

– weishaupt –

info

Information on industrial burners



Increased capacity for
industrial applications

Weishaupt monarch® gas burner WM-G10 version ZMI (20 – 1250 kW)

Weishaupt monarch[®] burner WM-G10 ZMI

Larger capacity in a more compact form



Weishaupt monarch[®] burners WM-G10 in version ZMI have been developed for use on special industrial applications. With their considerable turndown range, these burners are suitable for use on process plant.

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 level.

To realise this goal, a completely new air inlet and air damper control were developed. The special housing design with 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. A final adjustment is 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-G10 burners are available with sliding multistage or modulating operation, enabling numerous control possibilities and making the burner universally employable. Both version ensure a gentle, problem free start up and high operational reliability. Within its operating range, the burner's output is easily matched to the current heat demand.

Version ZMI (fully automatic sliding multi stage or modulating, depending on the type of load control):

The burner's output can be matched within a turndown ratio of 20:1 to the current heat demand.

Fuels

Natural gas E
Natural gas LL
LPG B/P

The suitability of other fuels must be confirmed in advance by Weishaupt.

Application

Due to its particularly large turndown ratio, the Weishaupt gas burner WM-G10 is suitable for use on process plant.

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).

Notes on operation

ZMI burners may only be installed and commissioned on direct fired heat exchangers when the following conditions are met:

- The flame must not be impeded in the combustion chamber by process specific flue gas recirculation or by secondary air.
- A flue gas sampling point must be available prior to dilution by any other sources.
- A flame view port must be available.
- A gas meter or throughput display which immediately indicates the actual current gas throughput is essential for setting the burner.

Zero governor

Weishaupt gas burners WM-G10 version ZMI are additionally equipped with a zero governor. This eliminates the effects of pressure losses in the gas valve train.

The zero governor is connected to the fan pressure in the burner by a flexible impulse line.

A high fan pressure produces high gas pressure at the zero governor's outlet, a low fan pressure produces a low gas pressure at the governor's outlet.

Permissible ambient conditions

- Ambient temperature during operation -15 to + 40 °C
- 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

Weishaupt gas burners WM-G10 ZMI are equipped to comply with EN 676, however, due to the high degree of excess air at partial load they are not tested by an independent body.

If testing is required, the plant operator should arrange for this to be carried out either on site or at an authorised testing centre.

The burners conform to the following standards and EU Directives:

- Machine Directive 98/37/EU
- 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 label without CE-PIN label

Trademark

Weishaupt monarch® burners WM10 are registered as a trademark throughout Europe.

The most important advantages at a glance:

- Extended turndown ratio of up to 20:1 for certain applications
- Digital combustion management with electronic compound regulation at all ratings
- More compact than previous burners of similar size
- Sound attenuated air inlet as standard for quieter operation
- Powerful fan due to the specially developed fan geometry and air damper control
- All WM-G10 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
- Reliable sliding multi stage or modulating operation, depending on the type of load controller
- 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

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. The monarch® WM 10 burner for example, received the red dot award for its good product design.



reddot award
product design

Digital combustion management: Precise, simple and reliable

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

Weishaupt WM-G 10 gas burners 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 operating 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

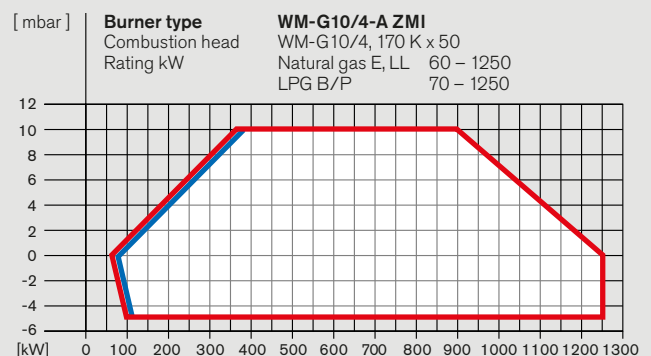
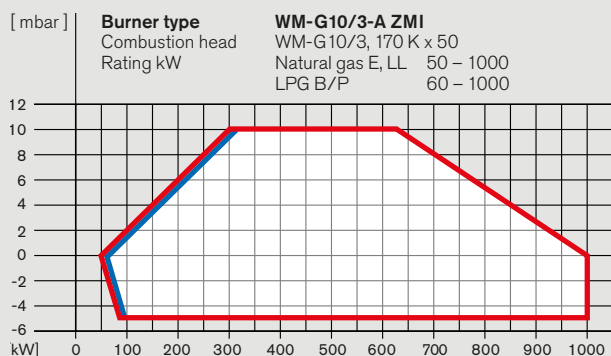
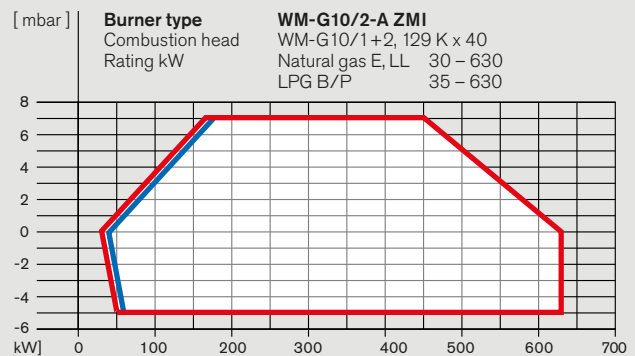
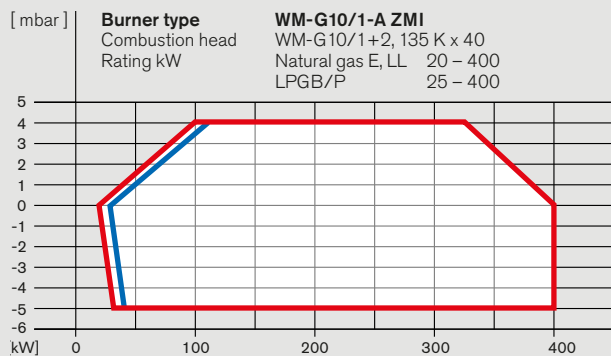
Digital combustion management makes burner operation simple and reliable. The most important advantages:

- 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-FM100	W-FM200
Digital combustion management		
Combustion manager for intermittent operation	●	●
Combustion manager for continuous operation	●	●
Flame sensor for intermittent operation	ION/QRI/QRB/QRA	ION/QRI/QRB/QRA
Flame sensor for continuous operation	ION/QRI	ION/QRI
Servomotors in electronic compound (max.)	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)	100 m	100 m
Fuel consumption meter available		●
Display of combustion efficiency		●
eBUS / MOD BUS interface	●	●
PC supported commissioning	●	●

Burner selection version ZMI



N. Gas —
LPG —

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.

Valve train sizing version ZMI

WM-G10/1, vers. ZMI

Burner rating kW	Press. at gas b/fly at full load mbar	Low pressure supply (with FRS) (flow pressure in mbar into shut off valve, $p_{e,max} = 300$ mbar)				High pressure supply (with HP regulator) (flow pressure in mbar into double gas valve)			
		Nominal diameter of v/train				Nominal diameter of v/train			
		3/4"	1"	1 1/2"	2"	3/4"	1"	1 1/2"	2"
		Nominal diameter of gas b/fly				Nominal diameter of gas b/fly			
		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	3	14	9	-	-	10	7	6	6
175	3	18	10	-	-	12	8	7	6
200	3	21	11	-	-	14	8	7	6
225	3	26	13	8	-	16	9	7	6
250	3	30	15	9	-	19	10	8	6
275	3	36	17	9	-	21	11	8	6
300	4	42	20	11	-	25	13	9	7
325	4	49	22	12	9	29	14	10	8
350	5	56	25	13	9	33	16	11	9
375	6	63	29	15	10	37	18	12	9
400	6	72	32	16	11	42	20	14	10

Natural gas LL (N) $H_i = 8.83$ kWh/mn ³ ; $d = 0.641$; $W_i = 11.029$ kWh/mn ³									
150	4	19	11	8	-	13	9	7	7
175	4	24	13	9	-	16	10	8	7
200	4	29	15	9	-	19	11	8	7
225	4	36	17	10	-	22	12	9	7
250	4	42	20	11	-	25	13	9	7
275	4	50	23	12	9	30	15	10	8
300	5	59	27	14	10	35	17	12	9
325	6	69	31	16	11	40	19	13	10
350	7	79	35	17	12	46	22	14	11
375	7	90	40	19	13	52	24	16	12
400	8	102	45	22	14	59	27	18	13

LPG B/P (F) $H_i = 25.89$ kWh/mn ³ ; $d = 1.555$; $W_i = 20.762$ kWh/mn ³									
150	3	9	-	-	-	7	6	6	6
175	3	10	-	-	-	8	6	6	6
200	3	12	-	-	-	9	7	6	6
225	3	14	9	-	-	10	7	6	6
250	3	16	9	-	-	11	7	6	6
275	3	18	10	-	-	12	8	7	6
300	4	21	12	8	-	14	9	7	7
325	4	24	13	9	-	16	10	8	7
350	5	27	15	10	8	18	11	9	8
375	5	31	16	11	9	20	12	10	8
400	6	34	18	12	9	22	13	10	9

Screwed

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

WM-G10/2, vers. ZMI

Burner rating kW	Press. at gas b/fly at full load mbar	Low pressure supply (with FRS) (flow pressure in mbar into shut off valve, $p_{e,max} = 300$ mbar)				High pressure supply (with HP regulator) (flow pressure in mbar into double gas valve)					
		Nominal diameter of v/train				Nominal diameter of v/train					
		3/4"	1"	1 1/2"	2"	65	3/4"	1"	1 1/2"	2"	65
		Nominal diameter of gas b/fly				Nominal diameter of gas b/fly					
		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											
300	3	41	18	9	-	-	24	11	8	6	-
350	4	55	24	12	8	-	32	15	10	7	-
400	5	71	31	15	10	8	41	19	12	9	6
450	6	89	38	18	12	10	51	23	15	11	7
500	7	108	46	22	13	11	61	27	17	12	8
550	8	130	55	25	15	12	73	32	20	13	9
600	9	153	64	29	17	14	86	37	23	15	10
630	10	169	70	31	18	15	94	40	24	16	11

Natural gas LL (N) $H_i = 8.83$ kWh/mn ³ ; $d = 0.641$; $W_i = 11.029$ kWh/mn ³											
300	4	58	25	13	8	-	33	16	10	7	-
350	5	78	34	16	10	9	45	20	13	9	6
400	7	101	43	20	13	11	57	26	16	11	7
450	8	127	54	25	15	12	72	32	20	13	9
500	9	155	65	29	17	14	87	38	23	15	11
550	11	186	78	34	20	16	104	44	27	17	12
600	12	221	91	39	22	18	123	51	30	19	14
630	13	242	100	43	24	19	135	56	33	20	15

LPG B/P (F) $H_i = 25.89$ kWh/mn ³ ; $d = 1.555$; $W_i = 20.762$ kWh/mn ³											
300	2	20	10	-	-	-	13	8	6	5	-
350	4	26	14	9	-	-	17	10	8	7	-
400	5	33	17	10	8	-	21	12	9	8	5
450	6	41	21	12	10	9	26	14	11	9	6
500	7	50	24	14	11	10	31	17	12	10	7
550	8	59	28	16	12	11	36	19	14	11	8
600	9	69	33	18	13	12	42	22	16	12	9
630	9	76	35	19	14	13	45	23	17	13	10

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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WM-G10/3, vers. ZMI

Burner rating kW	Press. at gas b/fly at full load mbar	Low pressure supply (with FRS) (flow pressure in mbar into shut off valve, $p_{e,max} = 300$ mbar)						High pressure supply (with HP regulator) (flow pressure in mbar into double gas valve)					
		Nominal diameter of v/train						Nominal diameter of v/train					
		3/4"	1"	1 1/2"	2"	65	80	3/4"	1"	1 1/2"	2"	65	80

Natural gas E (N) $H_i = 10.35$ kWh/mn ³ ; $d = 0.606$; $W_i = 13.295$ kWh/mn ³													
500	3	104	42	18	10	-	-	58	23	13	8	-	-
550	4	126	51	21	11	8	-	69	28	16	9	5	-
600	5	149	60	24	12	9	8	82	33	18	10	6	5
650	5	174	70	28	14	10	9	95	38	20	11	6	6
700	6	201	80	31	16	11	10	110	43	23	13	7	7
750	6	230	91	36	17	12	10	125	49	26	14	8	7
800	7	-	103	40	19	13	11	-	55	29	15	9	8
850	8	-	116	44	21	14	12	-	61	32	17	10	9
900	8	-	129	49	23	16	13	-	68	35	18	11	10
950	9	-	144	54	25	17	14	-	75	39	19	12	10
1000	10	-	159	59	27	18	15	-	83	42	21	13	11

Natural gas LL (N) $H_i = 8.83$ kWh/mn ³ ; $d = 0.641$; $W_i = 11.029$ kWh/mn ³													
500	4	150	60	24	12	9	-	82	32	18	10	5	-
550	5	181	72	28	14	10	9	99	39	21	11	6	6
600	6	214	85	33	16	12	10	117	45	24	13	8	7
650	7	251	99	38	18	13	11	136	53	28	15	9	8
700	8	-	114	44	21	14	12	-	61	32	16	10	9
750	9	-	131	50	23	16	13	-	69	36	18	11	10
800	9	-	148	56	26	17	14	-	78	40	20	12	11
850	10	-	166	62	28	19	16	-	87	44	22	13	12
900	11	-	186	69	31	21	17	-	97	49	24	15	13
950	12	-	207	77	34	22	18	-	107	54	26	16	14
1000	13	-	228	84	37	24	19	-	118	59	28	17	15

LPG B/P (F) $H_i = 25.89$ kWh/mn ³ ; $d = 1.555$; $W_i = 20.762$ kWh/mn ³													
500	3	46	21	11	-	-	-	27	13	9	7	-	-
550	4	55	24	12	8	-	-	32	15	10	7	-	-
600	4	65	29	14	9	-	-	37	17	11	8	-	-
650	5	76	33	16	10	9	-	43	20	13	9	6	5
700	6	87	38	18	11	9	9	50	22	14	10	6	6
750	6	100	42	20	12	10	9	56	25	16	11	7	7
800	7	113	48	22	13	11	10	64	28	17	12	8	7
850	7	127	53	24	14	12	11	71	31	19	13	8	8
900	8	141	59	26	15	12	11	79	34	21	13	9	9
950	9	157	65	29	17	13	12	88	37	22	14	10	9
1000	9	173	72	31	18	14	13	97	41	24	15	11	10

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

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.

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.

WM-G10/4, vers. ZMI

Burner rating kW	Press. at gas b/fly at full load mbar	Low pressure supply (with FRS) (flow pressure in mbar into shut off valve, $p_{e,max} = 300$ mbar)						High pressure supply (with HP regulator) (flow pressure in mbar into double gas valve)								
		Nominal diameter of v/train						Nominal diameter of v/train								
		1"	1 1/2"	2"	65	80	1"	1 1/2"	2"	65	80	1"	1 1/2"	2"	65	80

Natural gas E (N) $H_i = 10.35$ kWh/mn ³ ; $d = 0.606$; $W_i = 13.295$ kWh/mn ³																
600	6	61	25	13	10	9	34	19	11	7	6	45	25	14	9	8
700	8	82	33	17	13	12	58	32	18	12	11	70	37	20	13	12
800	10	106	42	22	16	14	84	44	22	14	12	99	50	24	15	13
900	10	132	51	25	18	15	116	58	27	16	14	125	62	27	16	14
1000	11	160	61	28	19	16	125	68	30	17	15	138	70	29	17	15
1100	11	191	71	32	21	17	148	80	34	19	16	155	80	32	18	16
1200	12	225	82	36	23	18	170	92	38	21	17	175	90	34	19	17
1250	12	243	88	38	23	19	185	98	40	22	18	190	95	35	19	18

Natural gas LL (N) $H_i = 8.83$ kWh/mn ³ ; $d = 0.641$; $W_i = 11.029$ kWh/mn ³																
600	7	86	34	17	12	11	46	25	14	8	7	62	33	18	11	10
700	9	116	45	22	16	14	80	42	22	15	13	99	51	26	16	15
800	12	150	58	28	20	17	119	60	29	18	16	138	68	31	17	16
900	13	188	71	33	22	18	148	74	34	20	18	170	80	36	19	18
1000	14	229	85	38	25	20	175	88	39	22	20	200	90	40	21	20
1100	14	274	100	43	27	22	200	100	44	23	22	225	100	45	23	22
1200	15	-	117	49	30	23	225	110	49	26	24	250	110	50	24	23
1250	16	-	125	52	31	24	240	120	52	31	24	270	120	52	24	24

LPG B/P (F) $H_i = 25.89$ kWh/mn ³ ; $d = 1.555$; $W_i = 20.762$ kWh/mn ³																
600	4	28	14	9	-	-	17	11	8	-	-	22	14	9	6	5
700	5	37	17	10	9	8	22	16	10	7	6	32	19	12	7	7
800	6	47	21	12	10	9	38	21	13	8	7	44	24	14	8	7
900	6	57	24	14	11	10	44	24	14	8	7	51	27	15	9	8
1000	6	69	28	15	11	10	51	27	15	9	8	55	29	15	9	8
1100	7	82	33	17	12	11	55	29	15	9	8	60	32	17	11	10
1200	7	96	37	18	13	11	60	34	19	13	11	65	36	19	13	11
1250	7	103	40	19	13	11	65	37	20	14	11	70	39	20	14	11

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

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.

Order numbers

Technical data

Order No. version ZMI

Burner type	Version		Order No.
WM-G10/1	ZMI	3/4"	217 113 10
		1"	217 113 11
		1 1/2"	217 113 12
		2"	217 113 13
WM-G10/2	ZMI	3/4"	217 116 10
		1"	217 116 11
		1 1/2"	217 116 12
		2"	217 116 13
		DN 65	217 116 14
WM-G10/3	ZMI	3/4"	217 119 10
		1"	217 119 11
		1 1/2"	217 119 12
		2"	217 119 13
		DN 65	217 119 14
WM-G10/4	ZMI	1"	217 121 11
		1 1/2"	217 121 12
		2"	217 121 13
		DN 65	217 121 14
		DN 80	217 121 15

Technical data

Burner		WM-G10/1-A	WM-G10/2-A	WM-G10/3-A	WM-G10/4-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 prefusing (motor in Y switching)	A minimum	10 AT (external)	10 AT (external)	10 AT (external)	10 AT (external)
Speed (50 Hz)	rpm	2850	2850	2800	2800
Combustion manager	Type	W-FM 100	W-FM 100	W-FM 100	W-FM 100
Flame monitoring	Type	ION	ION	ION	ION
Servomotor Air / Gas	Type	SQM 45	SQM 45	SQM 45	SQM 45
Weight (without controller + valve train)	kg	approx. 54	approx. 54	approx. 56	approx. 56

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.

Special equipment

Special equipment burner		WM-G10/1-A ZMI	WM-G10/2-A ZMI	WM-G10/3-A ZMI	WM-G10/4-A ZMI
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 (screwed W-MF) 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 (screwed DMV) R2"					
	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 (flanged DMV)					
	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		250 030 22	250 030 22	250 030 22	250 030 22
Ducted air intake with LGW pressure switch		250 030 24	250 030 24	250 030 24	250 030 24
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 100 with module for load control, analogue signal convertor and speed control with optional fuel metering	fitted	250 030 72	250 030 72	250 030 72	250 030 72
	loose	on request	on request	on request	on request
Speed control with frequency convertor fitted to burner (W-FM 200 required)	210 030 11	210 030 11	210 030 11	210 030 11	210 030 11
Speed control for frequency convertor loose (FC from accessories) (W-FM 200 required)		210 030 12	210 030 12	210 030 12	210 030 12
ABE with Chinese calligraphy (W-FM 100/200)		110 018 53	110 018 53	110 018 53	110 018 53
Motor D90 with contactor 230 V and overload protection ¹⁾		250 030 86	250 030 86	250 030 86	250 030 86
ABE (loose) with Chinese calligraphy (W-FM 100/200)		110 018 53	110 018 53	110 018 53	110 018 53
Control voltage 110 V		250 031 72	250 031 72	250 031 72	250 031 72

Country specific versions 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)

Overview mode of operation

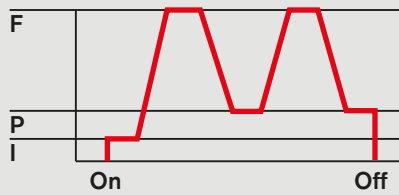
Function schematic

Mode of operation

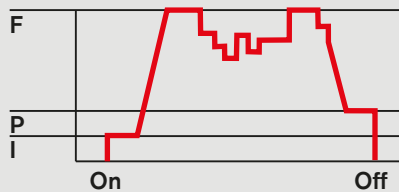
Load control ZM (sliding multi stage or modulating)

- Stepping motors adjust the load between partial and full load dependent on the heat demand.
- There is a gradual change between both load points. There are no sudden large changes in fuel throughput.
- For modulating operation (infinitely variable within the capacity range in response to heat demand) a load controller is required, which can be integrated into the W-FM 100/200. Alternatively, a controller can be fitted to the control panel.

sliding multi stage



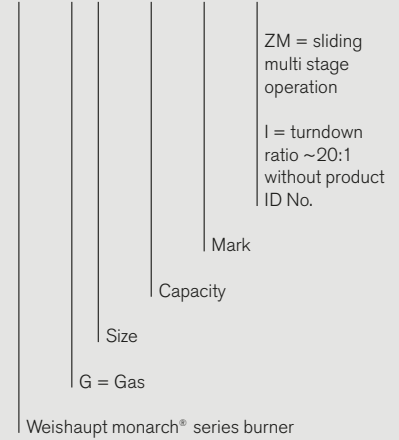
modulating



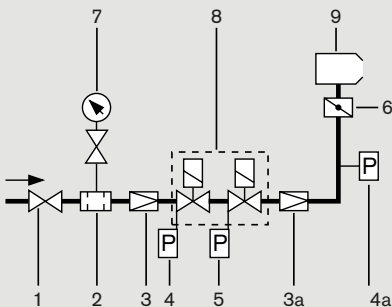
- F = Full load (nominal load)
P = Partial load (min. rating)
I = Ignition load

Designation

WM- G 10 / 3 - A /ZMI



Valve train layout



Legend:

- Ball valve *
- Filter for gas
- Pressure regulator (LP) * or (HP) *
- 3a Zero governor with impulse line
- Low gas pressure switch
- 4a High gas pressure switch (for TRD) *
- Valve proving gas pressure switch
- Gas butterfly valve
- Pressure gauge with push button valve *
- Double solenoid valve (DMV)
- 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.

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.

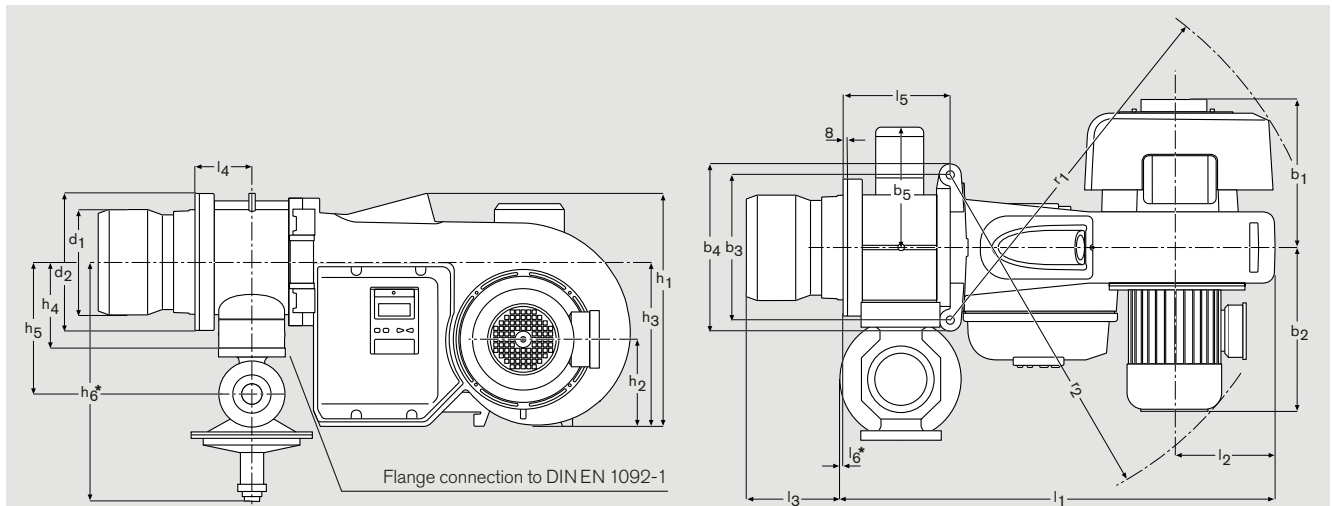
Gas meter

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

Thermal shut off device (TAE) optional, depending on local regulations

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

Dimensions



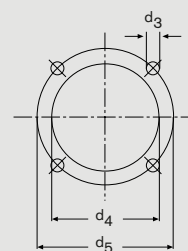
Size	Dimensions in mm											h_1	h_2	h_3	h_4	h_5	
	l_1	l_2	l_3	l_4	l_5	Rp ¾	Rp 1	l_6^* for DN			screw.					flang.	
10/1	813	205	171-178	98	168	-	-	-	27	45	45	445	167	313	140	254	252
10/2	813	205	158-178	98	188	-	-	-	27	45	45	445	167	313	140	254	252
10/3	833	205	199-224	108	208	-	-	-	17	35	35	445	167	313	162	298	284
10/4	833	205	199-224	108	228	-	-	-	17	35	35	445	167	313	162	298	284

Size	Dimensions in mm											b_1	b_2	b_3	b_4	b_5	r_1	r_2	d_1	d_2	d_3	d_4	d_5
	h_6^* for DN																						
10/1	360	380	433	486	-	-	279	307	270	312	232	718	682	160	212	M10	165	186					
10/2	391	411	464	517	562	-	279	307	270	312	232	718	682	160	212	M10	165	186					
10/3	435	455	508	561	594	594	279	307	270	312	240	718	682	200	260	M10	210	235					
10/4	-	455	508	561	594	594	279	307	270	312	240	718	682	218	260	M10	220	235					

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

* If the protrusion of the zero governor may foul the appliance mounting plate then a spacer ring must be inserted between said plate and the burner flange (see accessories list).
It should be noted that combustion head dimension l_3 is thereby reduced by the height of the spacer ring.

Boiler plate drilling dimensions



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 in 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.

That's no façade. That's reliability.

Weishaupt is reliability.

The family owned business in Schwendi, southern Germany, was founded in 1932 by Max Weishaupt. Today, with branch offices and subsidiary companies in 60 countries, it counts as an international market leader in the fields of burners, heating and condensing systems, solar technology, heat pumps and building management systems.

The values of trust, quality, customer service, innovation and experience are those on which the pioneering Max Weishaupt founded his company. That, summed up in a single word, is reliability. And Weishaupt stands for that to this very day.



The Weishaupt Forum in Schwendi



- weishaupt -

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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.

