
	3 stage	sliding multi stage	modulating	sliding multi stage	modulating
ZM				●	●
ZM-T	●			●	●
ZM-R		●	●	●	●

Designation

WM - GL10 / 4 -A / ZM - T
 ZM - R



Order numbers Gas burners

Version ZM

Burner type	Vers.	Nominal diameter	Order No.
WM-G10/1	ZM	R3/4	217 111 10
		R1	217 111 11
		R1 1/2	217 111 12
		R2	217 111 13
WM-G10/2	ZM	R3/4	217 114 10
		R1	217 114 11
		R1 1/2	217 114 12
		R2	217 114 13
		DN 65	217 114 14
WM-G10/3	ZM	R3/4	217 117 10
		R1	217 117 11
		R1 1/2	217 117 12
		R2	217 117 13
		DN65	217 117 14
		DN80	217 117 15
WM-G10/4	ZM	R1	217 120 11
		R1 1/2	217 120 12
		R2	217 120 13
		DN65	217 120 14
		DN80	217 120 15
		DN100	217 120 16

Version ZM-LN

Burner type	Vers.	Nominal diameter	Order No.
WM-G10/1	ZM-LN	R3/4	217 112 10
		R1	217 112 11
		R1 1/2	217 112 12
		R2	217 112 13
WM-G10/2	ZM-LN	R3/4	217 115 10
		R1	217 115 11
		R1 1/2	217 115 12
		R2	217 115 13
WM-G10/3	ZM-LN	DN65	217 115 14
		R3/4	217 118 10
		R1	217 118 11
		R1 1/2	217 118 12
		R2	217 118 13
WM-G10/3	ZM-LN	DN65	217 118 14
		DN80	217 118 15
		DN100	217 118 16
		DN100	217 118 16

CE-PIN: CE 0085BQ0027

Order numbers Dual fuel burners

Version ZM-T

Burner type	Vers.	Nominal diameter	Order No.
WM-GL10/1	ZM-T	R3/4	218 111 10
		R1	218 111 11
		R1 1/2	218 111 12
		R2	218 111 13
WM-GL10/2	ZM-T	R3/4	218 112 10
		R1	218 112 11
		R1 1/2	218 112 12
		R2	218 112 13
WM-GL10/3	ZM-T	DN65	218 112 14
		R3/4	218 113 10
		R1	218 113 11
		R1 1/2	218 113 12
		R2	218 113 13
WM-GL10/4	ZM-T	DN65	218 113 14
		DN80	218 113 15
		DN100	218 113 16
		R1	218 114 11
		R1 1/2	218 114 12
		R2	218 114 13
		DN65	218 114 14
		DN80	218 114 15
		DN100	218 114 16

Version ZM-R

Burner type	Vers.	Nominal diameter	Order No.
WM-GL10/2	ZM-R	R3/4	218 115 10
		R1	218 115 11
		R1 1/2	218 115 12
		R2	218 115 13
		DN65	218 115 14
		R3/4	218 116 10
		R1	218 116 11
		R1 1/2	218 116 12
WM-GL10/3	ZM-R	R2	218 116 13
		DN65	218 116 14
		DN80	218 116 15
		DN100	218 116 16
WM-GL10/4	ZM-R	R1	218 117 11
		R1 1/2	218 117 12
		R2	218 117 13
		DN65	218 117 14
		DN80	218 117 15
		DN100	218 117 16

CE-PIN: CE 0085BR0136

DIN CERTCO: 5G1025/06M

Special equipment

Gas burners version ZM

Special equipment vers. ZM		WM-G 10/1-A / ZM	WM-G 10/2-A / ZM	WM-G 10/3-A / ZM	WM-G 10/4-A / ZM
Combustion head extension	by 100 mm	250 030 00	250 030 03	250 030 06	250 030 09
	by 200 mm	250 030 01	250 030 04	250 030 07	250 030 10
	by 300 mm	250 030 02	250 030 05	250 030 08	250 030 11
Solenoid valve for air pressure switch test for continuous run fan or post purge		250 030 21	250 030 21	250 030 21	250 030 21
High gas pressure switch (W-MF screwed) R 3/4" to R 1 1/2"	GW 50 A6/1	250 031 40	250 031 40	250 031 40	250 031 40
	GW 150 A6/1	250 031 41	250 031 41	250 031 41	250 031 41
	GW 500 A6/1	250 031 42	250 031 42	250 031 42	250 031 42
High gas pressure switch (DMV screwed) R 2"	GW 50 A6/1	150 017 52	150 017 52	150 017 52	150 017 52
	GW 150 A6/1	150 017 53	150 017 53	150 017 53	150 017 53
	GW 500 A6/1	150 017 54	150 017 54	150 017 54	150 017 54
High gas pressure switch (DMV flanged)	GW 50 A6/1	150 017 49	150 017 49	150 017 49	150 017 49
	GW 150 A6/1	150 017 50	150 017 50	150 017 50	150 017 50
	GW 500 A6/1	150 017 51	150 017 51	150 017 51	150 017 51
Plug connection ST 18/7 and ST 18/4 (flying leads)		250 030 22	250 030 22	250 030 22	250 030 22
Ducted air intake with pressure switch LGW		250 030 24	250 030 24	250 030 24	250 030 24
KS40 controller inbuilt in burner housing (W-FM 50)		250 030 99	250 030 99	250 030 99	250 030 99
W-FM 100 (suitable for cont. run fan) instead of W-FM 50	fitted	250 030 74	250 030 74	250 030 74	250 030 74
	loose	250 030 45	250 030 45	250 030 45	250 030 45
Analogue module with load controller for W-FM 100		110 017 18	110 017 18	110 017 18	110 017 18
W-FM 200 instead of W-FM 50 with module for load control, analogue signal convertor and speed control module with optional fuel metering	fitted	250 030 75	250 030 75	250 030 75	250 030 75
	loose	250 030 48	250 030 48	250 030 48	250 030 48
Speed control with frequency convertor fitted to burner (W-FM 50/200 required)		210 030 11	210 030 11	210 030 11	210 030 11
Speed control for frequency convertor loose (FC from accessories) (W-FM 50/200 required)		210 030 12	210 030 12	210 030 12	210 030 12
Motor D90 with contactor 230 V and overload protection		250 030 86 ¹⁾	250 030 86 ¹⁾	250 030 86 ¹⁾	250 030 86 ¹⁾
ABE (loose) with Chinese calligraphy (W-FM 100/200)		110 018 53	110 018 53	110 018 53	110 018 53
Special voltages (on request only)		on request	on request	on request	on request

¹⁾ The necessary motor protection can be provided either by a motor protection switch (supplied and fitted into a panel by others), or with integral motor overload protection (see Special equipment).

Special equipment Gas burners version ZM-LN

Special equipment vers. ZM-LN		WM-G 10/1-A / ZM-LN	WM-G 10/2-A / ZM-LN	WM-G 10/3-A / ZM-LN
Combustion head extension	by 100 mm	250 030 12	250 030 15	250 030 18
	by 200 mm	250 030 13	250 030 16	250 030 19
	by 300 mm	250 030 14	250 030 17	250 030 20
Solenoid valve for air pressure switch test for continuous run fan or post purge		250 030 21	250 030 21	250 030 21
High gas press. switch (W-MF screwed) R 3/4" to R 1 1/2"	GW 50 A6/1	250 031 40	250 031 40	250 031 40
	GW 150 A6/1	250 031 41	250 031 41	250 031 41
	GW 500 A6/1	250 031 42	250 031 42	250 031 42
High gas press. switch (DMV screwed) R 2"	GW 50 A6/1	150 017 52	150 017 52	150 017 52
	GW 150 A6/1	150 017 53	150 017 53	150 017 53
	GW 500 A6/1	150 017 54	150 017 54	150 017 54
High gas pressure switch (DMV flanged)	GW 50 A6/1	150 017 49	150 017 49	150 017 49
	GW 150 A6/1	150 017 50	150 017 50	150 017 50
	GW 500 A6/1	150 017 51	150 017 51	150 017 51
Plug connection ST 18/7 and ST 18/4 (flying leads)		250 030 22	250 030 22	250 030 22
Ducted air intake with pressure switch LGW		250 030 24	250 030 24	250 030 24
KS40 controller inbuilt in burner housing (W-FM 50)		250 030 99	250 030 99	250 030 99
W-FM 100 (suitable for cont. run fan) instead of W-FM 50	fitted	250 030 74	250 030 74	250 030 74
	loose	250 030 45	250 030 45	250 030 45
Analogue module with load controller for W-FM 100		110 017 18	110 017 18	110 017 18
W-FM 200 instead of W-FM 50 with module for load control, analogue signal convertor and speed control module with optional fuel metering	fitted	250 030 75	250 030 75	250 030 75
	loose	250 030 48	250 030 48v	250 030 48
Speed control with frequency convertor fitted to burner (W-FM 50/200 required)		210 030 11	210 030 11	210 030 11
Speed control for frequency convertor loose (FC from accessories) (W-FM 50/200 required)		210 030 12	210 030 12	210 030 12
Motor D90 with contactor 230 V and overload protection		250 030 86 ¹⁾	250 030 86 ¹⁾	250 030 86 ¹⁾
ABE (loose) with Chinese calligraphy (W-FM 100/200)		110 018 53	110 018 53	110 018 53
Special voltage (on request only)		on request	on request	on request

¹⁾ The necessary motor protection can be provided either by a motor protection switch (supplied and fitted into a panel by others), or with integral motor overload protection (see Special equipment).

Special equipment

Dual fuel burners version ZM-T

Special equipment vers. ZM-T		WM-GL 10/1-A	WM-GL 10/2-A	WM-GL 10/3-A	WM-GL 10/4-A
Combustion head extension	by 100 mm	250 030 50	250 030 53	250 030 56	250 030 59
	by 200 mm	250 030 51	250 030 54	250 030 57	250 030 60
	by 300 mm	250 030 52	250 030 55	250 030 58	250 030 61
Solenoid valve for air press. switch test - cont. run fan or post purge		250 030 21	250 030 21	250 030 21	250 030 21
High gas pressure switch (W-MF screwed) R 3/4" to R 1 1/2"	GW 50 A6/1	250 031 40	250 031 40	250 031 40	250 031 40
	GW 150 A6/1	250 031 41	250 031 41	250 031 41	250 031 41
	GW 500 A6/1	250 031 42	250 031 42	250 031 42	250 031 42
High gas pressure switch (DMV screwed) R 2"	GW 50 A6/1	150 017 52	150 017 52	150 017 52	150 017 52
	GW 150 A6/1	150 017 53	150 017 53	150 017 53	150 017 53
	GW 500 A6/1	150 017 54	150 017 54	150 017 54	150 017 54
High gas pressure switch (DMV flanged)	GW 50 A6/1	150 017 49	150 017 49	150 017 49	150 017 49
	GW 150 A6/1	150 017 50	150 017 50	150 017 50	150 017 50
	GW 500 A6/1	150 017 51	150 017 51	150 017 51	150 017 51
2 stage instead of 3 stage (low impact start/changeover)		210 030 31	210 030 31	210 030 31	210 030 31
Electromagnetic coupling		250 030 44	250 030 44	250 030 44	250 030 44
Ducted air intake with pressure switch LGW		210 030 20	210 030 20	210 030 20	210 030 20
Min. pressure switch DSA58 (TRD 72h) in conjunction with W-FM 100/200		250 030 82	250 030 82	250 030 82	250 030 82
W-FM 100 (suitable for cont. run fan) inst. W-FM 54 with module for load control and analogue signal convertor	fitted	250 031 78	250 031 78	250 031 78	250 031 78
	loose	on request	on request	on request	on request
W-FM 200 instead of W-FM 54 with module for load control, analogue signal convertor and speed control module with optional fuel metering	fitted	250 031 77	250 031 77	250 031 77	250 031 77
	loose	on request	on request	on request	on request
Speed control with frequency convertor fitted to burner (W-FM 54/200 required)		210 030 11 ¹⁾	210 030 11 ¹⁾	210 030 11 ¹⁾	210 030 11 ¹⁾
Speed control for frequency convertor loose (FC from accessories) (W-FM 54/200 required)		210 030 12 ¹⁾	210 030 12 ¹⁾	210 030 12 ¹⁾	210 030 12 ¹⁾
Oil hoses 1300 mm instead of 1000 mm		210 003 00	210 003 00	210 003 00	210 003 00
Oil meter VZ08 fitted		250 030 46	250 030 46	250 030 46	250 030 46
Oil meter VZ08 with remote control NF, fitted		250 030 47	250 030 47	250 030 47	250 030 47
Motor D90 with contactor 230 V and overload protection		250 030 86 ²⁾	250 030 86 ²⁾	250 030 86 ²⁾	250 030 86 ²⁾
ABE (loose) with Chinese calligraphy (W-FM 100/200)		110 018 53	110 018 53	110 018 53	110 018 53
Special voltage (on request only)		on request	on request	on request	on request

¹⁾ FC operation ver. ZM-T: It is recommended to operate the multi stage oil side at 100% speed

²⁾ The necessary motor protection can be provided either by a motor protection switch (supplied and fitted into a panel by others), or with integral motor overload protection (see Special equipment).

Special equipment Dual fuel burners version ZM-R

Special equipment vers. ZM-R		WM-GL 10/2-A	WM-GL 10/3-A	WM-GL 10/4-A
Combustion head extension	by 100 mm	250 030 62	250 030 65	250 030 68
	by 200 mm	250 030 63	250 030 66	250 030 69
	by 300 mm	250 030 64	250 030 67	250 030 70
Solenoid valve for air press. switch test - cont. run fan or post purge		250 030 21	250 030 21	250 030 21
High gas press. switch (DMV screwed) add. on gas butterfly	GW 50 A6/1	250 007 59	250 007 59	250 007 59
High gas pressure switch (DMV flanged)	GW 50 A6/1	150 017 49	150 017 49	150 017 49
	GW 150 A6/1	150 017 50	150 017 50	150 017 50
Electromagnetic coupling		250 030 44	250 030 44	250 030 44
Ducted air intake with pressure switch LGW10		210 030 20	210 030 20	210 030 20
Min. pressure switch DSA58 (TRD 72h) in conjunction with W-FM 100/200		210 030 23	210 030 23	210 030 23
W-FM 100 (suitable for cont. run fan) instead of W-FM 54	fitted	250 031 76	250 031 76	250 031 76
	lose	on request	on request	on request
Analogue module with load controller for W-FM 100		110 017 18	110 017 18	110 017 18
W-FM 200 instead of W-FM 54 with module for load control, analogue signal convertor and speed control module with optional fuel metering	fitted	250 031 77	250 031 77	250 031 77
	loose	250 031 62	250 031 62	250 031 62
Speed control with frequency convertor fitted to burner (W-FM 54/200 required)		210 030 11 ¹⁾	210 030 11 ¹⁾	210 030 11 ¹⁾
Speed control for frequency convertor loose (FC from accessories) (W-FM 54/200 required)		210 030 12 ¹⁾	210 030 12 ¹⁾	210 030 12 ¹⁾
Motor D90 with contactor 230 V and overload protection		250 030 86 ²⁾	250 030 86 ²⁾	250 030 86 ²⁾
ABE (loose) with Chinese calligraphy (W-FM 100/200)		110 018 53	110 018 53	110 018 53
Special voltages (on request only)		on request	on request	on request

¹⁾ FC operation vers. ZM-R: General conditions for regulating oil operation
 – Frequency: min. 35 Hz
 – Turndown: max. 3:1 (limits for burner sizes 10/3 + 10/4)

²⁾ FC operation vers. ZM-R: General conditions for regulating oil operation
 – Frequency: min. 35 Hz
 – Turndown: max. 3:1 (limits for burner sizes 10/3 + 10/4)

Technical data

Gas burners version ZM / ZM-LN		WM-G10/1-A / ZM WM-G10/1-A / ZM-LN	WM-G 10/2-A / ZM WM-G 10/2-A / ZM-LN	WM-G 10/3-A / ZM WM-G 10/3-A / ZM-LN	WM-G 10/4-A / ZM
Burner motor ¹⁾	Type Weishaupt	D90/50-2/1	D90/50-2/1	D90/90-2/1	D90/90-2/1
Nominal load	kW	0,76	0,76	1,5	1,5
Nominal current	A	2,1	2,1	3,5	3,5
Motor prefuse (motor in Y switching)	A minimum	10 AT (external)	10 AT (external)	10 AT (external)	10 AT (external)
Speed (50 Hz)	1/rpm	2850	2850	2800	2800
Combustion manager	Type	W-FM 50	W-FM 50	W-FM 50	W-FM 50
Flame monitoring	Type	ION	ION	ION	ION
Stepping motor air/gas	Type	STE 50	STE 50	STE 50	STE 50
NO _x Class to EN 676	ZM / ZM-LN	2 / 3	2 / 3	2 / 3	2 / -
Weight	kg	approx. 54	approx. 54	approx. 56	approx. 56

Dual fuel burners version ZM-T		WM-GL 10/1-A	WM-GL 10/2-A	WM-GL 10/3-A	WM-GL 10/4-A
Burner motor ¹⁾	Type Weishaupt	D90/50-2/1	D90/50-2/1	D90/90-2/1	D90/90-2/1
Nominal load	kW	0,76	0,76	1,5	1,5
Nominal current	A	2,1	2,1	3,5	3,5
Motor prefuse (motor in Y switching)	A minimum	10 AT (external)	10 AT (external)	10 AT (external)	10 AT (external)
Speed (50 Hz)	1/rpm	2850	2850	2800	2800
Combustion manager	Type	W-FM 54	W-FM 54	W-FM 54	W-FM 54
Stepping motor air/gas	Type	STE50	STE50	STE50	STE50
NO _x Class to EN 267 / EN 676		2/2	2/2	2/2	2/2
Weight	kg	approx. 58	approx. 58	approx. 58	approx. 58
Pump fitted	Type	AL75	AL75	AL95	AJ6
Maximum flow quantity	l/h	130	130	150	150
Oil hoses	DN/length	8/1000	8/1000	8/1000	8/1000

Dual fuel burners version ZM-R		WM-GL 10/2-A	WM-GL 10/3-A	WM-GL 10/4-A
Burner motor ¹⁾	Type Weishaupt	D90/50-2/1	D90/90-2/1	D90/90-2/1
Nominal load	kW	0,76	1,5	1,5
Nominal current	A	2,1	3,5	3,5
Motor prefuse (motor in Y switching)	A minimal	10 AT (external)	10 AT (external)	10 AT (external)
Speed (50 Hz)	1/rpm	2850	2800	2800
Combustion manager	Type	W-FM 54	W-FM 54	W-FM 54
Stepping motor air/gas/oil	Type	STE50	STE50	STE50
NO _x Class to EN 267 / EN 676		2/2	2/2	2/2
Weight	kg	approx. 58	approx. 58	approx. 58
Pump fitted	Type	AJ6	AJ6	AJ6
Maximum flow quantity	l/h	290	290	290
Oil hoses	DN/length	8/1000	8/1000	8/1000

¹⁾ The necessary motor protection can be provided either by a motor protection switch (supplied and fitted into a panel by others), or with integral motor overload protection (see Special equipment).

Voltages and frequencies:

The burners are equipped as standard for three phase alternating current (D) 400V, 3~, 50 Hz. Other voltages and frequencies are available on request.

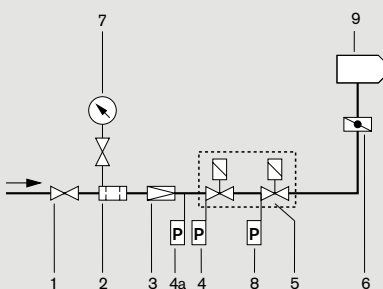
Standard burner motor:

Insulation Class F, Type of protection IP 54 .

Fuel systems

Gas fuel systems

W-FM 50/100/200



- 1 Ball valve *
- 2 Gas filter *
- 3 Pressure regulator (LP) or (HP) *
- 4 Low gas pressure switch
- 4a High gas pressure switch (for TRD) *
- 5 Double solenoid valve (DMV)
- 6 Gas butterfly valve
- 7 Pressure gauge with push button valve *
- 8 Valve proving gas pressure switch
- 9 Burner

* Not included in burner price

Layout of the valve train

On boilers with hinged doors, the valve train must be mounted on the opposite side to the boiler door hinges.

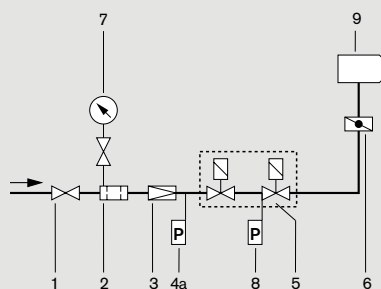
Compensator

To enable tension free mounting of the valve train, the fitting of a compensator is recommended.

Break points in the valve train

Break points in the valve train should be provided to enable the door of the heat exchanger to be swung open. The main gas line is best separated at the compensator.

W-FM 54



- 1 Ball valve *
- 2 Gas filter *
- 3 Pressure regulator (LP) or (HP) *
- 4a High gas pressure switch (for TRD) *
- 5 Double solenoid valve (DMV)
- 6 Gas butterfly valve
- 7 Pressure gauge with push button valve *
- 8 Valve proving gas pressure switch
- 9 Burner

Supporting the valve train assembly

The valve train should be properly supported in accordance with the site conditions. See Weishaupt accessories list for various valve train support components.

Gas meter

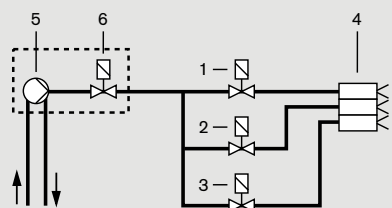
A gas meter must be installed to measure gas consumption during commissioning.

Thermal shut off device (TAE) optional depending on regulations

Integrated into the ball valve on screwed valve trains. Separate component with HTB seals in front of ball valve for flanged valve trains.

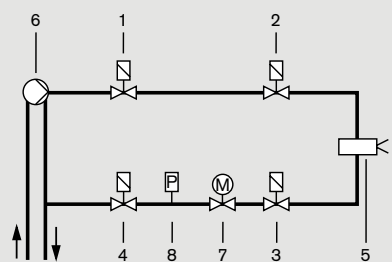
Oil fuel system

Version ZM-T



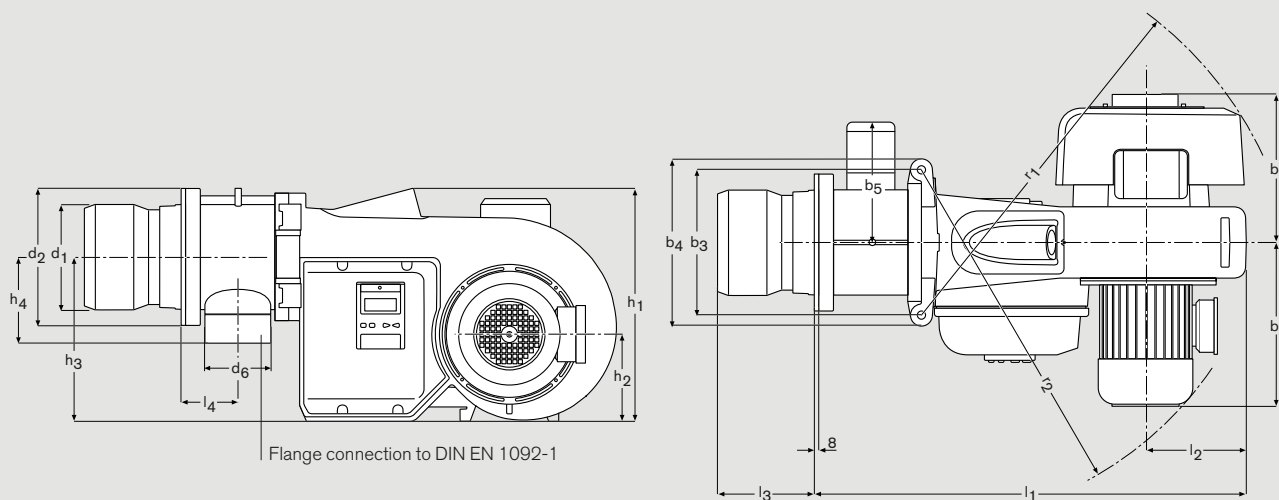
- 1 Stage 1 solenoid valve
- 2 Stage 2 solenoid valve
- 3 Stage 3 solenoid valve
- 4 Nozzle head with 3 oil atomising nozzles
- 5 Oil pump fitted to burner
- 6 Safety solenoid valve
- on burner pump (10/1 - 10/3)
- separat (10/4)

Version ZM-R



- 1 Solenoid valve normally closed
1. shut off device in supply
- 2 Solenoid valve normally closed
2. shut off device in supply
- 3 Solenoid valve normally closed
1. shut off device in return
- 4 Solenoid valve normally closed
2. shut off device in return
- 5 Nozzle head with spill type nozzle
- 6 Oil pump fitted to burner
- 7 Oil regulator
- 8 Pressure switch in return

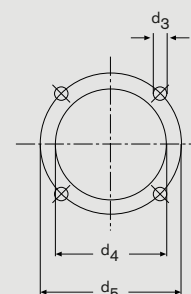
Dimensions Gas burners



Burner type	Dimensions in mm															
	l ₁	l ₂	l ₃	l ₄	b ₁	b ₂	b ₃	b ₄	b ₅	h ₁	h ₂	h ₃	h ₄	r ₁	r ₂	
WM-G10/1 ZM	813	205	171 – 178	98	279	307	270	312	232	445	167	313	140	718	682	
WM-G10/2 ZM	813	205	158 – 178	98	279	307	270	312	232	445	167	313	140	718	682	
WM-G10/3 ZM	833	205	199 – 224	108	279	307	270	312	240	445	167	313	162	718	682	
WM-G10/4 ZM	833	205	199 – 224	108	279	307	270	312	240	445	167	313	162	718	682	
WM-G10/1 ZM-LN	793	205	129 – 144	88	279	307	270	312	214	445	167	313	130	718	682	
WM-G10/2 ZM-LN	813	205	132 – 143	98	279	307	270	312	232	445	167	313	140	718	682	
WM-G10/3 ZM-LN	833	205	177 – 197	108	279	307	270	312	240	445	167	313	162	718	682	

Burner Type	Dimensions in mm					
	d ₁	d ₂	d ₃	d ₄	d ₅	d ₆
WM-G10/1 ZM	160	212	M10	165	186	DN40
WM-G10/2 ZM	160	212	M10	165	186	DN40
WM-G10/3 ZM	200	260	M10	210	235	DN50
WM-G10/4 ZM	215	260	M10	220	235	DN50
WM-G10/1 ZM-LN	127	195	M10	135	160 – 170	DN25
WM-G10/2 ZM-LN	160	212	M10	165	186	DN40
WM-G10/3 ZM-LN	200	260	M10	210	235	DN50

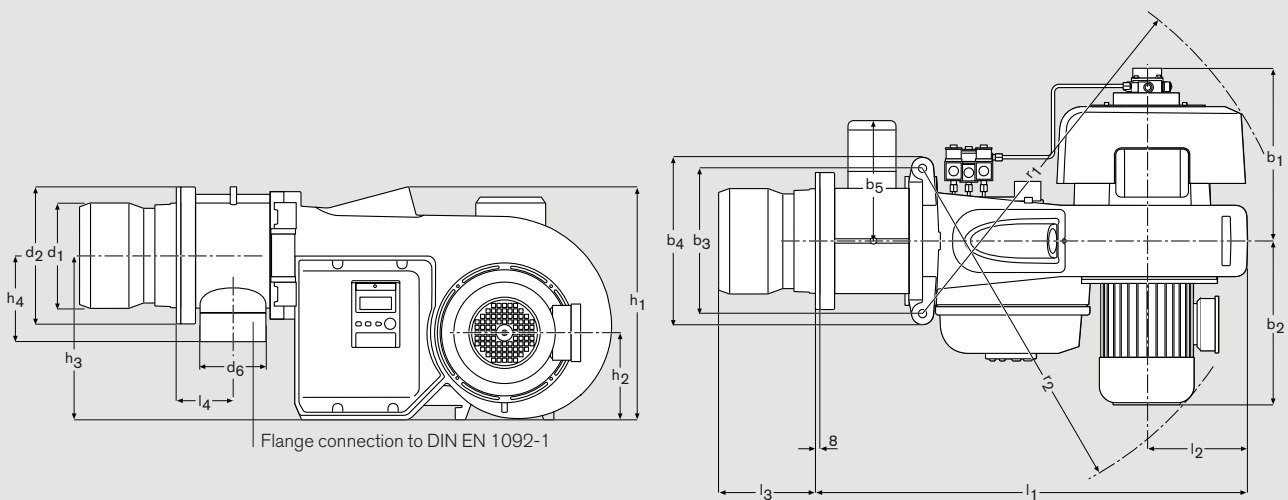
Boiler plate drilling dimensions



All dimensions are approximate.
Weishaupt reserve the right to make changes in light of future developments.

Dimensions

Dual fuel burners

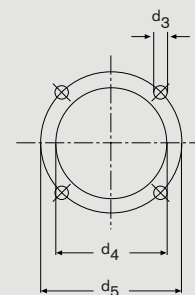


Burner Type	Dimensions in mm															
	l1	l2	l3	l4	b1 ^①	b2	b3	b4	b5	h1	h2	h3	h4	r1	r2	
WM-GL10/1 ZM-T	813	205	171 – 178	98	323	307	270	312	232	445	167	313	140	718	682	
WM-GL10/2 ZM-T	813	205	158 – 178	98	323	307	270	312	232	445	167	313	140	718	682	
WM-GL10/3 ZM-T	833	205	199 – 224	108	323	307	270	312	240	445	167	313	162	718	682	
WM-GL10/4 ZM-T	833	205	199 – 224	108	347	307	270	312	240	445	167	313	162	718	682	
WM-GL10/2 ZM-R	813	205	158 – 178	98	352	307	270	312	232	445	167	313	140	718	682	
WM-GL10/3 ZM-R	833	205	199 – 224	108	352	307	270	312	240	445	167	313	162	718	682	
WM-GL10/4 ZM-R	833	205	199 – 224	108	352	307	270	312	240	445	167	313	162	718	682	

① without electromagnetic coupling (pump with magnetic coupling plus 130 mm)

Burner Type	Dimensions in mm					
	d1	d2	d3	d4	d5	d6
WM-GL10/1 ZM-T	160	212	M10	165	186	DN40
WM-GL10/2 ZM-T	160	212	M10	165	186	DN40
WM-GL10/3 ZM-T	200	260	M10	210	235	DN50
WM-GL10/4 ZM-T	218	260	M10	220	235	DN50
WM-GL10/2 ZM-R	160	212	M10	165	186	DN40
WM-GL10/3 ZM-R	200	260	M10	210	235	DN50
WM-GL10/4 ZM-R	218	260	M10	220	235	DN50

Boiler plate drilling dimensions



All dimensions are approximate.
Weishaupt reserve the right to make changes in light of future developments.

That's no Utopia. Weishaupt's constant research and development programme ensures ever cleaner and more economical burners and heating systems. That's reliability.



Test beds at the Weishaupt research and Development Centre



Making advances

Weishaupt has long recognised the theme of our time and is continually researching into ever more efficient and environmentally friendly burners and heating systems. So Weishaupt is not only contributing considerably to the reduction of unnecessary energy costs, but is also taking an active part in protecting the environment.

In house production

Not only research and development takes place at Weishaupt. Burner and heating system production is also deeply rooted at our sites in Germany and Switzerland. This enables the real time, seamless monitoring and control of the quality of all the products produced by Weishaupt.

– weishaupt –

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We're right where you need us

A strong service network gives peace of mind

Weishaupt equipment is available from good heating companies, with whom Weishaupt works in partnership. To support the specialists, Weishaupt maintains a large sales and service network. Delivery, spares and service are thus continually ensured.

Even in an emergency, Weishaupt is on call. The service department is available to Weishaupt customers around the clock, 365 days a year. A Weishaupt branch office or agency near you can answer all your questions on heating and Weishaupt burners.

