–weishaupt–

product

Information on oil, gas and dual-fuel burners

WM 30 for oil, gas and dual-fuel

WM 30 monarch® burners (350 – 5700 kW) • powerful and versatile

Progress and tradition: The latest monarch® burner

The monarch® trademark has stood for power and quality for more than 50 years

For more than five decades, Weishaupt's monarch® series burners have been used on a wide variety of heat exchangers and industrial plant, and their success has helped underpin Weishaupt's outstanding reputation.

The latest monarch® series is writing the next chapter in this success story. Its combination of ultra-modern technology and compact construction helps to make this burner universally employable.

Digital.

Digital combustion management for economical and reliable 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 latest monarch burners operate with considerably reduced noise levels, thanks to the specially developed fan unit.

Digital

Digital combustion management means optimal combustion figures, continuously reproducible setpoints, and ease of use.

Weishaupt WM 30-series oil, gas, and dual-fuel burners are equipped as standard with electronic compound regulation and digital combustion management. Modern combustion technologies demand a precise and continually reproducible dosing of fuel and combustion air. This is the only way optimal combustion figures can 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 a bus system, enabling the user-friendly setting of the burner.

Flexible communication options
The integrated interface enables all necessary data and functions to be relayed to a master control system. If required, a modem can be installed to allow for remote operation, monitoring, and diagnosis.

Bus communication with external controls and building managment
Several bus systems are available via E-Gate or Mod-Gate if data from the burner are to be exchanged with a PLC unit, or if control of the burner is to be integrated into a building management system.

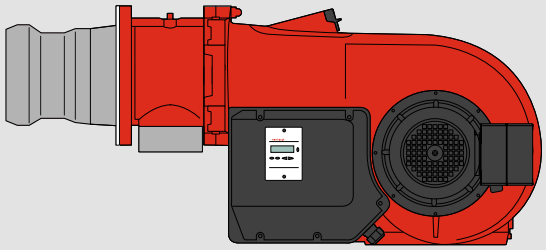
For the control and management levels Weishaupt offers ProGraf NT, a real-time software product that meets any and all requirements.

Technological edge
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. The only additional requirements are external control and motor fuses.
- Reduced installation expense. Each burner is tested and supplied as a complete unit.
- Commissioning and servicing takes less time. The burner's basic parameters are set at the factory. The combustion manager's menu-driven commissioning program is used to run through the final site-specific adjustments and the combustion emission checks.

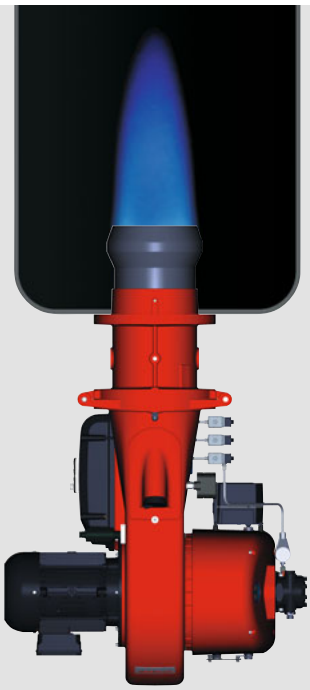
Digital combustion management General system overview	**W-FM 50**	**W-FM 54**	**W-FM 100**	**W-FM 200**
Single-fuel operation	●		●	●
Dual-fuel operation		●	●	●
Controller for intermittent operation	●	●	●	●
Controller for continuous operation			●	●
Flame sensor for intermittent operation	ION/QRA2/QRB	QRA2	ION/QRI/QRB/QRA	ION/QRI/QRB/QRA
Flame sensor for continuous operation			ION/QRI	ION/QRI
Servomotors in electronic compound (max.)	x 2	x 3	x 4	x 6
Servomotors with stepping motors	●	●	●	●
Variable speed drive available	●	●		●
O_2 trim available				●
Gas valve proving	●	●	●	●
4-20 mA input signal	●	●	optional	●
Integrated, self-checking PID controller for temperature or pressure			optional	●
Removable operating unit (max. distance)	20 m	20 m	100 m	100 m
Fuel consumption meter (switchable)	●[1)]	●[1)]		●
Combustion efficiency display				●
eBUS / Modbus interface	●	●	●	●
PC-supported commissioning	●	●	●	●

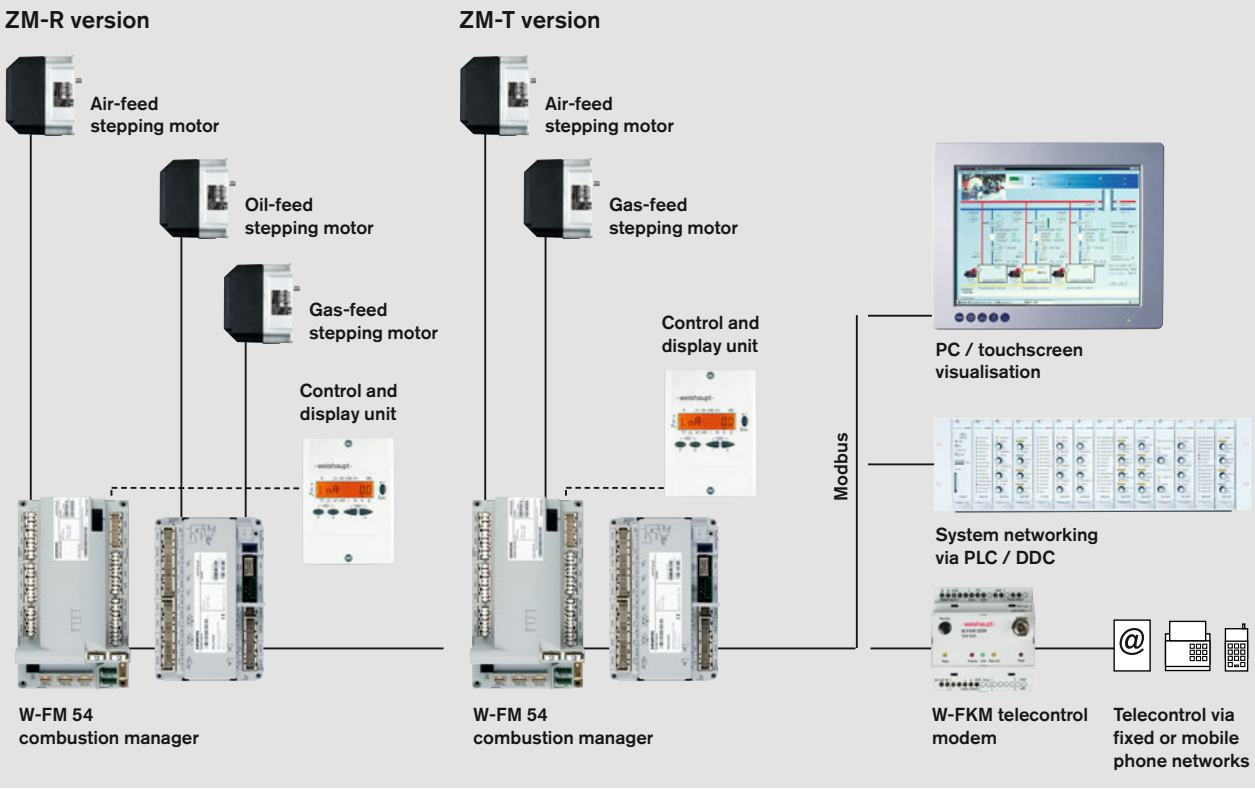
Please enquire regarding connections available for additional functions, e.g. flue gas dampers, oil shut-off assemblies etc.

[1)] Not in conjunction with variable speed drive



Burner with inbuilt digital combustion manager





Schematic representation with W-FM 54

Compact and quiet

The latest Weishaupt WM-series monarch® burners are compact, powerful, and quiet. They are writing the the next chapter in the 50-year-long success story of the legendary monarch® series.

Futuristic fan technology
From the very earliest stages of development, 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. This special housing design with its self-opening air inlet and the new air-damper technology result in increased fan pressure and thus in greater capacity despite the burner's more compact form.

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

Fast commissioning, simple servicing
All WM 30 burners are delivered with the mixing assembly preset for the required output of the burner. A final adjustment is made using the combustion manager's menu-controlled commissioning program.

All of the burner's components, such as the mixing assembly, air damper, and combustion manager, are readily accessible despite its compact form. This enables maintenance and servicing work to be carried out quickly and easily, aided by the standard hinged flange which provides a perfect servicing position.

Adjustment to suit different combustion chamber conditions can easily be made with the burner in its installed position. The integral sightglass enable ignition and the flame to be observed.

Regulation
The following methods of regulation are available for Weishaupt WM burners:
Oil: Three-stage (T)
(or two-stage with low-impact start or change-over)
modulating (R)
Gas: Sliding-two-stage or modulating (ZM), depending on the type of capacity regulation: Within its operating range, the burner's output is matched to the current heat demand.

These multiple control options make the burner universally employable. Both versions enure a gentle, problem-free start up and high degree of operational reliability.

A number of executions are available to meet differing emission level and operational requirements:

ZM version
Burners with the standard, advanced-design mixing assembly for installations with Class 2 oil and gas-side NO_x emission requirements.

LN version (Low-NO_x)
Compared to burners with the standard mixing assembly, LN-version burners achieve a further reduction in NO_x emissions (Class 3). This is achieved through a more intensive recirculation of the combustion gases in the combustion chamber.

Good emissions depend on combustion chamber geometry, thermal loading and on the combustion system (three-pass or reverse-flame).

Fuels
Natural Gas E
Natural Gas LL
LPG B/P
Fuel oil EL (<6 mm^2/s at 20 °C) in accordance with DIN 51 603, part 1

The suitability of fuels of differing quality must be confirmed in advance with Weishaupt.

Applications
EN 267 and EN 676-approved Weishaupt WM 20 burners are suitable for:
- Installation on EN 303-compliant heat exchangers
- 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 (oil/dual-fuel burners)
  -15 to +40 °C (gas burners)
- Humidity: max. 80 % relative humidty, no condensation
- Suitable for operation indoors only
- For plant in unheated areas, certain further measures may be required (please enquire).

Use of the burner for other applications or in ambient conditions not detailed above is not permitted without the prior written agreement of Max Weishaupt GmbH. 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:

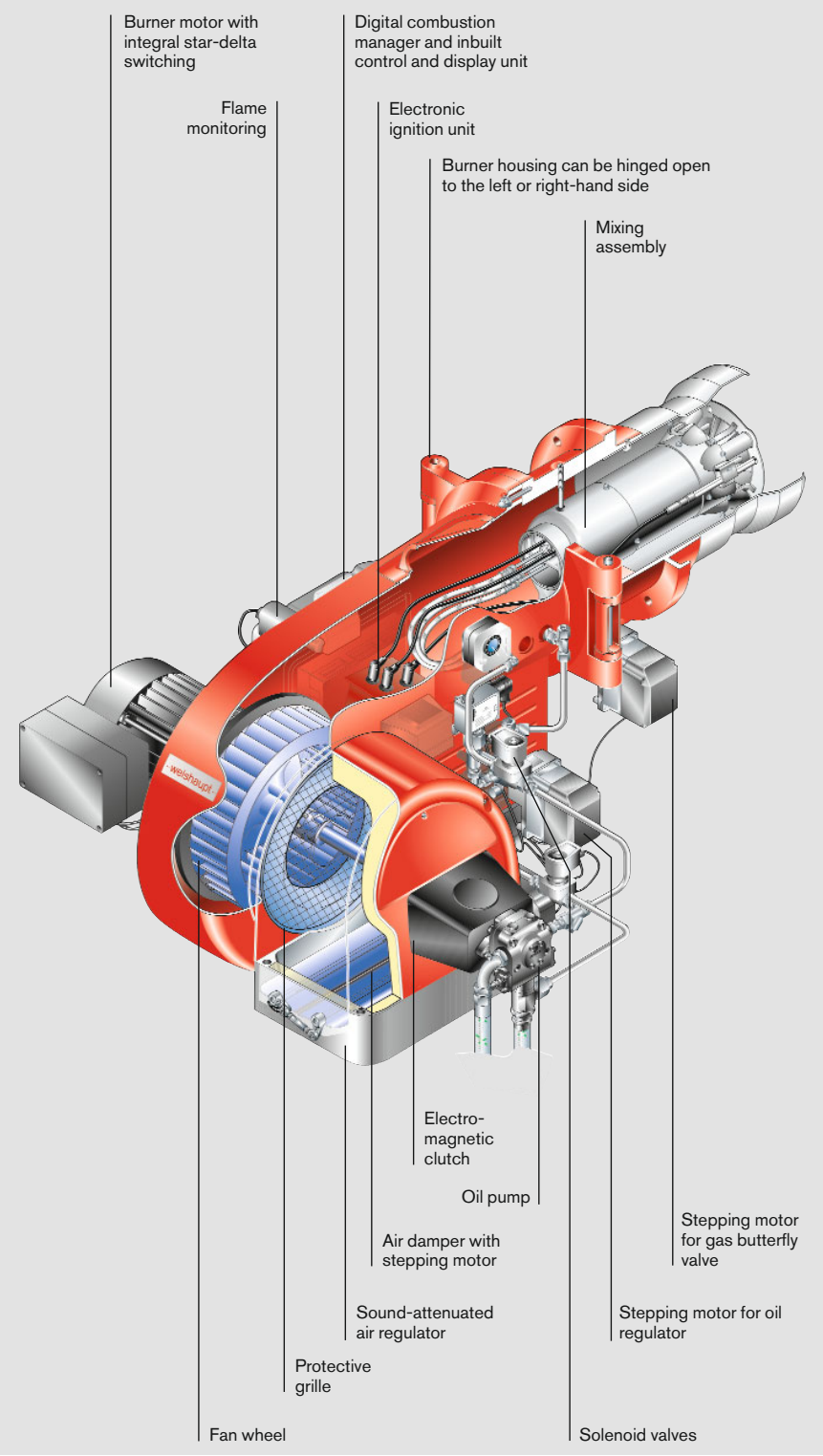
- EN 267 and EN 676
- Machinery Directive, 2006/42/EC
- Electromagnetic Compatibility Directive, 2004/108/EC
- Low Voltage Directive, 2006/95/EC
- Pressure Vessel Directive, 97/23/EC
- The burners carry CE and CE-PIN marks

The most important advantages:

- Easy fuel change-over between gas and oil on dual-fuel burners
- Digital combustion management with electronic compound regulation at all ratings
- Compact construction
- Sound-attenuated air inlet as standard for quieter operation
- Powerful fan with specially developed fan geometry and air-damper control
- All WM 30 burners are delivered with the mixing assembly preset for the required output of the burner
- IP 54 protection as standard
- Electromagnetic clutch included as standard (WM-GL30)
- Easy access to all components, such as the mixing head, air damper and combustion manager
- Reliable operation with three-stage, sliding-two-stage or modulating operation, depending on version and method of capacity regulation
- Computer-controlled function test of each individual burner at the factory
- Burners can be supplied with pre-wired plug connections
- Excellent price / capacity ratio
- Well-established, global service network

Trademark

Weishaupt WM 30 monarch® burners are registered as a trademark throughout Europe.



WM-GL 30 version ZM-R

Overview of burner regulation
Model designation

Oil-fired operation

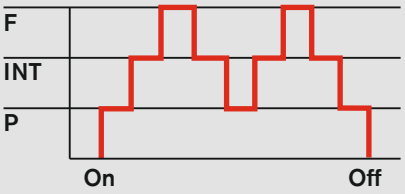
Three-stage operation (T)

- 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
- Load control is achieved by opening and closing solenoid valves 2 and 3

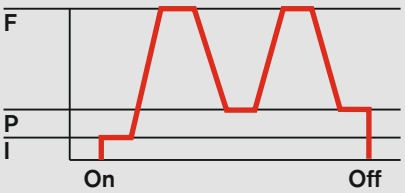
Modulating operation (R)

- 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 50 or W-FM 54 with a separate capacity regulator
  - W-FM 100 with integral capacity controller
  - W-FM 200
- Alternatively, a regulator can be fitted into a control panel.

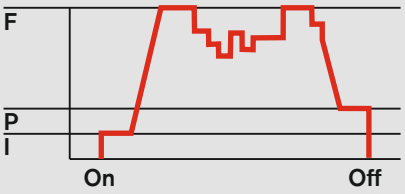
Three-stage



Sliding-two-stage



Modulating



Gas-fired operation

Sliding-two-stage or modulating operation (ZM)

- 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.
- Modulating operation:
  - W-FM 50 or W-FM 54 with a separate capacity regulator
  - W-FM 100 with integral capacity controller
  - W-FM 200
- Alternatively, a regulator can be fitted into a control panel.

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

Fuel Version	Oil three-stage	Oil sliding-two-stage	Oil modulating	Gas sliding-two-stage	Gas modulating
ZM				●	●
ZM-T	●			●	●
ZM-R		●	●	●	●

Model designation

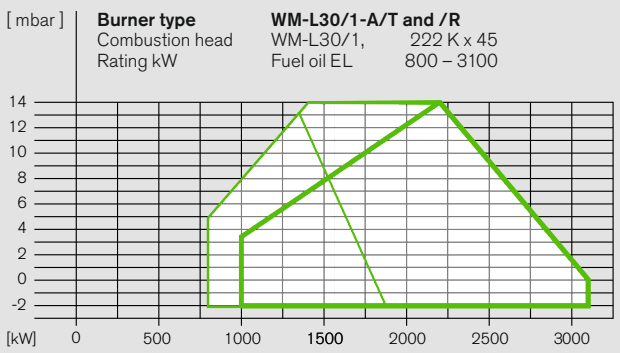
WM – L 30 / 3 –A / T
R

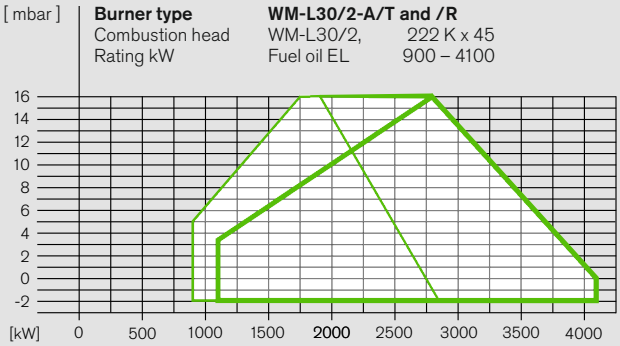
- Version
  T = three-stage
  R = modulating
- Mark
- Capacity
- Size
- L = Light oil
- Weishaupt monarch® burner series

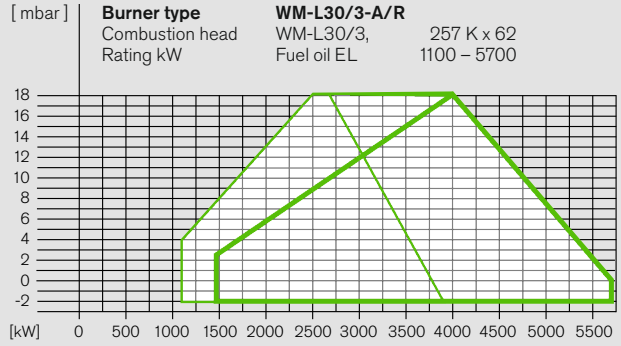
WM – GL 30 / 3 –A / ZM – T
ZM – R

- Version
  ZM / ZM-T = sliding-two-stage / 3-stage
  ZM-R = modulating
- Mark
- Capacity
- Size
- G = Gas
  L = Light oil
- Weishaupt monarch® burner series

Burner selection
WM-L30, versions T and R







Fuel oil EL: Capacity with combustion head
Closed
Open

Turndown: **max. 3:1**

Capacity graphs certified in accordance with EN 267.

Stated ratings are based on an air temperature of 20 °C and an installation altitude of 500 m above sea level.

Stated oil throughputs are based on a calorific value of 11.91 kWh/kg for fuel oil EL.

DIN CERTCO certification:
The burners have been type-tested by an independent body (TÜV-Süd) and certified by DIN CERTCO.

Burner selection
WM-G(L)30, versions ZM, ZM-T and ZM-R

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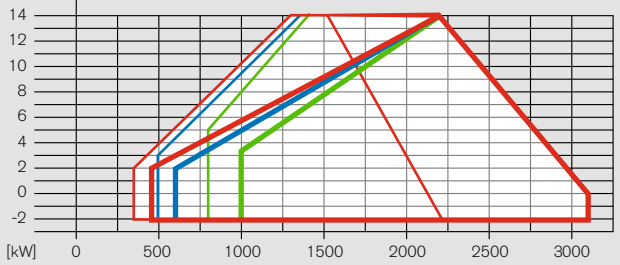
Burner type	**WM-G30/1-A ZM** **WM-GL30/1-A ZM-T and ZM-R**
Combustion head	WM-G (L)30/1, 222 K x 45
Rating kW	Nat. gas E, LL 350 – 3100
	LPG B/P 500 – 3100
	Fuel oil EL 800 – 3100



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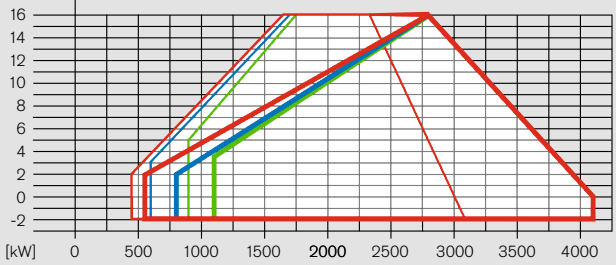
Burner type	**WM-G30/2-A ZM** **WM-GL30/2-A ZM-T and ZM-R**
Combustion head	WM-G (L)30/2, 222 K x 45
Rating kW	Nat. gas E, LL 450 – 4100
	LPG B/P 600 – 4100
	Fuel oil EL 900 – 4100



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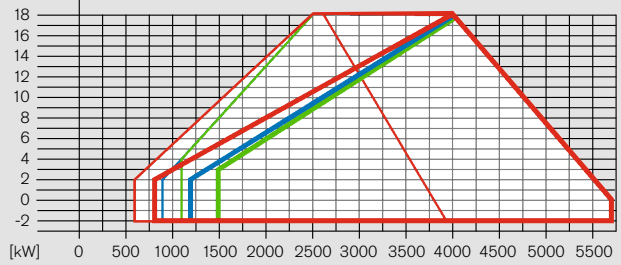
Burner type	**WM-G30/3-A ZM** **WM-GL30/3-A ZM-R**
Combustion head	WM-G (L) 30/3, 260 K x 62
Rating kW	Nat. gas E, LL 600 – 5700
	LPG B/P 900 – 5700
	Fuel oil EL 1100 – 5700



Nat. gas: Capacity with comb. head
Closed
Open

LPG: Capacity with comb. head
Closed
Open

Fuel oil EL: Capacity with comb. head
Closed
Open

Turndown, gas max. 6:1
oil max. 3:1

Capacity graphs certified in accordance with EN 267 and EN 676.

Stated ratings are based on an installation at sea level. For installations at higher altitudes, a reduction in capacity of 1 % per 100 m above sea level should be taken into account.

Gas valve train sizing
WM-G(L)30, versions ZM, ZM-T and ZM-R

WM-G(L)30/1-A, versions ZM, ZM-T and ZM-R

Burner rating kW	Low-pressure supply (with FRS) (flow pressure in mbar into shut-off valve, p_e max = 300 mbar) **Nominal valve-train diameter**							High-pressure supply (with HP regulator) (flow pressure in mbar into double solenoid valve) **Nominal valve-train diameter**						
	1"	**1 ½"**	**2"**	**65**	**80**	**100**	**125**	**1"**	**1 ½"**	**2"**	**65**	**80**	**100**	**125**
	Nominal diameter of gas butterfly							Nominal diameter of gas butterfly						
	80	80	80	80	80	80	80	80	80	80	80	80	80	80
Natural gas E (N) H_i = 10.35 kWh/mn³; d = 0.606														
1350	195	72	29	18	14	11	11	55	39	15	10	9	8	8
1550	256	94	37	22	17	14	13	71	51	20	13	11	10	10
1750	–	119	46	27	20	16	15	90	64	24	16	14	12	12
2000	–	153	58	34	24	19	18	117	82	31	20	17	15	14
2250	–	191	70	40	28	22	19	–	102	37	23	19	16	16
2500	–	233	84	47	32	24	22	–	124	43	27	22	18	17
2800	–	290	103	56	37	27	24	–	–	52	31	25	21	20
3100	–	–	123	65	43	31	27	–	–	62	36	28	23	22
Natural gas LL (N) H_i = 8.83 kWh/mn³; d = 0.641														
1350	280	102	39	23	17	13	12	77	54	20	13	11	9	9
1550	–	133	50	29	20	16	15	101	71	26	16	14	12	11
1750	–	168	62	35	25	19	17	128	89	32	20	17	14	13
2000	–	217	79	44	30	23	20	–	116	41	25	20	17	16
2250	–	272	97	53	35	26	23	–	–	49	30	24	20	19
2500	–	–	117	62	41	29	26	–	–	59	35	27	22	21
2800	–	–	144	75	48	34	29	–	–	71	41	32	25	24
3100	–	–	173	89	56	38	33	–	–	85	48	36	29	27
LPG B/P (F) H_i = 25.89 kWh/mn³; d = 1.555														
1350	84	34	16	11	10	9	8	25	18	9	7	6	6	6
1550	110	43	20	14	12	10	10	33	24	11	9	8	7	7
1750	138	54	24	16	14	12	11	41	30	14	11	9	9	9
2000	179	69	30	20	16	14	13	53	38	17	13	12	11	10
2250	225	85	36	23	18	16	15	65	47	21	15	13	12	12
2500	276	103	42	27	21	17	16	79	57	24	17	15	14	13
2800	–	127	50	31	23	19	18	97	70	28	20	17	15	15
3100	–	153	59	36	26	21	20	118	84	33	22	19	17	16

WM-G(L)30/2-A, versions ZM, ZM-T and ZM-R

Burner rating kW	Low-pressure supply (with FRS) (flow pressure in mbar into shut-off valve, p_e max = 300 mbar) **Nominal valve-train diameter**							High-pressure supply (with HP regulator) (flow pressure in mbar into double solenoid valve) **Nominal valve-train diameter**						
	1"	**1 ½"**	**2"**	**65**	**80**	**100**	**125**	**1"**	**1 ½"**	**2"**	**65**	**80**	**100**	**125**
	Nominal diameter of gas butterfly							Nominal diameter of gas butterfly						
	80	80	80	80	80	80	80	80	80	80	80	80	80	80
Natural gas E (N) H_i = 10.35 kWh/mn³; d = 0.606														
1700	–	110	42	24	17	14	13	84	59	21	14	11	10	9
2000	–	151	56	32	22	17	16	115	80	29	18	15	13	12
2300	–	198	72	40	28	21	19	–	105	37	23	19	16	15
2600	–	251	90	49	34	25	22	–	134	46	28	23	19	18
3000	–	–	117	63	42	30	27	–	–	60	36	28	23	22
3400	–	–	147	77	50	35	30	–	–	73	42	33	27	25
3800	–	–	180	92	58	40	34	–	–	88	50	38	30	28
4100	–	–	207	105	66	44	37	–	–	101	56	42	33	31
Natural gas LL (N) H_i = 8.83 kWh/mn³; d = 0.641														
1700	–	158	58	32	22	17	15	120	84	29	18	15	12	12
2000	–	216	78	43	29	22	19	–	115	39	24	19	16	15
2300	–	284	101	54	36	26	23	–	–	51	30	24	20	19
2600	–	–	126	67	44	31	27	–	–	63	37	29	24	22
3000	–	–	164	85	55	38	33	–	–	81	47	36	29	27
3400	–	–	207	105	66	45	38	–	–	101	56	43	34	31
3800	–	–	255	128	79	52	44	–	–	123	67	50	39	36
4100	–	–	294	146	89	58	48	–	–	–	76	56	43	39
LPG B/P (F) H_i = 25.89 kWh/mn³; d = 1.555														
1700	129	50	21	14	12	10	10	37	27	12	9	8	7	7
2000	178	67	28	18	14	12	12	51	37	16	11	10	9	9
2300	233	87	36	23	17	15	14	67	48	20	14	12	11	11
2600	296	110	44	27	21	17	16	84	60	24	17	15	13	13
3000	–	144	56	34	25	20	19	110	79	31	21	18	16	16
3400	–	182	69	41	30	24	22	140	99	38	25	21	19	18
3800	–	225	84	48	34	27	24	–	121	45	29	24	21	20
4100	–	260	96	54	38	29	26	–	140	51	32	27	23	22

WM-G(L)30/3-A, versions ZM and ZM-R

Burner rating kW	Low-pressure supply (with FRS) (flow pressure in mbar into shut-off valve, p_e max = 300 mbar) **Nominal valve-train diameter**							High-pressure supply (with HP regulator) (flow pressure in mbar into double solenoid valve) **Nominal valve-train diameter**						
	1½"	**2"**	**65**	**80**	**100**	**125**	**150**	**1½"**	**2"**	**65**	**80**	**100**	**125**	**150**
	Nominal diameter of gas butterfly							Nominal diameter of gas butterfly						
	80	80	80	80	80	80	80	80	80	80	80	80	80	80
Natural gas E (N) H_i = 10.35 kWh/mn³; d = 0.606														
2500	227	78	40	25	18	15	14	118	37	20	15	12	11	11
2900	–	104	53	33	22	19	17	158	49	27	20	16	14	14
3300	–	133	67	41	27	23	21	–	63	34	25	19	18	17
3800	–	174	86	53	34	28	26	–	82	44	32	24	22	21
4300	–	218	106	63	40	32	29	–	102	53	38	28	25	24
4800	–	268	129	75	46	36	32	–	124	63	44	31	28	27
5300	–	–	153	88	52	41	35	–	148	73	51	35	31	29
5700	–	–	175	98	57	44	38	–	169	82	56	38	33	32
Natural gas LL (N) H_i = 8.83 kWh/mn³; d = 0.641														
2500	–	109	54	33	22	18	16	168	51	27	19	14	13	13
2900	–	146	72	43	28	23	21	–	68	36	26	19	17	17
3300	–	187	92	55	35	28	25	–	88	46	33	24	22	21
3800	–	246	119	70	43	35	31	–	115	59	42	30	27	26
4300	–	–	148	85	51	40	35	–	143	72	50	35	31	30
4800	–	–	181	102	60	46	40	–	175	86	59	40	35	33
5300	–	–	216	120	69	52	44	–	–	101	68	45	39	37
5700	–	–	247	136	76	57	48	–	–	114	76	50	43	40
LPG B/P (F) H_i = 25.89 kWh/mn³; d = 1.555														
2500	97	36	20	14	11	10	9	51	17	11	9	7	7	7
2900	129	47	26	18	14	12	12	68	23	14	11	9	9	9
3300	166	60	33	22	17	15	14	88	30	18	14	12	11	11
3800	219	78	42	28	20	18	17	115	39	23	18	15	14	14
4300	278	97	51	33	24	21	19	146	48	28	22	17	16	16
4800	–	118	61	39	27	23	21	179	57	32	24	19	18	17
5300	–	141	71	44	30	25	23	–	68	37	28	21	19	19
5700	–	161	80	49	32	27	24	–	76	41	30	23	21	20

Screwed		**Flanged**	
R 1	W-MF 512	DN 65	DMV 5065/12
R 1½	W-MF 512	DN 80	DMV 5080/12
R 2	DMV 525/12	DN 100	DMV 5100/12
		DN 125	VGD 40.125
		DN 150	VGD 40.150

The combustion chamber pressure in mbar must be added to the minimum gas pressure determined from the above chart. Minimum gas pressure should not be less than 15 mbar.

For low-pressure supplies, EN 88-compliant governors with safety diaphragms are used. The maximum permissible supply pressure into the shut-off valve for low-pressure installations is 300 mbar.

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

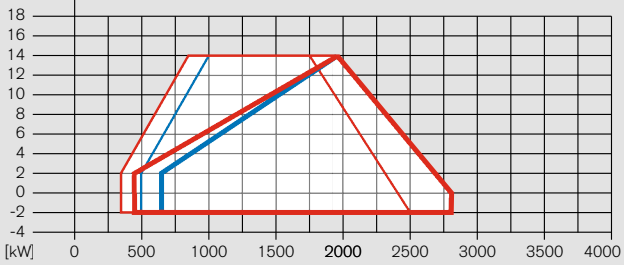
Refer to the burner's rating plate for the maximum connection pressure.

Burner selection
WM-G30, version ZM-LN

[mbar]

Burner type **WM-G30/1-A ZM-LN**

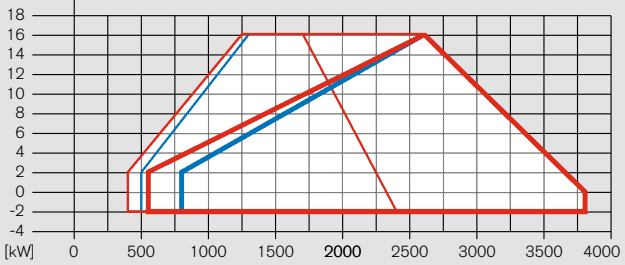
Combustion head	WM-G30/1 LN,	210 x 60
Rating kW	Nat. gas E, LL	350 – 2800
	LPG B/P	500 – 2800



[mbar]

Burner type **WM-G30/2-A ZM-LN**

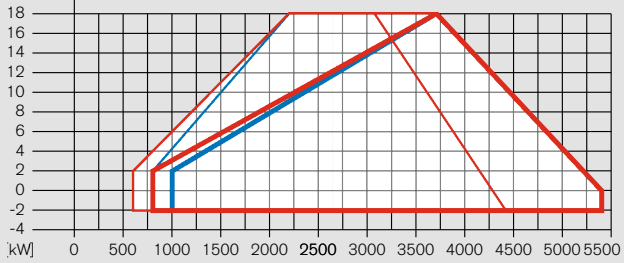
Combustion head	WM-G30/2 LN,	210 x 60
Rating kW	Nat. gas E, LL	400 – 3800
	LPG B/P	500 – 3800



[mbar]

Burner type **WM-G30/3-A ZM-LN**

Combustion head	WM-G30/3 LN,	250 x 90
Rating kW	Nat. gas E, LL	600 – 5400
	LPG B/P	800 – 5400



Nat. gas: Capacity with comb. head
Closed
Open

LPG: Capacity with comb. head
Closed
Open

Turndown: **max. 6:1**

Capacity graphs certified in accordance with EN 676.

Stated ratings are based on an installation at sea level. For installations at higher altitudes, a reduction in capacity of 1 % per 100 m above sea level should be taken into account.

Gas valve train sizing
WM-G30, version ZM-LN

WM-G30/1-A, version ZM-LN

Burner rating kW	Low-pressure supply (with FRS) (flow pressure in mbar into shut-off valve, p_e max = 300 mbar) **Nominal valve-train diameter** **1" 1 ½" 2" 65 80 100 125** Nominal diameter of gas butterfly 80 80 80 80 80 80 80	High-pressure supply (with HP regulator) (flow pressure in mbar into double solenoid valve) **Nominal valve-train diameter** **1" 1 ½" 2" 65 80 100 125** Nominal diameter of gas butterfly 80 80 80 80 80 80 80
Natural gas E (N)	H_i = 10.35 kWh/mn³; d = 0.606, Wi = 13.295 kWh/mn³	
1300	183 70 29 19 15 13 12	53 38 16 12 11 10 9
1500	244 92 39 25 20 17 16	71 51 22 16 15 13 13
1700	– 118 49 32 25 21 20	91 66 29 21 19 17 17
1900	– 147 61 39 31 26 25	114 83 36 27 24 22 21
2100	– 178 73 46 36 30 29	139 100 43 32 28 26 25
2300	– 212 86 54 41 35 33	– 119 51 37 32 29 29
2500	– 248 99 61 46 38 36	– 139 58 41 36 33 32
2800	– – 118 71 53 43 39	– – 68 47 40 36 35
Natural gas LL (N)	H_i = 8.83 kWh/mn³; d = 0.641, Wi = 11.029 kWh/mn³	
1300	263 98 39 25 19 16 15	75 54 22 15 13 12 12
1500	– 130 52 32 25 20 19	100 72 29 21 18 16 16
1700	– 166 66 41 31 26 24	128 92 38 27 23 21 20
1900	– 207 82 50 38 31 29	– 115 47 33 29 26 25
2100	– 251 98 59 44 36 34	– 139 56 39 34 30 30
2300	– – 115 69 51 41 38	– – 66 45 39 35 34
2500	– – 133 78 57 46 42	– – 75 51 43 38 37
2800	– – 161 92 65 51 46	– – 88 58 49 42 41
LPG B/P (F)	H_i = 25.89 kWh/mn³; d = 1.555, Wi = 20.762 kWh/mn³	
1300	80 34 17 13 11 10 10	25 19 10 8 8 7 7
1500	106 44 22 17 15 13 13	34 26 14 12 11 10 10
1700	136 56 28 21 18 17 16	44 34 18 15 14 14 13
1900	169 70 34 25 22 20 19	55 42 23 19 18 17 17
2100	206 84 41 30 26 23 23	66 51 27 22 21 20 20
2300	245 99 47 34 29 26 26	78 60 32 26 24 23 23
2500	287 115 54 38 32 29 28	91 69 36 29 27 25 25
2800	– 140 63 44 36 32 31	110 82 41 32 30 28 27

WM-G30/2-A, version ZM-LN

Burner rating kW	Low-pressure supply (with FRS) (flow pressure in mbar into shut-off valve, p_e max = 300 mbar) **Nominal valve-train diameter** **1" 1 ½" 2" 65 80 100 125** Nominal diameter of gas butterfly 80 80 80 80 80 80 80	High-pressure supply (with HP regulator) (flow pressure in mbar into double solenoid valve) **Nominal valve-train diameter** **1" 1 ½" 2" 65 80 100 125** Nominal diameter of gas butterfly 80 80 80 80 80 80 80
Natural gas E (N)	H_i = 10.35 kWh/mn³; d = 0.606, Wi = 13.295 kWh/mn³	
1700	– 120 51 33 27 23 22	93 68 31 23 21 19 19
2000	– 164 69 44 35 30 28	128 93 41 31 28 25 25
2300	– 213 87 55 43 36 34	– 120 52 38 34 31 30
2600	– – 106 65 49 41 38	– – 62 44 39 35 34
2900	– – 127 76 57 46 43	– – 73 51 44 39 38
3200	– – 150 88 64 51 47	– – 85 57 49 43 42
3500	– – 175 101 72 56 52	– – 97 64 54 48 46
3800	– – 201 114 80 62 56	– – 110 72 60 52 50
Natural gas LL (N)	H_i = 8.83 kWh/mn³; d = 0.641, Wi = 11.029 kWh/mn³	
1700	– 168 68 43 33 27 26	130 94 40 28 25 23 22
2000	– 230 92 56 43 35 33	– 128 53 38 33 30 29
2300	– – 117 70 52 43 40	– – 67 47 40 36 35
2600	– – 144 84 61 49 45	– – 81 55 47 41 40
2900	– – 173 99 71 55 50	– – 96 63 53 47 45
3200	– – 206 116 81 62 56	– – 112 72 60 52 50
3500	– – 241 133 92 69 62	– – 129 82 67 57 55
3800	– – – 152 103 76 68	– – – 92 75 63 60
LPG B/P (F)	H_i = 25.89 kWh/mn³; d = 1.555, Wi = 20.762 kWh/mn³	
1700	138 58 30 23 20 19 18	46 36 20 17 16 15 15
2000	189 79 40 30 26 24 23	62 48 27 23 21 21 20
2300	248 102 50 37 32 29 28	81 62 34 29 27 26 25
2600	– 128 61 45 38 35 34	102 78 42 35 32 31 30
2900	– 156 74 53 45 40 39	124 94 50 41 38 36 35
3200	– 186 86 61 51 46 44	– 112 58 47 43 41 41
3500	– 220 100 70 58 51 49	– 131 67 53 49 46 46
3800	– – 114 79 65 57 55	– – 75 60 55 52 51

WM-G30/3-A, version ZM-LN

Burner rating kW	Low-pressure supply (with FRS) (flow pressure in mbar into shut-off valve, p_e max = 300 mbar) **Nominal valve-train diameter** **1½" 2" 65 80 100 125 150** Nominal diameter of gas butterfly 80 80 80 80 80 80 80	High-pressure supply (with HP regulator) (flow pressure in mbar into double solenoid valve) **Nominal valve-train diameter** **1½" 2" 65 80 100 125 150** Nominal diameter of gas butterfly 80 80 80 80 80 80 80
Natural gas E (N)	H_i = 10.35 kWh/mn³; d = 0.606, Wi = 13.295 kWh/mn³	
2600	259 98 57 41 33 30 29	141 54 36 31 27 26 25
3000	– 127 72 51 40 36 34	185 69 45 38 33 31 31
3400	– 159 89 62 47 42 40	– 85 54 45 38 37 36
3800	– 194 107 73 54 49 46	– 103 64 52 44 42 42
4200	– 233 126 84 62 55 52	– 122 75 60 51 48 47
4600	– 275 147 97 70 62 58	– 142 86 69 57 54 53
5000	– – 169 110 78 68 64	– 164 97 77 63 59 58
5400	– – 192 124 87 75 70	– 187 109 86 70 65 64
Natural gas LL (N)	H_i = 8.83 kWh/mn³; d = 0.641, Wi = 11.029 kWh/mn³	
2600	– 135 75 52 40 36 34	199 72 46 38 32 31 30
3000	– 175 96 65 49 43 41	– 92 57 47 39 38 37
3400	– 220 118 79 58 51 48	– 114 70 56 47 44 43
3800	– 270 143 94 67 59 55	– 138 83 66 54 51 50
4200	– – 170 110 77 67 62	– 165 97 76 62 58 56
4600	– – 199 127 88 75 69	– 193 111 86 69 65 63
5000	– – 230 144 98 84 77	– – 127 97 77 72 70
5400	– – 263 163 110 93 85	– – 143 109 85 79 77
LPG B/P (F)	H_i = 25.89 kWh/mn³; d = 1.555, Wi = 20.762 kWh/mn³	
2600	118 52 35 29 25 24 24	68 33 25 23 21 21 21
3000	154 66 44 35 31 29 28	89 41 31 28 26 26 25
3400	195 82 53 42 36 34 33	111 50 38 34 31 30 30
3800	240 99 63 49 42 39 38	136 60 44 39 36 35 35
4200	289 117 73 56 47 44 43	163 70 51 45 41 40 39
4600	– 137 84 64 53 49 48	193 81 58 51 46 45 44
5000	– 158 96 72 59 55 53	– 92 65 57 51 49 49
5400	– 180 108 80 65 60 58	– 104 72 63 56 54 54

Screwed		**Flanged**	
R 1	W-MF 512	DN 65	DMV 5065/12
R 1½	W-MF 512	DN 80	DMV 5080/12
R 2	DMV 525/12	DN 100	DMV 5100/12
		DN 125	VGD 40.125
		DN 150	VGD 40.150

The combustion chamber pressure in mbar must be added to the minimum gas pressure determined from the above chart. Minimum gas pressure should not be less than 15 mbar.

For low-pressure supplies, EN 88-compliant governors with safety diaphragms are used. The maximum permissible supply pressure into the shut-off valve for low-pressure installations is 300 mbar.

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

Refer to the burner’s rating plate for the maximum connection pressure.

Scope of delivery

Description	WM-L30-T	WM-L30-R	WM-G30 ZM/LN	WM-GL30 ZM-T	WM-GL30 ZM-R
Burner housing, hinged flange, housing cover, Weishaupt burner motor, air-inlet housing, fan wheel, combustion head, ignition unit, ignition cable, ignition electrodes, combustion manager with control unit, flame sensor, stepping motors, flange gasket, limit switch on hinged flange, fixing screws	●	●	●	●	●
Digital combustion manager W-FM 50 W-FM 54	● –	● –	● –	– ●	– ●
Valve proving via W-FM and pressure switch with electronic compound	–	–	●	●	●
Class A double gas solenoid valve	–	–	●	●	●
Gas butterfly valve	–	–	●	●	●
Air-pressure switch	–	–	●	●	●
Low-gas-pressure switch	–	–	●	●	●
Preset, capacity-based mixing assembly	●	●	●	●	●
Stepping motor for compound regulation of fuel and air with W-FM Stepping motor for air regulator Stepping motor for gas butterfly valve Stepping motor for oil regulator	 ● – –	 ● – ●	 ● ● –	 ● ● –	 ● ● ●
Oil-pressure switch in return	–	●	–	–	●
Oil pump fitted to burner	●	●	–	●	●
Oil hoses	●	●	–	●	●
2 oil solenoid valves, oil regulator, nozzle head with-solenoid valve, premounted regulating nozzle and safety shut-off device	–	●	–	–	●
3 oil solenoid valves, 1 safety valve, three-stage nozzle head with premounted oil nozzle	●	–	–	●	–
Electromagnetic clutch	O	O	–	●	●
Star-delta combination, fitted to motor	●	●	●	●	●
IP 54 protection	●	●	●	●	●

EN 676 stipulates that gas filters and gas pressure regulators form part of the burner supply (see Weishaupt accessories list).
Please enquire or see the special equipment section of this brochure for further burner executions, such as TRD 604, 24 h/72 h, etc.

● Standard
O Optional

Order numbers

Oil burners, version T

Burner type	Version	Order No.
WM-L30/1-A	T	211 320 10
WM-L30/2-A	T	211 320 20

DIN CERTCO: 5G1046/10

Oil burners, version R

Burner type	Version	Order No.
WM-L30/1-A	R	215 320 10
WM-L30/2-A	R	215 320 20
WM-L30/3-A	R	215 320 30

DIN CERTCO: 5G1046/10

Gas burners, version ZM

Burner type	Version	DMV size	Order No.
WM-G30/1-A	ZM	R 1	217 310 11
	ZM	R 1½	217 310 12
	ZM	R 2	217 310 13
	ZM	DN 65	217 310 14
	ZM	DN 80	217 310 15
	ZM	DN 100	217 310 16
	ZM	DN 125	217 310 17
WM-G30/2-A	ZM	R 1	217 312 11
	ZM	R 1½	217 312 12
	ZM	R 2	217 312 13
	ZM	DN 65	217 312 14
	ZM	DN 80	217 312 15
	ZM	DN 100	217 312 16
	ZM	DN 125	217 312 17
WM-G30/3-A	ZM	R 1½	217 314 12
	ZM	R 2	217 314 13
	ZM	DN 65	217 314 14
	ZM	DN 80	217 314 15
	ZM	DN 100	217 314 16
	ZM	DN 125	217 314 17
	ZM	DN 150	217 314 18

CE-PIN: CE-0085 BU 0359

Dual-fuel burners, version ZM-T

Burner type	Version	DMV size	Order No.
WM-GL30/1-A	ZM-T	R 1	218 310 11
	ZM-T	R 1½	218 310 12
	ZM-T	R 2	218 310 13
	ZM-T	DN 65	218 310 14
	ZM-T	DN 80	218 310 15
	ZM-T	DN 100	218 310 16
	ZM-T	DN 125	218 310 17
WM-GL30/2-A	ZM-T	R 1	218 311 11
	ZM-T	R 1½	218 311 12
	ZM-T	R 2	218 311 13
	ZM-T	DN 65	218 311 14
	ZM-T	DN 80	218 311 15
	ZM-T	DN 100	218 311 16
	ZM-T	DN 125	218 311 17

DIN CERTCO: 5G1044/10M
CE-PIN: CE-0085 BU 0360

Dual-fuel burners, version ZM-R

Burner type	Version	DMV size	Order No.
WM-GL30/1-A	ZM-R	R 1	218 315 11
	ZM-R	R 1½	218 315 12
	ZM-R	R 2	218 315 13
	ZM-R	DN 65	218 315 14
	ZM-R	DN 80	218 315 15
	ZM-R	DN 100	218 315 16
	ZM-R	DN 125	218 315 17
WM-GL30/2-A	ZM-R	R 1	218 316 11
	ZM-R	R 1½	218 316 12
	ZM-R	R 2	218 316 13
	ZM-R	DN 65	218 316 14
	ZM-R	DN 80	218 316 15
	ZM-R	DN 100	218 316 16
	ZM-R	DN 125	218 316 17
WM-GL30/3-A	ZM-R	R 1½	218 317 12
	ZM-R	R 2	218 317 13
	ZM-R	DN 65	218 317 14
	ZM-R	DN 80	218 317 15
	ZM-R	DN 100	218 317 16
	ZM-R	DN 125	218 317 17
	ZM-R	DN 150	218 317 18

DIN CERTCO: 5G1044/10M
CE-PIN: CE-0085 BU 0360

Order numbers

Gas burners, version ZM-LN

Burner type	Version	DMV size	Order No.
WM-G30/1-A	ZM-LN	R 1	217 311 11
	ZM-LN	R 1½	217 311 12
	ZM-LN	R 2	217 311 13
	ZM-LN	DN 65	217 311 14
	ZM-LN	DN 80	217 311 15
	ZM-LN	DN 100	217 311 16
	ZM-LN	DN 125	217 311 17
WM-G30/2-A	ZM-LN	R 1	217 313 11
	ZM-LN	R 1½	217 313 12
	ZM-LN	R 2	217 313 13
	ZM-LN	DN 65	217 313 14
	ZM-LN	DN 80	217 313 15
	ZM-LN	DN 100	217 313 16
	ZM-LN	DN 125	217 313 17
WM-G30/3-A	ZM-LN	R 1½	217 315 12
	ZM-LN	R 2	217 315 13
	ZM-LN	DN 65	217 315 14
	ZM-LN	DN 80	217 315 15
	ZM-LN	DN 100	217 315 16
	ZM-LN	DN 125	217 315 17
	ZM-LN	DN 150	217 315 18

CE-PIN: CE-0085 BU 0359

Special equipment
WM-L30, version T

Version T (three-stage)			WM-L30/1-A / T	WM-L30/2-A / T
Pressure gauge with ball valve			110 000 79	110 002 82
Vacuum gauge with ball valve			110 005 69	110 017 00
Combustion-head extension		by 150 mm	210 031 03	210 031 03
		by 300 mm	210 031 04	210 031 04
Oil hoses, 1300 mm in lieu of 1000 mm			on application	on application
Two-stage operation with low-impact start or change-over			210 030 31	210 030 31
Air-inlet flange for duct connection, with LGW air-pressure switch (LGW 50 also required)			on application	on application
LGW 50 air-pressure switch			210 030 08	210 030 08
Oil meter	VZO20 without transmitter		210 031 14	210 031 14
	VZO20with low-frequency transmitter for external wiring		210 031 13	210 031 13
	VZO20 with low-frequency transmitter forinternal wiring		210 031 24	210 031 24
ST 18/7 and ST 18/4 plug connections			210 030 13	210 030 13
KS40 controller fitted to burner (W-FM 50)			210 031 01	210 031 01
W-FM 100 (suitable for continuous operation) in lieu of W-FM 50		fitted	210 030 32	210 030 32
		loose	210 030 88	210 030 88
Integral capacity controller and analogue signal convertor for W-FM 100			110 017 18	110 017 18
W-FM 200 in lieu of W-FM 50, with integral capacity controller, analogue signal convertor, and VSD module with optional fuel metering		fitted	210 030 10	210 030 10
		loose	on application	on application
DSA58 minimum-pressure switch in supply (for TRD 72 h in conjunction with W-FM 100/200)			on application	on application
QRI flame sensor in lieu of QRB (required for TRD)			210 030 24	210 030 24
ABE with Chinese-character display, supplied loose (W-FM 100/200)			110 018 53	110 018 53
Special voltage (on application only)			on application	on application
110 V control voltage			250 031 72	250 031 72

Country-specific executions and special voltages on application

Special equipment
WM-L30, version R

Version R (sliding-two-stage or modulating)			**WM-L30/1-A / R**	**WM-L30/2-A / R**	**WM-L30/3-A / R**
Pressure gauge with ball valve on pump			110 002 82	110 002 82	110 002 82
Pressure gauge with ball valve in return			110 011 50	110 011 50	110 011 50
Vacuum meter with ball valve			on application	on application	on application
Combustion-head extension	by 150 mm		210 031 05	210 031 05	210 031 06
	by 300 mm		210 031 07	210 031 07	210 031 08
Oil hoses, 1300 mm in lieu of 1000 mm			110 001 59	–	–
Air-inlet flange for duct connection, with LGW air-pressure switch (LGW 50 also required)			on application	on application	on application
LGW 50 air-pressure switch			210 030 08	210 030 08	210 030 08
ST 18/7 and ST 18/4 plug connections			250 030 22	250 030 22	250 030 22
KS40 controller fitted to burner (W-FM 50)			210 031 02	210 031 02	210 031 02
W-FM 100 (suitable for continuous operation) in lieu of W-FM 50		fitted	210 030 38	210 030 38	210 030 38
		loose	210 031 47	210 031 47	210 031 47
Integral capacity controller and analogue signal convertor for W-FM 100			110 017 18	110 017 18	110 017 18
W-FM 200 in lieu of W-FM 50 with integral capacity controller, analogue signal convertor, and VSD module with optional fuel metering		fitted	210 030 39	210 030 39	210 030 39
		loose	on application	on application	on application
DSA58 minimum-pressure switch in supply (for TRD 72 h in conjunction with W-FM 100/200)			on application	on application	on application
QRI flame sensor in lieu of QRB (required for TRD)			210 030 24	210 030 24	210 030 24
VSD with integral frequency convertor (W-FM 50/200 required)			210 030 97	210 031 48	210 031 49
VSD with separate frequency convertor (W-FM 200 required) (See accessories list for frequency convertor)			210 030 98	210 030 98	210 031 00
ABE with Chinese-character display, supplied loose (W-FM 100/200)			110 018 53	110 018 53	110 018 53
Special voltage (on application only)			on application	on application	on application
110 V control voltage			250 031 72	250 031 72	250 031 72

Country-specific executions and special voltages on application

Special equipment
WM-G30, version ZM

Version ZM		WM-G30/1-A	WM-G30/2-A	WM-G30/3-A
Combustion-head extension	by 150 mm	250 031 83	250 031 83	250 031 85
	by 300 mm	250 031 84	250 031 84	250 031 86
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-pressure switch (screwed W-MF) R ¾ to R 1½	GW 50 A6/1 GW 150 A6/1 GW 500 A6/1	250 031 40 250 031 41 250 031 42	250 031 40 250 031 41 250 031 42	250 031 40 250 031 41 250 031 42
High-gas-pressure switch (screwed DMV) R 2	GW 50 A6/1 GW 150 A6/1 GW 500 A6/1	150 017 52 150 017 53 150 017 54	150 017 52 150 017 53 150 017 54	150 017 52 150 017 53 150 017 54
High-gas-pressure switch (flanged DMV)	GW 50 A6/1 GW 150 A6/1 GW 500 A6/1	150 017 49 150 017 50 150 017 51	150 017 49 150 017 50 150 017 51	150 017 49 150 017 50 150 017 51
ST 18/7 and ST 18/4 plug connections (W-FM 50/100/200)		250 030 22	250 030 22	250 030 22
Air-inlet flange for duct connection, with LGW air-pressure switch		210 031 15	210 031 15	210 031 15
KS40 controller fitted to burner (W-FM 50)		250 032 08	250 032 08	250 032 08
W-FM 100 (suitable for continuous operation) in lieu of W-FM 50	fitted	250 030 74	250 030 74	250 030 74
	loose	250 032 32	250 032 32	250 032 32
Integral capacity controller & analogue signal convertor for W-FM 100		110 017 18	110 017 18	110 017 18
W-FM 200 in lieu of W-FM 50 with integral capacity controller, analogue signal convertor, and VSD module with optional fuel metering	fitted	250 030 75	250 030 75	250 030 75
	loose	250 032 63	250 032 63	250 032 63
VSD with integral frequency convertor (W-FM 50/200 required)		210 030 97	210 030 97	210 031 49
VSD with separate frequency convertor (W-FM 200 required) (See accessories list for frequency convertor)		210 030 98	210 030 98	210 030 98
Offset gas butterfly valve and DMV for vertical firing		250 032 93	250 032 93	250 032 93
ABE with Chinese-character display, supplied loose (W-FM 100/200)		110 018 53	110 018 53	110 018 53
110 V control voltage		250 031 72	250 031 72	250 031 72

Country-specific executions and special voltages on application

Special equipment
WM-GL30, version ZM-T

Version ZM-T		WM-GL30/1-A	WM-GL30/2-A
Combustion-head extension	by 150 mm	250 031 87	250 031 87
	by 300 mm	250 031 88	250 031 88
Solenoid valve for air-pressure switch test for continuous-run fan or post-purge		250 030 21	250 030 21
High-gas-pressure switch (screwed W-MF) R ¾ to R 1½	GW 50 A6/1 GW 150 A6/1 GW 500 A6/1	250 031 40 250 031 41 250 031 42	250 031 40 250 031 41 250 031 42
High-gas-pressure switch (screwed DMV) R 2	GW 50 A6/1 GW 150 A6/1 GW 500 A6/1	150 017 52 150 017 53 150 017 54	150 017 52 150 017 53 150 017 54
High-gas-pressure switch (flanged DMV)	GW 50 A6/1 GW 150 A6/1 GW 500 A6/1	150 017 49 150 017 50 150 017 51	150 017 49 150 017 50 150 017 51
ST 18/7 and ST 18/4 plug connections (W-FM 54)		250 031 99	250 031 99
ST 18/7 plug connection (W-FM 100/200)		250 032 01	250 032 01
Air-inlet flange for duct connection, with LGW air-pressure switch		210 031 15	210 031 15
DSA58 minimum-pressure switch in supply (for TRD 72 h in conjunction with W-FM 100/200)		210 030 46	210 030 46
W-FM 100 (suitable for cont. operation) in lieu of W-FM 54 with int. capacity controller and analogue signal convertor	fitted	250 031 78	250 031 78
	loose	on application	on application
W-FM 200 in lieu of W-FM 54 with integral capacity controller, analogue signal convertor and VSD module with optional fuel metering	fitted	250 031 77	250 031 77
	loose	on application	on application
VSD with int. frequency convertor (W-FM 54/200 required) [1]		210 030 97	210 031 48
VSD with separate frequency convertor (W-FM 200 required) (See accessories list for frequency convertor) [1]		210 030 98	210 030 98
Oil hoses, 1300 mm in lieu of 1000 mm		150 000 47	150 000 44
VZO20 oil meter without transmitter		250 032 27	250 032 27
VZO20 oil meter with low-frequency transmitter for internal wiring (W-FM 50/54 or W-FM 200)		210 031 24	210 031 24
VZO20 oil meter with low-frequency transmitter for external wiring		250 032 28	250 032 28
Offset gas butterfly valve and DMV for vertical firing		250 032 96	250 032 96
ABE with Chinese-character display, supplied loose (W-FM 100/200)		110 018 53	110 018 53
110 V control voltage (W-FM 100/200) (W-FM 54)		250 031 72 on application	250 031 72 on application

Country-specific executions and special voltages on application

[1] VSD with ZM-T version burners: When firing on oil (i.e. without modulating capacity regulation), operation at 100 % speed is recommended.

Special equipment
WM-GL30, version ZM-R

Version ZM-R		WM-GL30/1-A	WM-GL30/2-A	WM-GL30/3-A
Combustion-head extension	by 150 mm	250 031 89	250 031 89	250 031 91
	by 300 mm	250 031 90	250 031 90	250 031 92
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-pressure switch (screwed W-MF) R ¾ to R 1½	GW 50 A6/1 GW 150 A6/1 GW 500 A6/1	250 031 40 250 031 41 250 031 42	250 031 40 250 031 41 250 031 42	250 031 40 250 031 41 250 031 42
High-gas-pressure switch (screwed DMV) R 2	GW 50 A6/1 GW 150 A6/1 GW 500 A6/1	150 017 52 150 017 53 150 017 54	150 017 52 150 017 53 150 017 54	150 017 52 150 017 53 150 017 54
High-gas-pressure switch (flanged DMV)	GW 50 A6/1 GW 150 A6/1 GW 500 A6/1	150 017 49 150 017 50 150 017 51	150 017 49 150 017 50 150 017 51	150 017 49 150 017 50 150 017 51
ST 18/7 and ST 18/4 plug connections (W-FM 54/100/200)		250 030 22	250 030 22	250 030 22
Air-inlet flange for duct connection, with LGW air-pressure switch		on application	on application	on application
DSA58 inimimum-pressure switchin supply (for TRD 72 h in conjunction with W-FM 100/200)		on application	on application	on application
W-FM 100 (suitable for continuous operation) in lieu of W-FM 54	fitted	250 031 76	250 031 76	250 031 76
	loose	250 032 74	250 032 74	250 032 74
Integral capacity controller and analogue signal convertor for W-FM 100		110 017 18	110 017 18	110 017 18
W-FM 200 in lieu of W-FM 54 with integral capacity controller, analogue signal convertor and VSD module with optional fuel metering	fitted	250 031 77	250 031 77	250 031 77
	loose	250 032 75	250 032 75	250 032 75
VSD with integral frequency convertor (W-FM 54/200 required) [2)]		210 030 97	210 031 48	210 031 49
VSD with separate frequency convertor (W-FM 200 required) (See accessories list for frequency convertor) [2)]		210 030 98	210 030 98	210 031 00
Oil hoses, 1300 mm in lieu of 1000 mm		on application	–	–
Offset gas butterfly valve and DMV for vertical firing		250 032 96	250 032 96	250 032 96
ABE with Chinese-character display, supplied loose (W-FM 100/200)		110 018 53	110 018 53	110 018 53
110 V control voltage (W-FM 100/200) (W-FM 54)		250 031 72 on application	250 031 72 on application	250 031 72 on application

Country-specific executions and special voltages on application

[2)] VSD with ZM-R version burners: General conditions for modulating capacity regulation when firing on oil
– Frequency: min. 35 Hz
– Turndown: max. 3:1

Special equipment
WM-G30, version ZM-LN

Version ZM-LN		WM-G30/1-A	WM-G30/2-A	WM-G30/3-A
Combustion-head extension	by 150 mm	250 032 39	250 032 39	250 032 41
	by 300 mm	250 032 40	250 032 40	250 032 42
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-pressure switch (screwed W-MF) R ¾ to R 1½				
	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-pressure switch (screwed DMV) 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 (flanged DMV)				
	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
ST 18/7 and ST 18/4 plug connections (W-FM 50/100/200)		250 030 22	250 030 22	250 030 22
Air-inlet flange for duct connection, with LGW air-pressure switch		210 031 15	210 031 15	210 031 15
KS40 controller fitted to burner (W-FM 50)		250 032 08	250 032 08	250 032 08
W-FM 100 (suitable for continuous operation) in lieu of W-FM 50	fitted	250 030 74	250 030 74	250 030 74
	loose	250 032 32	250 032 32	250 032 32
Integral capacity controller & analogue signal convertor for W-FM 100		110 017 18	110 017 18	110 017 18
W-FM 200 in lieu of W-FM 50 with integral capacity controller, analogue signal convertor, and VSD module with optional fuel metering	fitted	250 030 75	250 030 75	250 030 75
	loose	250 032 63	250 032 63	250 032 63
VSD with integral frequency convertor (W-FM 50/200 required)		210 030 97	210 030 97	210 031 49
VSD with separate frequency convertor (W-FM 200 required) (See accessories list for frequency convertor)		210 030 98	210 030 98	210 030 98
Offset gas butterfly valve and DMV for vertical firing		250 032 93	250 032 93	250 032 93
ABE with Chinese-character display, supplied loose (W-FM 100/200)		110 018 53	110 018 53	110 018 53
110 V control voltage		250 031 72	250 031 72	250 031 72

Country-specific executions and special voltages on application

Technical data
Oil burners

Oil burners		WM-L30/1-A / T	WM-L30/2-A / T
Burner motor [1]	Weishaupt type	WM-D 132/120-2/7K5	WM-D 132/170-2/10K0
Nominal rating	kW	7.5	10
Nominal current	A	15	20
Motor protection switch [2] or motor prefusing [2] (with overload protection)	Type (e.g.)	MS132 - 16	MS132 - 25
	A minimum	25 A slow (external)	25 A slow (external)
Speed (50 Hz)	rpm	2900	2850
Combustion manager	Type	W-FM 50	W-FM 50
Flame monitoring	Type	QRB	QRB
Air stepping motor	Type	STE50	STE50
NOx Class per EN 267		2	2
Weight	kg	approx. 145	approx. 145
Integral pump max. flow rate	Type l/h	J7 392	TA2 525
Oil hoses	DN / Length	13 / 1000	20 / 1000

Oil burners		WM-L30/1-A / R	WM-L30/2-A / R	WM-L30/3-A / R
Burner motor [1]	Weishaupt type	WM-D 132/120-2/7K5	WM-D 132/170-2/10K0	WM-D 132/210-2/14K0
Nominal rating	kW	7.5	10	14
Nominal current	A	15	20	28
Motor protection switch [2] or motor prefusing [2] (with overload protection)	Type (e.g.)	MS132 - 16	MS132 - 25	MS132 - 32
	A minimum	25 A slow (external)	25 A slow (external)	35 A slow (external)
Speed (50 Hz)	rpm	2900	2850	2900
Combustion manager	Type	W-FM 50	W-FM 50	W-FM 50
Flame monitoring	Type	QRB	QRB	QRB
Air/oil stepping motor	Type	STE50	STE50	STE50
NOx Class per EN 267		2	2	2
Weight	kg	approx 155	approx. 155	approx. 175
Integral pump max. flow rate	Type l/h	TA3 785	TA4 1050	TA5 1410
Oil hoses	DN / Length	20 / 1000	25 / 1300	25 / 1300

[1] The electrical motors are high-efficiency IE2 motors in accordance with Commission Regulation (EC) No. 640/2009

[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).

Voltages and frequencies:
The burners are equipped as standard for three-phase alternating current, 400 V, 3 ~, 50 Hz. Other voltages and frequencies are available on application.

Standard burner motor:
Insulation Class F, IP 54 protection.

Technical data
Gas and dual-fuel burners

Gas burners		WM-G30/1-A	WM-G30/2-A	WM-G30/3-A
Burner motor [1) 2)]	Weishaupt type	WM-D 132/120-2/7K5	WM-D 132/170-2/10K0	WM-D 132/210-2/14K0
Nominal rating	kW	7.5	10	14
Nominal current	A	15	20	28
Motor protection switch [2)] or motor prefusing [2)] (with overload protection)	Type (e.g.) A minimum	MS132 - 16 25 A slow (external)	MS132 - 25 25 A slow (external)	MS132 - 32 35 A slow (external)
Speed (50 Hz)	rpm	2900	2850	2900
Combustion manager	Type	W-FM 50	W-FM 50	W-FM 50
Flame monitoring	Type	ION	ION	ION
Air/gas stepping motor	Type	STE50	STE50	STE50
NOx Class per EN 676	ZM / ZM-LN	2 / 3	2 / 3	2 / 3
Weight (excluding DMV and fittings)	kg	approx 145	approx. 152	approx. 179

Dual-fuel burners, version ZM-T		WM-GL30/1-A	WM-GL30/2-A
Burner motor [1) 2)]	Weishaupt type	WM-D 132/120-2/7K5	WM-D 132/170-2/10K0
Nominal rating	kW	7.5	10
Nominal current	A	15	20
Motor protection switch [2)] or motor prefusing [2)] (with overload protection)	Type (e.g.) A minimum	MS132 - 16 25 A slow (external)	MS132 - 25 25 A slow (external)
Speed (50 Hz)	rpm	2900	2850
Combustion manager	Type	W-FM 54	W-FM 54
Flame monitoring	Type	QRA2	QRA2
Air/gas/oil stepping motor	Type	STE50	STE50
NOx Class per EN 267 / EN 676		2	2
Weight (excluding DMV and fittings)	kg	approx. 160	approx. 167
Integral pump max. flow rate	Type l/h	J7 392	TA2 525
Oil hoses	DN / Length	13 / 1000	20 / 1000

Dual-fuel burners, version ZM-R		WM-GL30/1-A	WM-GL30/2-A	WM-GL30/3-A
Burner motor [1) 2)]	Weishaupt type	WM-D 132/120-2/7K5	WM-D 132/170-2/10K0	WM-D 132/210-2/14K0
Nominal rating	kW	7.5	10	14
Nominal current	A	15	20	28
Motor protection switch [2)] or motor prefusing [2)] (with overload protection)	Type (e.g.) A minimum	MS132 - 16 25 A slow (external)	MS132 - 25 25 A slow (external)	MS132 - 32 35 A slow (external)
Speed (50 Hz)	rpm	2900	2850	2900
Combustion manager	Type	W-FM 54	W-FM 54	W-FM 54
Flame monitoring	Type	QRA2	QRA2	QRA2
Air/gas/oil stepping motor	Type	STE50	STE50	STE50
NOx Class per EN 267 / EN 676		2	2	2
Weight (excluding DMV and fittings)	kg	approx. 170	approx. 177	approx. 190
Integral pump max. flow rate	Type l/h	TA3 785	TA4 1050	TA5 1410
Oil hoses	DN / Length	20 / 1000	25 / 1300	25 / 1300

[1)] The electrical motors are high-efficiency IE2 motors in accordance with Commission Regulation (EC) No. 640/2009

[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).

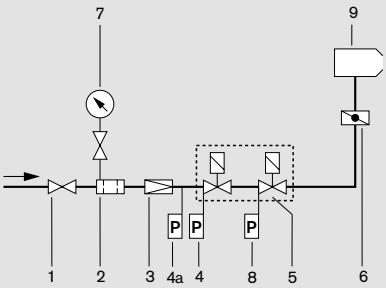
Voltages and frequencies:
The burners are equipped as standard for three-phase alternating current, 400 V, 3 ~, 50 Hz. Other voltages and frequencies are available on application.

Standard burner motor:
Insulation Class F, IP 54 protection.

Fuel systems

Gas-side fuel system

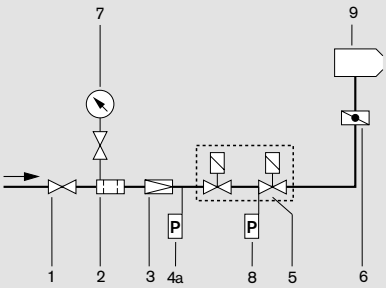
W-FM 50/100/200



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 pressure switch
9 Burner

* Not included in burner price

W-FM 54



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

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

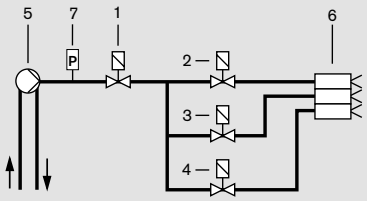
Break points in the valve train
Break points in the valve train should be provided to enable the door of the heat exchanger to be swung open. The main gas line is best separated at the compensator.

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

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

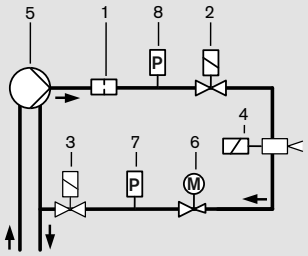
Oil-side fuel system

Version (ZM-)T



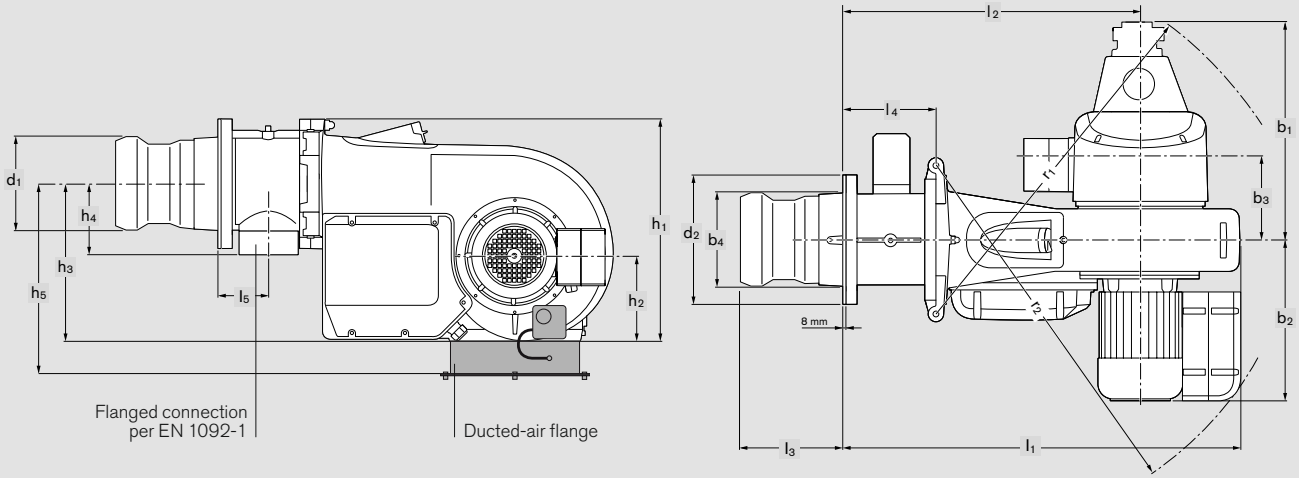
1 Safety solenoid valve
2 Stage 1 solenoid valve
3 Stage 2 solenoid valve
4 Stage 3 solenoid valve
5 Burner-mounted oil pump
6 Nozzle head with 3 oil atomising nozzles
7 Pressure switch in supply (optional)

Version (ZM-)R



1 Strainer
2 Normally closed solenoid valve in supply
3 Normally closed solenoid valve in return
4 Nozzle head with regulating nozzle
5 Burner-mounted oil pump
6 Oilregulator
7 Pressure switch in return
8 Pressure switch in supply (optional)

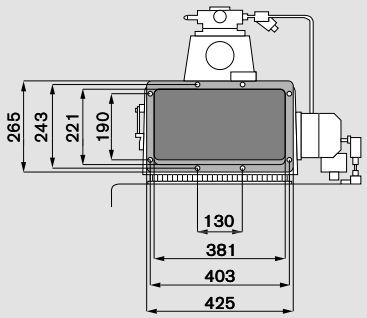
Dimensions



Burner type	Dimensions in mm l_1	l_2	l_3	l_4	l_5	b_1	b_2	b_3	b_4	h_1	h_2	h_3	h_4	h_5
WM-L30/1-A T	941	622	301 – 326	43	–	481	469	261	301	695	256	505	–	621
WM-L30/2-A T	941	622	301 – 326	43	–	480	507	261	301	695	256	505	–	621
WM-L30/1-A R	941	622	301 – 326	43	–	484	469	261	301	695	256	505	–	621
WM-L30/2-A R	941	622	301 – 326	43	–	488	507	261	301	695	256	505	–	621
WM-L30/3-A R	956	622	285 – 325	58	–	494	547	261	301	730	256	505	–	621
WM-G30/1-A ZM	1146	827	349 – 374	248	128	398	469	261	301	695	256	505	212	621
WM-G30/2-A ZM	1146	827	349 – 374	248	128	398	507	261	301	695	256	505	212	621
WM-G30/3-A ZM	1166	827	349 – 389	268	148	398	547	261	348	730	256	505	232	621
WM-GL30/1-A ZM-T	1146	827	349 – 374	248	128	612	469	261	301	695	256	505	212	621
WM-GL30/2-A ZM-T	1146	827	349 – 374	248	128	610	507	261	301	695	256	505	212	621
WM-GL30/1-A ZM-R	1146	827	349 – 374	248	128	615	469	261	301	695	256	505	212	621
WM-GL30/2-A ZM-R	1146	827	349 – 374	248	128	619	507	261	301	695	256	505	212	621
WM-GL30/3-A ZM-R	1166	827	349 – 389	268	148	625	547	261	348	730	256	505	232	621
WM-G30/1-A ZM-LN	1146	827	384 – 404	248	128	398	469	261	301	695	256	505	212	621
WM-G30/2-A ZM-LN	1146	827	374 – 414	248	128	398	507	261	301	695	256	505	212	621
WM-G30/3-A ZM-LN	1166	827	395 – 420	268	148	398	547	261	348	730	256	505	232	621

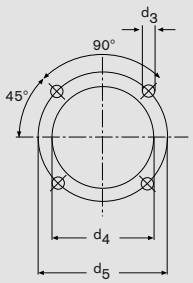
All dimensions are approximate.
Weishaupt reserve the right to make changes in light of future developments..

Underside of ducted-air flange

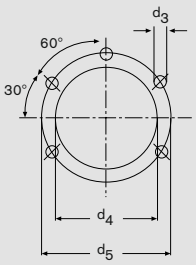


Mounting-plate drilling dimensions

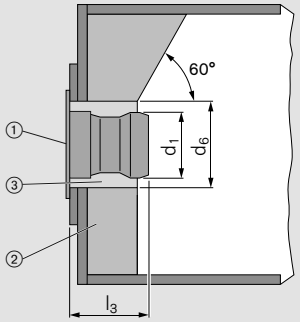
WM 30/1 and WM 30/2



WM 30/3



Heat-exchanger preparation



① Flange gasket
② Refractory
③ Aperture

The refractory ② must not protrude beyond the front edge of the combustion head. It may however be tapered (min. 60°).

Burner type	Dimensions in mm r_1	r_2	d_1	d_2	d_3	d_4	d_5	d_6	Nominal diameter of gas butterfly
WM-L30/1-A T	992	1085	290	380	M12	305	330	360	–
WM-L30/2-A T	992	1111	300	380	M12	305	330	360	–
WM-L30/1-A R	992	1085	290	380	M12	305	330	360	–
WM-L30/2-A R	992	1111	300	380	M12	305	330	360	–
WM-L30/3-A R	992	1151	367	450	M12	375	400	420	–
WM-G30/1-A ZM	992	1085	290	380	M12	305	330	360	DN 80
WM-G30/2-A ZM	992	1111	300	380	M12	305	330	360	DN 80
WM-G30/3-A ZM	992	1151	367	450	M12	375	400	420	DN 80
WM-GL30/1-A ZM-T	1038	1085	290	380	M12	305	330	360	DN 80
WM-GL30/2-A ZM-T	1048	1111	300	380	M12	305	330	360	DN 80
WM-GL30/1-A ZM-R	1052	1085	290	380	M12	305	330	360	DN 80
WM-GL30/2-A ZM-R	1055	1111	300	380	M12	305	330	360	DN 80
WM-GL30/3-A ZM-R	1059	1151	367	450	M12	375	400	420	DN 80
WM-G30/1-A LN	992	1085	280	380	M12	305	330	360	DN 80
WM-G30/2-A LN	992	1111	296	380	M12	305	330	360	DN 80
WM-G30/3-A LN	992	1151	356	450	M12	375	400	420	DN 80

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

–weishaupt–

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