–weishaupt–

product

Information on oil, gas and dual-fuel burners

WM 30 for oil, gas and dual-fuel

WM 30 monarch® burners (350 – 6200 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.

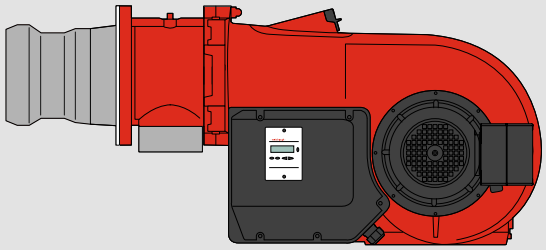
For the control and management levels Weishaupt offers ProGraf NT, a real-time software product that meets any and all requirements.

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.

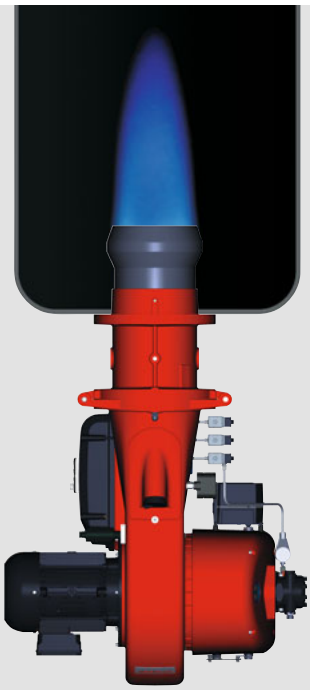
Digital combustion management General system overview	**W-FM 50**	**W-FM 54**	**W-FM 100**	**W-FM 200**
Single-fuel operation	●		●	●
Dual-fuel operation		●	●	●
Controller for intermittent operation	●	●	●	●
Controller for continuous operation			●	●
Flame sensor for intermittent operation	ION/QRA2/QRB	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	●	●	●	●

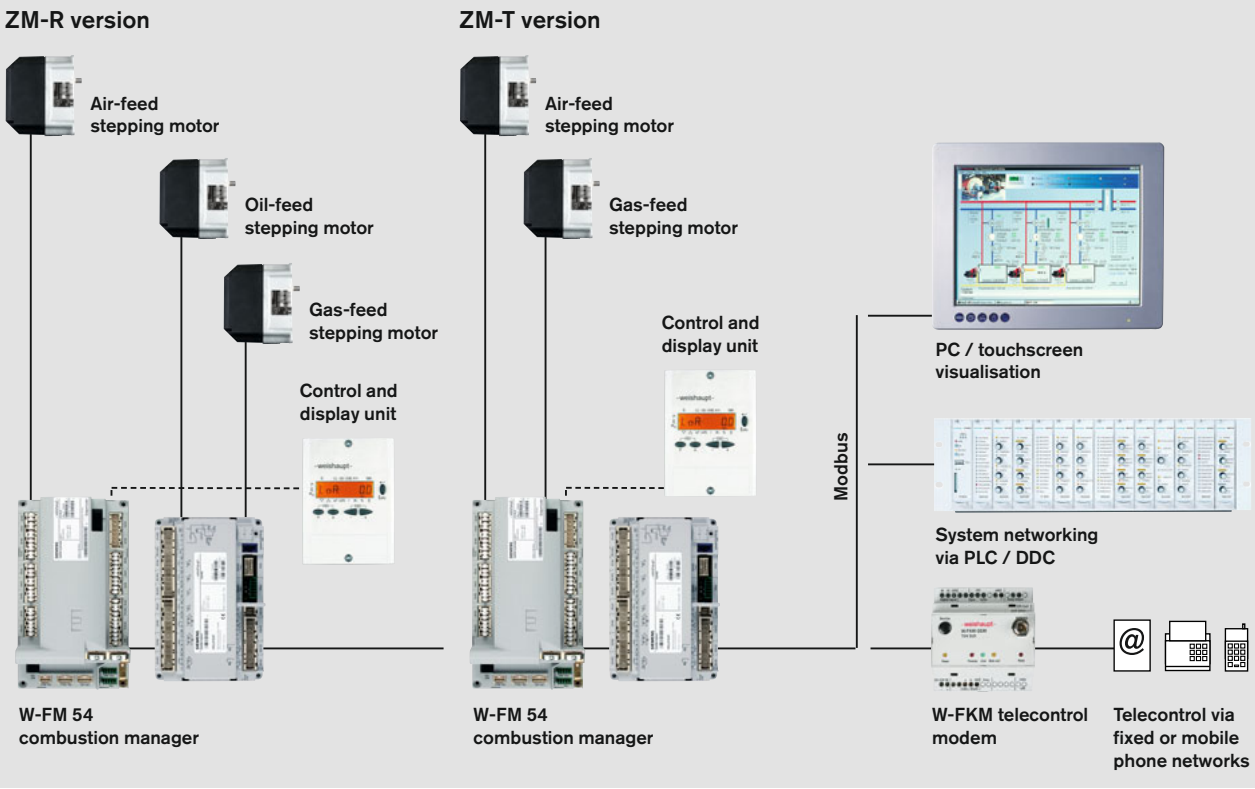
Please enquire regarding connections available for additional functions, e.g. flue gas dampers, oil shut-off assemblies etc.

[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).

3LN version
Ultra-Low-NO_x oil, gas, and dual-fuel burners with multiflam mixing assemblies for installations with extremely low NO_x emission limits (suitable for three-pass and through-pass boilers only). The burners' extremely low NO_x emissions are achieved using a special fuel distribution system. Suitable for light oil, natural gas, and LPG, 3LN-burners meet NO_x Class 3 requirements.

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).

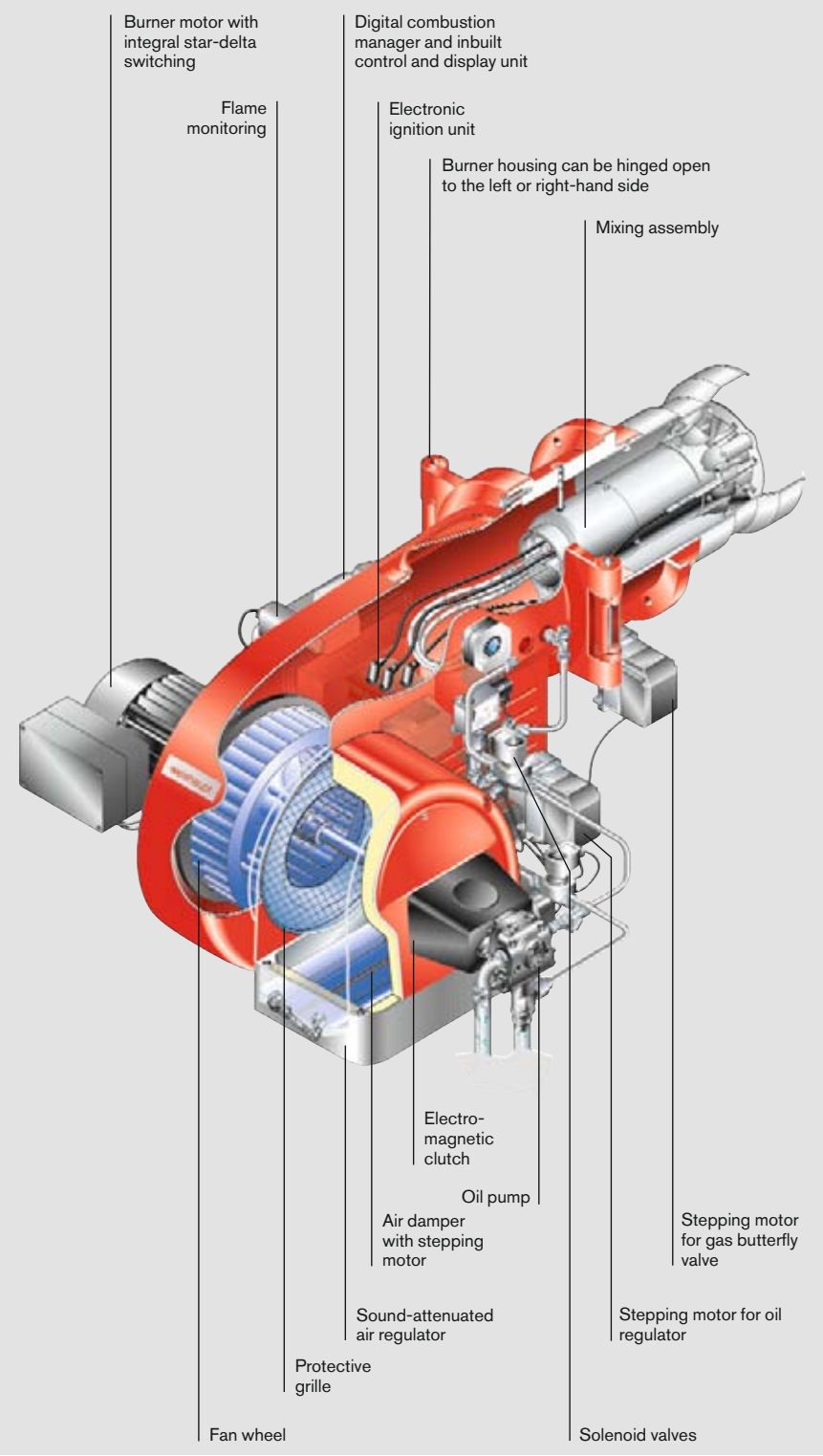
Use of the burner for other applications or in ambient conditions not detailed above is not permitted without the prior written agreement of Max Weishaupt GmbH. Service intervals will be reduced in accordance with the more extreme operational conditions.

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 Equipment 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-GL30, version ZM-R

Overview of burner regulation
Model designation

Oil-fired operation

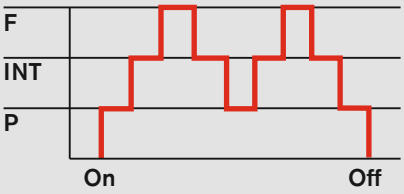
Three-stage operation (T)

- 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

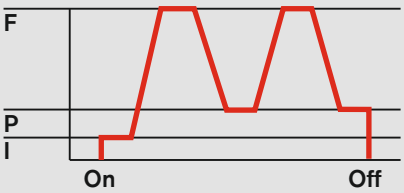
Modulating operation (R)

- 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.

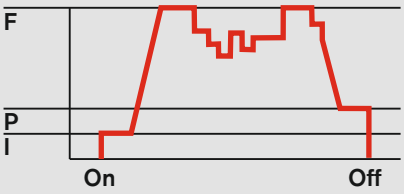
Three-stage



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

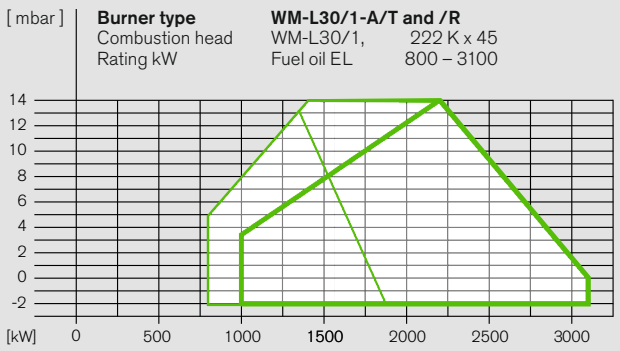
WM – L 30 / 3 –A / T
R

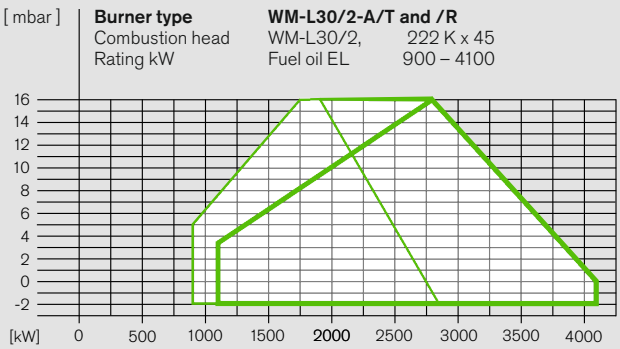
- Version
  T = three-stage
  R = modulating
- Mark
- Capacity
- Size
- L = Light oil
- Weishaupt monarch® burner series

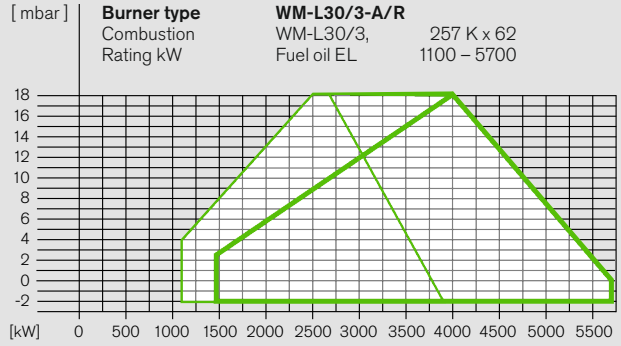
WM – GL 30 / 3 –A / ZM – T
ZM – R

- 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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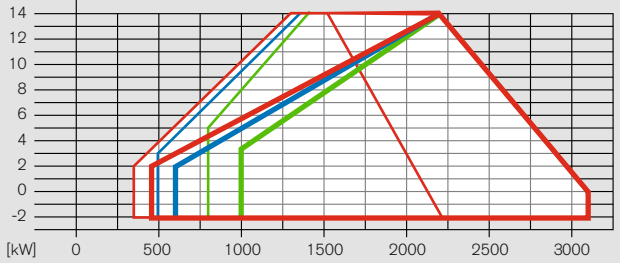
Burner type **WM-G30/1-A ZM**
WM-GL30/1-A ZM-T and ZM-R

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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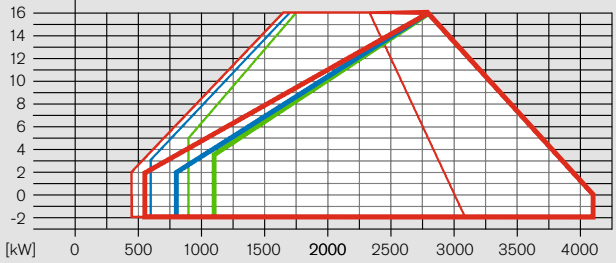
Burner type **WM-G30/2-A ZM**
WM-GL30/2-A ZM-T and ZM-R

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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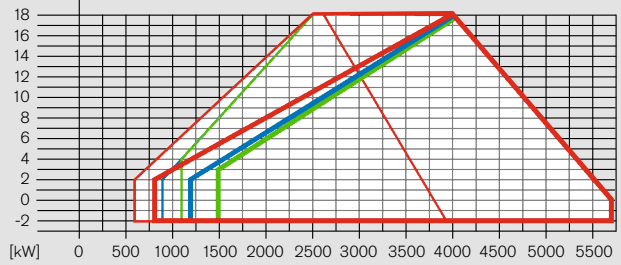
Burner type **WM-G30/3-A ZM**
WM-GL30/3-A ZM-R

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



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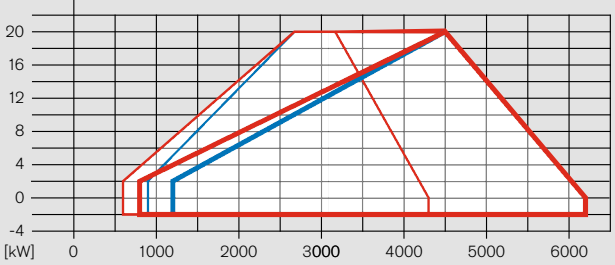
Burner type **WM-G30/4-A ZM**

Combustion head	WM-G (L)30/3, 260 K x 62
Rating kW	Nat. gas E, LL 600 – 6200
	LPG B/P 900 – 6200



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 LHV = 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 LHV = 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 LHV = 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 LHV = 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 LHV = 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 LHV = 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, 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**						
	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 LHV = 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 LHV = 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 LHV = 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

WM-G30/4-A, version ZM

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**					
	2"	**65**	**80**	**100**	**125**	**150**	**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
Natural gas E LHV = 10.35 kWh/mn³; d = 0.606												
2700	90	46	29	20	17	16	43	24	18	14	13	12
3200	125	64	40	27	22	20	60	33	24	19	17	17
3700	165	82	50	33	27	25	78	42	31	23	21	20
4200	209	102	61	39	32	28	98	51	37	27	24	24
4700	258	124	73	45	36	31	120	61	43	31	27	26
5200	-	148	85	51	40	35	143	71	49	34	30	29
5700	-	174	98	57	44	38	169	82	56	38	33	31
6200	-	203	113	64	48	41	196	94	63	42	36	34
Natural gas LL LHV = 8.83 kWh/mn³; d = 0.641												
2700	127	63	38	25	21	19	59	31	23	17	15	15
3200	177	87	52	33	27	24	83	43	31	23	21	20
3700	234	113	67	41	33	30	109	56	40	29	26	25
4200	297	142	82	50	39	35	137	69	48	34	30	29
4700	-	174	99	58	45	39	168	83	57	39	34	33
5200	-	209	117	67	51	44	-	98	66	44	38	36
5700	-	246	136	76	57	48	-	114	75	49	42	40
6200	-	287	156	85	63	52	-	130	85	54	46	43
LPG B/P LHV = 25.89 kWh/mn³; d = 1.555												
2700	41	23	16	12	11	11	20	13	10	8	8	8
3200	57	31	22	16	15	14	28	17	14	12	11	11
3700	74	40	27	20	17	16	37	22	17	14	13	13
4200	93	49	32	23	20	18	46	26	21	17	15	15
4700	114	59	37	26	22	21	55	31	24	19	17	17
5200	137	69	43	29	25	23	66	36	27	21	20	19
5700	162	81	50	33	28	25	78	42	31	24	22	21
6200	190	95	58	38	31	28	91	49	36	27	25	24

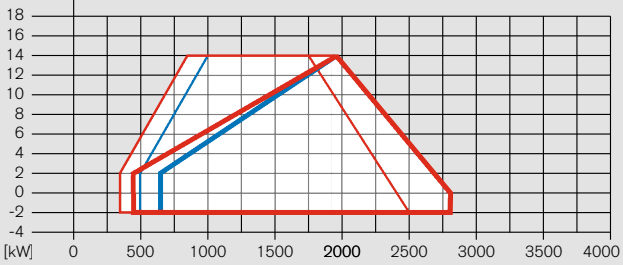
See page 13 for further details.

Burner selection
WM-G30, version ZM-LN

[mbar]

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

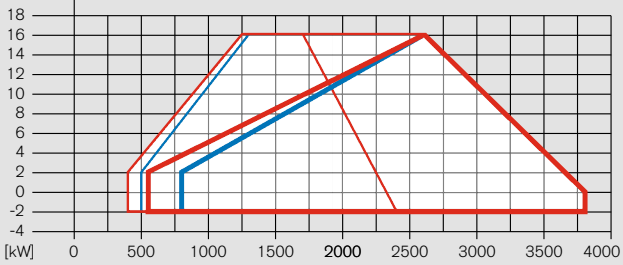
Combustion head	WM-G30/1 LN,	210 x 60
Rating kW	Nat. gas E, LL	350 – 2800
	LPG B/P	500 – 2800



[mbar]

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

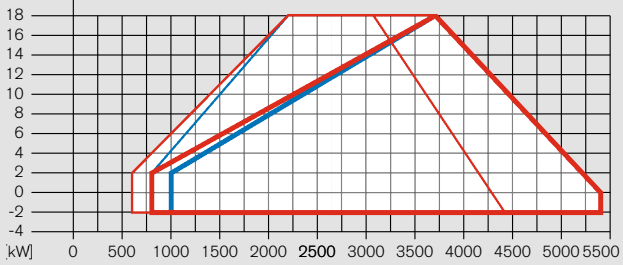
Combustion head	WM-G30/2 LN,	210 x 60
Rating kW	Nat. gas E, LL	400 – 3800
	LPG B/P	500 – 3800



[mbar]

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

Combustion head	WM-G30/3 LN,	250 x 90
Rating kW	Erdgas E, LL	600 – 5400
	Flüssiggas B/P	800 – 5400



Nat. gas: Capacity with comb. head
Closed
Open

LPG: Capacity with comb. headf
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							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 LHV = 10.35 kWh/mn³; d = 0.606														
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 LHV = 8.83 kWh/mn³; d = 0.641														
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 LHV = 25.89 kWh/mn³; d = 1.555														
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							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 LHV = 10.35 kWh/mn³; d = 0.606														
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 LHV = 8.83 kWh/mn³; d = 0.641														
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 LHV = 25.89 kWh/mn³; d = 1.555														
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							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 LHV = 10.35 kWh/mn³; d = 0.606														
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 LHV = 8.83 kWh/mn³; d = 0.641														
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 LHV = 25.89 kWh/mn³; d = 1.555														
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	○	○	–	●	●
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
○ 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
		R 1½	217 310 12
		R 2	217 310 13
		DN 65	217 310 14
		DN 80	217 310 15
		DN 100	217 310 16
		DN 125	217 310 17
WM-G30/2-A	ZM	R 1	217 312 11
		R 1½	217 312 12
		R 2	217 312 13
		DN 65	217 312 14
		DN 80	217 312 15
		DN 100	217 312 16
		DN 125	217 312 17
WM-G30/3-A	ZM	R 1½	217 314 12
		R 2	217 314 13
		DN 65	217 314 14
		DN 80	217 314 15
		DN 100	217 314 16
		DN 125	217 314 17
		DN 150	217 314 18
WM-G30/4-A	ZM	R 2	217 316 13
		DN 65	217 316 14
		DN 80	217 316 15
		DN 100	217 316 16
		DN 125	217 316 17
		DN 150	217 316 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
		R 1½	218 310 12
		R 2	218 310 13
		DN 65	218 310 14
		DN 80	218 310 15
		DN 100	218 310 16
		DN 125	218 310 17
WM-GL30/2-A	ZM-T	R 1	218 311 11
		R 1½	218 311 12
		R 2	218 311 13
		DN 65	218 311 14
		DN 80	218 311 15
		DN 100	218 311 16
		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
		R 1½	218 315 12
		R 2	218 315 13
		DN 65	218 315 14
		DN 80	218 315 15
		DN 100	218 315 16
		DN 125	218 315 17
WM-GL30/2-A	ZM-R	R 1	218 316 11
		R 1½	218 316 12
		R 2	218 316 13
		DN 65	218 316 14
		DN 80	218 316 15
		DN 100	218 316 16
		DN 125	218 316 17
WM-GL30/3-A	ZM-R	R 1½	218 317 12
		R 2	218 317 13
		DN 65	218 317 14
		DN 80	218 317 15
		DN 100	218 317 16
		DN 125	218 317 17
		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
		R 1½	217 311 12
		R 2	217 311 13
		DN 65	217 311 14
		DN 80	217 311 15
		DN 100	217 311 16
		DN 125	217 311 17
WM-G30/2-A	ZM-LN	R 1	217 313 11
		R 1½	217 313 12
		R 2	217 313 13
		DN 65	217 313 14
		DN 80	217 313 15
		DN 100	217 313 16
		DN 125	217 313 17
WM-G30/3-A		R 1½	217 315 12
		R 2	217 315 13
		DN 65	217 315 14
		DN 80	217 315 15
		DN 100	217 315 16
		DN 125	217 315 17
		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 [1]			210 030 08	210 030 08
Oil meter	VZO20 without transmitter		210 031 14	210 031 14
	VZO20 with low-frequency transmitter for external wiring		210 031 13	210 031 13
	VZO20 with low-frequency transmitter for internal wiring		210 031 24	210 031 24
ST 18/7 and ST 18/4 plug connections			210 030 13	210 030 13
KS20 controller fitted to burner (W-FM 50)			250 033 15	250 033 15
W-FM 100 (suitable for continuous operation) in lieu of W-FM 50 [1]		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 (W-FM 100/200) [1]			on application	on application
QRI flame sensor in lieu of QRB [1]			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

[1] Required for PED (97/23/EC) compliance

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)			210 031 15	210 031 15	210 031 15
LGW 50 air-pressure switch [1]			210 031 31	210 031 31	210 031 31
ST 18/7 and ST 18/4 plug connections			250 030 22	250 030 22	250 030 22
KS20 controller fitted to burner (W-FM 50)			250 033 15	250 033 15	250 033 15
W-FM 100 (suitable for continuous operation) in lieu of W-FM 50 [1]		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 (W-FM 100/200)			on application	on application	on application
QRI flame sensor in lieu of QRB [1]			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

[1] Required for PED (97/23/EC) compliance

Special equipment
WM-G30, version ZM

Version ZM		WM-G30/1-A	WM-G30/2-A	WM-G30/3-A	WM-G30/4-A
Combustion-head extension	by 150 mm	250 031 83	250 031 83	250 031 85	250 031 85
	by 300 mm	250 031 84	250 031 84	250 031 86	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	250 030 21
High-gas-pressure switch [1] (Screwed R ¾ to R2 for low-pressure supplies)	GW 50 A6/1 GW 150 A6/1 GW 500 A6/1	250 033 30 250 033 31 250 033 32	250 033 30 250 033 31 250 033 32	250 033 30 250 033 31 250 033 32	250 033 30 250 033 31 250 033 32
High-gas-pressure switch [1] (Flanged DMV/VGD for low-pressure supplies)	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	150 017 49 150 017 50 150 017 51
High-gas-pressure switch [1] (Fitted to high-pressure regulator)	GW 50 A6/1 GW 150 A6/1 GW 500 A6/1	250 033 33 250 033 34 250 033 35	250 033 33 250 033 34 250 033 35	250 033 33 250 033 34 250 033 35	250 033 33 250 033 34 250 033 35
ST 18/7 and ST 18/4 plug connections (W-FM 50/100/200)		250 030 22	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	–
KS20 controller fitted to burner (W-FM 50) [1]		250 033 15	250 033 15	250 033 15	250 033 15
W-FM 100 (suitable for continuous operation) in lieu of W-FM 50	fitted	250 030 74	250 030 74	250 030 74	250 030 74
	loose	250 032 32	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	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	250 030 75
	loose	250 032 63	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	on application
VSD with separate frequency convertor (W-FM 200 required) (See accessories list for frequency convertor)		210 030 98	210 030 98	210 030 98	on application
Offset gas butterfly valve and DMV for vertical firing		250 032 93	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	110 018 53
110 V control voltage		250 031 72	250 031 72	250 031 72	on application

Country-specific executions and special voltages on application

[1] Required for PED (97/23/EC) compliance

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 [2] (Screwed R ¾ to R2 for low-pressure supplies)	GW 50 A6/1 GW 150 A6/1 GW 500 A6/1	250 033 30 250 033 31 250 033 32	250 033 30 250 033 31 250 033 32
High-gas-pressure switch [2] (Flanged DMV/VGD for low-pressure supplies)	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
High-gas-pressure switch [2] (Fitted to high-pressure regulator)	GW 50 A6/1 GW 150 A6/1 GW 500 A6/1	250 033 33 250 033 34 250 033 35	250 033 33 250 033 34 250 033 35
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 (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.

[2] Required for PED (97/23/EC) compliance

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 [2] (Screwed R ¾ to R2 for low-pressure supplies)	GW 50 A6/1 GW 150 A6/1 GW 500 A6/1	250 033 30 250 033 31 250 033 32	250 033 30 250 033 31 250 033 32	250 033 30 250 033 31 250 033 32
High-gas-pressure switch [2] (Flanged DMV/VGD for low-pressure supplies)	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
High-gas-pressure switch [2] (Fitted to high-pressure regulator)	GW 50 A6/1 GW 150 A6/1 GW 500 A6/1	250 033 33 250 033 34 250 033 35	250 033 33 250 033 34 250 033 35	250 033 33 250 033 34 250 033 35
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 minimum-pressure switch in supply (W-FM 100/200) [2]		210 031 09	210 031 09	210 031 09
W-FM 100 (suitable for continuous operation) in lieu of W-FM 54 [2]				
	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) [1]		210 030 97	210 031 48	210 031 49
VSD with separate frequency convertor (W-FM 200 required) (See accessories list for frequency convertor) [1]		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

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

[2] Required for PED (97/23/EC) compliance

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 [1] (Screwed R ¾ to R2 for low-pressure supplies)	GW 50 A6/1 GW 150 A6/1 GW 500 A6/1	250 033 30 250 033 31 250 033 32	250 033 30 250 033 31 250 033 32	250 033 30 250 033 31 250 033 32
High-gas-pressure switch [1] (Flanged DMV/VGD for low-pressure supplies)	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
High-gas-pressure switch [1] (Fitted to high-pressure regulator)	GW 50 A6/1 GW 150 A6/1 GW 500 A6/1	250 033 33 250 033 34 250 033 35	250 033 33 250 033 34 250 033 35	250 033 33 250 033 34 250 033 35
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
KS20 controller fitted to burner (W-FM 50)		250 033 15	250 033 15	250 033 15
W-FM 100 (suitable for continuous operation) in lieu of W-FM 50 [1]	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

[1] Required for PED (97/23/EC) compliance

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]	Type (e.g.) A minimum	MS132 - 16 25A gG/T (external)	MS132 - 25 25A gG/T (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]	Type (e.g.) A minimum	MS132 - 16 25A gG/T (external)	MS132 - 25 25A gG/T (external)	MS132 - 32 35A gG/T (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	WM-G30/4-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	WM-D 132/210-2/15K5
Nominal rating	kW	7.5	10	14	15.5
Nominal current	A	15	20	28	30
Motor protection switch [2)] or motor prefusing [2)]	Type (e.g.) A minimum	MS132 - 16 25A gG/T (external)	MS132 - 25 25A gG/T (external)	MS132 - 32 35A gG/T (external)	MS132 - 32 50A gG/T (external)
Speed (50 Hz)	rpm	2900	2850	2900	2900
Combustion manager	Type	W-FM 50	W-FM 50	W-FM 50	W-FM 50
Flame monitoring	Type	ION	ION	ION	ION
Air/gas stepping motor	Type	STE50	STE50	STE50	STE50
NOx Class per EN 676	ZM / ZM-LN	2 / 3	2 / 3	2 / 3	2 / -
Weight (excluding DMV and fittings)	kg	approx. 145	approx. 152	approx. 179	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)]	Type (e.g.) A minimum	MS132 - 16 25A gG/T (external)	MS132 - 25 25A gG/T (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)]	Type (e.g.) A minimum	MS132 - 16 25A gG/T (external)	MS132 - 25 25A gG/T (external)	MS132 - 32 35A gG/T (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 / 300

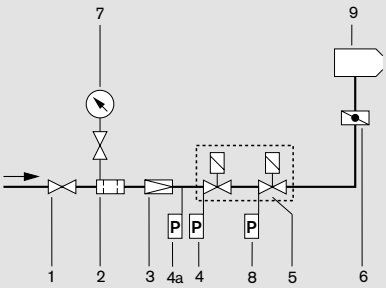
[1)] The electrical motors are high-efficiency IE2 motors in accordance with Commission Regulation (EC) No. 640/2009.
[2)] The necessary motor protection can be provided either by a motor protection switch (supplied and fitted into a panel by others), or with integral motor overload protection (see special 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

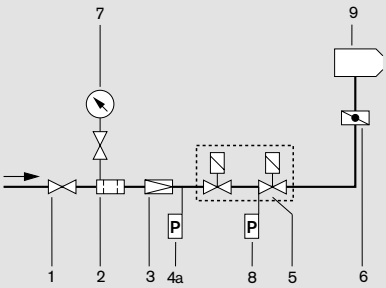
W-FM 50/100/200



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.

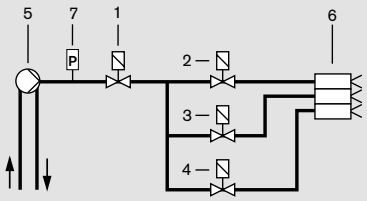
Break points in the valve train
Break points in the valve train should be provided to enable the door of the heat exchanger to be swung open. The main gas line is best separated at the compensator.

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.

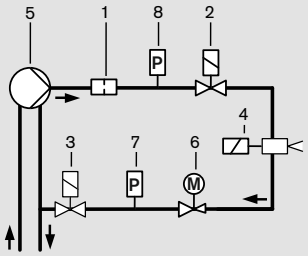
Oil-side fuel system

Version (ZM-)T



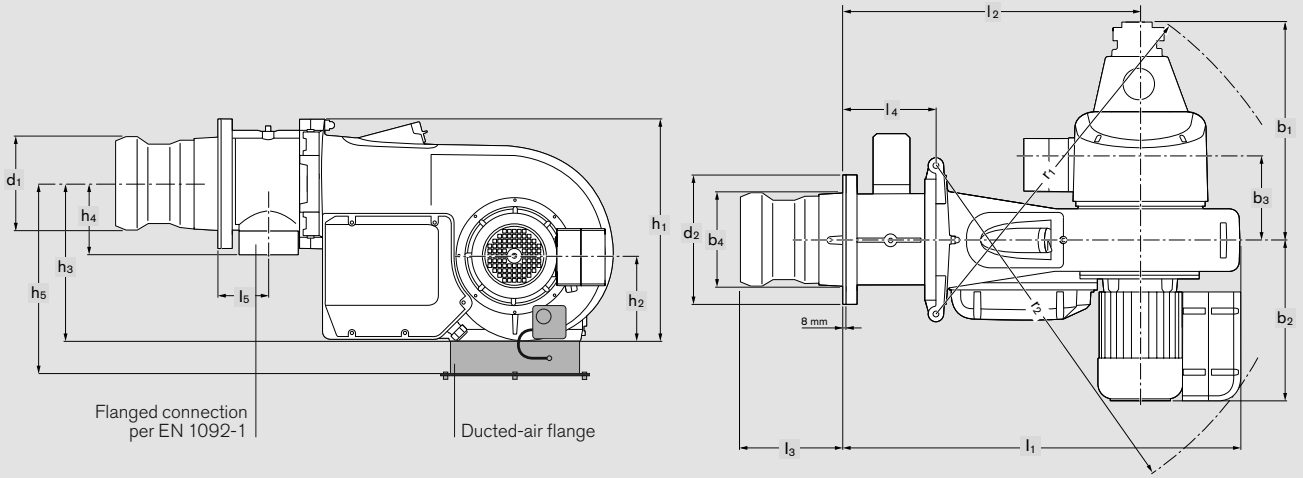
1 Safety solenoid valve
2 Stage 1 solenoid valve
3 Stage 2 solenoid valve
4 Stage 3 solenoid valve
5 Burner-mounted oil pump
6 Nozzle head with 3 oil atomising nozzles
7 Pressure switch in supply (optional)

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)

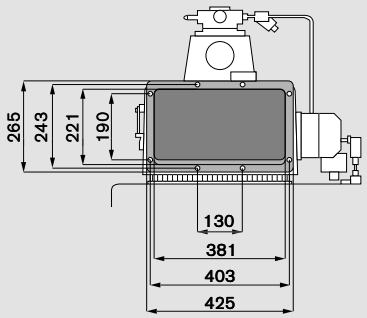
Dimensions



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	637	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	847	349 – 389	268	148	398	547	261	348	730	256	505	232	621
WM-G30/4-A ZM	1166	847	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	847	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	847	395 – 420	268	148	398	547	261	348	730	256	505	232	621

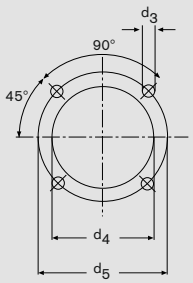
All dimensions are approximate.
Weishaupt reserve the right to make changes in light of future developments.

Underside of ducted-air flange

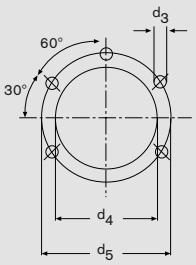


Mounting-plate drilling dimensions

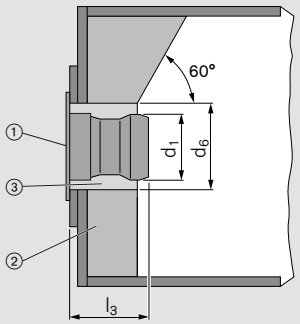
WM 30/1 and WM 30/2



WM 30/3 and WM 30/4



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-G30/4-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..

Saving fuel, reducing emissions: Patented multiflam® technology

Weishaupt's patented multiflam® technology enables large combustion plant to comply with very low emission limits without the need for expensive additional equipment. This reduction in emissions is achieved through the use of an innovative mixing assembly and fuel distribution.

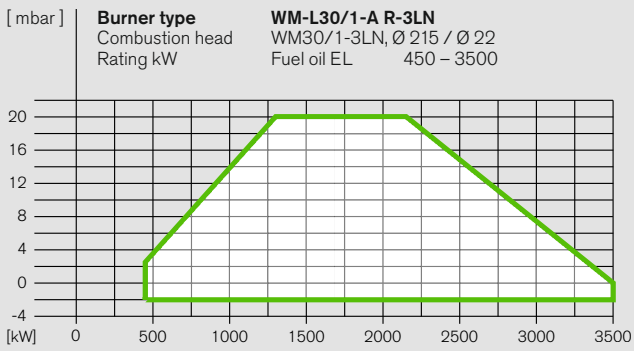
Weishaupt multiflam® burners have been proving themselves in the field for more than 10 years. They are especially suited to markets with stringent emission limits.

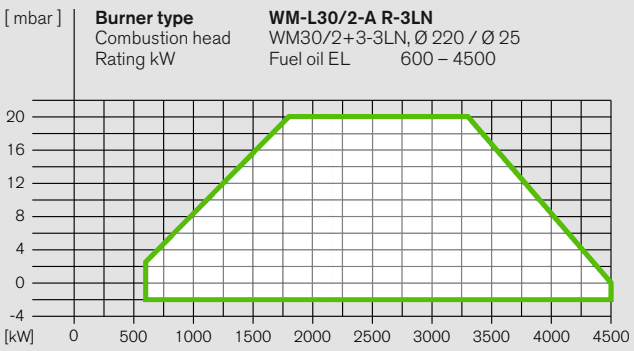
The latest monarch® burners are now bringing this technology to medium-capacity ranges, combining flexibility with extremely low emissions.

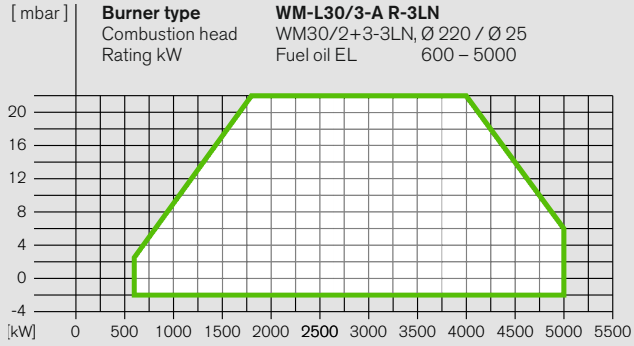
Exemplary emissions
3LN, multiflam®-version burners reduce NO_x emissions below the already good levels that can be achieved with a standard mixing assembly. These additional reductions are achieved using a special mixing assembly with fuel distribution.

Good combustion figures also depend on combustion chamber geometry, volumetric loading and boiler design (three-pass type). Certain conditions (including, for example, combustion chamber loading, measurement tolerances, temperature, pressure, humidity etc.) must be observed in order for a guarantee of emission levels to be given.

Burner selection
WM-L30, version 3LN (multiflam®)







Fuels
Fuel oil EL

Turndown, EL **max 5:1**

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.

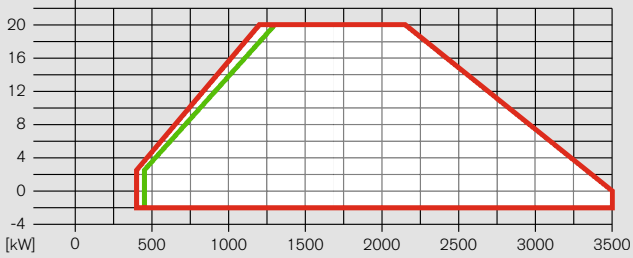
Stated oil throughputs are based on a calorific value of 11.91 kWh/kg for fuel oil EL.

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

Burner selection
WM-G30 and WM-GL30, vers. 3LN (multiflam®)

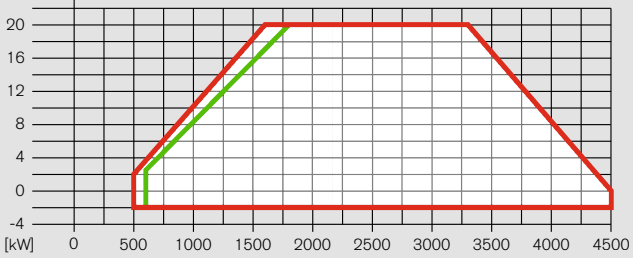
[mbar]

Burner type **WM-G30/1-A ZM-3LN**
WM-GL30/1-A ZM-R-3LN
Combustion head WM30/1-3LN, Ø 215 / Ø 22
Rating kW Nat. gas E, LL 400 – 3500
LPG B/P 400 – 3500
Fuel oil EL 450 – 3500



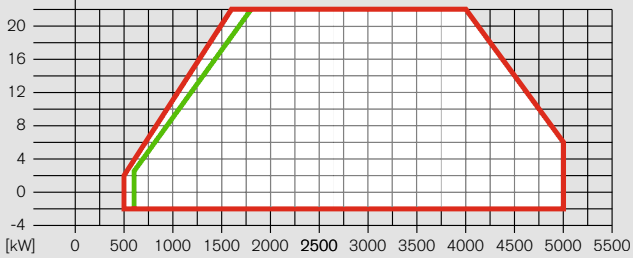
[mbar]

Burner type **WM-G30/2-A ZM-3LN**
WM-GL30/2-A ZM-R-3LN
Combustion head WM30/2+3-3LN, Ø 220 / Ø 25
Rating kW Nat. gas E, LL 500 – 4500
LPG B/P 500 – 4500
Fuel oil EL 600 – 4500



[mbar]

Burner type **WM-G30/3-A ZM-3LN**
WM-GL30/3-A ZM-R-3LN
Combustion head WM30/2+3-3LN, Ø 220 / Ø 25
Rating kW Nat. gas E, LL 500 – 5000
LPG B/P 500 – 5000
Fuel oil EL 600 – 5000



Fuels
Nat. gas/LPG
Fuel oil EL

Turndown, Gas **max. 9:1**
EL **max. 5:1**

The capacity graphs are 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-G30 and WM-GL30, vers. 3LN (multiflam®)

WM-G(L)30/1-A, version ZM(-R)-3LN (multiflam®)

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**	**1½"**	**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
Natural gas E LHV = 10.35 kWh/mn³; d = 0.606												
1200	68	34	25	22	20	19	41	22	19	17	17	16
1500	98	44	30	25	22	21	57	28	22	20	19	18
1900	148	62	40	31	27	25	84	37	27	25	23	22
2300	210	84	52	40	33	31	117	49	35	31	28	27
2700	284	111	67	49	40	37	157	63	44	38	34	33
3100	-	142	84	61	49	45	-	80	55	47	42	40
3500	-	177	103	75	59	54	-	100	67	57	50	48
Natural gas LL LHV = 8.83 kWh/mn³; d = 0.641												
1200	97	47	34	30	27	26	59	32	26	24	23	23
1500	139	61	42	34	30	28	81	39	30	27	26	25
1900	211	86	54	42	35	33	119	51	37	33	30	29
2300	-	117	71	52	43	40	167	67	47	41	36	35
2700	-	155	90	66	52	48	-	87	59	50	44	43
3100	-	199	114	81	64	58	-	110	73	62	54	52
3500	-	249	141	100	77	70	-	137	90	75	65	63
LPG LHV = 25.89 kWh/mn³; d = 1.555												
1200	43	29	25	24	23	23	30	23	21	21	20	20
1500	54	32	27	25	23	23	36	24	22	21	20	20
1900	74	39	30	27	25	24	47	27	24	22	22	21
2300	100	48	35	30	27	27	61	33	27	25	24	24
2700	131	60	42	35	31	30	78	39	31	29	27	27
3100	168	75	51	41	36	35	99	48	37	34	32	31
3500	211	91	61	49	43	41	123	58	45	41	38	37

WM-G(L)30/2-A, version ZM(-R)-3LN (multiflam®)

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**	**1½"**	**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
Natural gas E LHV = 10.35 kWh/mn³; d = 0.606												
1600	103	42	26	20	17	16	56	23	17	15	13	13
2000	156	61	36	27	22	20	85	34	23	20	17	17
2500	239	90	52	37	29	27	130	49	32	27	24	23
3000	-	125	71	50	38	35	184	67	43	36	31	30
3500	-	167	93	64	48	44	-	89	56	47	40	38
4000	-	215	118	80	60	54	-	114	71	58	49	47
4500	-	269	146	99	73	65	-	141	88	71	60	57
Natural gas LL LHV = 8.83 kWh/mn³; d = 0.641												
1600	146	58	35	26	22	20	80	32	22	19	17	17
2000	222	84	49	35	28	25	121	45	30	25	22	21
2500	-	124	69	48	37	33	183	66	42	34	29	28
3000	-	174	95	64	48	42	-	91	56	46	38	36
3500	-	233	125	83	61	54	-	121	73	59	49	46
4000	-	-	160	105	76	66	-	155	93	74	61	58
4500	-	-	199	130	93	81	-	194	115	92	75	71
LPG LHV = 25.89 kWh/mn³; d = 1.555												
1600	56	31	24	22	21	20	35	22	19	18	18	18
2000	75	36	26	22	20	19	44	23	19	17	17	16
2500	106	45	30	24	20	19	60	27	20	18	17	16
3000	146	58	36	27	22	21	81	33	23	20	18	18
3500	195	75	44	33	26	24	106	41	28	24	21	21
4000	252	95	56	40	32	29	137	52	35	30	26	25
4500	-	119	69	50	39	36	173	66	44	37	32	31

WM-G(L)30/3-A, version ZM(-R)-3LN (multiflam®)

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 LHV = 10.35 kWh/mn³; d = 0.606														
1600	103	42	26	20	17	16	15	56	23	17	15	13	13	13
2000	156	61	36	27	22	20	20	85	34	23	20	17	17	17
2500	239	90	52	37	29	27	26	130	49	32	27	24	23	23
3000	-	125	71	50	38	35	33	184	67	43	36	31	30	29
3500	-	167	93	64	48	44	41	-	89	56	47	40	38	37
4000	-	215	118	80	60	54	51	-	114	71	58	49	47	46
4500	-	269	146	99	73	65	61	-	141	88	71	60	57	56
5000	-	-	177	119	87	77	72	-	172	106	86	72	68	67
Natural gas LL LHV = 8.83 kWh/mn³; d = 0.641														
1600	146	58	35	26	22	20	20	80	32	22	19	17	17	17
2000	222	84	49	35	28	25	24	121	45	30	25	22	21	21
2500	-	124	69	48	37	33	31	183	66	42	34	29	28	28
3000	-	174	95	64	48	42	40	-	91	56	46	38	36	36
3500	-	233	125	83	61	54	50	-	121	73	59	49	46	45
4000	-	-	160	105	76	66	62	-	155	93	74	61	58	57
4500	-	-	199	130	93	81	75	-	194	115	92	75	71	69
5000	-	-	243	158	112	97	91	-	-	140	111	91	85	84
LPG LHV = 25.89 kWh/mn³; d = 1.555														
1600	50	25	19	16	15	14	14	30	16	13	12	12	12	12
2000	73	33	24	20	18	17	17	42	21	17	15	14	14	14
2500	108	47	31	25	22	21	21	62	29	22	20	18	18	18
3000	152	64	41	33	28	27	26	86	38	29	26	24	23	23
3500	203	84	53	41	35	33	32	115	50	37	33	30	29	29
4000	263	107	67	52	43	41	39	149	64	46	41	37	36	36
4500	-	133	83	63	53	49	48	187	79	57	51	46	45	44
5000	-	163	101	76	63	59	57	-	97	70	61	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 R-3LN	WM-G30 ZM-3LN	WM-GL30 ZM-R-3LN
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 100 W-FM 200	WM30/1, WM30/2 WM30/3	● ●	● ●	● ●
Valve proving via W-FM and pressure switch with electronic compound		–	●	●
Double gas solenoid valve (Class A)		–	●	●
Gas butterfly valve		–	●	●
Air-pressure switch		–	●	●
Low-gas-pressure switch.		–	●	●
Mixing assembly with modulating diffuser		●	●	●
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 Stepping motor for mixing assembly		 ● – ● ●	 ● ● – ●	 ● ● ● ●
Oil-pressure switch in return		●	–	●
DSA58 oil-pressure switch in supply	WM30/1, WM30/2 WM30/3	○ ●	– –	○ ●
Oil pump fitted to burner[1)]		●	–	●
Oil hoses		●	–	●
Supply and return with 2 oil solenoids, oil regulator, nozzle head, premounted nozzles		●	–	●
Electromagnetic clutch [1)]	WM30/1, WM30/2 WM30/3	○ –	– –	● –
Star-delta combination fitted to motor [1)]	WM30/1, WM30/2 WM30/3	● –	● –	● –
Variable speed drive	WM30/1, WM30/2 WM30/3	○ ●	○ ●	○ ●
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.

● Standard
○ Optional

[1)] WM30/3 burners are equipped as standard with a frequency convertor (full load = 57 Hz) and a burner-mounted, motorised oil pump, type SMG1629.

Order numbers

Oil burners

Burner Type	Version	Order No.
WM-L30/1-A	R-3LN	215 320 11
WM-L30/2-A	R-3LN	215 320 21
WM-L30/3-A	R-3LN	215 320 31

DIN CERTCO: 5G1046/10

Gas burners

Burner Type	Version	DMV size	Order No.
WM-G30/1-A	ZM-3LN	R 1½	217 317 12
		R 2	217 317 13
		DN 65	217 317 14
		DN 80	217 317 15
		DN 100	217 317 16
		DN 125	217 317 17
WM-G30/2-A	ZM-3LN	R 1½	217 318 12
		R 2	217 318 13
		DN 65	217 318 14
		DN 80	217 318 15
		DN 100	217 318 16
		DN 125	217 318 17
WM-G30/3-A	ZM-3LN	R 1½	217 319 12
		R 2	217 319 13
		DN 65	217 319 14
		DN 80	217 319 15
		DN 100	217 319 16
		DN 125	217 319 17
		DN 150	217 319 18

CE-PIN: CE-0085BU0359

Dual-fuel burners

Burner Type	Version	DMV size	Order No.
WM-GL30/1-A	ZM-R-3LN	R 1½	218 325 12
		R 2	218 325 13
		DN 65	218 325 14
		DN 80	218 325 15
		DN 100	218 325 16
		DN 125	218 325 17
WM-GL30/2-A	ZM-R-3LN	R1½	218 326 12
		R2	218 326 13
		DN 65	218 326 14
		DN 80	218 326 15
		DN 100	218 326 16
		DN 125	218 326 17
WM-GL30/3-A	ZM-R-3LN	R 1½	218 327 12
		R 2	218 327 13
		DN 65	218 327 14
		DN 80	218 327 15
		DN 100	218 327 16
		DN 125	218 327 17
		DN 150	218 327 18

CE-PIN: CE-0085BU0360
DIN CERTCO: 5G1044/10M

Special equipment
WM-L30, version 3LN (multiflam®)

Oil burners, version R-3LN			WM-L30/1-A	WM-L30/2-A	WM-L30/3-A
Pressure gauge with ball valve on pump			110 002 82	110 002 82	–
Pressure gauge with ball valve in return			110 011 50	110 011 50	–
Vacuum gauge with ball valve			110 017 00	110 017 00	–
Combustion-head extension	by 150 mm		on application	on application	on application
	by 300 mm		on application	on application	on application
Air-inlet flange for duct connection, with LGW air-pressure switch (LGW 50 also required)		210 031 15	210 031 15	–	
LGW 50 air-pressure switch [1]				210 031 39	210 031 39 –
ST 18/7 and ST 18/4 plug connections			250 030 22	250 030 22	250 030 22
W-FM 100 supplied loose in lieu of fitted			on application	on application	–
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	250 030 72	250 030 72	standard
		loose	on application	on application	–
DSA58 pressure switch in supply [1]			210 031 09	210 031 09	–
VSD with integral frequency convertor (W-FM 200 required)			210 031 48	210 031 49	standard
VSD with separate frequency convertor (W-FM 200 required) (See accessories list for frequency convertor)			210 030 98	210 031 00	on application
ABE with Chinese-character display, supplied loose			110 018 53	110 018 53	110 018 53
Special voltage (on application only)			on application	on application	on application
110 V control voltage			on application	on application	on application

Country-specific executions and special voltages on application

[1] Required for PED (97/23/EC) compliance

Special equipment
WM-G30 and WM-GL30, vers. 3LN (multiflam®)

Gas and dual-fuel burners, version ZM(-R-3LN)		WM30/1	WM30/2	WM30/3
Combustion-head extension	by 150 mm	on application	on application	on application
	by 300 mm	on application	on application	on application
Solenoid valve for air-pressure switch test for continuous-run fan or post-purge	on application	on application	on application	
High-gas-pressure switch [1] (Screwed R¾ to R2 for low-pressure supplies)	GW 50 A6/1 GW 150 A6/1 GW 500 A6/1	250 033 30 250 033 31 250 033 32	250 033 30 250 033 31 250 033 32	250 033 30 250 033 31 250 033 32
High-gas-pressure switch [1] (Flanged DMV/VGD for low-pressure supplies)	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
High-gas-pressure switch [1] (Fitted to high-pressure regulator)	GW 50 A6/1 GW 150 A6/1 GW 500 A6/1	250 033 33 250 033 34 250 033 35	250 033 33 250 033 34 250 033 35	250 033 33 250 033 34 250 033 35
ST 18/7 and ST 18/4 plug connections		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	–
DSA58 pressure switch in supply [1]		on application	on application	on application
W-FM 100 supplied loose in lieu of fitted		on application	on application	–
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	250 030 72	250 030 72	standard
	loose	on application	on application	–
VSD with integral frequency convertor (W-FM 200 required)		210 031 48	210 031 49	standard
VSD with separate frequency convertor (W-FM 200 required) (See accessories list for frequency convertor)		210 030 98	210 031 00	on application
ABE with Chinese-character display, supplied loose		110 018 53	110 018 53	110 018 53
110 V control voltage		on application	on application	on application

Country-specific executions and special voltages on application

[1] Required for PED (97/23/EC) compliance

Technical data
WM 30, version 3LN (multiflam®)

Oil burners, version R-3LN		WM-L30/1-A	WM-L30/2-A	WM-L30/3-A
Burner motor [1]	Weishaupt type	WM-D 132/170-2/10K0	WM-D 132/210-2/14K0	WM-D 132/210-2/17K0
Nominal rating	kW	10	14	17
Nominal current	A	20	28	34
Motor protection switch [2] or motor prefusing [2]	Type (e.g.) A minimum	MS132 - 25 25A gG/T (external)	MS132 - 32 35A gG/T (external)	MS450 - 40 50A gG/T (external)
Speed (50 Hz)	rpm	2900	2850	3320 [3]
Combustion manager	Type	W-FM 100	W-FM 100	W-FM 200
Flame monitoring	Type	QRA73	QRA73	QRA73
Air/oil stepping motor Mixing assembly stepping motor	Type Type	SQM45 SQM48	SQM45 SQM48	SQM45 SQM48
NOx Class per EN 267		3	3	3
Weight	kg	approx. 155	approx. 155	approx. 175
Integral pump max. flow rate	Type l/h	TA4 1050	TA5 1410	SMG1629 (motorised) 1500
Oil hoses	DN / Length	25 / 1300	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).

[3] Full load at 57 Hz via frequency convertor

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.

Gas burners, version ZM-3LN		WM-G30/1-A	WM-G30/2-A	WM-G30/3-A
Burner motor [1]	Weishaupt type	WM-D 132/170-2/10K0	WM-D 132/210-2/14K0	WM-D 132/210-2/17K0
Nominal rating	kW	10	14	17
Nominal current	A	20	28	34
Motor protection switch [2] or motor prefusing [2]	Type (e.g.) A minimum	MS132 - 25 25A gG/T (external)	MS132 - 32 35A gG/T (external)	MS450 - 40 50A gG/T (external)
Speed (50 Hz)	rpm	2900	2850	3320 [3]
Combustion manager	Type	W-FM 100	W-FM 100	W-FM 200
Flame monitoring	Type	ION	ION	ION
Air/gas stepping motor Mixing assembly stepping motor	Type Type	SQM45 SQM48	SQM45 SQM48	SQM45 SQM48
NOx Class per EN 267		3	3	3
Weight (excluding DMV and fittings)	kg	approx. 145	approx. 152	approx. 179

Dual-fuel burners, version ZM-R-3LN		WM-GL30/1-A	WM-GL30/2-A	WM-GL30/3-A
Burner motor [1]	Weishaupt type	WM-D 132/170-2/10K0	WM-D 132/210-2/14K0	WM-D 132/210-2/17K0
Nominal rating	kW	10	14	17
Nominal current	A	20	28	34
Motor protection switch [2] or motor prefusing [2]	Type (e.g.) A minimum	MS132 - 25 25A gG/T (external)	MS132 - 32 35A gG/T (external)	MS450 - 40 50A gG/T (external)
Speed (50 Hz)	rpm	2900	2850	3320 [3]
Combustion manager	Type	W-FM 100	W-FM 100	W-FM 200
Flame monitoring	Type	QRA73	QRA73	QRA73
Air/gas/oil stepping motor Mixing assembly stepping motor	Type Type	SQM45 SQM48	SQM45 SQM48	SQM45 SQM48
NOx Class per EN 267 / EN 676		3	3	3
Weight (excluding DMV and fittings)	kg	approx. 170	approx. 177	approx. 190
Weight (excluding DMV and fittings) max. flow rate	type l/h	TA4 1050	TA5 1410	SMG1629 (motorised) 1500
Oil hoses	DN / Length	25 / 1300	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).

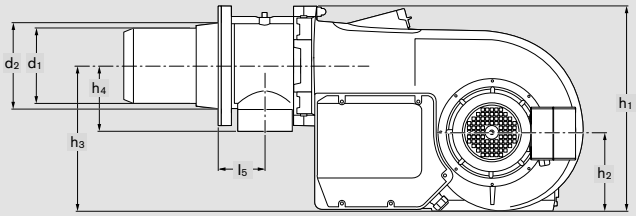
[3] Full load at 57 Hz via frequency convertor

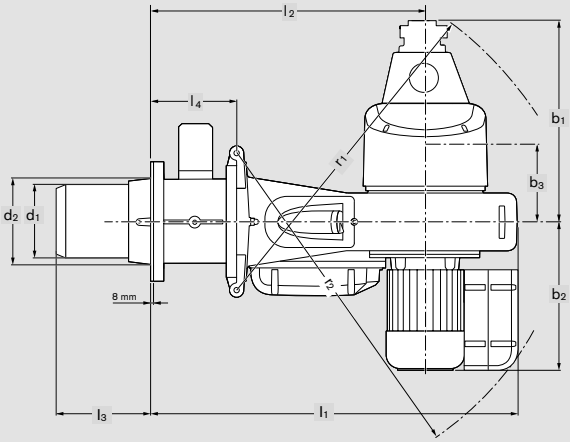
Voltages and frequencies:
The burners are equipped as standard for three-phase alternating current, 400 V, 3 ~, 50 Hz. Other voltages and frequencies are available on application.

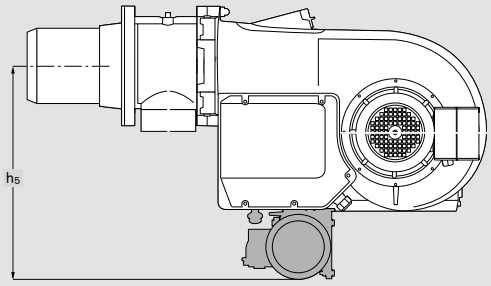
Standard burner motor:
Insulation Class F, IP 54 protection.

Dimensions

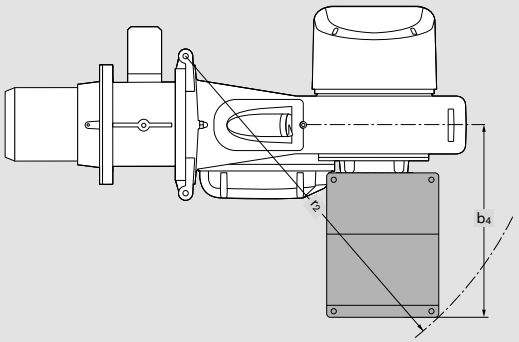
multiflam® burners, version 3LN



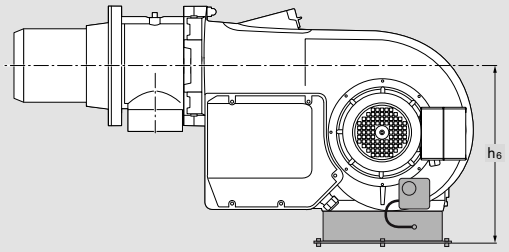




Motorised oil pump
(WM 30/3)



Frequency convertor
(WM 30/3)



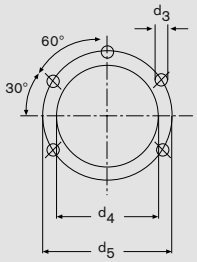
Ducted-air flange

Burner type	Dimensions in mm l_1	l_2	l_3	l_4	b_1	b_2	b_4	h_1	h_2	h_3	h_4	h_5	h_6
WM-L30/1-A R-3LN	1166	847	473	148	615	507	630	730	256	505	–	730	621
WM-L30/2-A R-3LN	1166	847	480	148	619	547	670	730	256	505	–	730	621
WM-L30/3-A R-3LN	1166	847	480	148	446	547	670	730	256	505	–	730	621
WM-G30/1-A ZM-3LN	1166	847	473	148	398	507	630	730	256	505	232	730	621
WM-G30/2-A ZM-3LN	1166	847	480	148	398	547	670	730	256	505	232	730	621
WM-G30/3-A ZM-3LN	1166	847	480	148	398	547	670	730	256	505	232	730	621
WM-GL30/1-A ZM-R-3LN	1166	847	473	148	619	507	630	730	256	505	232	730	621
WM-GL30/2-A ZM-R-3LN	1166	847	480	148	625	547	670	730	256	505	232	730	621
WM-GL30/3-A ZM-R-3LN	1166	847	480	148	446	547	670	730	256	505	232	730	621

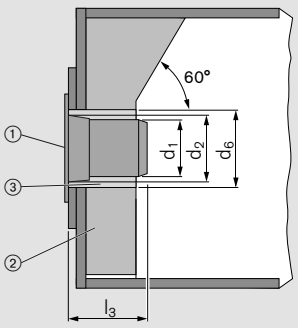
Brenner-Typ	Dimensions in mm r_1	r_2	d_1	d_2	Nom. diameter of gas butterfly	d_3	d_4	d_5	d_6
WM-L30/1-A R-3LN	1055	1111	296	348		M12	375	400	380
WM-L30/2-A R-3LN	1059	1151	322	348		M12	375	400	380
WM-L30/3-A R-3LN	992	1151	322	348		M12	375	400	380
WM-G30/1-A ZM-3LN	992	1111	296	348	DN80	M12	375	400	380
WM-G30/2-A ZM-3LN	992	1151	322	348	DN80	M12	375	400	380
WM-G30/3-A ZM-3LN	992	1151	322	348	DN80	M12	375	400	380
WM-GL30/1-A ZM-R-3LN	1055	1111	296	348	DN80	M12	375	400	380
WM-GL30/2-A ZM-R-3LN	1059	1151	322	348	DN80	M12	375	400	380
WM-GL30/3-A ZM-R-3LN	992	1151	322	348	DN80	M12	375	400	380

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

Mounting-plate drilling dimensions



Heat-exchanger preparation



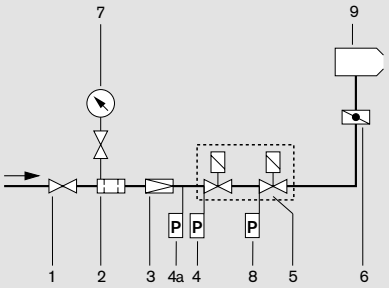
① Flange gasket
② Refractory
③ Aperture

The leading edge of the combustion head must protrude approx. 50 mm beyond the refractory ②. The refractory may be tapered (min. 60°).

Fuel systems

Gas fuel system

W-FM 100/200



1 Ball valve *
2 Gas filter *
3 Pressure regulator, (LP) or (HP) *
4 Low-gas-pressure switch
4a High-gas-pressure switch *
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

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.

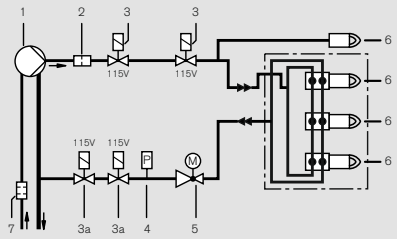
Break points in the valve train
Break points in the valve train should be provided to enable the door of the heat exchanger to be swung open. The main gas line is best separated at the compensator.

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.

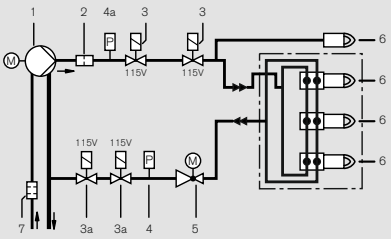
Gas meter
A gas meter must be installed to measure gas consumption during commissioning.

Oil fuel system

WM30/1 and WM30/2



WM30/3
with motorised pump, type SMG 1629



1 Oil pump
2 Strainer
3 Normally closed oil solenoid valve (115 V, switched in series with 3a)
3a Normally closed oil solenoid valve (115 V, switched in series with 3, fitted against the direction of flow)
4 Oil-pressure switch in return
4a Oil-pressure switch in supply
5 Oil regulator
6 Nozzle assembly with shut-off device
7 External oil filter ①

① Not included in burner price.

–weishaupt–

That's no façade. Headquartered in the southern German town of Schwendi, and with numerous offices across the world, Weishaupt has been a leading player in the heating and combustion technology industries for years. That's reliability.

Weishaupt is reliability.
The family-owned business from Schwendi in southern Germany was founded by Max Weishaupt in 1932. It is a global player, with offices in 60 countries across the world, and is a market leader for burners, heating and condensing boiler systems, solar technology, heat pumps, and building management systems.

The pioneering Max Weishaupt endowed his business with the core values of trust, quality, customer service, innovation, and experience.

That, summed up in a single word, is reliability.

And that is something for which Weishaupt stands to this day.

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 & Development Centre

Making advances
Weishaupt has long recognised the theme of our times and is continually researching into ever more effective 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. That enables the real-time, seamless monitoring and control of all the products produced by Weishaupt.

–weishaupt–

Max Weishaupt GmbH
88475 Schwendi
Tel +49 7353 830,
Fax +49 7353 83358
www.weishaupt.de

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Neachells Lane, Willenhall, WV13 3RG
Tel (01902) 609841,
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