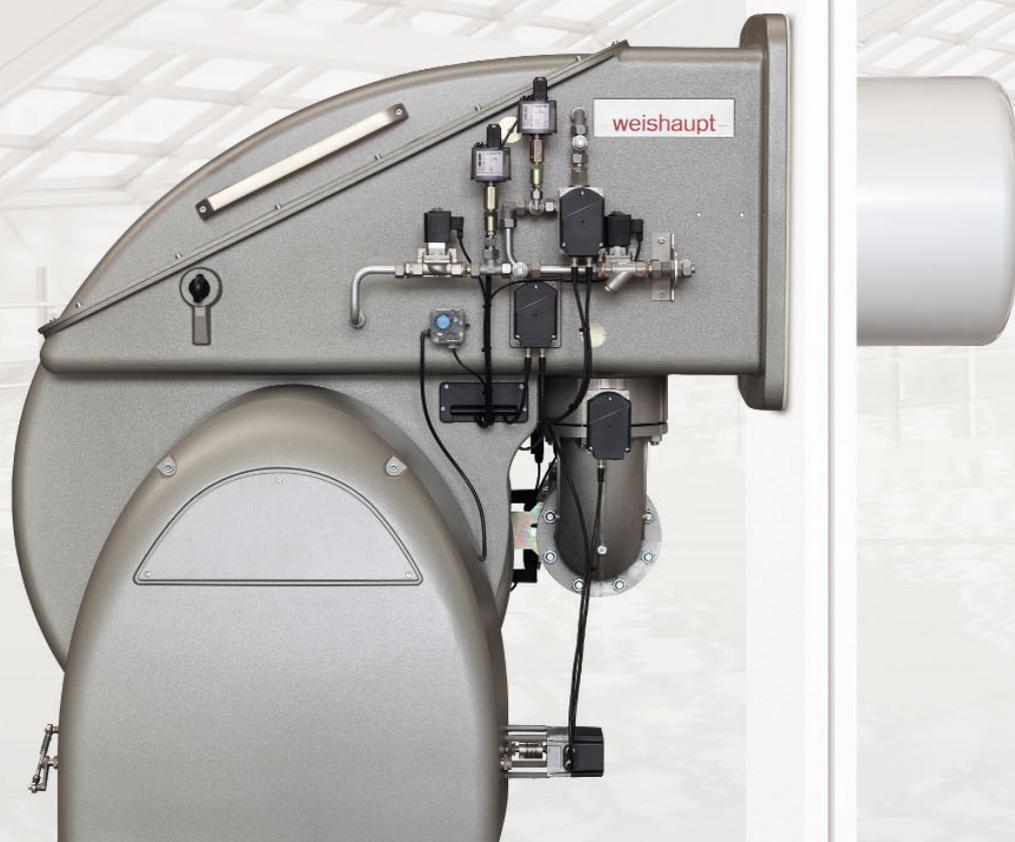


– weishaupt –

product

Information on monobloc industrial burners



WKmono-series industrial burners

WKmono80 industrial burners • 1 200–17 000 kW

For more than six decades, Weishaupt burners have proven themselves on a wide variety of heat exchangers and process plant. Their success stems from a relentless demand for high-quality materials and workmanship, and uncompromising quality control standards.

Weishaupt continually establishes new benchmarks with its well-engineered products, facilitated by the ever-constant efforts of its own Research and Development Centre.

It was such efforts that enabled the rapid development of the WKmono 80, which shares its platform with the duobloc WK 80 burner. The large 1 200 to 17 000 kW range of the WKmono 80, which is available in NR and multiflam® versions and is suitable for natural gas, LPG, and light oil, is particularly impressive.

All Weishaupt burners are manufactured at the company's main plant in Schwendi in southwestern Germany. Not only does this extremely modern production facility serve as a beacon of safety, precision, and cleanliness, it also allows for a rapid response when assembling medium and large-sized burners, which are almost always individually configured. The high proportion of in-house production, among other things, allows Weishaupt to meet its own demands for high levels of quality and to ensure purpose-built items can be produced promptly.

Of course, Weishaupt's range also covers the whole gamut of modern control technology, including fully comprehensive solutions for complex building automation projects; future-oriented, cost-effective, and flexible.

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.

Powerful.

The latest WKmono burner's compact monobloc housing provides a lot of power, thanks to the specially developed fan unit.



Compact and powerful

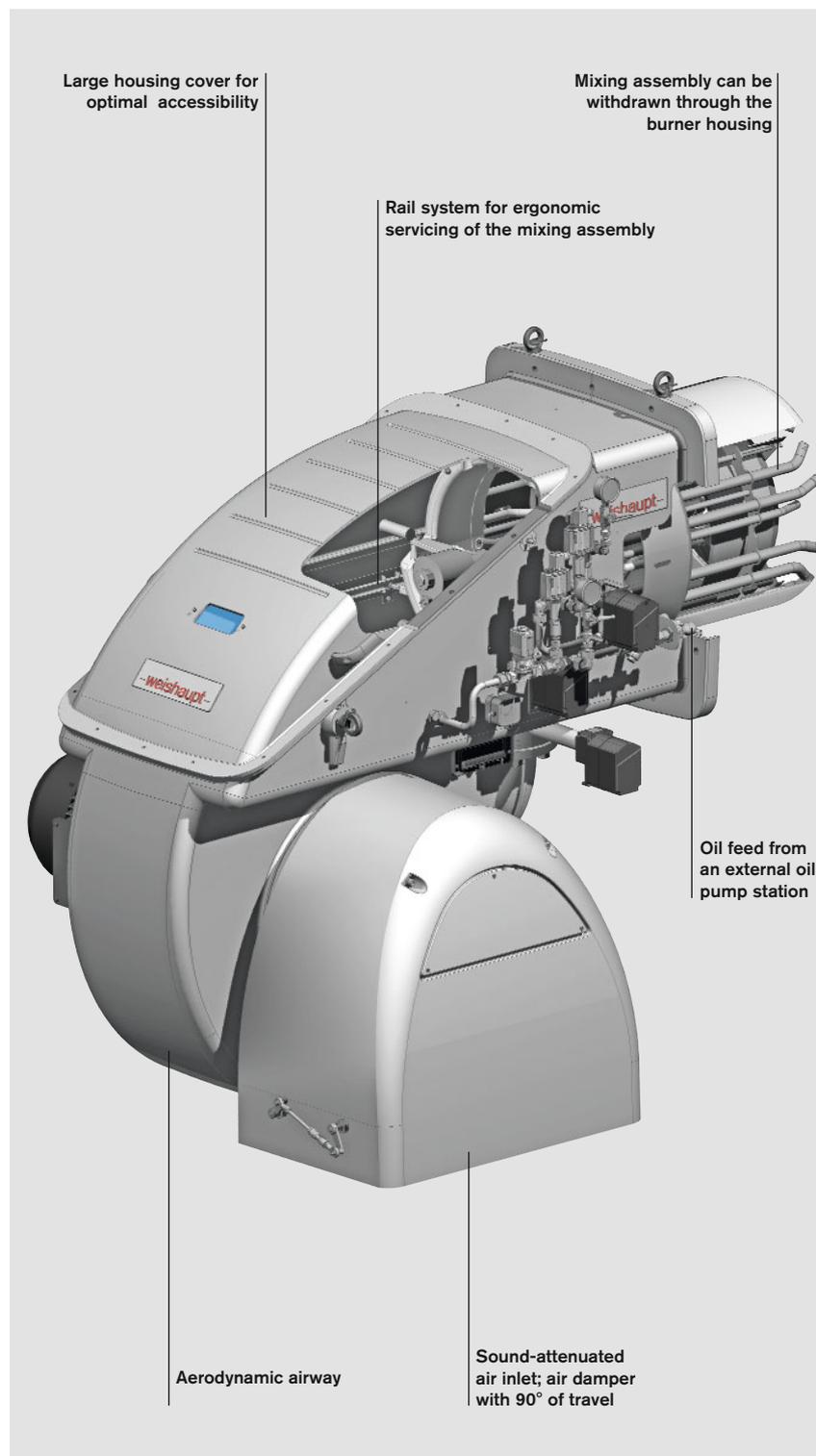
The WKmono 80 is a combination of monobloc and duobloc burner. It retains the compact and service-friendly design, and uses the existing modular construction system, of the duobloc WK burner series.

A rail system, for example, makes it easy to withdraw and insert the mixing assembly during servicing. Tried-and-tested safety shutoff devices, oil regulators, pump stations, and other system components from the WK burner range, provide a high degree of efficiency and flexibility.

The combustion managers are, in a nutshell, "digital reliability". Their adaptability and versatility leave nothing to be desired. VSD, O2 trim and communication with superordinate control systems are commonplace features for equipment of this size.

Since no one fuel is the same as the next, different mixing assemblies have been specially developed for use with particular fuels. Reliable combustion with a wide range of gases and oils is thereby guaranteed.

This next generation of monobloc burner shares in Weishaupt's guiding principles of cost-effectiveness, efficiency, and reliability.



WKmono-GL80/2-A ZM-R-NR

Specification

Fuels

Natural gas
LPG
Light oil (35 s gas oil)
10 % biodiesel blends (B10)

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

Applications

EN 267 and EN 676-approved Weishaupt WKmono 80 burners are suitable for:

- 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.).

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 humidity, 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:

- Machinery Directive 2006/42/EC
- Pressure Equipment Directive, 97/23/EC 2014/68/EU (effective 09.07.2016)
- Gas Appliance Directive, 2009/142/EC
 - EN 676 and EN 267
- Low Voltage Directive 2006/95/EC 2014/35/EU (effective 20.04.2016)
 - EN 60335-1, -2, -2-102
- Electromagnetic Compatibility Directive 2004/108/EC 2014/30/EU (effective 19.04.2016)
 - EN 61000-6-2, -6-4
- The burners are marked with a
 - CE mark
 - CE Prod. ID No. per 2009/142/EC
 - ID number of the monitoring body

Regulation

Weishaupt WKmono 80 burners are suitable for sliding-two-stage or modulating operation, depending on the type of capacity regulation.

With modulating operation, the burner's output is matched within its operating range to the current heat demand. That makes the burner universally employable.

NR version

Gas and dual-fuel burners with an advanced-design mixing assembly for installations with Class 2 (oil-side) and Class 3 (gas-side) NO_x emission requirements.

3LN version

Ultra-Low-NO_x gas, oil, 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. 3LN-version burners are suitable for light oil, natural gas, and LPG, and meet Class 3 NO_x requirements.

Digital

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

Weishaupt WKmono 80-series gas, oil, 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.

Simple operation

Setting and control of the burner is achieved using a control and display unit. The control and display unit has a clear text display with a choice of languages. An English/Chinese dual-screen version is available as an option.

Measures for saving energy and increasing safety and reliability

Electronic compound regulation with the W-FM 100 and 200 combustion managers facilitates the extremely precise, hysteresis-free setting of the burner. This reduces flue gas losses and saves fuel.

Variable speed drive reduces electrical consumption and facilitates a soft start of the combustion air fan. The use of VSD also reduces noise emissions by a considerable amount.

O₂ trim saves fuel through a continual and extremely efficient optimisation of the combustion air. A lambda probe in the flue gas system makes allowances for all O₂-altering factors.

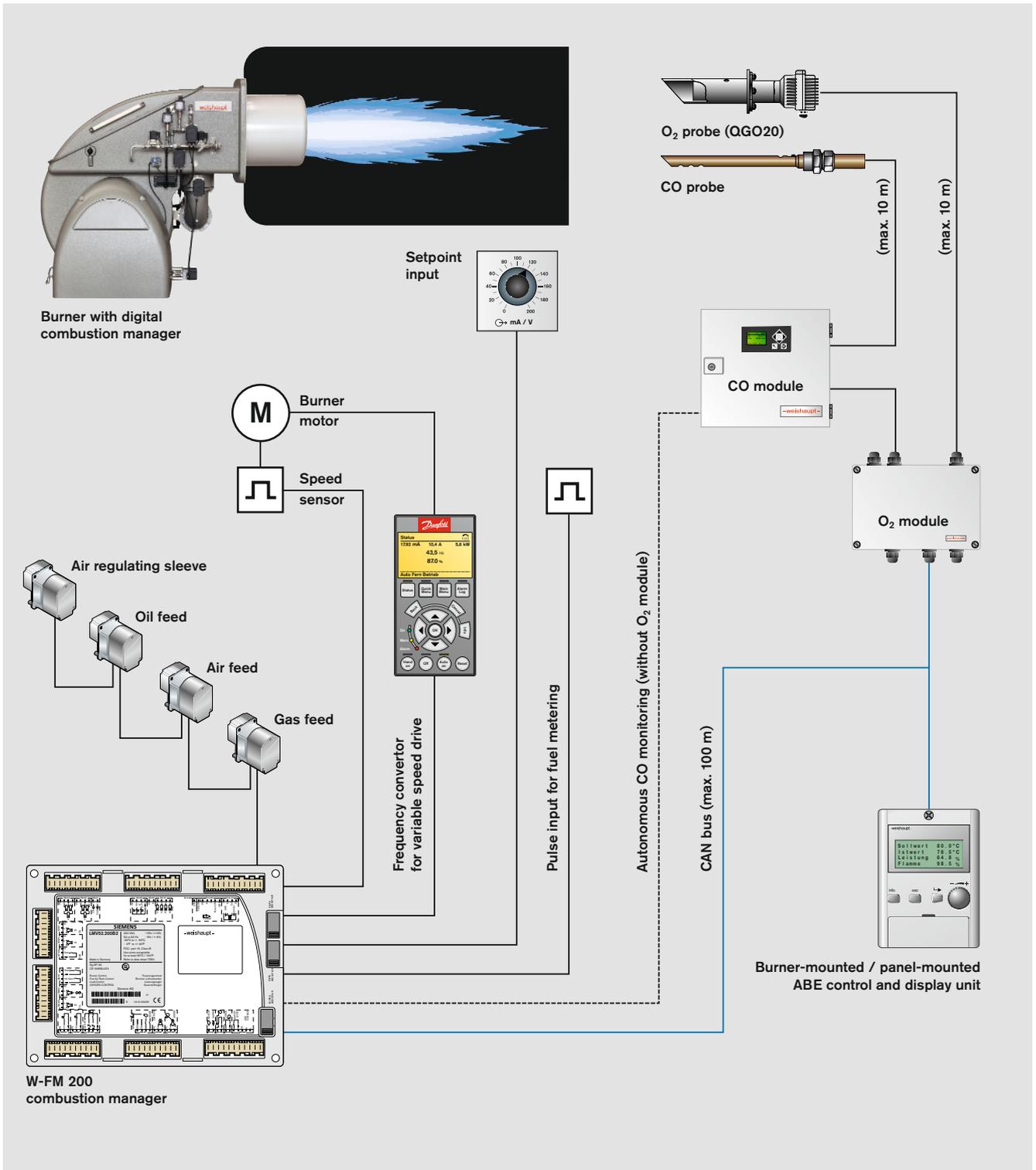
Combined CO/O₂ control ensures an ultimate degree of safety. CO emissions are continually monitored and, if the defined limit is exceeded, the burner is operated with an increased amount of excess air for a short period of time before the O₂ trim returns the burner to its preset O₂ setpoint. Should external influences prevent a non-critical condition from being reached, then the burner will undergo a controlled shut-down.

CO monitoring executes a safety shut-down of the burner if a predefined CO limit is exceeded, thereby ensuring the very highest degree of safety.

Digital combustion management General system overview	W-FM 100	W-FM 200
Single-fuel operation	●	●
Dual-fuel operation	●	●
Controller for continuous operation > 24 h	●	●
Variable speed drive available	–	●
O ₂ trim available	–	●
Controller for combined O ₂ trim / CO monitoring / flue gas recirculation	–	○
Flame sensor for continuous operation	ION/QRI/QRA 73	ION/QRI/QRA 73
W-FC 4.0 flame monitoring	●	●
W-FC 5.0/6.0 flame monitoring	–	●
Actuators in electronic compound (max.)	x 4	x 6
Gas valve proving	●	●
Integrated PID controller with adaption: Pt100 / Pt1000 / Ni1000 temperature sensor or 0 / 2–10 V and 0 / 4–20 mA input signals for temperature / pressure	●	●
0 / 2–10 V and 0 / 4–20 mA setpoint input for temperature / pressure	○	●
20-language clear text display (ABE limited to 6 languages)	●	●
Dual language / script clear text display (Chinese / English)	●	●
Removable operating unit (max. distance)	100 m	100 m
Fuel consumption meter (switchable)	–	●
Combustion efficiency display in conjunction with O ₂ trim	–	●
eBUS / Modbus interface	●	●
PC-supported commissioning	●	●

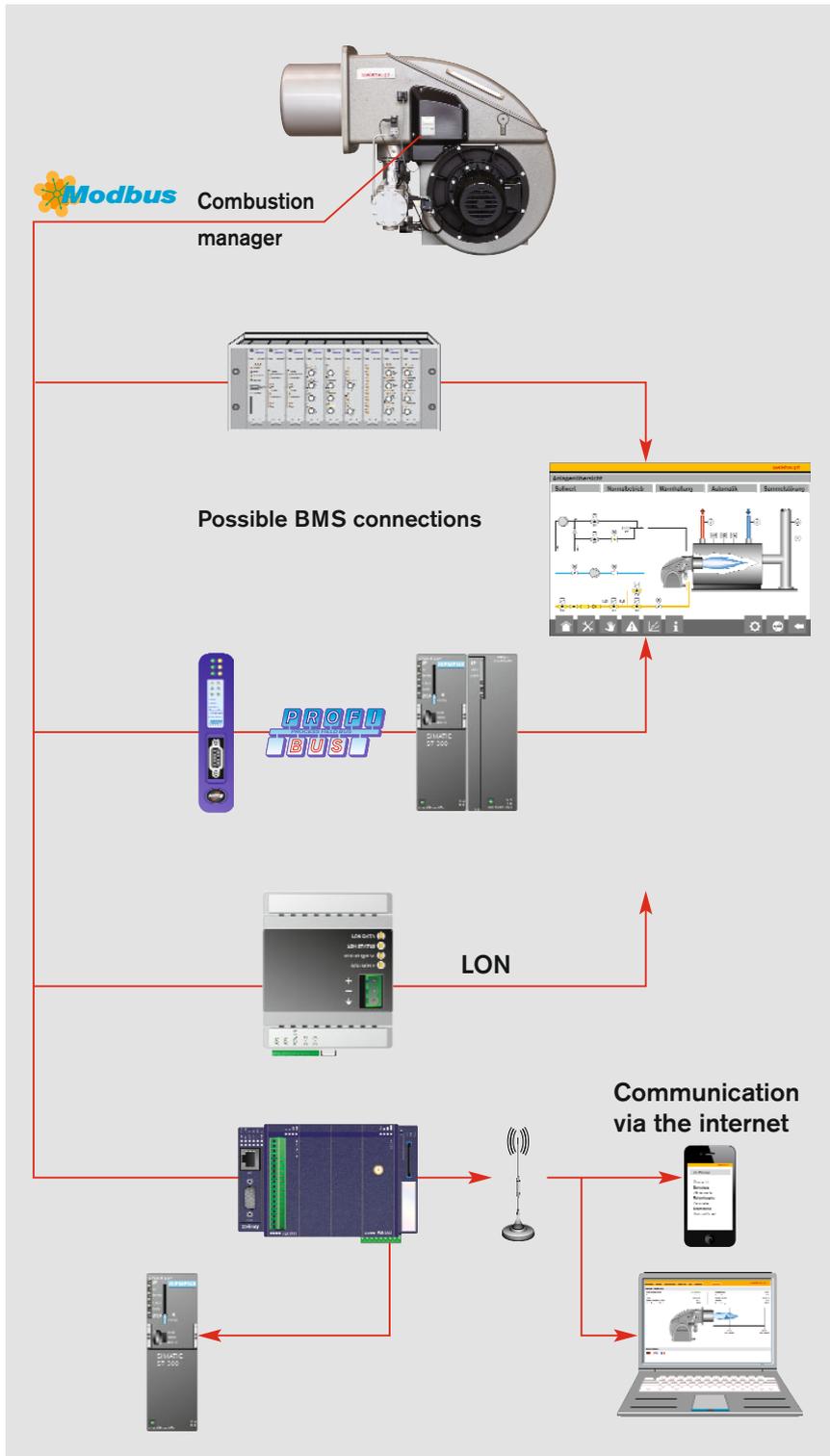
● Standard
○ Optional

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



Schematic representation with W-FM 200

Flexible communications: Compatible with building management systems



The digital combustion manager is the basis of communications with other, superordinate systems. This is generally achieved using the eBus or Modbus protocols.

All the usual burner and boiler functions can be monitored and controlled through a direct connection with a building management system.

A graphical HMI is available as an option to provide a user-friendly overview of the boiler. The touchscreen display allows numerous functions to be adjusted and monitored, such as system parameters and setpoints of individual and multi-boiler plant and ancillary equipment. The controls specialists, Neuberger, who are a part of the Weishaupt Group, are able to design and implement complex control solutions.

Further optional components enable connections to be made to systems using Profibus-DP or LON.

A recent addition to Weishaupt's portfolio is the W-FM COM communications module. It transmits data securely over the internet so that it can be called up and displayed in an internet browser window, facilitating accurate service planning for example. Even away from the internet you can be kept up to date with the operation of the burner: In the event of a safety shutdown, an SMS text message is sent automatically.



Remote monitoring made easy via tablet or laptop

Overview of burner regulation

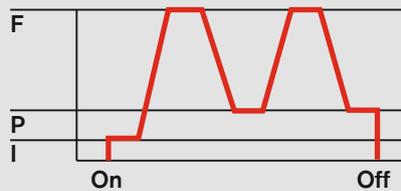
Model designation

Gas and oil-fired operation

Sliding-two-stage regulation

- A two-point signal from a temperature or pressure stat causes stepping motors to adjust capacity between partial load and full load, depending on the heat demand.

Sliding-two-stage

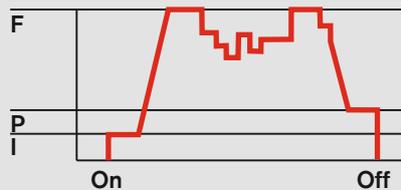


- Modulating operation:
 - W-FM 100 with integral capacity controller
 - W-FM 200
- Alternatively, a regulator can be fitted into the control panel

Modulating regulation

- An electronic PID controller causes stepping motors to make infinitely variable adjustments to capacity, depending on the heat demand.

Modulating

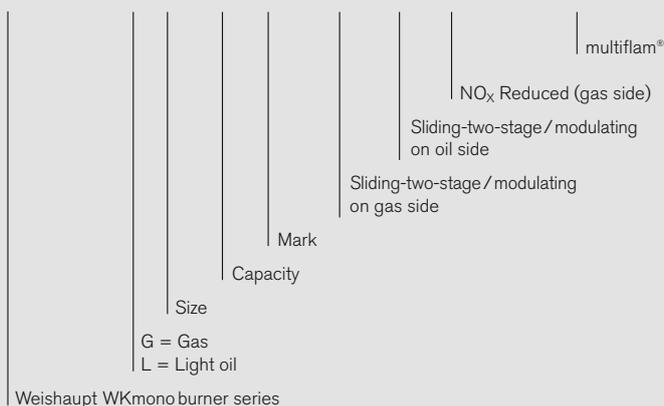


- F = Full load (nominal load)
- P = Partial load (min. load)
- I = Ignition load

Burner version	Gas		Oil	
	sliding-two-stage	modulating	sliding-two-stage	modulating
ZM-NR	●	●	–	–
R	–	–	●	●
ZM-R-NR	●	●	●	●
ZM-3LN	●	●	–	–
R-3LN	–	–	●	●
ZM-R-3LN	●	●	●	●

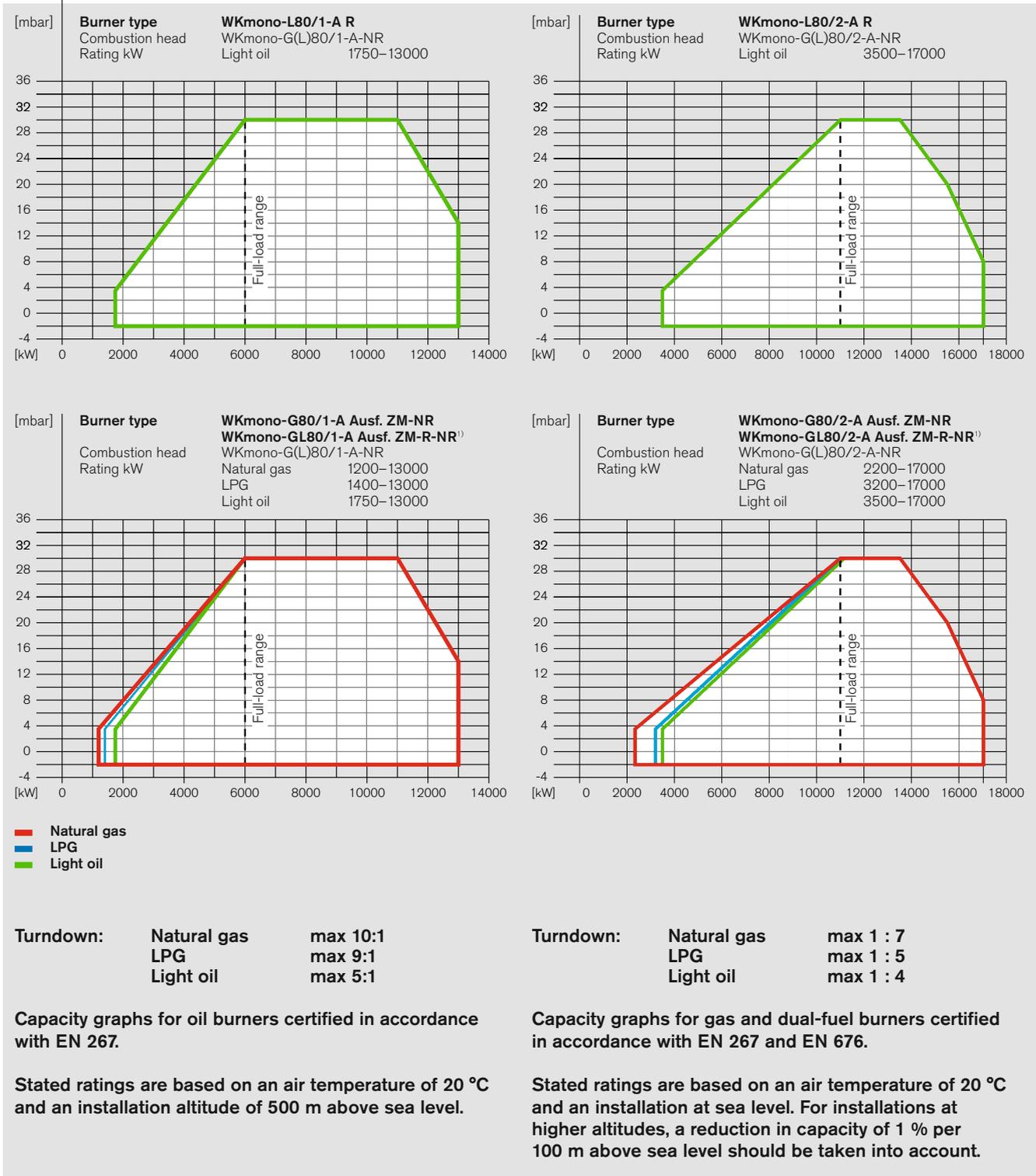
Model designation

WKmono – GL 80 / 1 – A / ZM – R – NR or ...3LN



Burner selection

WKmono 80, versions R, ZM-NR, and ZM-R-NR



Oil burners, version R

Burner type	Version	Order No.
WKmono-L80/1-A	R	281 814 10
WKmono-L80/2-A	R	281 824 10

DIN CERTCO: 5G1056M

Gas burners, version ZM-NR

Burner type	Version	Valve train size	Order No.
WKmono-G80/1-A	ZM-NR	DN 100	287 814 16
		DN 125	287 814 17
		DN 150	287 814 18
WKmono-G80/2-A	ZM-NR	DN 100	287 824 16
		DN 125	287 824 17
		DN 150	287 824 18

CE-PIN: CE-0085 CQ 0417

Dual-fuel burners, version ZM-R-NR

Burner type	Version	Valve train size	Order No.
WKmono-GL80/1-A	ZM-R-NR	DN 100	288 814 16
		DN 125	288 814 17
		DN 150	288 814 18
WKmono-GL80/2-A	ZM-R-NR	DN 100	288 824 16
		DN 125	288 824 17
		DN 150	288 824 18

DIN CERTCO: 5G1056M

CE-PIN: CE-0085 CQ 0417

Fuel systems

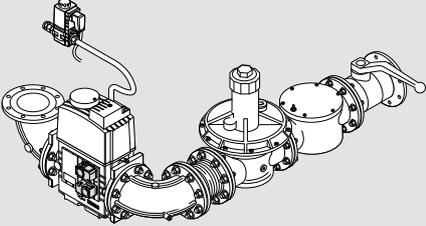
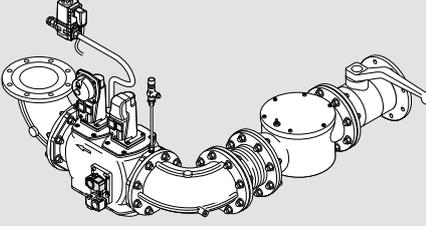
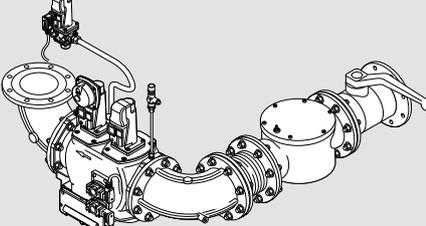
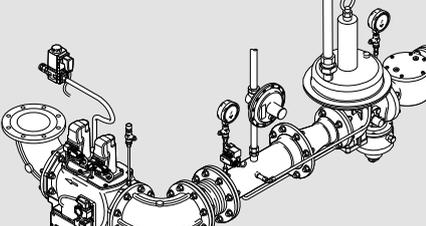
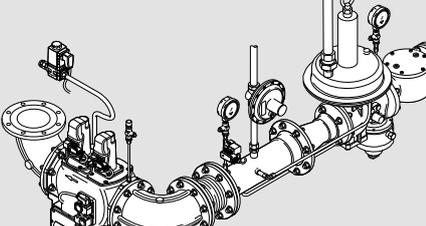
Gas and dual-fuel burners (gas side)

Variant				LP1	LP2	LP3	HP	
Operational limits							Standard	So
Gas flow pressure before the ball valve at max. burner load				≤ 300 mbar	≤ 300 mbar	300–500 mbar	300–4000 / 5000 / 10000 mbar	
Regulated gas pressure, P ₀ mbar				≤ 200	≤ 250	≤ 360	≤ 210	> 210–350
Maximum operating pressure (MOP) on low-pressure side mbar				500	500	700*	500	500
Maximum operating pressure (MOP) on high-pressure side (depending on regulator) mbar				-	-	-	4000 / 5000	4000 / 5000 / 10000
WKmono 80/1	WKmono 80/2	Nominal valve train size	Gas valve assembly type	Low-pressure supply with FRS regulator	Low-pressure supply with SKP25 regulator on VGD valve block	Low-pressure supply with SKP25 regulator on VGD valve block	High-pressure supply with HP regulator	
		DN 100	DMV 5100/12	●			●	●
		DN 125	VGD 40.125	●			●	
				●	●	●*	●	●
		DN 150	VGD 40.150	●			●	
				●	●	●*	●	●

* Requires the use of pressure switches and ignition gas valves rated for ≥ 700 mbar.

Fuel systems

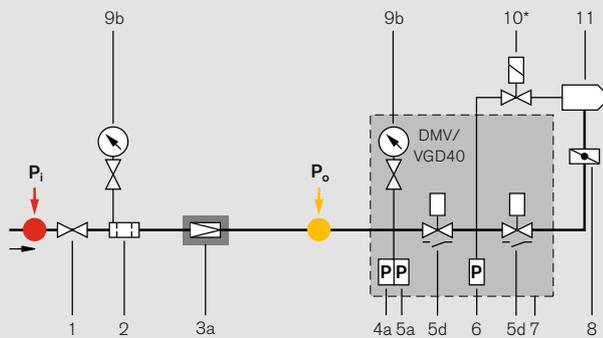
Gas valve train types

<p>LP1</p>	<p>Low-pressure gas supply with FRS regulator Used when:</p> <ul style="list-style-type: none"> – The gas flow pressure before the ball valve at maximum burner load is ≤ 300 mbar. – The maximum operating pressure (MOP) does not exceed 500 mbar. – The regulated gas pressure, P_{or}, incl. combustion chamber resistance, does not exceed 200 mbar (140–200 mbar spring). 	
<p>LP2</p>	<p>Low-pressure gas supply with SKP 25 regulator For VGD valve assemblies. Used when:</p> <ul style="list-style-type: none"> – The gas flow pressure before the ball valve at maximum burner load is ≤ 300 mbar. – The maximum operating pressure (MOP) does not exceed 500 mbar. – The regulated gas pressure, P_{or}, incl. combustion chamber resistance, does not exceed 200 mbar. – Pressure switches and ignition gas valves in LP2 trains can be rated for 500 mbar. 	
<p>LP3</p>	<p>Low-pressure gas supply with SKP 25 regulator For VGD valve assemblies. Used when:</p> <ul style="list-style-type: none"> – The gas flow pressure before the ball valve at maximum burner load is 300–500 mbar. – The maximum operating pressure (MOP) does not exceed 700 mbar. – The regulated gas pressure, P_{or}, incl. combustion chamber resistance, does not exceed 360 mbar. – Pressure switches and ignition gas valves in LP3 trains must be rated for ≥ 700 mbar. The VGD 40.125 and VGD 40.150 valve assemblies are rated as standard for 700 mbar. 	
<p>HP Standard</p>	<p>High-pressure gas supply Used when:</p> <ul style="list-style-type: none"> – The gas flow pressure before the ball valve at maximum burner load is > 300 mbar. – The maximum operating pressure (MOP) does not exceed 4/5 bar, depending on the regulator type. – The regulated gas pressure, P_{or}, incl. combustion chamber resistance, does not exceed 210 mbar (100–210 mbar spring). 	
<p>HP So</p>	<p>High-pressure gas supply So Used when:</p> <ul style="list-style-type: none"> – The gas flow pressure before the ball valve at maximum burner load is > 300 mbar. – The maximum operating pressure (MOP) does not exceed 4/5/10 bar, depending on the regulator type. – The regulated gas pressure, P_{or}, incl. combustion chamber resistance, is 210–350 mbar. 	

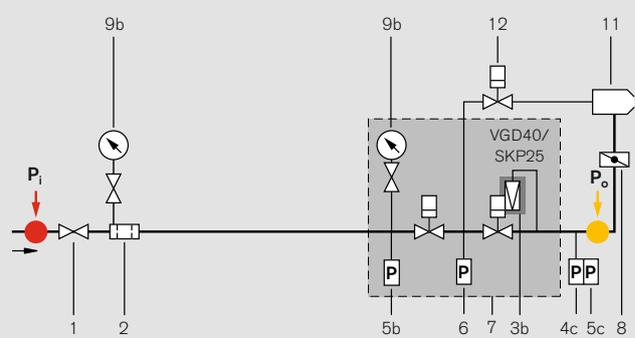
Fuel systems

Gas and dual-fuel burners (gas side)

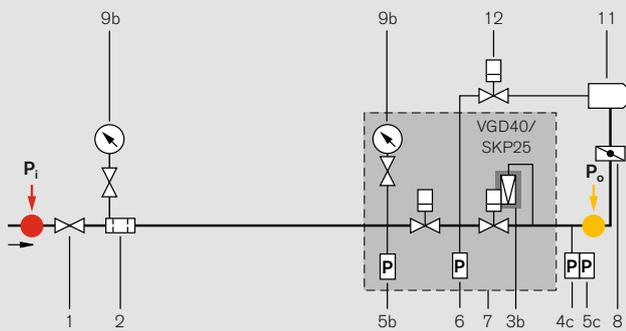
LP1



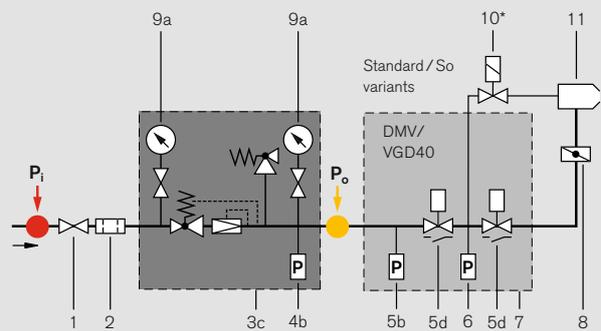
LP2



LP3



HP



Standard variant: Regulated gas pressure ≤ 210 mbar
So variant: Regulated gas pressure 210–350 mbar

* WKmono-G(L)80/1-A ZM-(R)-NR excepted

- 1 Ball valve
- 2 Gas filter
- 3a Low-pressure FRS regulator
- 3b Low-pressure SKP25 regulator
- 3c High-pressure regulator incl. SAV / SBV
- 4a High gas pressure switch on flanged valve trains (mounted on the inlet side of the assembly)
- 4b High gas pressure switch on flanged valve trains (mounted on the outlet side of the assembly)
- 4c High gas pressure switch on flanged valve trains (mounted on the flanged bend)
- 5a Low gas pressure switch (mounted on the inlet side of the assembly)
- 5b Low gas pressure switch (mounted on the inlet side of the assembly)
- 5c Additional low gas pressure switch in conjunction with VGD40 and SKP15 & 25 (mounted on the flanged bend)
- 5d "Open" position indicator switch in conjunction with VGD40 und 2x SKP15
- 6 Valve-proving pressure switch (mounted on the valve assembly)
- 7 Double gas valve assembly
- 8 Gas butterfly valve
- 9a Pressure gauge with push-button valve (standard)
- 9b Pressure gauge with push-button valve (accessory)
- 10 SV-D ignition gas solenoid valve
- 11 Burner
- 12 VGG10 ignition gas valve with SKP15



General actuator/coil



Solenoid coil



Hydraulic actuator



Burner

P_i

Inlet pressure before the ball valve

P_o

Regulated gas pressure



Gas pressure regulator



Gas valve assembly

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.

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.

Compensator

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

Optional thermal shutoff (when required by local regulations)

A separate component with HTB seals fitted before the ball valve on flanged valve trains.

Gas valve train sizing

WKmono-G(L)80, versions ZM-NR & ZM-R-NR

WKmono-G(L)80/1-A, versions ZM-NR and ZM-R-NR

Burner rating kW	Low-pressure supply (LP1) (flow pressure in mbar into shut-off valve)			High-pressure supply (HP) (flow pressure in mbar into gas valve assembly)		
	Nominal valve train diameter			Nominal valve train diameter		
	100	125	150	100	125	150
	Nominal diameter of gas butterfly			Nom. diameter of gas b'fly		
	150	150	150	150	150	150

Natural gas E LHV = 10.35 kWh/Nm ³ ; d = 0.606						
6000	72	57	51	51	46	44
6500	78	61	53	54	48	46
7000	86	66	57	58	51	48
7500	95	72	62	64	55	52
8000	105	79	67	70	60	57
9000	128	96	80	84	72	68
10000	156	116	97	103	88	82
11000	189	140	117	124	106	100
12000	226	168	141	150	128	121
13000	268	200	168	179	154	145

Natural gas LL LHV = 8.83 kWh/Nm ³ ; d = 0.641						
6000	87	66	56	58	50	47
6500	99	75	63	66	56	53
7000	113	84	71	74	63	60
7500	128	95	79	83	71	67
8000	143	106	88	93	79	74
9000	178	131	109	115	98	92
10000	218	159	132	141	119	111
11000	261	191	158	169	143	133
12000	-	226	186	200	169	158
13000	-	264	218	235 So	198	185

LPG* LHV = 25.89 kWh/Nm ³ ; d = 1.555						
6000	54	49	46	44	42	41
6500	57	50	46	45	43	42
7000	59	51	47	46	43	42
7500	61	52	48	47	43	42
8000	64	53	48	48	44	43
9000	69	56	50	50	45	43
10000	79	62	54	55	49	47
11000	95	75	65	67	59	57
12000	111	87	76	78	70	67
13000	128	101	87	91	80	76

So → High-pressure regulator for $p_o \leq 350$ mbar.
 * The LPG charts are based on propane, but may also be used for butane.

The combustion chamber pressure in mbar must be added to the minimum gas pressure determined from the above chart.

For low-pressure supplies, EN 88-compliant governors with safety diaphragms are used.

Gas pressure definition for LP1 low-pressure supplies before the ball valve:

- Maximum operating pressure (MOP): 500 mbar
- Maximum gas flow pressure at maximum burner rating: 300 mbar

For high-pressure supplies, EN 334-compliant high-pressure regulators should be selected from the technical brochure:

- Regulators up to 4 bar, Print No. 830012xx,
- Regulators with safety devices, Print No. 831979xx.

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

Flanged

DN 100	DMV 5100/12
DN 125	VDG 40.125
DN 150	VDG 40.150

Gas valve train sizing

WKmono-G(L)80, versions ZM-NR & ZM-R-NR

WKmono-G(L)80/2-A, versions ZM-NR and ZM-R-NR							WKmono-G(L)80/2-A, versions ZM-NR and ZM-R-NR						
Burner rating kW	Low-pressure supply (LP1) (flow pressure in mbar into shutoff valve)			High-pressure supply (HP) (flow pressure in mbar into gas valve assembly)			Burner rating kW	Low-pressure supply (LP2, LP3) (flow pressure in mbar into shutoff valve)			SKP25 setting press. (Pressure in mbar at the flanged bend)		
	Nominal valve train diameter			Nominal valve train diameter				Nominal valve train diameter					
	100	125	150	100	125	150		125	150				
	Nominal diameter of gas butterfly			Nom. diameter of gas b'fly				Nominal diameter of gas butterfly					
	150	150	150	150	150	150		150	150				
Natural gas E LHV = 10.35 kWh/Nm ³ ; d = 0.606							Natural gas E LHV = 10.35 kWh/Nm ³ ; d = 0.606						
11000	177	129	106	113	95	88	11000	110	98	77			
11500	187	134	109	117	97	90	11500	113	101	77			
12000	197	139	112	121	100	92	12000	117	103	78			
12500	208	145	115	125	102	94	12500	121	106	79			
13000	219	151	119	130	105	96	13000	125	109	79			
13500	230	157	122	135	107	98	13500	129	111	80			
14000	242	163	126	139	110	100	14000	133	114	81			
14500	254	170	130	144	113	102	14500	137	117	81			
15000	267	176	134	149	116	104	15000	141	120	82			
16000	293	190	142	160	122	108	16000	150	126	83			
17000	–	213	158	179	136	120	17000	168	141	92			
Natural gas LL LHV = 8.83 kWh/Nm ³ ; d = 0.641							Natural gas LL LHV = 8.83 kWh/Nm ³ ; d = 0.641						
11000	250	179	146	158	132	122	11000	152	135	105			
11500	264	187	150	163	135	124	11500	157	139	106			
12000	278	194	155	169	138	127	12000	162	142	106			
12500	293	202	159	175	141	129	12500	167	145	107			
13000	–	210	164	181	144	131	13000	172	149	108			
13500	–	219	169	187	148	134	13500	178	153	108			
14000	–	228	174	194	152	136	14000	183	156	109			
14500	–	237	179	201	155	139	14500	189	160	109			
15000	–	246	184	208	159	142	15000	195	164	110			
16000	–	266	195	223 So	167	147	16000	208	173	111			
17000	–	297	217	248 So	186	163	17000	231	192	123			
LPG* LHV = 25.89 kWh/Nm ³ ; d = 1.555							LPG* LHV = 25.89 kWh/Nm ³ ; d = 1.555						
11000	147	127	118	119	112	109	11000	119	115	104			
11500	151	130	119	121	113	110	11500	121	116	105			
12000	156	132	121	123	114	111	12000	123	117	106			
12500	160	135	123	125	116	112	12500	125	119	106			
13000	165	137	124	127	117	113	13000	127	120	107			
13500	170	140	126	130	118	114	13500	129	121	107			
14000	175	143	128	132	120	115	14000	131	123	108			
14500	181	146	130	134	121	117	14500	133	124	108			
15000	186	149	132	136	123	118	15000	135	126	109			
16000	197	155	135	141	126	120	16000	139	129	110			
17000	210	162	140	147	129	123	17000	144	133	111			

So → High-pressure regulator for p₀ ≤ 350 mbar.
 * The LPG charts are based on propane, but may also be used for butane.

The combustion chamber pressure in mbar must be added to the minimum gas pressure determined from the above chart.

For low-pressure supplies, EN 88-compliant governors with safety diaphragms are used.

Gas pressure definition for LP1 and LP2 low-pressure supplies before the ball valve:

- Maximum operating pressure (MOP): 500 mbar
- Maximum gas flow pressure at maximum burner rating: 300 mbar

Gas pressure definition for LP3 low-pressure supplies before the ball valve:

- Maximum operating pressure (MOP): 700 mbar
- Maximum gas flow pressure at maximum burner rating: 500 mbar

For high-pressure supplies, EN 334-compliant high-pressure regulators should be selected from the technical brochure:

- Regulators up to 4 bar, Print No. 830012xx,
- Regulators with safety devices, Print No. 831979xx.

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

Flanged

DN 100	DMV 5100/12
DN 125	VDG 40.125
DN 150	VDG 40.150

Scope of delivery

Description	WKmono-L80 version R	WKmono-G80 version ZM-NR	WKmono-GL80 version ZM-R-NR
Burner housing, housing cover, burner motor, air inlet housing, fan wheel, combustion head, ignition unit, ignition cable, ignition electrodes, combustion manager with control unit, flame sensor, actuators, flange gasket, fixing screws	●	●	●
Digital combustion manager W-FM 100 W-FM 200	● ○	● ○	● ○
Valve proving via the combustion manager	–	●	●
Class-A double gas valve assembly	–	●	●
Gas butterfly valve	–	●	●
Air pressure switch	●	●	●
Low gas pressure switch High gas pressure switch	– –	● ●	● ●
Regulating sleeve in the mixing assembly	●	●	●
Actuators for compound regulation of fuel and air via W-FM: Air damper stepping motor Gas butterfly valve stepping motor Oil regulator stepping motor Mixing assembly stepping motor	● – ● ●	● ● – ●	● ● ● ●
Oil pressure switch in return Oil pressure switch in supply	● ●	– –	● ●
MDK80 safety shutoff device with solenoid nozzle assembly, solenoid and premounted return nozzle, 2 oil solenoid shutoff valves, oil regulator	●	–	●
Oil pump fitted to burner	–	–	–
IP 54 protection	●	●	●

EN 676 stipulates that gas filters and gas pressure regulators form part of the burner supply (see Weishaupt accessories list).

- Standard
- Optional

Special equipment WKmono 80, versions R, ZM-NR, and ZM-R-NR

Burner	WKmono-L80 version R	WKmono-G80 version ZM-NR	WKmono-GL80 version ZM-R-NR
W-FM 100 supplied loose	○	○	○
Integral capacity controller and analogue signal convertor for W-FM 100	○	○	○
W-FM 200 in lieu of W-FM 100, with integral capacity controller, analogue signal convertor, and VSD module (burner mounted)	○	○	○
W-FM 200 in lieu of W-FM 100, with integral capacity controller, analogue signal convertor, and VSD module (supplied loose)	○	○	○
W-FM 200 with extended O ₂ trim / CO control / flue gas recirculation functionality	○	○	○
W-FC 4.0 flame monitoring	○	○	○
W-FC 5.0 flame monitoring	○	○	○
ABE with Chinese-character display	○	○	○
VSD with separate frequency convertor (W-FM 200 required) (See accessories list for frequency convertor)	○	○	○
Pt1000 air temperature sensor for combustion efficiency display with W-FM 200 and O ₂ trim	○	○	○
Solenoid valve for air pressure switch test for continuous-run fan or post-purge	○	○	○
Low-pressure variant 2 (LP2)	-	○	○
Low-pressure variant 3 (LP3)	-	○	○
0–40 bar pressure gauge with ball valve in supply	○	-	○
0–40 bar pressure gauge with ball valve in return	○	-	○
Separate pump station	○	-	○
110 V control voltage	○	○	○
Combustion head extension	by 150 mm	○	○
	by 300 mm	○	○

Please enquire regarding further special equipment, or refer to the price list.

Country-specific executions and special voltages on application.

Technical data

WKmono 80, versions R, ZM-NR, and ZM-R-NR

Fuel-independent			WKmono 80/1-A	WKmono 80/2-A
Burner motor ¹⁾²⁾	Type		AF 225M/2L - 24LS 45K0	AF 225M/2L - 24LS 45K0
Nominal rating	kW		45	45
Nominal current	A		75	75
Motor protection switch ²⁾ or motor prefusing ²⁾	Type (e.g.) A minimum A minimum	Star-delta DOL	NZMN1-M80 100A gG (external) 160A gG (external)	NZMN1-M80 100A gG (external) 160A gG (external)
Speed (50 Hz)	rpm		2955	2955
Combustion manager Prefusing	Type A		W-FM 100 16A B	W-FM 100 16A B
Air damper actuator Mixing assembly actuator	Type Type		SQM48 (20 Nm) SQM48 (20 Nm)	SQM48 (20 Nm) SQM48 (20 Nm)
Oil				
			WKmono-L80/1-A R	WKmono-L80/2-A R
Nominal rating	kW		44.2	47.2
Ignition unit	Type		W-ZG02 (2-pole)	W-ZG02 (2-pole)
Flame monitoring	Type		QRI	QRI
Oil actuator	Type		SQM48 (20 Nm)	SQM48 (20 Nm)
NO _x Class per EN 267	Cat.		2	2
Weight	kg		865	925
Max. torque	kNm		10	10
Oil solenoid valves 110–120 V DN 20 (supply) 20 W 110–120 V DN 20 (return) 20 W	Type Type		5406 NC 5407 NC	5406 NC 5407 NC
Oil press. switch 0–25 bar (supply – 18 bar) 1–10 bar (return, LFO – 5 bar)	Type Type		DSB 158 DSB 146	DSB 158 DSB 146
Gas				
			WKmono-G80/1-A ZM-NR	WKmono-G80/2-A ZM-NR
Nominal rating	kW		44.1	47.2
Ignition unit	Type		W-ZG02 (2-pole)	W-ZG02 (2-pole)
Ignition gas valve Ignition gas valve (LP3)	Type Type		– –	SV-D 507 VGG10 with SKP15
Flame monitoring	Type		ION	ION
Gas actuator	Type		SQM45 (3 Nm)	SQM45 (3 Nm)
NO _x Class per EN 676	Cat.		3	3
Weight (excl. double gas valve assembly and fittings)	kg		835	895
Max. torque	kNm		10	10
Double gas valve assembly weight incl. ignition gas valve and connection pieces	kg		DN 100 approx. 61	DN 125 approx. 51
				DN 150 approx. 70

Dual-fuel		WKmono-GL80/1-A ZM-R-NR	WKmono-GL80/2-A ZM-R-NR
Nominal rating	kW	44.2	47.2
Igniton unit	Type	W-ZG03 (3-pole)	W-ZG02 (2-pole)
Ignition gas valve	Type	–	SV-D 507
Ignition gas valve (LP3)	Type	–	VGG10 mit SKP15
Flame monitoring	Type	QRI	QRI
Actuators	gas	Type	SQM45 (3 Nm)
	oil	Type	SQM48 (20 Nm)
NO _x Class per EN 676/EN 267	Cat.	3/2	3/2
Weight (excl. double gas valve assembly and fittings)	kg	865	925
Max. torque	kNm	10	10
Oil solenoid valves 110–120 V DN 20 (supply) 20 W 110–120 V DN 20 (return) 20 W	Type	5406 NC	5406 NC
	Type	5407 NC	5407 NC
Oil press. switch 0–25 bar (supply – 18 bar) 1–10 bar (return, LFO – 5 bar)	Type	DSB 158	DSB 158
	Type	DSB 146	DSB 146

Notes

¹⁾ The electrical motors are premium-efficiency IE3 motors in accordance with Commission Regulation (EC) No. 640/2009

²⁾ The necessary motor starter and protection must be fitted in a control panel.

Voltages and frequencies:

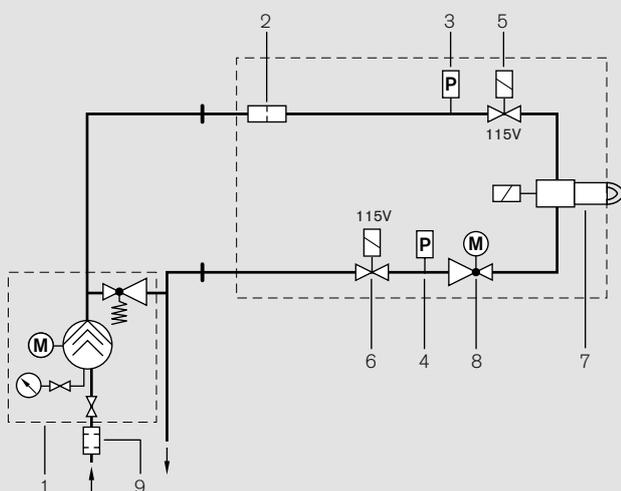
The burners are equipped as standard for three-phase alternating current, 400 V, 3 ~, 50 Hz. Other voltages and frequencies are available on application.

Standard burner motor:

Insulation Class F, IP 55 protection.

Oil-side fuel system

Versions R and ZM-R-NR



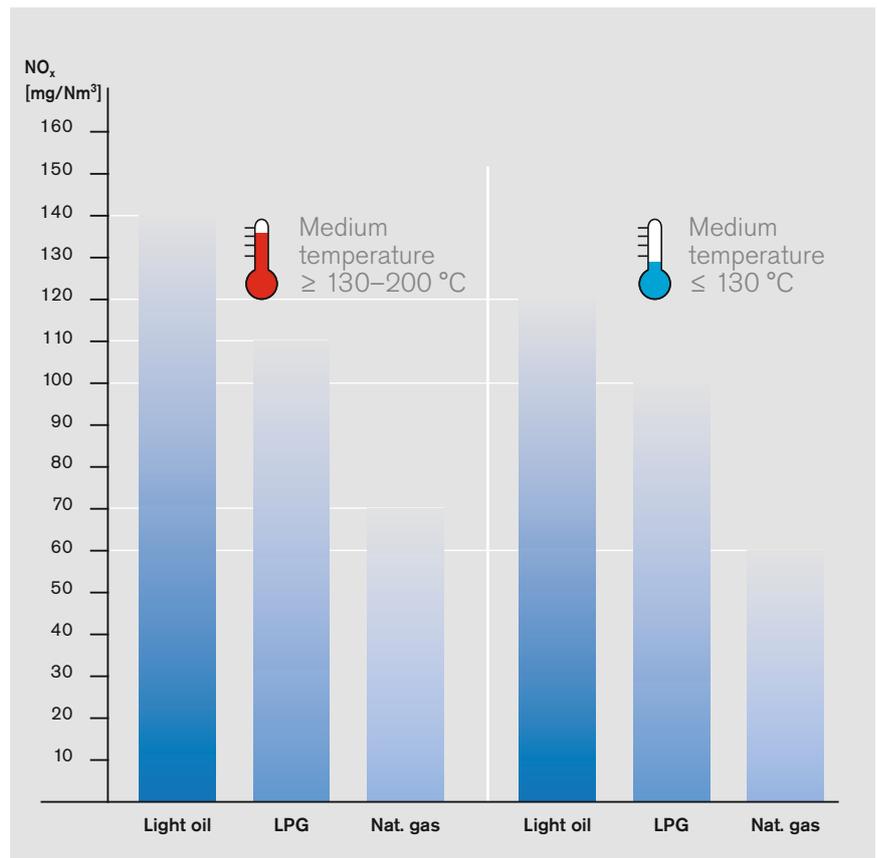
- 1 External pump with pressure maintenance
- 2 Strainer
- 3 Min. oil pressure switch
- 4 Max. oil pressure switch
- 5 Supply solenoid valve (230 V, fitted in direction of flow)
- 6 Return solenoid valve (230 V, fitted against direction of flow)
- 7 Solenoid nozzle assembly
- 8 Oil regulator
- 9 Filter

Emissions reduced by the multiflam[®] principle

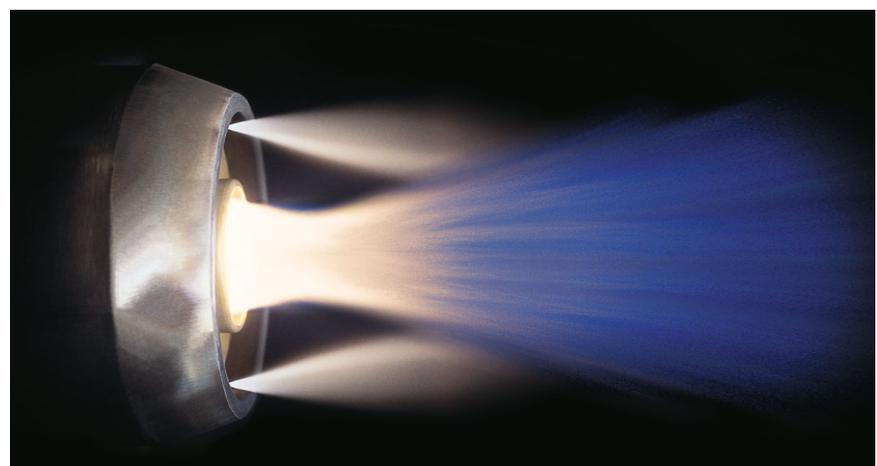
The multiflam[®] principle developed and patented by Weishaupt is an innovative way of reducing NO_x emissions from combustion plant to a minimal level.

At the heart of Weishaupt's multiflam[®] technology lies a special mixing assembly design. Fuel is distributed among several nozzles and combusted in a primary and a secondary flame. Temperature in the flame's core is considerably reduced, resulting in an effective reduction of nitrogen oxides.

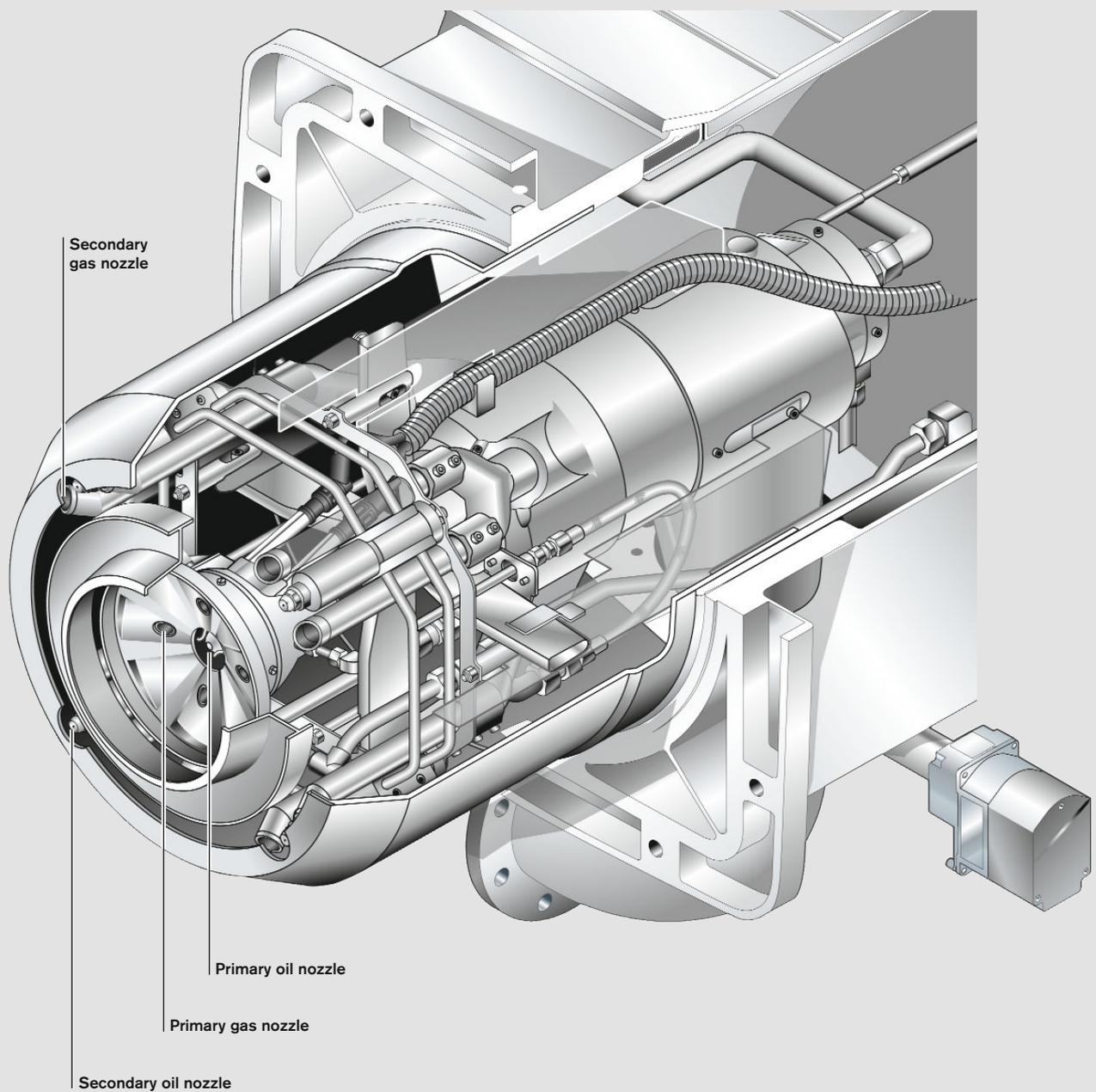
The wide range of ratings across which multiflam[®] burners are now available is equally outstanding. All the way from the WM 10 monarch[®] burner right up to the WK 80 industrial burner, there is now a multiflam[®] burner for outputs ranging from 120 up to 23 000 kW.



Guaranteed emission levels for 3LN-version WKmono 80 burners on three-pass/through-pass boilers, subject to Weishaupt's published constraints



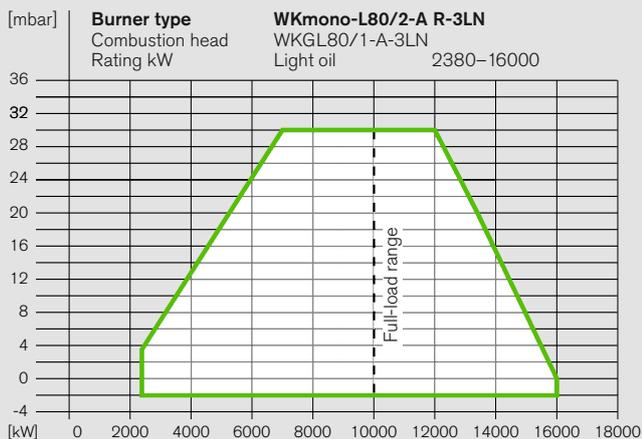
WKmono 80 burners are also available in multiflam[®] execution



The multiflam® mixing assembly of a WKmono 80 burner

Burner selection

WKmono 80, vers. R-3LN, ZM-3LN, & ZM-R-3LN



- Natural gas
- LPG
- Light oil

Turndown:

Natural gas	max 10:1
LPG	max 8:1
Light oil	max 5:1

Capacity graphs for oil burners 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.

Capacity graphs for gas and dual-fuel burners certified in accordance with EN 267 and EN 676.

Stated ratings are based on an air temperature of 20 °C and 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.

Oil burners, version R-3LN (multiflam®)

Burner type	Version	Order No.
WKmono-L80/2-A	R-3LN	281 824 20

DIN CERTCO: 5G1056M

Gas burners, version ZM-3LN (multiflam®)

Burner type	Version	Valve train size	Order No.
WKmono-G80/2-A	ZM-3LN	DN 100	287 824 26
		DN 125	287 824 27
		DN 150	287 824 28

CE-PIN: CE-0085 CQ 0417

Dual-fuel burners, version ZM-R-3LN (multiflam®)

Burner type	Version	Valve train size	Order No.
WKmono-GL80/2-A	ZM-R-3LN	DN 100	288 824 26
		DN 125	288 824 27
		DN 150	288 824 28

DIN CERTCO: 5G1056M

CE-PIN: CE-0085 CQ 0417

Gas valve train sizing

WKmono-G80, version ZM-3LN

WKmono-G80/2-A version ZM-3LN							WKmono-G80/2-A version ZM-3LN						
Burner rating kW	Low-pressure supply (LP1) (flow pressure in mbar into shutoff valve)			High-pressure supply (HP) (flow pressure in mbar into gas valve assembly)			Burner rating kW	Low-pressure supply (LP2, LP3) (flow pressure in mbar into shutoff valve)			SKP25 setting press. (Pressure in mbar at the flanged bend)		
	Nominal valve train diameter			Nominal valve train diameter				Nominal valve train diameter					
	100	125	150	100	125	150		125	150				
	Nominal diameter of gas butterfly			Nom. diameter of gas b'fly				Nominal diameter of gas butterfly					
	150	150	150	150	150	150		150	150				
Natural gas E LHV = 10.35 kWh/Nm ³ ; d = 0.606							Natural gas E LHV = 10.35 kWh/Nm ³ ; d = 0.606						
10000	159	118	99	105	90	85	10000	103	93	75			
11000	178	129	106	113	95	89	11000	110	99	77			
12000	199	141	114	123	101	93	12000	118	105	79			
13000	228	160	128	139	114	105	13000	134	118	88			
14000	260	182	145	158	128	118	14000	151	133	99			
15000	295	204	162	177	144	132	15000	169	148	110			
16000	-	228	179	197	159	145	16000	188	164	121			
17000	-	252	197	218 So	175	159	17000	207	180	131			
Natural gas LL LHV = 8.83 kWh/Nm ³ ; d = 0.641							Natural gas LL LHV = 8.83 kWh/Nm ³ ; d = 0.641						
10000	216	158	130	139	118	110	10000	135	121	96			
11000	244	173	140	152	126	116	11000	146	129	99			
12000	274	190	151	165	134	123	12000	158	138	102			
13000	-	217	171	188	151	138	13000	179	156	114			
14000	-	248	194	214 So	172	156	14000	203	176	129			
15000	-	279	217	241 So	192	174	15000	228	197	143			
16000	-	-	241	268 So	213 So	193	16000	254	218	157			
17000	-	-	266	297 So	234 So	211 So	17000	280	240	171			
LPG* LHV = 25.89 kWh/Nm ³ ; d = 1.555							LPG* LHV = 25.89 kWh/Nm ³ ; d = 1.555						
10000	116	99	91	92	86	84	10000	93	89	80			
11000	126	106	97	98	91	88	11000	98	94	83			
12000	137	113	102	105	96	93	12000	104	99	87			
13000	153	125	112	115	104	101	13000	114	107	94			
14000	174	142	127	131	119	114	14000	129	122	107			
15000	199	162	145	150	136	131	15000	148	139	122			
16000	226	184	164	170	154	148	16000	167	157	138			
17000	251	203	181	188	170	164	17000	185	174	153			

So → High-pressure regulator for $p_0 \leq 350$ mbar.

* The LPG charts are based on propane, but may also be used for butane..

The combustion chamber pressure in mbar must be added to the minimum gas pressure determined from the above chart.

For low-pressure supplies, EN 88-compliant governors with safety diaphragms are used.

Gas pressure definition for LP1 and LP2 low-pressure supplies before the ball valve:

- Maximum operating pressure (MOP): 500 mbar
- Maximum gas flow pressure at maximum burner rating: 300 mbar

Gas pressure definition for LP3 low-pressure supplies before the ball valve:

- Maximum operating pressure (MOP): 700 mbar
- Maximum gas flow pressure at maximum burner rating: 500 mbar

For high-pressure supplies, EN 334-compliant high-pressure regulators should be selected from the technical brochure:

- Regulators up to 4 bar, Print No. 830012xx,
- Regulators with safety devices, Print No. 831979xx.

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

Flanged

DN 100	DMV 5100/12
DN 125	VDG 40.125
DN 150	VDG 40.150

Gas valve train sizing

WKmono-GL80, version ZM-R-3LN

WKmono-GL80/2-A version ZM-R-3LN							WKmono-GL80/2-A version ZM-R-3LN						
Burner rating kW	Low-pressure supply (LP1) (flow pressure in mbar into shut-off valve)			High-pressure supply (HP) (flow pressure in mbar into gas valve assembly)			Burner rating kW	Low-pressure supply (LP2, LP3) (flow pressure in mbar into shutoff valve)			SKP25 setting press. (Pressure in mbar at the flanged bend)		
	Nominal valve train diameter			Nominal valve train diameter				Nominal valve train diameter					
	100	125	150	100	125	150		125	150				
	Nominal diameter of gas butterfly			Nom. diameter of gas b'fly				Nominal diameter of gas butterfly					
	150	150	150	150	150	150		150	150	150			
Natural gas E LHV = 10.35 kWh/Nm ³ ; d = 0.606							Natural gas E LHV = 10.35 kWh/Nm ³ ; d = 0.606						
10000	159	118	99	105	90	85	10000	103	93	75			
11000	178	129	106	113	95	89	11000	110	99	77			
12000	199	141	114	123	101	93	12000	118	105	79			
13000	228	160	128	139	114	105	13000	134	118	88			
14000	260	182	145	158	128	118	14000	151	133	99			
15000	295	204	162	177	144	132	15000	169	148	110			
16000	–	228	179	197	159	145	16000	188	164	121			
Natural gas LL LHV = 8.83 kWh/Nm ³ ; d = 0.641							Natural gas LL LHV = 8.83 kWh/Nm ³ ; d = 0.641						
10000	216	158	130	139	118	110	10000	135	121	96			
11000	244	173	140	152	126	116	11000	146	129	99			
12000	274	190	151	165	134	123	12000	158	138	102			
13000	–	217	171	188	151	138	13000	179	156	114			
14000	–	248	194	214 So	172	156	14000	203	176	129			
15000	–	279	217	241 So	192	174	15000	228	197	143			
16000	–	–	241	268 So	213 So	193	16000	254	218	157			
LPG* LHV = 25.89 kWh/Nm ³ ; d = 1.555							LPG* LHV = 25.89 kWh/Nm ³ ; d = 1.555						
10000	116	99	91	92	86	84	10000	93	89	80			
11000	126	106	97	98	91	88	11000	98	94	83			
12000	137	113	102	105	96	93	12000	104	99	87			
13000	153	125	112	115	104	101	13000	114	107	94			
14000	174	142	127	131	119	114	14000	129	122	107			
15000	199	162	145	150	136	131	15000	148	139	122			
16000	226	184	164	170	154	148	16000	167	157	138			

So → High-pressure regulator for p₀ ≤ 350 mbar.

* The LPG charts are based on propane, but may also be used for butane.

The combustion chamber pressure in mbar must be added to the minimum gas pressure determined from the above chart.

For low-pressure supplies, EN 88-compliant governors with safety diaphragms are used.

Gas pressure definition for LP1 and LP2 low-pressure supplies before the ball valve:

- Maximum operating pressure (MOP): 500 mbar
- Maximum gas flow pressure at maximum burner rating: 300 mbar

Gas pressure definition for LP3 low-pressure supplies before the ball valve:

- Maximum operating pressure (MOP): 700 mbar
- Maximum gas flow pressure at maximum burner rating: 500 mbar

For high-pressure supplies, EN 334-compliant high-pressure regulators should be selected from the technical brochure:

- Regulators up to 4 bar, Print No. 830012xx,
- Regulators with safety devices, Print No. 831979xx.

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

Flanged

DN 100	DMV 5100/12
DN 125	VDG 40.125
DN 150	VDG 40.150

Scope of delivery

Description	WKmono-L80 version R-3LN	WKmono-G80 version ZM-3LN	WKmono-GL80 version ZM-R-3LN
Burner housing, housing cover, burner motor, air inlet housing, fan wheel, combustion head, ignition unit, ignition cable, ignition electrodes, combustion manager with control unit, flame sensor, actuators, flange gasket, fixing screws	●	●	●
Digital combustion manager W-FM 100 W-FM 200	● ○	● ○	● ○
Valve proving via the combustion manager	–	●	●
Class-A double gas valve assembly	–	●	●
Gas butterfly valve	–	●	●
Air pressure switch	●	●	●
Low gas pressure switch High gas pressure switch	– –	● ●	● ●
Modulating mixing assembly	●	●	●
Actuators for compound regulation of fuel and air via W-FM: Air damper stepping motor Gas butterfly valve stepping motor Oil regulator stepping motor Mixing assembly stepping motor	● – ● ●	● ● – ●	● ● ● ●
Oil pressure switch in return Oil pressure switch in supply	● ●	– –	● ●
Supply and return with 2 oil solenoid valves, oil regulator, nozzle head, premounted nozzles	●	–	●
Oil pump fitted to burner	–	–	–
IP 54 protection	●	●	●

EN 676 stipulates that gas filters and gas pressure regulators form part of the burner supply (see Weishaupt accessories list).

- Standard
- Optional

Special equipment WKmono 80, vers. R-3LN, ZM-3LN, & ZM-R-3LN

Burner	WKmono-L80 version R-3LN	WKmono-G80 version ZM-3LN	WKmono-GL80 version ZM-R-3LN
W-FM 100 supplied loose	○	○	○
Integral capacity controller and analogue signal convertor for W-FM 100	○	○	○
W-FM 200 in lieu of W-FM 100, with integral capacity controller, analogue signal convertor, and VSD module (burner mounted)	○	○	○
W-FM 200 in lieu of W-FM 100, with integral capacity controller, analogue signal convertor, and VSD module (supplied loose)	○	○	○
W-FM 200 with extended O ₂ trim / CO control / flue gas recirculation functionality	○	○	○
Flue gas recirculation (requires W-FM 200 with extended functionality)	–	○	○
W-FC 4.0 flame monitoring	○	○	○
W-FC 5.0 flame monitoring	○	○	○
W-FC 6.0 flame monitoring	–	○	○
ABE with Chinese-character display	○	○	○
VSD with separate frequency convertor (W-FM 200 required) (See accessories list for frequency convertor)	○	○	○
Pt1000 air temperature sensor for combustion efficiency display with W-FM 200 and O ₂ trim	○	○	○
Solenoid valve for air pressure switch test for continuous-run fan or post-purge	○	○	○
Low-pressure variant 2 (LP2)	–	○	○
Low-pressure variant 3 (LP3)	–	○	○
0–40 bar pressure gauge with ball valve in supply	○	–	○
0–40 bar pressure gauge with ball valve in return	○	–	○
Separate pump station	○	–	○
110 V control voltage	○	○	○
Combustion head extension			
	by 150 mm	○	○
	by 300 mm	○	○

Please enquire regarding further special equipment, or refer to the price list.

Country-specific executions and special voltages on application.

Technical data

WKmono 80, vers. R-3LN, ZM-3LN, & ZM-R-3LN

Fuel-independent		WKmono 80/2-A		
Burner motor 400V, 3~, 50 Hz ¹⁾²⁾	Type	AF 225M/2L - 24LS 45K0		
Nominal rating	kW	45		
Nominal current	A	75		
Motor protection switch ²⁾ or motor prefusing ²⁾	Star-delta DOL	Type (e.g.) A minimum A minimum	NZMN1-M80 100A gG (external) 160A gG (external)	
Speed (50 Hz)	rpm	2955		
Combustion manager Prefusing	Type A	W-FM 100 16A B		
Air damper actuator Mixing assembly actuator	Type Type	SQM48 (20 Nm) SQM48 (35 Nm)		
Oil		WKmono-L80/2-A R-3LN		
Burner motor	kW	46.2		
Ignition unit	Type	W-ZG02 (2-pole)		
Flame monitoring	Type	QRA 73		
Oil actuator	Type	SQM48 (20 Nm)		
NO _x Class per EN 267	Cat.	3		
Weight	kg	925		
Max. torque	kNm	10		
Oil solenoid valves 110–120 V DN 20 (supply) 20 W 110–120 V DN 20 (return) 20 W	Type Type	5406 NC 5407 NC		
Oil press. switch 0–25 bar (supply – 18 bar) 1–10 bar (return, LFO – 5 bar)	Type Type	DSB 158 DSB 146		
Gas		WKmono-G80/2-A ZM-3LN		
Burner motor	kW	47.1		
Ignition unit	Type	W-ZG02 (2-pole)		
Ignition gas valve	Type	SV-D 507		
Ignition gas valve (LP3)	Type	VGG10 with SKP15		
Flame monitoring	Type	ION		
Gas actuator	Type	SQM45 (3 Nm)		
NO _x Class per EN 676	Cat.	3		
Weight (excl. double gas valve assembly and fittings)	kg	895		
Max. torque	kNm	10		
Double gas valve assembly weight incl. ignition gas valve and connection pieces	kg	DN 100 approx. 61	DN 125 approx. 51	DN 150 approx. 70

Dual-fuel		WKmono-GL80/2-A ZM-R-3LN
Nominal rating	kW	46.2
Ignition unit	Type	W-ZG02 (2-pole)
Ignition gas valve	Type	SV-D 507
Ignition gas valve (LP3)	Type	VGG10 mit SKP15
Flame monitoring	Type	ORA 73
Actuators	gas oil	Type Type
		SQM45 (3 Nm) SQM48 (20 Nm)
NO _x Class per EN 676 / EN 267	Cat.	3/3
Weight (excl. double gas valve assembly and fittings)	kg	925
Max. torque	kNm	10
Oil solenoid valves 110–120 V DN 20 (supply) 20 W	Type	5406 NC
110–120 V DN 20 (return) 20 W	Type	5407 NC
Oil press. switch 0–25 bar (supply – 18 bar)	Type	DSB 158
1–10 bar (return, LFO – 5 bar)	Type	DSB 146

Notes

¹⁾ The electrical motors are premium-efficiency IE3 motors in accordance with Commission Regulation (EC) No. 640/2009

²⁾ The necessary motor starter and protection must be fitted in a control panel.

Voltages and frequencies:

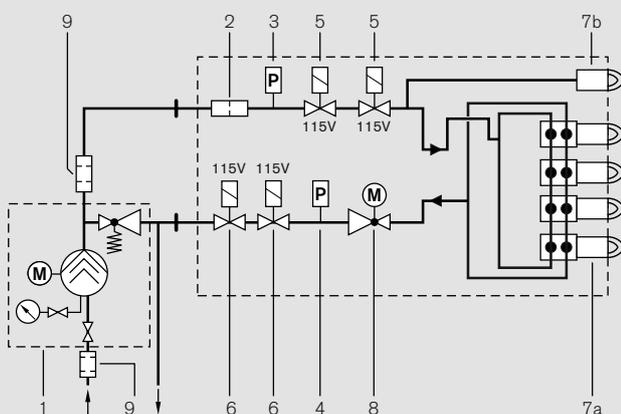
The burners are equipped as standard for three-phase alternating current, 400 V, 3 ~, 50 Hz. Other voltages and frequencies are available on application.

Standard burner motor:

Insulation Class F, IP 55 protection.

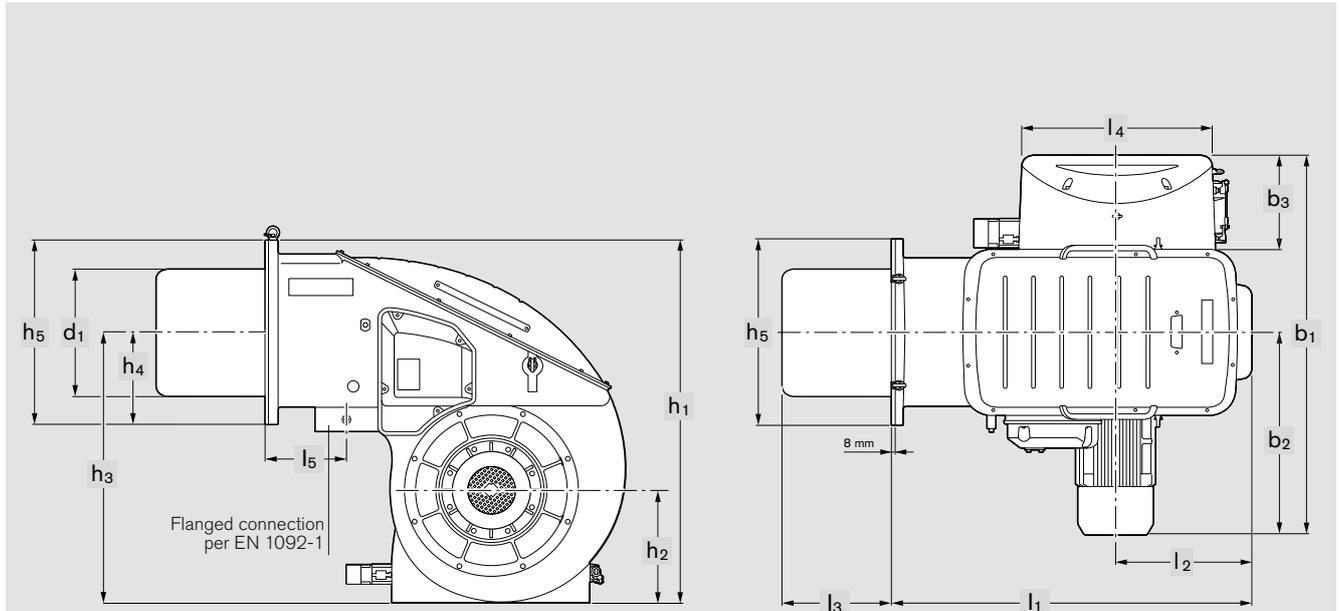
Oil-side fuel system

Versions R-3LN and ZM-R-3LN



- 1 External pump with pressure maintenance
- 2 Strainer
- 3 Min. oil pressure switch
- 4 Max. oil pressure switch
- 5 Supply solenoid valve (230 V, fitted in direction of flow)
- 6 Return solenoid valve (230 V, fitted against direction of flow)
- 7a Hydraulic nozzle head with secondary nozzles
- 7b Nozzle assembly with primary nozzle
- 8 Oil regulator
- 9 Filter

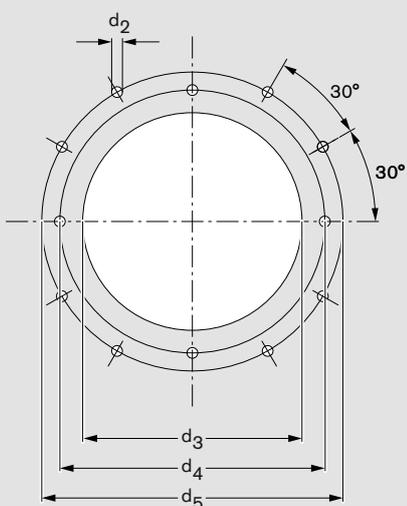
Dimensions



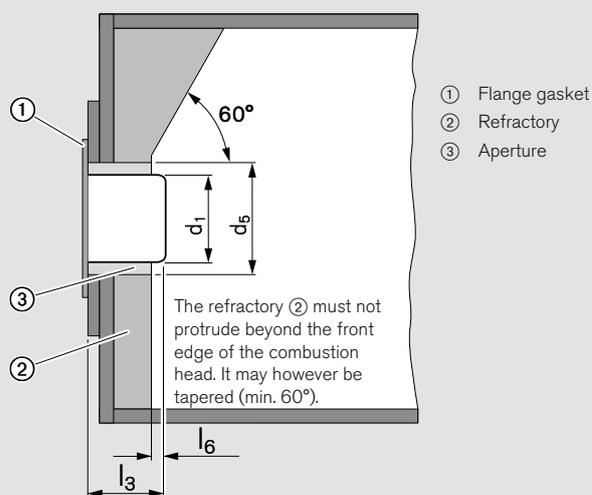
Burner type	Dimensions in mm												
	l ₁	l ₂	l ₃	l ₄	l ₅	l ₆	b ₁	b ₂	b ₃	h ₁	h ₂	h ₃	h ₄
WKmono-L80/1-A R	1635	615	425	900	368	≥ 0	1732	925	543	1661	515	1236	456
WKmono-L80/2-A R	1635	615	500	900	368	≥ 0	1732	925	543	1661	515	1236	456
WKmono-G80/1-A ZM-NR	1635	615	425	900	368	≥ 0	1732	925	543	1661	515	1236	456
WKmono-G80/2-A ZM-NR	1635	615	500	900	368	≥ 0	1732	925	543	1661	515	1236	456
WKmono-GL80/1-A ZM-R-NR	1635	615	425	900	368	≥ 0	1732	925	543	1661	515	1236	456
WKmono-GL80/2-A ZM-R-NR	1635	615	500	900	368	≥ 0	1732	925	543	1661	515	1236	456
WKmono-L80/2-A R-3LN	1635	615	510	900	368	≥ 70	1732	925	543	1661	515	1236	456
WKmono-G80/2-A ZM-3LN	1635	615	510	900	368	≥ 70	1732	925	543	1661	515	1236	456
WKmono-GL80/2-A ZM-R-3LN	1635	615	510	900	368	≥ 70	1732	925	543	1661	515	1236	456

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

Mounting-plate drilling dimensions



Heat exchanger preparation



Burner type	Dimensions in mm						Nominal diameter of gas butterfly
	h_5	d_1	d_2	d_3	d_4	d_5	
WKmono-L80/1-A R	850	485	M16	530	770	875	–
WKmono-L80/2-A R	850	590	M16	640	770	875	–
WKmono-G80/1-A ZM-NR	850	485	M16	530	770	875	DN 150
WKmono-G80/2-A ZM-NR	850	590	M16	640	770	875	DN 150
WKmono-GL80/1-A ZM-R-NR	850	485	M16	530	770	875	DN 150
WKmono-GL80/2-A ZM-R-NR	850	590	M16	640	770	875	DN 150
WKmono-L80/2-A R-3LN	850	540	M16	640	770	875	–
WKmono-G80/2-A ZM-3LN	850	540	M16	640	770	875	DN 150
WKmono-GL80/2-A ZM-R-3LN	850	540	M16	640	770	875	DN 150

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

Weishaupt Headquarters Schwendi, southern Germany



Administration, burner production, control panel construction and the R&D Centre at Weishaupt's main plant in Schwendi



The Weishaupt Research & Development Centre



WKmono 80 undergoing trials



Burners rated up to 32 MW are tested on the world's largest test firing chamber in the R&D Centre

