

– weishaupt –

product

Information on oil, gas and dual fuel burners



WM 20 oil, gas and dual fuel version

Weishaupt monarch® WM20 burners • compact and powerful

Advanced technology starts from tradition

The new monarch[®] burner



The Monarch[®] Trademark has represented performance and quality in burner industry for over 50 years

For over five decades, Weishaupt monarch[®] series burners have been used at various heating and industrial process applications. Over this period of time, they have built an excellent reputation for Weishaupt.

With the new monarch[®] WM burner this success story is now continued. Ultra modern technology in conjunction with a compact design allows this high performance burner to be universally utilized in various applications.

Digital.

Digital combustion management system ensures economical and safe burner operation. The operation is simple.

Compact.

The streamlined shape of the burner casing and the specially designed air ducting make it possible to achieve high capacity with compact size.

Quiet.

Thanks to the newly designed blower unit, the new Monarch burners operate with lower sound levels.



Digital

Digital combustion management means optimum combustion results, always repeatable operating points and easy handling.

Weishaupt WM 20 oil, gas and dual fuel burners are equipped with electronic fuel air ratio controller and digital combustion manager as standard. Modern heating applications require precise and always repeatable correct mixture of fuel and air. Only this way, optimum combustion values can be guaranteed over extended periods of time.

Simple operation

The programming of burner function is performed via the Display and Control unit. The unit is connected to the combustion manager via a BUS system. This way, adjustment of the burner is user friendly.

Flexible communication possibilities

The integrated interface makes it possible to receive and send all required information and control commands from and to the BMS system. If required, a modem can be installed so that remote monitoring and remote diagnostic function can be activated.

Communication with remote control system or with BMS system

The system supports several communication protocols for connecting to BMS system if data has to be exchanged between burners and other heating systems with PLC devices.

For control and management functions, Weishaupt offers ProGraf NT - a software product that provides a real time solution to meet all requirements.

Advantages of new technology

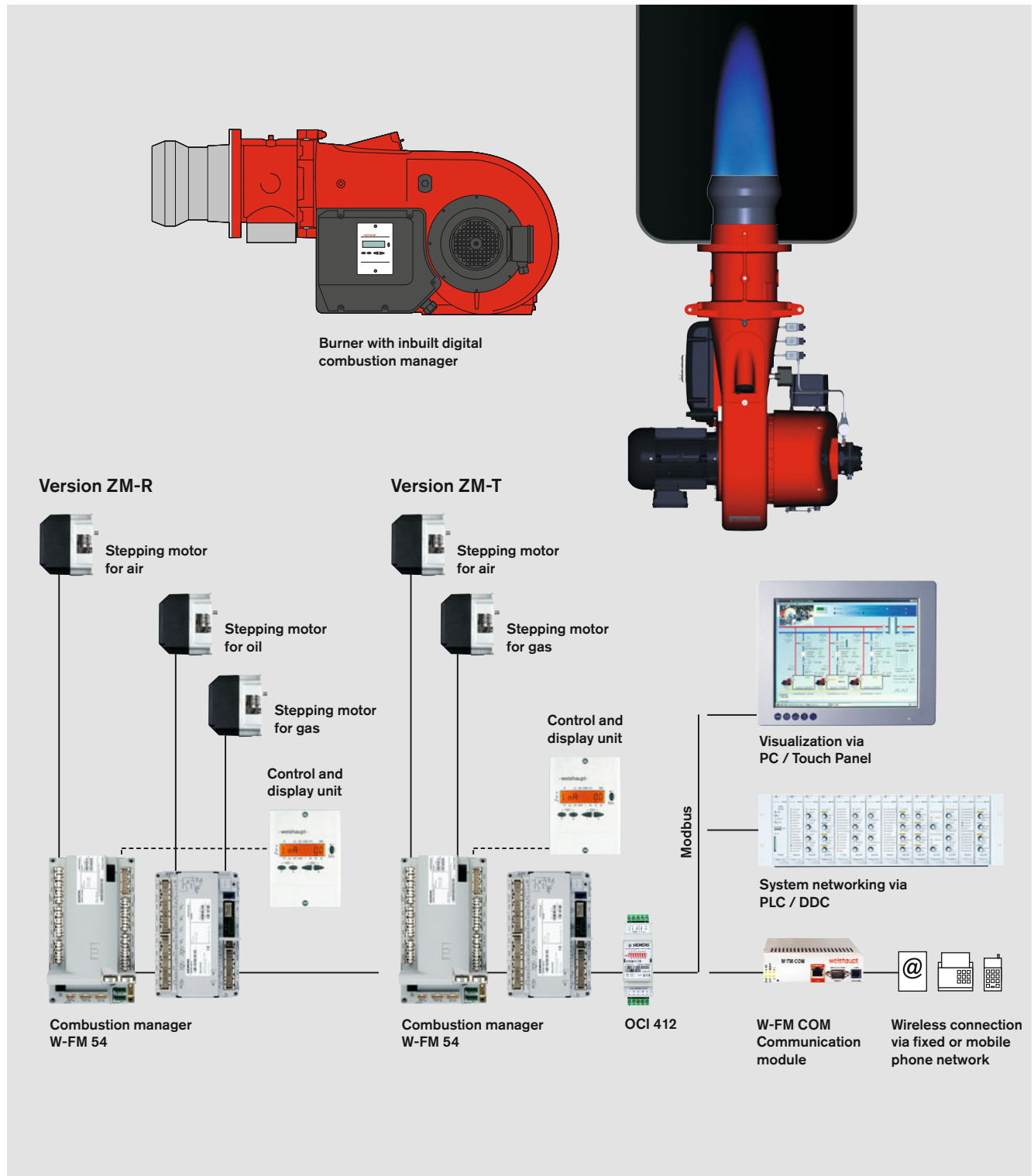
Digital combustion management makes burner operation user friendly and safe. The most important benefits are:

- No additional burner controls are required since this function is already taken care by the combustion manager. Fuses and eventually mains disconnect switch are the only additional items required.
- Less installation work means less errors: the burners are tested as a complete unit at the factory.
- Commissioning and service work take less time. The initial presetting of the burner is carried out at the factory. On site, only the site specific operating points have to be adjusted.

System overview Digital Combustion Management	W-FM50	W-FM54	W-FM 100	W-FM 200
Combustion manager for intermittent operation	●	●	●	●
Combustion manager for continuous operation	● ²⁾		●	●
Flame sensor for intermittent operation	ION/QRA2/QRB	QRA2	ION/QRI/QRB	ION/QRI/QRB
Flame sensor for continuous operation	ION		ION/QRI/QRA73	ION/QRI/QRA73
Number of actuator (max.)	2 pcs	3 pcs	4 pcs	6 pcs
Actuator with stepping motor	●	●	●	●
Compatible with Variable Speed Drive operation	●	●		●
O ₂ -Trim (optional)				●
Single fuel operation	●		●	●
Dual fuel operation		●	●	●
Valve proving system for gas valves	●	●	●	●
Integrated self tuning PID-Modulating controller for Temperature or Pressure			Optional	●
Removable ABE control unit (max. distance)	65 ft (20 m)	65 ft (20 m)	325 ft (100 m)	325 ft (100 m)
Fuel meter interface	● ¹⁾	● ¹⁾		●
Combustion efficiency display (w/ optional sensor)				●
eBUS / MOD BUS interface	●	●	●	●
PC interface	●	●	●	●

¹⁾ Not in conjunction with VFD operation

²⁾ Only in conjunction with ionization electrode (flame rod)



Connection schematic with W-FM 54

Compact and Quiet

The newly developed Weishaupt monarch® burner is compact, efficient and quiet. It is the continuation of the 50 years success history of the legendary monarch® series.

Advanced blower fan technology

Right from early development phase of this new burner generation, future oriented blower fan technology has been utilized to achieve a compact, streamlined design and low operating noise.

Innovative air damper control

The newly developed air damper control provides a high degree of linearity over the entire operating range.

Reduced noise level

Right from the earliest developmental stage of this new burner generation, particular emphasis was placed on low operational noise level.

Quick commissioning, easy maintenance

All WM 20 burners are shipped out with an adjustable mixing head. Final adjustment is to be performed via commissioning program in the combustion manager.

Despite its compact design all components such as oil nozzles, mixing head, air damper and combustion manager are easily accessible. Therefore maintenance and service work can be performed easily and quickly. The standard hinged flange allows ideal service position for the burner.

Matching to various combustion chamber geometries can be performed directly on the burner. The flame and the ignition process can be observed via the integrated viewing port.

Flexible control capability

WM 20 burners are available with the following control options:

- Oil: 3-stage (T)
modulating (R)
- Gas: Sliding two stage or
modulating (ZM)

This allows flexible control possibilities, which make the burner universally adaptable to various applications. Both versions result in a smooth, trouble free start and reliable operation.

Various versions are available to meet different emission and operation requirements:

ZM version

Standard version for gas and dual fuel burners.

LN (LowNOx) version

Low NOx version of WM gas burners. The low NOx emission is achieved by increased recirculation of combustion gases.

3LN multiflam® version

Low NOx - Oil/ Gas/ Dual fuel burner equipped with multiflam mixing head for the most stringent emission requirements. The low NOx emission is achieved by fuel distribution principle.

Compliance to certain emission requirement is also dependant on combustion chamber geometry, volume loading and design of the combustion system.

Suitable fuels

Natural gas
Propane
Light Oil #2 according to ASTM D396

Different type of fuel requires written confirmation from Weishaupt.

Applications

Weishaupt WM 20 oil, gas and dual fuel burners are suitable to be used for the following:

- Installation on heat exchanger
- Hot water boiler
- Steam boiler and high pressure hot water boiler
- Intermittent and continuous operation
- Hot air generator

The combustion air must be free from any aggressive substances (Halogen, Chloride, Fluoride etc) and contamination (dust, building materials, vapours etc). For many cases an external air ducting to the burner is recommended as an option.

Permissible ambient conditions:

- Ambient temperature
-10 to +40°C (14 to 104F)
-15 to +40°C (5 to 104F)
- Air humidity: max. 80% relative humidity, no condensation
- Suitable only for indoor operation
- For installation in unheated rooms under some circumstances special solutions are required (contact Weishaupt)

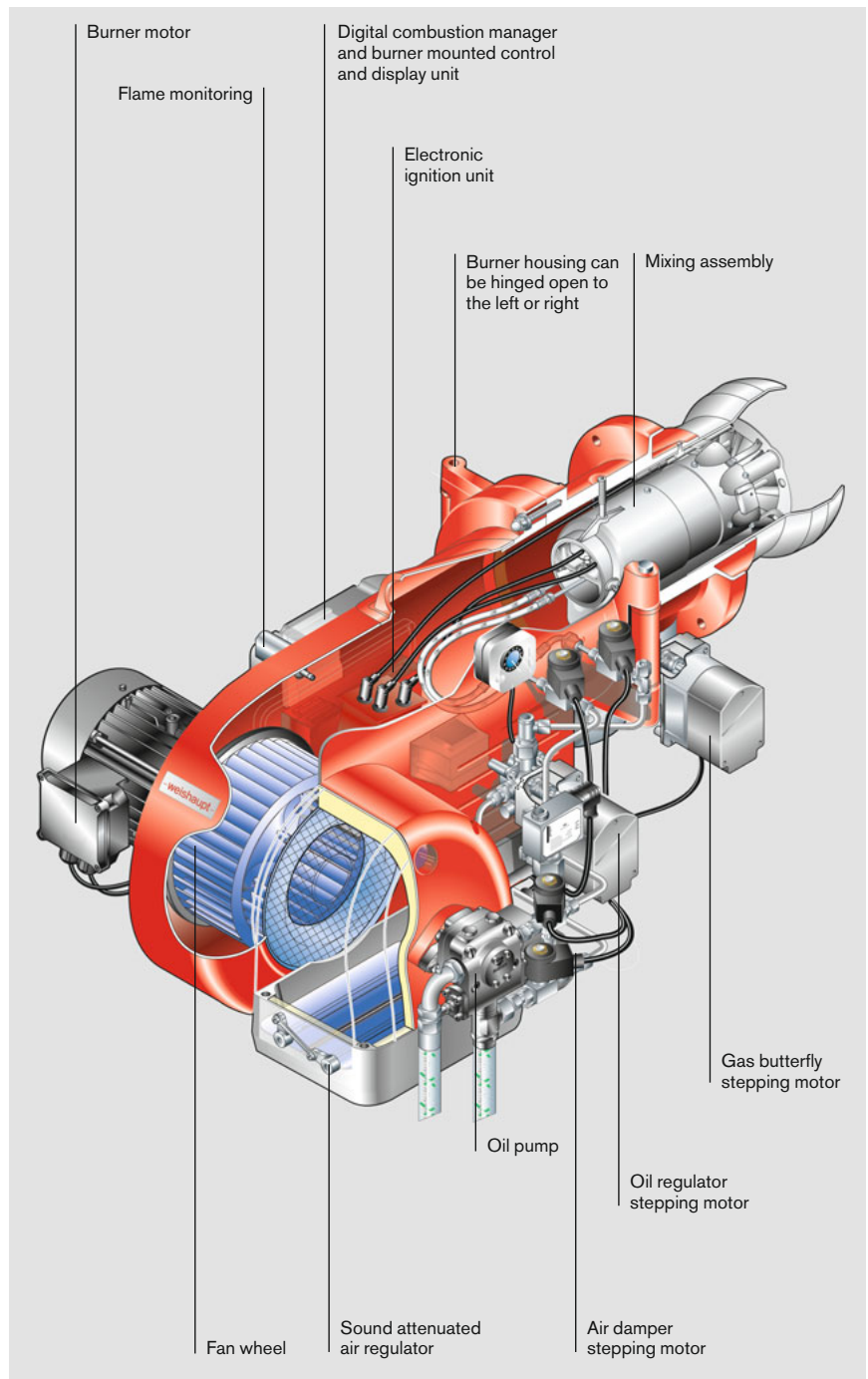
Any discrepancy from the above described applications requires written confirmation from Weishaupt Corporation. The maintenance interval could be shortened according to conditions where the burners are installed.

Approvals

The burner is in compliance with most European and North American applicable standards.

The most important advantages at a glance:

- Digital combustion management with electronic fuel air ratio controller
- Quiet operation due to air inlet equipped with sound absorbing material as standard
- High performance blower due to specially designed blower geometry and air damper control system
- All WM-20 burners are equipped with adjustable flame tube to match required firing rate
- Protection class IP 54 as standard
- Easy access to all components, such as: mixing head, air damper and combustion manager
- Safe operation with sliding two stage/ modulating operation as standard depending on type of modulating controller
- Computer aided function test of each individual burner in factory
- Excellent price to performance ratio
- Worldwide service network



WM-GL20 version ZM-R

Operating modes

Order numbers

Operating modes with oil

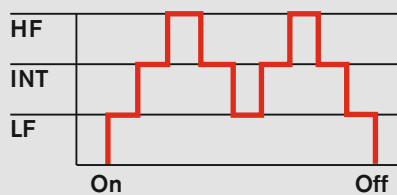
3 stage (T) operation

- Oil release during start by opening the solenoid valve 1 and safety solenoid valve
- Highfire is achieved by opening solenoid valves 2 and 3
- Firing rate is controlled by opening and closing solenoid valves 2 and 3

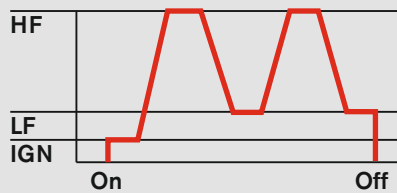
Modulating (R) operation

- By opening the solenoid valve, oil amount required for ignition is released
- A digital stepping motor regulates the oil regulator up to full capacity
- Burner firing rate between low and highfire is controlled by opening and closing oil regulator
- Integrated or external modulating controller can be used as firing rate controller.

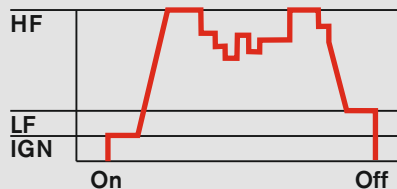
3-stage



sliding stage



modulating



Operating modes with gas

Sliding-stage or modulating (ZM) operation

- Burner capacity between low and highfire depending on heat requirement is controlled by stepping motor
 - Anywhere between both operating points the burner can be operated. There are no sudden changes of fuel flow
 - Option for combustion manager:
 - W-FM 50 (single fuel application) with additional modulating controller
 - W-FM 54 (dual fuel application) with additional modulating controller
 - W-FM 100 (single/ dual fuel) with integrated modulating controller
 - W-FM 200 (single/ dual fuel)
- Alternatively an external modulating controller can also be used for that purpose.

HF = Highfire
 INT = Intermediary fire
 LF = Lowfire
 IGN = Ignition

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

Nomenclature

WM - GL 20 / 3 -A / ZM - T
 ZM - R

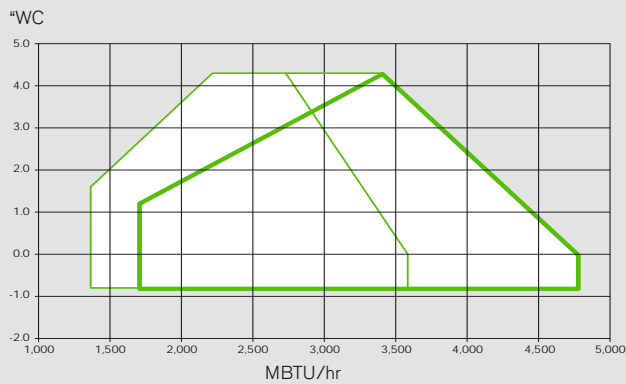
Size Capacity Revision Version
 T = 3-stage
 R = sliding stage or modulating

G = Gas
 L = #2 Oil

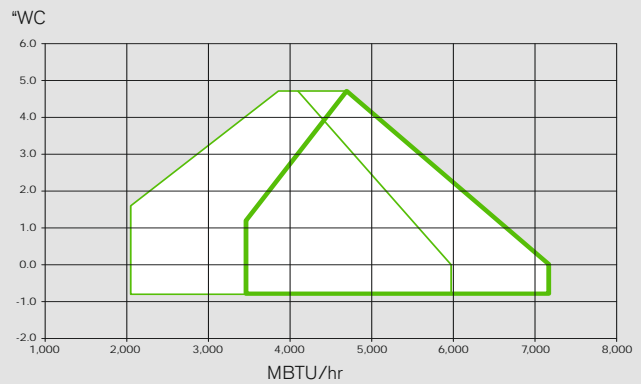
Weishaupt monarch® burner series

Burner selection WM-L 20 Oil burners version T and R

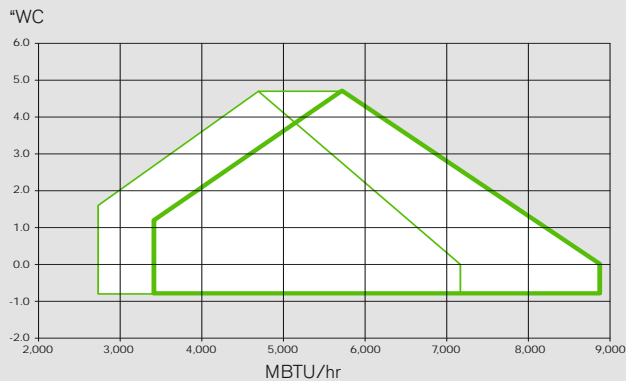
Burner model WM-L20/1-A/ T WM-L20/1-A/ R
Combustion head WM-L20/1, 165x40 (flat)
Capacity MBTU/h #2 Oil 1,365 – 4,750



Burner model WM-L20/2-A/ T WM-L20/2-A/ R
Combustion head WM-L20/2, 165x50 (flat)
Capacity MBTU/h #2 Oil 2,050 – 7,165



Burner model WM-L20/3-A/ T WM-L20/3-A/ R
Combustion head WM-L20/3, 165x50 (flat)
Capacity MBTU/h #2 Oil 2,730 – 8,875



#2 Oil wih flame tube
 close
 open

The firing rates are based on an installation altitude of **1,640 ft (500 m)**.
 The capacity graphs are based on a fuel calorific value of **140,000 BTU/USG**.

Voltagages and frequencies:

The burners are equipped with three phase motor in 208 - 600 V, 60 Hz as standard. Different voltage and frequency are available upon request.

Standard burner motor:

Insulation class F, protection IP 54.

Burner order numbers

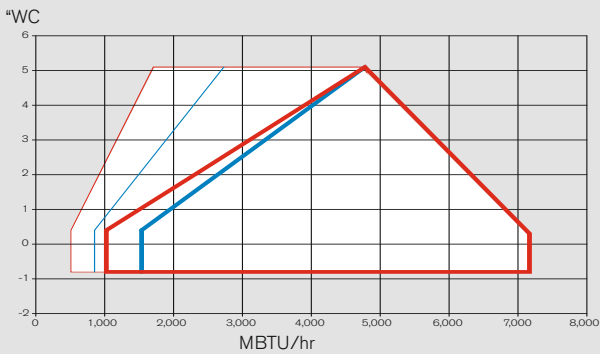
Burner model 3 stage	Order No.
WM-L20/1-A/ T	211 210 10
WM-L20/2-A/ T	211 210 20
WM-L20/3-A/ T	211 210 30

Burner model sliding 2 stage/ modulating	Order No.
WM-L20/1-A/ R	215 210 10
WM-L20/2-A/ R	215 210 20
WM-L20/3-A/ R	215 210 30

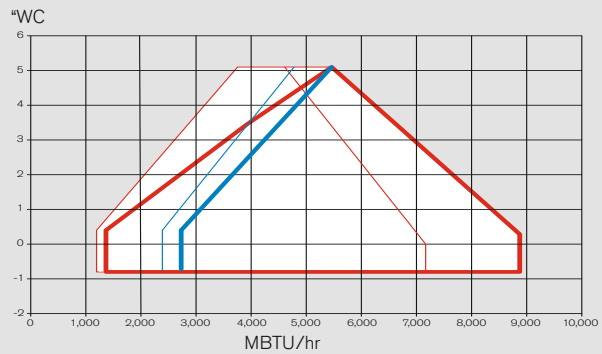
Burner selection WM-G 20

Gas burners version ZM and ZM-LN

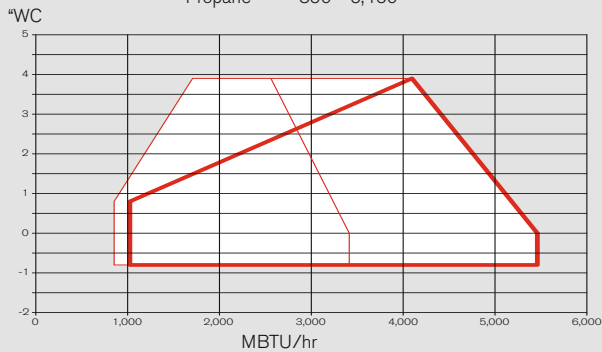
Burner model WM-G20/2-A ZM
Combustion head WM-G(L)20/2, 190K x 65
Capacity MBTU/h Natural gas 510 – 7,165
 Propane 850 – 7,165



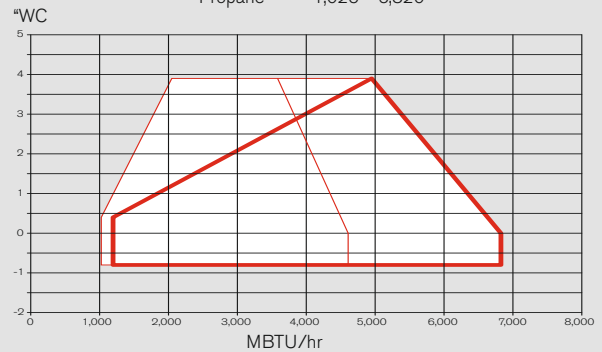
Burner model WM-G20/3-A ZM
Combustion head WM-G(L)20/3, 190K x 65
Capacity MBTU/h Natural gas 1,195 – 8,875
 Propane 2,390 – 8,875



Burner model WM-G20/2-A ZM-LN
Combustion head WM-G20/2-3a, 190x60
Capacity MBTU/h Natural gas 850 – 5,460
 Propane 850 – 5,460



Burner model WM-G20/3-A ZM-LN
Combustion head WM-G20/3-3a, 190x60
Capacity MBTU/h Natural gas 1,025 – 6,820
 Propane 1,025 – 6,820



Natural Gas with combustion head **Propane with combustion head**
 Closed ——— (blue line) Closed ——— (blue line)
 Open - - - - - (red line) Open - - - - - (red line)

Burner order numbers

Burner model	Version	Order No.
WM-G20/2	ZM	217 211 11
WM-G20/3	ZM	217 213 11
WM-G20/2	ZM-LN	217 212 11
WM-G20/3	ZM-LN	217 214 11

The firing rates are based on an installation altitude of 0 ft (0 m). A reduction of burner capacity of 1% for every 325 ft (100 m) should be taken into consideration in case of installation altitude above 0 ft.

Voltages and frequencies:

The burners are equipped with three phase motor in 208 - 600 V, 60 Hz as standard. Different voltage and frequency are available upon request.

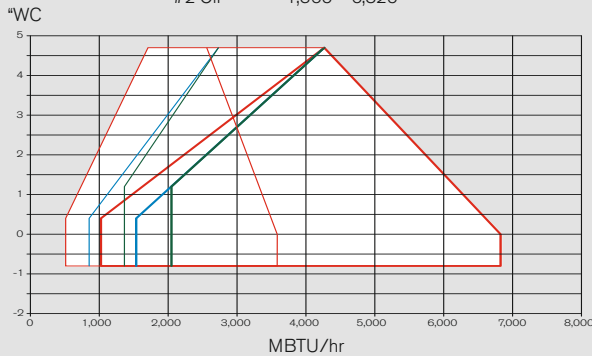
Standard burner motor:

Insulation class F, protection IP 54.

Burner selection WM-GL 20

Dual fuel burners version ZM-T and ZM-R

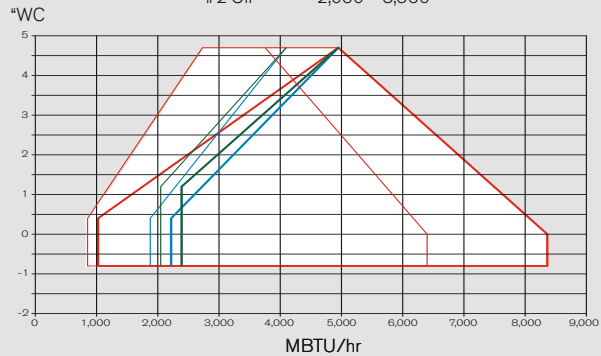
Burner model WM-GL20/2-A ZM-T and ZM-R
Combustion head WM-G(L)20/2, 190K x 45
Capacity MBTU/h
 Natural gas 510 – 6,825
 Propane 850 – 6,825
 #2 Oil 1,365 – 6,825



Natural Gas with combustion head
 Closed —
 Open —

Propane with combustion head
 Closed —
 Open —

Burner model WM-GL20/3-A ZM-T and ZM-R
Combustion head WM-G(L)20/3, 190K x 45
Capacity MBTU/h
 Natural gas 850 – 8,360
 Propane 1,870 – 8,360
 #2 Oil 2,050 – 8,360



#2 Oil with combustion head
 Closed —
 Open —

Burner part numbers

Burner model	Version	Part number
WM-GL 20/2-A	ZM-T	218 212 11
WM-GL 20/3-A	ZM-T	218 213 11
WM-GL 20/2-A	ZM-R	218 215 11
WM-GL 20/3-A	ZM-R	218 216 11

The firing rates are based on an installation altitude of 0 ft (0 m). A reduction of burner capacity of 1% for every 325 ft (100 m) should be taken into consideration in case of installation altitude above 0 ft.

Voltages and frequencies:

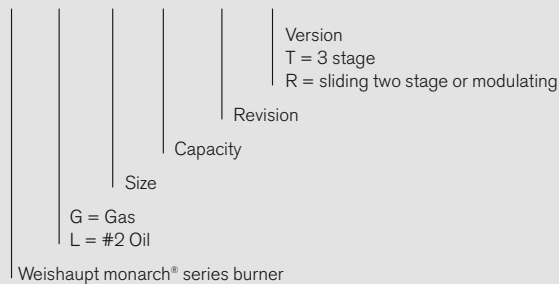
The burners are equipped with three phase motor in 208 - 600 V, 60 Hz as standard. Different voltage and frequency are available upon request.

Standard burner motor:

Insulation class F, protection IP 54.

Burner nomenclature

WM - GL20 / 3 - A / ZM - T
 ZM - R



Standard scope of supply

Description	WM-L20-T	WM-L20-R	WM-G20 ZM/LN	WM-GL20 ZM-T	WM-GL20 ZM-R
Burner housing, hinge flange, housing cover, Weishaupt burner motor, air intake housing, fan wheel, combustion head, ignition unit, ignition cable, ignition electrodes, combustion manager with operating unit, flame sensor, stepping motors, flange gasket, limit switch on hinge flange, fixing screws	●	●	●	●	●
Digital combustion manager W-FM 50	●	●	●	-	-
W-FM 54	-	-	-	●	●
W-FM 100/200	○	○	○ [● ZM]	○	○
Two gas safety shut off valves	-	-	●	●	●
Gas butterfly valve	-	-	●	●	●
Air pressure switch	○	○	●	●	●
Adjustable flame tube	●	●	●	●	●
Stepping motor for electronic fuel-air ratio controller	●	●	●	●	●
Stepping motor for air damper	-	-	●	●	●
Stepping motor for gas butterfly valve	-	●	-	-	●
Stepping motor for oil regulator	-	●	-	-	●
Oil pressure switch in return line	-	●	-	-	●
Burner mounted oil pump	●	●	-	●	●
Oil hoses	●	●	-	●	●
4 oil solenoid valves, oil regulator, nozzle head with premounted spill type nozzle	-	●	-	-	●
3 oil solenoid valves, 1 safety valve, three stage nozzle head with premounted oil nozzle	●	-	-	●	-
Magnetic clutch	○	○	-	○	●
IP 54 protection	●	●	●	●	●

● Standard
○ Optional

Accessories

Oil burners WM-L 20 vers. T and R

Version T (3 stage)		WM-L20/1-A / T	WM-L20/2-A / T	WM-L20/3-A / T
Combustion head extension	by 4" (100 mm)	210 030 49	210 030 52	210 030 55
	by 8" (200 mm)	210 030 50	210 030 53	210 030 56
	by 12" (300 mm)	210 030 51	210 030 54	210 030 57
Oil hoses 50" (1300 mm) in lieu of 39" (1000 mm)		110 000 72	110 000 72	110 000 72
Ducted air intake incl. pressure switch for air duct. (requires burner air pressure switch)		210 030 47	210 030 47	210 030 47
Burner air pressure switch		210 030 08	210 030 08	210 030 08
KS-20 modulating controller mounted on burner (W-FM50)		250 033 15	250 033 15	250 033 15
W-FM 100 (suitable for continuous operation) in lieu of W-FM 50	fitted	210 030 32	210 030 32	210 030 32
	loose	210 030 88	210 030 88	210 030 88
W-FM 200 in lieu of W-FM 50 with built-in modulating controller, speed control module with optional fuel metering	fitted	210 030 10	210 030 10	210 030 10
	loose	on request	on request	on request
QRI flame sensor in lieu of QRB		210 030 24	210 030 24	210 030 24
Special voltage (on request only)		on request	on request	on request
Version R (sliding multi-stage or modulating)		WM-L20/1-A / R	WM-L20/2-A / R	WM-L20/3-A / R
Combustion head extension	by 4" (100 mm)	210 030 58	210 030 61	210 030 64
	by 8" (200 mm)	210 030 59	210 030 62	210 030 65
	by 12" (300 mm)	210 030 60	210 030 63	210 030 66
Oil hoses 50" (1300 mm) in lieu of 39" (1000 mm)		110 001 59	110 001 59	110 001 59
Ducted air intake incl. pressure switch for air duct. (requires burner air pressure switch)		210 030 47	210 030 47	210 030 47
Burner air pressure switch		210 030 08	210 030 08	210 030 08
KS-20 modulating controller mounted on burner (W-FM50)		250 033 15	250 033 15	250 033 15
W-FM 100 (suitable for continuous operation) in lieu of W-FM 50	fitted	210 030 38	210 030 38	210 030 38
	loose	210 030 87	210 030 87	210 030 87
W-FM 200 in lieu of W-FM 50 with built-in modulating controller, speed control module with optional fuel metering	fitted	210 030 39	210 030 39	210 030 39
	loose	on request	on request	on request
Speed control with burner motor mounted VFD (W-FM 50/200 required)		on request	on request	on request
Speed control with separate VFD (W-FM 200 required)		on request	on request	on request
Special voltage (on request only)		on request	on request	on request

Accessories

Gas burner WM-G 20 vers. ZM and ZM-LN

Accessories		WM-G20/2-A ZM	WM-G20/2-A ZM-LN	WM-G20/3-A ZM	WM-G20/3-A ZM-LN
Comb. head extension	by 4" (100 mm)	230 030 79	230 030 87	230 030 79	230 030 87
	by 8" (200 mm)	230 030 80	230 030 88	230 030 80	230 030 88
	by 12" (300 mm)	230 030 81	230 030 89	230 030 81	230 030 89
Solenoid valve for air pressure switch test - continuous fan or post purge		250 030 21	250 030 21	250 030 21	250 030 21
Ducted air intake incl. pressure switch for air duct. (requires burner air pressure switch)		210 030 47	210 030 47	210 030 47	210 030 47
KS-20 modulating controller mounted on burner (W-FM50)		250 033 15	250 033 15	250 033 15	250 033 15
W-FM 100 (suitable for cont. operation) instead of W-FM 50	fitted	250 030 74	250 030 74	250 030 74	250 030 74
	loose	250 031 43	250 031 43	250 031 43	250 031 43
W-FM 200 instead of W-FM 50 with built in modulating controller and VFD control optional fuel metering	fitted	250 030 75	250 030 75	250 030 75	250 030 75
	loose	250 030 48	250 030 48	250 030 48	250 030 48
Speed control with burner motor mounted VFD (W-FM 50/200 required)		210 030 40	210 030 40	210 030 40	210 030 40
Speed control with separate VFD (W-FM 200 required)		210 030 41	210 030 41	210 030 41	210 030 41
Special voltages		on request	on request	on request	on request

Accessories

Dual fuel burner WM-GL 20 vers. ZM-T and ZM-R

Accessories, version ZM-T		WM-GL 20/2-A	WM-GL 20/3-A
Combustion head extension	by 4" (100 mm)	250 031 17	250 031 20
	by 8" (200 mm)	250 031 18	250 031 21
	by 12" (300 mm)	250 031 19	250 031 22
Solenoid valve for air pressure switch - continuous fan or post purge		250 030 21	250 030 21
Electromagnetic clutch		250 031 16	250 031 16
Ducted air intake incl. pressure switch for air duct.		210 030 47	210 030 47
Oil hoses 50" (1300) mm instead of 40" (1000 mm)		110 000 72	110 000 72
W-FM 100 (suitable for cont. operation) instead of W-FM 54 with built in modulating controller	fitted	250 031 78	250 031 78
	loose	250 031 93	250 031 93
W-FM 200 instead of W-FM 54 with built in modulating controller and VFD control with optional fuel metering	fitted	250 031 77	250 031 77
	loose	250 031 62	250 031 62
Speed control with burner motor mounted VFD (W-FM 54/200 required)		210 030 40	210 030 40
Speed control with separate VFD (W-FM 200 required)		on request	on request
Special voltages		on request	on request
Accessories, version ZM-R		WM-GL 20/2-A	WM-GL 20/3-A
Combustion head extension	by 4" (100 mm)	250 031 23	250 031 26
	by 8" (200 mm)	250 031 24	250 031 27
	by 12" (300 mm)	250 031 25	250 031 28
Solenoid valve for air pressure switch - continuous fan or post purge		250 030 21	250 030 21
Electromagnetic clutch		250 031 29	250 031 29
Ducted air intake incl. pressure switch for air duct.		210 030 47	210 030 47
Oil hoses 50" (1300) mm instead of 40" (1000 mm)		110 000 72	110 000 72
W-FM 100 (suitable for cont. operation) instead of W-FM 54 with built in modulating controller	fitted	250 031 76	250 031 76
	loose	250 031 82	250 031 82
W-FM 200 instead of W-FM 54 with built in modulating controller and VFD control with optional fuel metering	fitted	250 031 77	250 031 77
	loose	250 031 63	250 031 63
Speed control with burner motor mounted VFD (W-FM 54/200 required)		210 030 40	210 030 40
Speed control with separate VFD (W-FM 200 required)		210 030 41	210 030 41
Special voltages		on request	on request

Technical data

Oil burners

Oil burners		WM-L20/1-A / T	WM-L20/2-A / T	WM-L20/3-A / T
Burner motor	Weishaupt model	WM-D 112/140-2/3K0	WM-D 112/140-2/3K5	WM-D 112/170-2/4K5
Rated power	HP (kW)	4.2 (3.2)	5.6 (4.2)	6.6 (5.0)
Full load amps (FLA)	A	6.2 (@ 460V)	7.6 (@ 460V)	8.7 (@ 460V)
Motor fusing	A	20 AT (external)	20 AT (external)	25 AT (external)
Speed (60 Hz)	rpm	3,540	3,530	3,530
Combustion manager	Model	W-FM 50	W-FM 50	W-FM 50
Flame monitoring	Model	QRB	QRB	QRB
Stepping motor Air / Oil	Model	SQM 33	SQM 33	SQM 33
Pump fitted max. flow rate	Model GPH (l/h)	J6 90 (350)	J6 90 (350)	J7 123 (474)
Oil hoses	DN / Length	1/2" / 40" (13 / 1000)	1/2" / 40" (13 / 1000)	1/2" / 40" (13 / 1000)
Weight	lbs (kg)	approx. 196 (88)	approx. 196 (88)	approx. 214 (96)

Oil burners		WM-L20/1-A / R	WM-L20/2-A / R	WM-L20/3-A / R
Burner motor	Weishaupt model	WM-D 112/140-2/3K0	WM-D 112/140-2/3K5	WM-D 112/170-2/4K5
Rated power	HP (kW)	4.2 (3.2)	5.6 (4.2)	6.6 (5.0)
Full load amps (FLA)	A	6.2 (@ 460V)	7.6 (@ 460V)	8.7 (@ 460V)
Motor fusing	A	20 AT (external)	20 AT (external)	25 AT (external)
Speed (60 Hz)	rpm	3,540	3,530	3,530
Combustion manager	Model	W-FM 50	W-FM 50	W-FM 50
Flame monitoring	Model	QRB	QRB	QRB
Stepping motor Air / Oil	Model	SQM 33	SQM 33	SQM 33
Pump fitted max. flow rate	Type GPH (l/h)	TA2 165 (636)	TA2 165 (636)	TA3 244 (942)
Oil hoses	DN / Length	3/4" / 40" (20 / 1000)	3/4" / 40" (20 / 1000)	3/4" / 40" (20 / 1000)
Weight	lbs (kg)	approx. 214 (96)	approx. 214 (96)	approx. 231 (104)

Voltages and frequencies:

The burners are equipped with three phase motor in 208 - 600 V, 60 Hz as standard. Different voltage and frequency are available upon request.

Standard burner motor:

Insulation class F, protection IP 54.

Technical data

Gas and dual fuel burners

Gas burner version ZM and ZM-LN		WM-G20/2-A ZM	WM-G20/3-A ZM
Burner motor	Model	WM-D112/140-2/3K0	WM-D112/140-2/3K5
Rated power	HP (kW)	4.2 (3.2)	5.6 (4.2)
Full load amps (FLA)	A	6.2 (@ 460V)	7.6 (@ 460V)
Motor external fuse (YΔ start)	A	20 A slow (external)	20 A slow (external)
Speed (60 Hz)	rpm	3,540	3,530
Combustion manager	Model	W-FM 50	W-FM 50
Air/Gas stepping motor	Model	SQM 33	SQM 33
Flame monitoring	Type	Ionization rod	Ionization rod
Weight	approx. lbs (kg)	216 (97)	216 (97)

Dual fuel burner version ZM-T		WM-GL 20/2-A	WM-GL 20/3-A
Burner motor	Model	WM-D112/140-2/3K5	WM-D112/170-2/4K5
Rated power	HP (kW)	5.6 (4.2)	6.6 (5.0)
Full load amps (FLA)	A	7.6 (@ 460V)	8.7 (@ 460V)
Motor fuse (YΔ start)	A	20 A slow (external)	20 A slow (external)
Speed (60 Hz)	rpm	3,530	3,530
Combustion manager	Model	W-FM 54	W-FM 54
Air/Gas stepping motor	Model	SQM 33	SQM 33
Pump fitted	Model	J6	J7
max. flow rate	GPH (l/h)	90 (350)	123 (474)
Oil hoses	DN / Length	1/2" / 40" (13 / 1000)	1/2" / 40" (13 / 1000)
Weight	approx. lbs (kg)	238 (107)	245 (110)

Dual fuel burner version ZM-R		WM-GL 20/2-A	WM-GL 20/3-A
Burner motor	Model	WM-D112/140-2/3K5	WM-D112/170-2/4K5
Rated power	HP (kW)	5.6 (4.2)	6.6 (5.0)
Full load amps (FLA)	A	7.6 (@ 460V)	8.7 (@ 460V)
Motor fuse (YΔ start)	A	20 A slow (external)	20 A slow (external)
Speed (60 Hz)	rpm	3,530	3,530
Combustion manager	Model	W-FM 54	W-FM 54
Air/Gas stepping motor	Model	SQM 33	SQM 33
Pump fitted	Model	TA2	TA3
max. flow rate	GPH (l/h)	165 (636)	244 (942)
Oil hoses	DN / Length	1/2" / 40" (13 / 1000)	1/2" / 40" (13 / 1000)
Weight	approx. lbs (kg)	267 (120)	285 (128)

Voltages and frequencies:

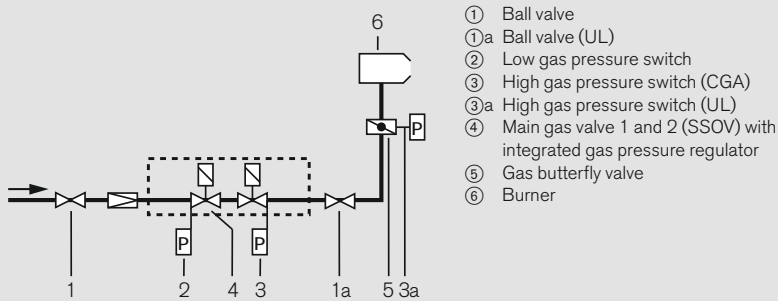
The burners are equipped with three phase motor in 208 - 600 V, 60 Hz as standard. Different voltage and frequency are available upon request.

Standard burner motor:

Insulation class F, protection IP 54.

Fuel systems

Gas train schematic*



*The above schematic shows typical gas train configuration only. The actual gas train configuration shipped with burner might differ depending on applicable codes/ regulation and application.

Gas train arrangement

For boiler with hinged door the gas train must be installed on the opposite side of the boiler door hinge.

Gas train installation

Gas train must be mounted tension free. Do not compensate misalignment by over tightening. Distance between burner and gas valves should be as small as possible. Pay attention to the correct gas flow direction.

Gas train support

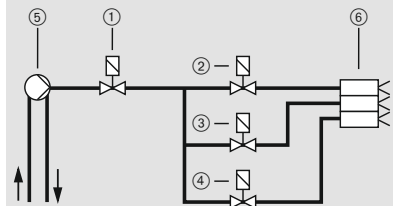
The gas train must be fixed and supported securely. They must not be allowed to vibrate during operation. Support suitable for the site should be fitted during installation.

Gas meter

For commissioning a gas meter is required to verify exact gas consumption.

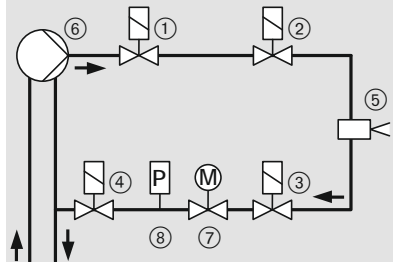
Oil function schematics

Version ZM-T



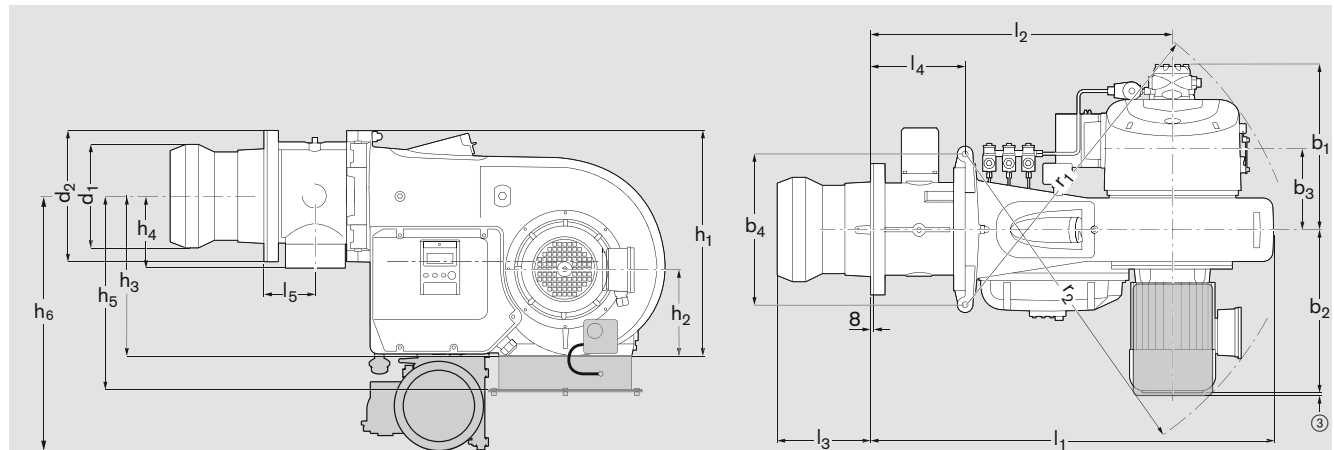
- ① Safety solenoid valve
- ② Stage 1 solenoid valve
- ③ Stage 2 solenoid valve
- ④ Stage 3 solenoid valve
- ⑤ Burner mounted oil pump
- ⑥ Nozzle assembly with 3 atomizing nozzles

Version ZM-R



- ① Oil solenoid valve 1 in supply line
- ② Oil solenoid valve 2 in supply line
- ③ Oil solenoid valve 1 in return line
- ④ Oil solenoid valve 2 in return line
- ⑤ Nozzle assembly with regulating nozzle
- ⑥ Burner mounted oil pump
- ⑦ Oil regulator
- ⑧ Pressure switch in return

Dimensions



Burner model	Dimensions in inches and (mm)															
	l ₁	l ₂	l ₃	l ₄	l ₅	b ₁ ^①	b ₂	b ₃	b ₄	h ₁	h ₂	h ₃	h ₄	h ₅	h ₆	
WM-L20/1 / T	31.9 (810)	21.9 (557)	8.5 - 9.1 (217 - 232)	1.5 (38)	–	16.2 (411)	16.7 (424)	8.2 (209)	15.0 (380)	22.6 (573)	8.9 (225)	16.1 (408)	–	18.5 (470)	22.3 (567)	
WM-L20/2 / T	31.9 (810)	21.9 (557)	8.9 - 9.7 (227 - 247)	1.5 (38)	–	16.2 (411)	16.7 (424)	8.2 (209)	15.0 (380)	22.6 (573)	8.9 (225)	16.1 (408)	–	18.5 (470)	22.3 (567)	
WM-L20/3 / T	31.9 (810)	21.9 (557)	9.3 - 10.1 (237 - 257)	1.5 (38)	–	16.2 (411)	17.6 (447)	8.2 (209)	15.0 (380)	22.6 (573)	8.9 (225)	16.1 (408)	–	18.5 (470)	22.6 (574)	
WM-L20/1 / R	31.9 (810)	21.9 (557)	8.5 - 9.1 (217 - 232)	1.5 (38)	–	16.1 (409)	16.7 (424)	8.2 (209)	15.0 (380)	22.6 (573)	8.9 (225)	16.1 (408)	–	18.5 (470)	22.6 (574)	
WM-L20/2 / R	31.9 (810)	21.9 (557)	8.9 - 9.7 (227 - 247)	1.5 (38)	–	16.1 (409)	16.7 (424)	8.2 (209)	15.0 (380)	22.6 (573)	8.9 (225)	16.1 (408)	–	18.5 (470)	22.6 (574)	
WM-L20/3 / R	31.9 (810)	21.9 (557)	9.3 - 10.1 (237 - 257)	1.5 (38)	–	16.3 (414)	17.6 (447)	8.2 (209)	15.0 (380)	22.6 (573)	8.9 (225)	16.1 (408)	–	18.5 (470)	23.8 (604)	
WM-G20/2 ZM	39.8 (1010)	29.8 (757)	9.1 - 10.5 (231 - 266)	9.4 (238)	5.0 (128)	12.8 (326)	16.7 (424)	8.2 (209)	15.0 (380)	22.6 (573)	8.9 (225)	16.1 (408)	7.2 (182)	18.5 (470)	–	
WM-G20/3 ZM	39.8 (1010)	29.8 (757)	9.1 - 10.1 (231 - 256)	9.4 (238)	5.0 (128)	12.8 (326)	16.7 (424)	8.2 (209)	15.0 (380)	22.6 (573)	8.9 (225)	16.1 (408)	7.2 (182)	18.5 (470)	–	
WM-G20/2 ZM-LN	39.8 (1010)	29.8 (757)	9.7 - 10.5 (247 - 267)	9.4 (238)	5.0 (128)	12.8 (326)	16.7 (424)	8.2 (209)	15.0 (380)	22.6 (573)	8.9 (225)	16.1 (408)	7.2 (182)	18.5 (470)	–	
WM-G20/3 ZM-LN	39.8 (1010)	29.8 (757)	9.7 - 10.5 (247 - 272)	9.4 (238)	5.0 (128)	12.8 (326)	16.7 (424)	8.2 (209)	15.0 (380)	22.6 (573)	8.9 (225)	16.1 (408)	7.2 (182)	18.5 (470)	–	
WM-GL20/2 ZM-T	39.8 (1010)	29.8 (757)	9.1 - 10.5 (231 - 266)	9.4 (238)	5.0 (128)	16.2 (411)	16.7 (424)	8.2 (209)	15.0 (380)	22.6 (573)	8.9 (225)	16.1 (408)	7.2 (182)	18.5 (470)	22.3 (567)	
WM-GL20/3 ZM-T	39.8 (1010)	29.8 (757)	9.1 - 10.1 (231 - 256)	9.4 (238)	5.0 (128)	16.2 (411)	17.6 (447)	8.2 (209)	15.0 (380)	22.6 (573)	8.9 (225)	16.1 (408)	7.2 (182)	18.5 (470)	22.6 (574)	
WM-GL20/2 ZM-R	39.8 (1010)	29.8 (757)	9.1 - 10.5 (231 - 266)	9.4 (238)	5.0 (128)	21.5 ^② (545)	16.7 (424)	8.2 (209)	15.0 (380)	22.6 (573)	8.9 (225)	16.1 (408)	7.2 (182)	18.5 (470)	22.6 (574)	
WM-GL20/3 ZM-R	39.8 (1010)	29.8 (757)	9.1 - 10.1 (231 - 256)	9.4 (238)	5.0 (128)	21.5 ^② (545)	17.6 (447)	8.2 (209)	15.0 (380)	22.6 (573)	8.9 (225)	16.1 (408)	7.2 (182)	18.5 (470)	23.8 (604)	

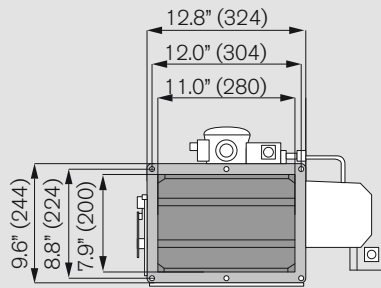
① without electromagnetic clutch (pump with electromagnetic clutch add 5.1" / 130 mm for version T and R)

② including Magnetic clutch

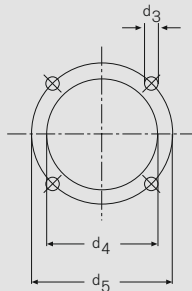
③ motor mounted VFD protrudes by approx 0.8" / 20 mm from burner motor

Dimensions

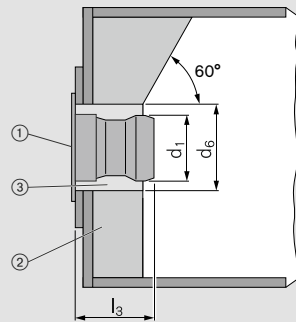
Ducted air intake bottom



Burner plate drilling dimensions



Preparing the heat exchanger



- ① Flange gasket
- ② Refractory
- ③ Gap

The refractory ② must not protrude beyond the front edge of the combustion head, it can however, take a conical shape (min. 60°).

Burner model	Dimensions in inches and (mm)								Gas butterfly size
	r ₁	r ₂	d ₁	d ₂	d ₃	d ₄	d ₅	d ₆	
WM-L20/1 / T	33.1 (840)	34.2 (869)	7.9 (200)	13.0 (330)	M12	9.4 (240)	11.7 (298)	9.4 (240)	-
WM-L20/2 / T	33.1 (840)	34.2 (869)	8.7 (220)	13.0 (330)	M12	10.2 (260)	11.7 (298)	10.2 (260)	-
WM-L20/3 / T	33.1 (840)	34.8 (883)	9.4 (240)	13.0 (330)	M12	10.6 (270)	11.7 (298)	11.0 (280)	-
WM-L20/1 / R	33.1 (840)	34.2 (869)	7.9 (200)	13.0 (330)	M12	9.4 (240)	11.7 (298)	9.4 (240)	-
WM-L20/2 / R	33.1 (840)	34.2 (869)	8.7 (220)	13.0 (330)	M12	10.2 (260)	11.7 (298)	10.2 (260)	-
WM-L20/3 / R	33.1 (840)	34.8 (883)	9.4 (240)	13.0 (330)	M12	10.6 (270)	11.7 (298)	11.0 (280)	-
WM-G20/2 ZM	33.1 (840)	34.2 (869)	9.8 (250)	13.0 (330)	M12	10.6 (270)	11.7 (298)	11.4 (290)	DN65
WM-G20/3 ZM	33.1 (840)	34.2 (869)	10.2 (260)	13.0 (330)	M12	10.6 (270)	11.7 (298)	11.4 (290)	DN65
WM-G20/2 ZM-LN	33.1 (840)	34.2 (869)	9.8 (250)	13.0 (330)	M12	10.6 (270)	11.7 (298)	11.4 (290)	DN65
WM-G20/3 ZM-LN	33.1 (840)	34.2 (869)	10.2 (260)	13.0 (330)	M12	10.6 (270)	11.7 (298)	11.4 (290)	DN65
WM-GL20/2 ZM-T	33.1 (840)	34.2 (869)	9.8 (250)	13.0 (330)	M12	10.6 (270)	11.7 (298)	11.4 (290)	DN65
WM-GL20/3 ZM-T	33.1 (840)	34.8 (883)	10.2 (260)	13.0 (330)	M12	10.6 (270)	11.7 (298)	11.4 (290)	DN65
WM-GL20/2 ZM-R	36.4 (925)	34.2 (869)	9.8 (250)	13.0 (330)	M12	10.6 (270)	11.7 (298)	11.4 (290)	DN65
WM-GL20/3 ZM-R	36.4 (925)	34.8 (883)	10.2 (260)	13.0 (330)	M12	10.6 (270)	11.7 (298)	11.4 (290)	DN65

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

Fuel savings, emissions reductions: Patented multiflam® technology



Weishaupt's patented multiflam® technology allows compliance with very stringent emission limits without the need for expensive additional equipment. The emissions reduction is accomplished by using innovative mixing assembly and applying fuel distribution principles.

Weishaupt multiflam® burners have been proven in the field for more than 10 years. They are especially suited for applications with stringent emission limits.

The latest monarch® burners have adopted this technology and brought a combination of flexibility and low emissions into medium capacity range.

Exemplary emission values

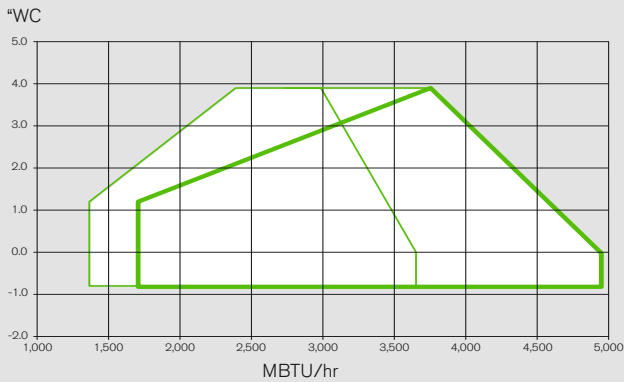
multiflam® 3LN version burners further reduce NO_x emissions below the level which can be achieved by standard mixing head. These additional reductions are accomplished by using special mixing assembly applying fuel distribution principles.

Combustion values also depend on combustion chamber geometry, volumetric loading and boiler design. Certain conditions such as combustion chamber dimensions, measurement tolerances, temperature, humidity, etc. must be verified in order to guarantee emission levels.

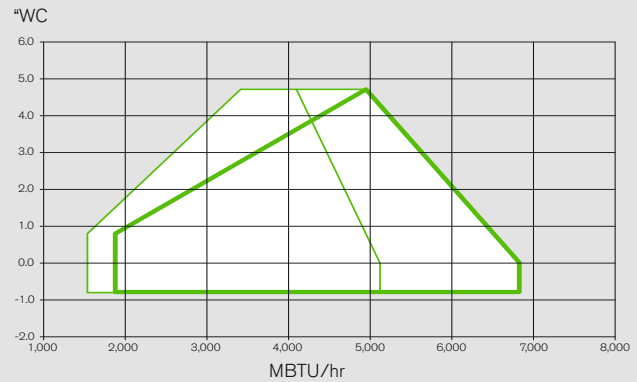
Burner selection Oil burners



WM20 multiflam[®] burners vers. 3LN

Burner model WM-L20/2-A/ T 3LN
Combustion head WM-L20/2-3LN, Ø 160 / Ø 22
Capacity MBTU/h #2 Oil 1,365 – 4,950



Burner model WM-L20/3-A/ T 3LN
Combustion head WM-L20/3-3LN, Ø 160 / Ø 22
Capacity MBTU/h #2 Oil 1,540 – 6,825



#2 Oil with flame tube
 close 
 open 

Burner order numbers

Burner model	Order No.
WM-L20/2-A/ T-3LN	211 210 24
WM-L20/3-A/ T-3LN	211 210 34

The firing rates are based on an installation altitude of 1,640 ft (500 m).
The capacity graphs are based on a fuel calorific value of 140,000 BTU/USG.

Voltages and frequencies:

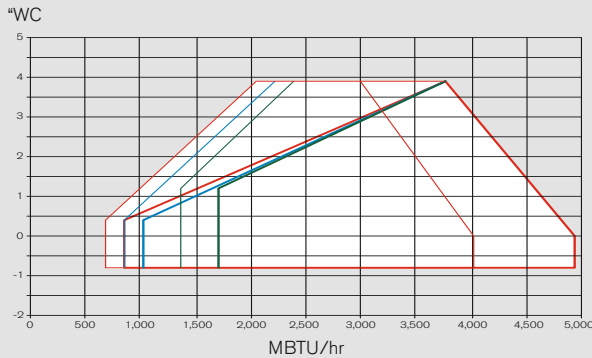
The burners are equipped with three phase motor in 208 - 600 V, 60 Hz as standard. Different voltage and frequency are available upon request.

Standard burner motor:

Insulation class F, protection IP 54.

Burner selection Gas and Dual fuel burners WM20 multiflam[®] burners vers. 3LN

Burner model WM-G20/2-A/ ZM-3LN
WM-GL20/2-A/ZM-T-3LN
Combustion head WM20/2-3LN, Ø 160 / Ø 22
Capacity MBTU/h Natural gas 685 – 4,945
Propane 855 – 4,945
#2 Oil 1,365 – 4,945

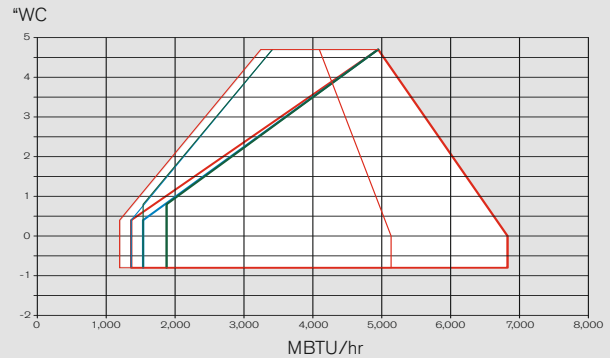


Natural Gas with combustion head **Propane with combustion head**
Closed ——— (red) Closed ——— (blue)
Open - - - - - (red) Open - - - - - (blue)

Burner part numbers

Burner model	Version	Part number
WM-G 20/2-A	ZM-3LN	217 215 11
WM-G 20/3-A	ZM-3LN	217 216 11
WM-GL 20/2-A	ZM-T-3LN	218 214 11
WM-GL 20/3-A	ZM-T-3LN	218 217 11

Burner model WM-G20/3-A/ ZM-3LN
WM-GL20/3-A/ZM-T-3LN
Combustion head WM20/3-3LN, Ø 160 / Ø 22
Capacity MBTU/h Natural gas 1,195 – 6,825
Propane 1,365 – 6,825
#2 Oil 1,540 – 6,825



#2 Oil with combustion head
Closed ——— (green)
Open - - - - - (green)

The firing rates are based on an installation altitude of 0 ft (0 m). A reduction of burner capacity of 1% for every 325 ft (100 m) should be taken into consideration in case of installation altitude above 0 ft.

Voltages and frequencies:

The burners are equipped with three phase motor in 208 - 600 V, 60 Hz as standard. Different voltage and frequency are available upon request.

Standard burner motor:

Insulation class F, protection IP 54.

Standard scope of supply

Description	WM-L20 T-3LN	WM-G20 ZM-3LN	WM-GL20 ZM-T-3LN
Burner housing, hinge flange, housing cover, Weishaupt burner motor, air intake housing, fan wheel, combustion head, ignition unit, ignition cable, ignition electrodes, combustion manager with operating unit, flame sensor, stepping motors, flange gasket, limit switch on hinge flange, fixing screws	●	●	●
Digital combustion manager W-FM 50	●	●	-
W-FM 54	-	-	●
W-FM 100/200	○	○	○
Two gas safety shut off valves	-	●	●
Gas butterfly valve	-	●	●
Air pressure switch	○	●	●
Adjustable flame tube	●	●	●
Stepping motor for electronic fuel-air ratio controller	●	●	●
Stepping motor for air damper	-	●	●
Stepping motor for gas butterfly valve	-	-	-
Stepping motor for oil regulator	-	-	-
Burner mounted oil pump	●	-	●
Oil hoses	●	-	●
3 oil solenoid valves, 1 safety valve, three stage nozzle head with premounted oil nozzle	●	-	●
Magnetic clutch	○	-	○
IP 54 protection	●	●	●

● Standard
○ Optional

Accessories

WM 20 multiflam[®] burners vers. 3LN

Oil burner WM-L20/.. -A T-3LN		WM-L20/2-A / T	WM-L20/3-A / T		
Combustion head extension	by 4" (100 mm)	210 031 36	210 031 36		
	by 8" (200 mm)	210 031 37	210 031 37		
	by 12" (300 mm)	210 031 38	210 031 38		
Oil hoses 50" (1300 mm) in lieu of 39" (1000 mm)		110 000 72	110 000 72		
Ducted air intake incl. pressure switch for air duct. (requires burner air pressure switch)		210 030 47	210 030 47		
W-FM 100 (suitable for continuous operation) in lieu of W-FM 50	fitted	210 030 32	210 030 32		
	loose	210 030 88	210 030 88		
W-FM 200 in lieu of W-FM 50 with built-in modulating controller, speed control module with optional fuel metering	fitted	210 030 10	210 030 10		
	loose	on request	on request		
KS20 modulating controller installed on burner (W-FM50)		250 033 15	250 033 15		
QRA73 flame sensor (W-FM100/200)		210 031 63	210 031 63		
Special voltage (on request only)		on request	on request		
Gas- and Dual fuel burner WM-G(L)20/.. -A ZM-3LN		G20/2	G20/3	GL20/2	GL20/3
Combustion head extension	by 4" (100 mm)	250 032 77	250 032 77	250 032 80	250 032 80
	by 8" (200 mm)	250 032 78	250 032 78	250 032 81	250 032 81
	by 12" (300 mm)	250 032 79	250 032 79	250 032 82	250 032 82
Oil hoses 50" (1300 mm) in lieu of 39" (1000 mm)		–	–	110 000 72	110 000 72
Ducted air intake incl. pressure switch for air duct.		210 030 47	210 030 47	210 030 47	210 030 47
W-FM 100 (suitable for continuous operation) in lieu of W-FM 50	fitted	250 030 74	250 030 74	–	–
	loose	250 031 43	250 031 43	–	–
W-FM 200 in lieu of W-FM 50 with built-in modulating controller, speed control module with optional fuel metering	fitted	250 030 75	250 030 75	–	–
	loose	250 030 48	250 030 48	–	–
Speed control with burner motor mounted VFD (W-FM 50/200 required)		on request	on request	on request	on request
Speed control with separate VFD (W-FM 200 required)		on request	on request	on request	on request
KS20 modulating controller installed on burner (W-FM50)		250 033 15	250 033 15	–	–
Electro magnetic clutch		–	–	250 031 16	250 031 16
QRA73 flame sensor (W-FM100/200)		210 031 63	210 031 63	210 031 63	210 031 63
Special voltage (on request only)		on request	on request	on request	on request

Technical data

WM 20 multiflam[®] burners vers. 3LN

Oil burners		WM-L20/2-A T-3LN	WM-L20/3-A T-3LN
Burner motor	Model	WM-D112/140-2/3K0	WM-D112/170-2/4K5
Rated power	HP (kW)	4.3 (3.2)	6.6 (5.0)
Full load amps (FLA)	A	6.2 (@ 460V)	8.7 (@ 460V)
Motor external fuse (ΥΔ start)	A	20 A slow (external)	20 A slow (external)
Speed (60 Hz)	rpm	3,540	3,530
Combustion manager	Model	W-FM 50	W-FM 50
Flame monitoring	Type	QRA2	QRA2
Air/Gas stepping motor	Model	SQM 33	SQM 33
Pump fitted	Model	J6	J7
max. flow rate	GPH (l/h)	90 (350)	123 (474)
Oil hoses	DN / Length	1/2" / 40" (13 / 1000)	1/2" / 40" (13 / 1000)
Weight	approx. lbs (kg)	235 (107)	253 (115)
Gas burners		WM-G20/2-A ZM-3LN	WM-G20/3-A ZM-3LN
Burner motor	Model	WM-D112/140-2/3K0	WM-D112/170-2/4K5
Rated power	HP (kW)	4.3 (3.2)	6.6 (5.0)
Full load amps (FLA)	A	6.2 (@ 460V)	8.7 (@ 460V)
Motor fuse (ΥΔ start)	A	20 A slow (external)	20 A slow (external)
Speed (60 Hz)	rpm	3,540	3,530
Combustion manager	Model	W-FM 50	W-FM 50
Flame monitoring	Type	QRA2	QRA2
Air/Gas stepping motor	Model	SQM 33	SQM 33
Weight	approx. lbs (kg)	225 (102)	243 (110)
Dual fuel burners		WM-GL 20/2-A	WM-GL 20/3-A
Burner motor	Model	WM-D112/140-2/3K5	WM-D112/170-2/4K5
Rated power	HP (kW)	5.6 (4.2)	6.6 (5.0)
Full load amps (FLA)	A	7.6 (@ 460V)	8.7 (@ 460V)
Motor fuse (ΥΔ start)	A	20 A slow (external)	20 A slow (external)
Speed (60 Hz)	rpm	3,530	3,530
Combustion manager	Model	W-FM 54	W-FM 54
Air/Gas stepping motor	Model	SQM 33	SQM 33
Pump fitted	Model	TA2	TA3
max. flow rate	GPH (l/h)	165 (636)	244 (942)
Oil hoses	DN / Length	1/2" / 40" (13 / 1000)	1/2" / 40" (13 / 1000)
Weight	approx. lbs (kg)	247 (112)	264 (120)

Voltages and frequencies:

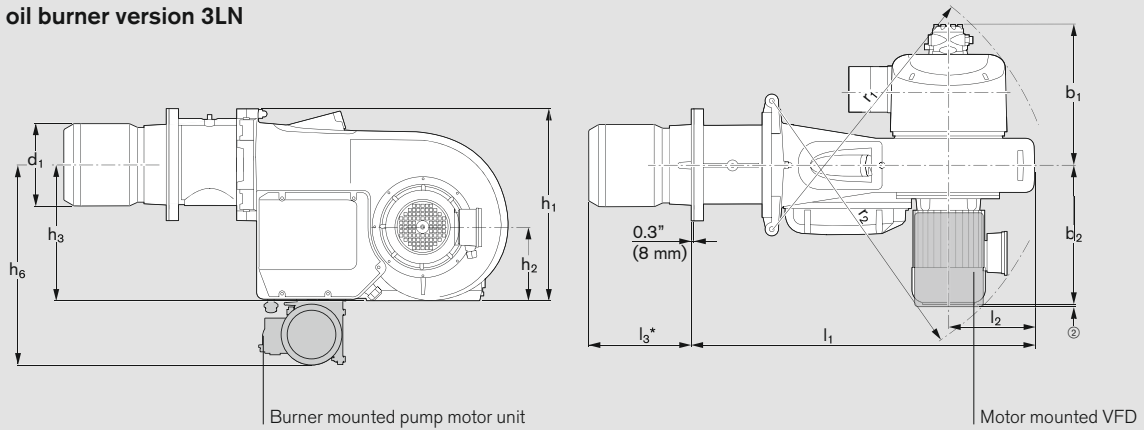
The burners are equipped with three phase motor in 208 - 600 V, 60 Hz as standard. Different voltage and frequency are available upon request.

Standard burner motor:

Insulation class F, protection IP 54.

Dimensions

multiflam® oil burner version 3LN

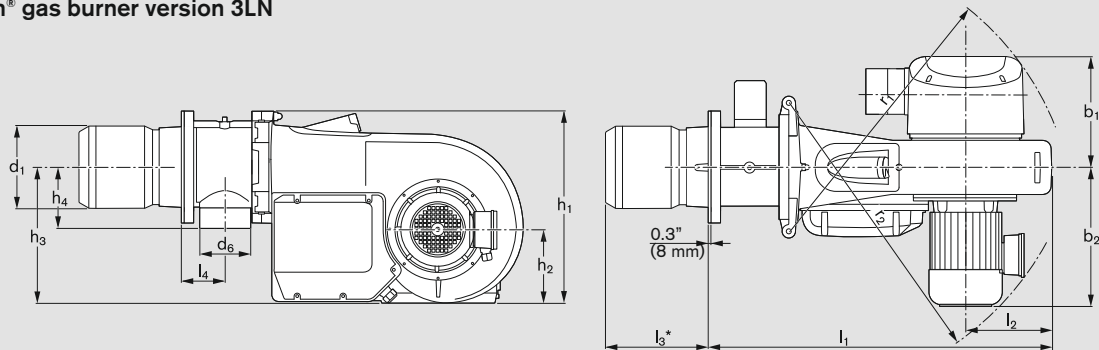


Burner model	Dimensions in inches and (mm)											
	l ₁	l ₂	l ₃	b ₁	b ₂	h ₁	h ₂	h ₃	h ₆	r ₁	r ₂	d ₁
WM-L20/2-A T-3LN	39.8 (1010)	10.0 (254)	11.6 – 12.2 (295 – 310)	16.2 (411)	16.7 (424)	22.6 (573)	8.9 (225)	16.1 (408)	22.3 (567)	33.1 (840)	34.2 (869)	9.5 (242)
WM-L20/3-A T-3LN	39.8 (1010)	10.0 (254)	11.6 – 12.2 (295 – 320)	16.2 (411)	17.6 (447)	22.6 (573)	8.9 (225)	16.1 (408)	22.6 (574)	33.1 (840)	34.8 (883)	9.5 (242)

① without electro magnetic clutch (Oil pump with magnetic clutch add. 5.1"/130 mm)

② motor mounted VFD protruding section approx. 0.8"/20 mm

multiflam® gas burner version 3LN

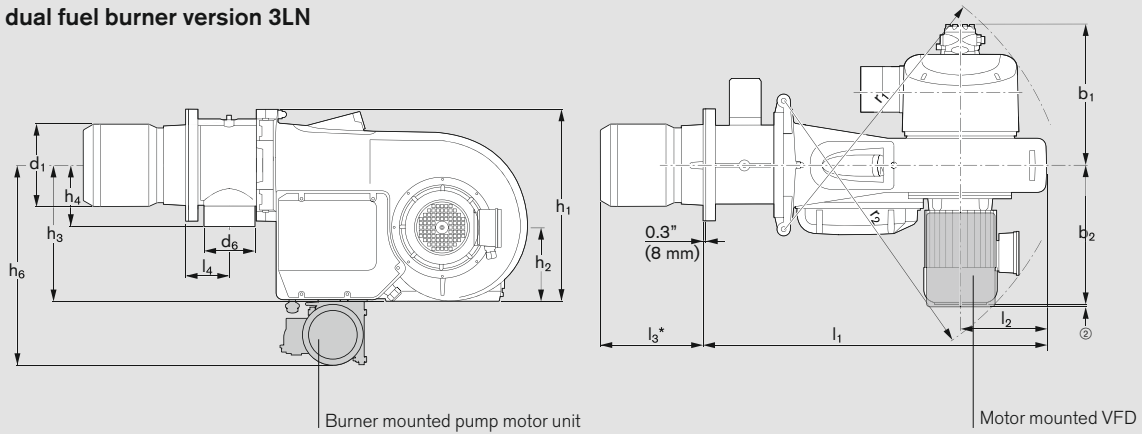


Burner model	Dimensions in inches and (mm)													
	l ₁	l ₂	l ₃	l ₄	b ₁	b ₂	h ₁	h ₂	h ₃	h ₄	r ₁	r ₂	d ₁	d ₆
WM-G20/2-A ZM-3LN	39.8 (1010)	10 (254)	11.6 – 12.2 (295 – 310)	5.0 (128)	12.8 (326)	16.7 (424)	22.6 (573)	8.9 (225)	16.1 (408)	7.2 (182)	33.1 (840)	34.2 (869)	9.5 (242)	DN65
WM-G20/3-A ZM-3LN	39.8 (1010)	10 (254)	11.6 – 12.6 (295 – 320)	5.0 (128)	12.8 (326)	17.6 (447)	22.6 (573)	8.9 (225)	16.1 (408)	7.2 (182)	33.1 (840)	34.8 (883)	9.5 (242)	DN65

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

Dimensions

multiflam® dual fuel burner version 3LN

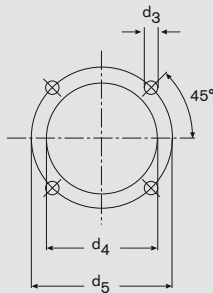


Burner model	Dimensions in inches and (mm)															
	l1	l2	l3 ^①	l4	b1	b2	h1	h2	h3	h4	h6	r1	r2	d1	d6	
WM-GL20/2-A ZM-T-3LN	39.8 (1010)	10.0 (254)	11.6 – 12.2 (295 – 310)	5.0 (128)	16.2 (411)	16.7 (424)	22.6 (573)	8.9 (225)	16.1 (408)	7.2 (182)	22.3 (567)	33.1 (840)	34.2 (869)	9.5 (242)	DN65	
WM-GL20/3-A ZM-T-3LN	39.8 (1010)	10.0 (254)	11.6 – 12.8 (295 – 325)	5.0 (128)	16.2 (411)	17.6 (447)	22.6 (573)	8.9 (225)	16.1 (408)	7.2 (182)	22.6 (574)	33.1 (840)	34.8 (883)	9.5 (242)	DN65	

- ① without electro magnetic clutch (Oil pump with magnetic clutch add. 5.1"/130 mm)
- ② motor mounted VFD protruding section approx. 0.8"/20 mm

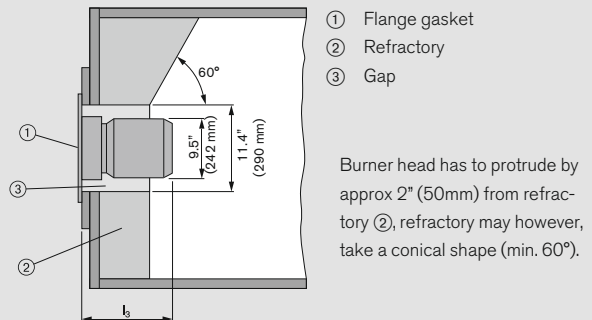
All dimensions are approximate. Weishaupt reserves the right to make changes in light of future developments.

Burner plate drilling dimensions



- d₃ = M12
- d₄ = 10.6" (270 mm)
- d₅ = 11.7" (298 mm)

Preparing the heat exchanger



- ① Flange gasket
- ② Refractory
- ③ Gap

Burner head has to protrude by approx 2" (50mm) from refractory ②, refractory may however, take a conical shape (min. 60°).

That is not a Facade. Weishaupt has been one of the leading company in heating and combustion industry since years with headquarter in Schwendi and branches all over the world. That is Reliability.



Weishaupt is Reliability.

The family business in Schwendi was established by Max Weishaupt in 1932. Represented in 55 countries by branch offices and subsidiaries Weishaupt is international leader in the areas of combustion technology and heating applications.

Trustworthy, quality, good customer service, innovation and experience are values on which the Pioneer Max Weishaupt established his company. All this combined in a word is reliability.

Therefore stands Weishaupt today.



That is not an Imagination. Continuous research and development at Weishaupt guarantee clean and efficient burners.
That is Reliability.



Test facility at Weishaupt R&D centre



Developing improvement.

Weishaupt recognizes the signs of time and researches perpetually to get more efficient and environmental friendly burner systems.

This way not only Weishaupt prevents largely unnecessary energy cost but also actively contributes in conserving the environment.

– weishaupt –

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Regular maintenance reduces heating costs and environmental pollution. Only a properly adjusted burner can save energy and be environmentally friendly. Behind each Weishaupt burner stands the whole Weishaupt customer service organization. The outstanding efforts made in maintenance and service justify the

enormous trust placed in Weishaupt's burners, for at Weishaupt, product and customer service belong together. Weishaupt customer service is there for you all year round. Whenever you need help, be it the supply of spare parts, technical advice or a site visit. We are there when you need us.