Technical information
Monobloc burners

Weishaupt monarch® burner
WM-L10 Z 75–600 kW

WM-L10 Z
Two-stage

Use.

Fuels
- Class D gas oil per BS 2869 / IS 251
- Class A2 gas oil per BS 2869 / IS 251
- Green fuels

Further details on green fuel specifications can be found on page 7.

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

Applications
Weishaupt WM-L10 Z burners are suitable for intermittent firing and continuous firing on:
- EN 303-compliant heat generators
- LTHW boilers
- Air heaters

Permissible ambient conditions
- Ambient temperature
  -10 °C to +40 °C for oil firing
- Maximum 80 % relative humidity, no condensation
- Combustion air must be free of aggressive substances (halogens, chlorides, fluorides, etc.) and impurities (dust, debris, vapours, etc.)
- Adequate ventilation must be ensured for operation in enclosed spaces
- For plant in unheated areas, certain further measures may be required

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.

Protection class
IP 54

EU directives and regulations
The burners are independently tested and certified by a Notified Body. They fulfil the applicable requirements of the following EU directives and regulations:

EMC	EMC Directive 2014/30/EU
LVD	Low-Voltage Directive 2014/35/EU
MD	Machinery Directive 2006/42/EC
RoHS	Restriction of Hazardous Substances Directive 2011/65/EU

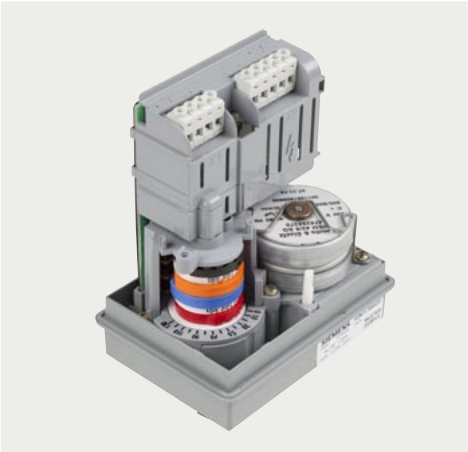
The relevant applied standards are detailed in the declaration of conformity.

All burners are labelled with:
- CE mark
- DIN CERTCO label and Reg. No.

WM-L10
two-stage

The burner controller's operating and display unit

LMO39 digital burner controller



Actuator with synchronous motor and cam switches

The Weishaupt WM 10 monarch® burner is available as a two-stage, oil-fired unit, the WM-L10 Z.

The burner's most fundamental difference is its LMO39 controller and SQN72 actuator.

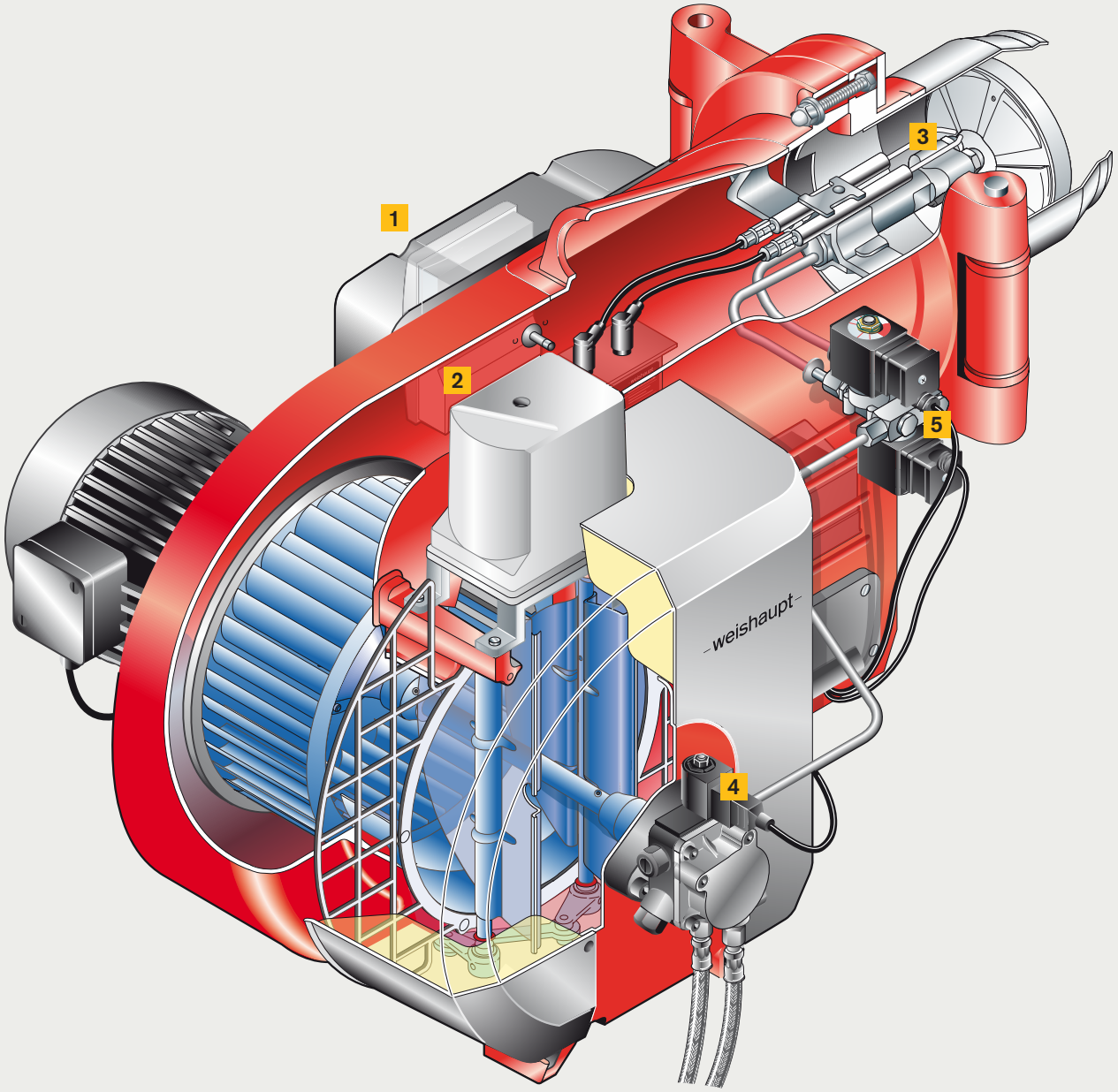
The two-stage version of the WM-L10 burner is only suitable for stand-alone combustion plant that does not have to interface with a communications system. It is notable for numerous interesting features, of which the following are particularly important:

- Digital burner controller for intermittent, single-fuel operation
- Undervoltage detection
- Remote control via operating unit
- Display of operating phase and error codes
- Precise operational timings thanks to digital signal processing
- Automatic controlled restart after 24 hours of continuous operation
- BCI or OCI interface for operating unit
- QRB flame sensor
- Actuator with synchronous motor
- Capacity control via thermostats or two-position switching
- Removable operating unit with error code display
- Optional fuel meter
- Type tested

Simple operation
The LMO39 digital burner controller reduces burner settings to a minimum and allows site-specific adjustments to be made using the ABE operating and display unit.

The ABE also displays the burner's current operating phase and, in the event of a lockout, the relevant error code.

Optimising the burner for combustion at partial and full load is as straightfoward as you would expect. The air damper actuator has rotating cam switches which are used to adjust the air volume to suit the oil throughput.



1 Inbuilt switchgear with LMO39 burner controller and its operating and display unit

2 SQN72 actuator

3 Two-stage execution

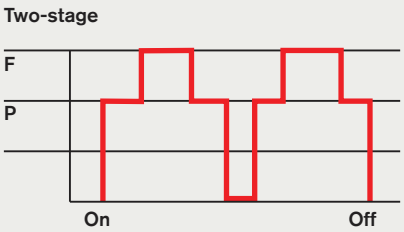
4 Solenoid valve functioning as an additional shutoff device

5 Stage 1 and stage 2 solenoid valves

Load control
Operating ranges
Dimensions
WM-L10/...-A Z

Two-stage load control (Z)

- Partial load: Oil is released during start-up by the opening of solenoid valve 1.
- Full load is reached by the opening of solenoid valve 2.

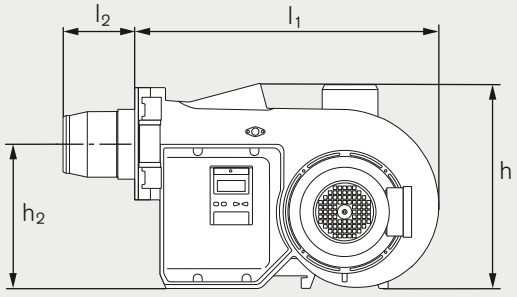


F = Full load (nominal load)
P = Partial load (min. load)

Model	Rating (kW)	
Standard version	**75 - 600**	0 100 200 300 400 500 600
Oil burners, version Z		
WM-L10/1-A Z	75 - 405	0 100 200 300 400 500 600
WM-L10/2-A Z	150 - 600	

Dimensions

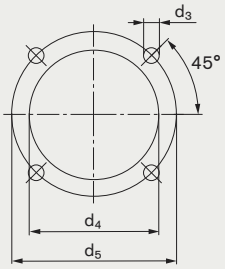
Dimension	Oil Z
l1 - Burner length excl. combustion head	659
l2 - Combustion head length	118–152
h1 - Overall burner height	445
h2 - Height to centreline of comb. head	313
b1 - Overall burner width	630

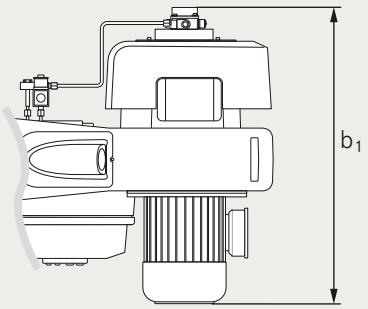


Mounting plate drilling dimensions

Dimension	Version Z
d3 - Thread diameter	M10
d4 - Inner diameter	165
d5 - Outer diameter	186

Dimensions in mm





Scope of delivery
Extra equipment
WM-L10/...-A Z

Version		Z
Burner housing, hinged flange, housing cover, Weishaupt burner motor (IE3), air inlet housing, fan wheel, combustion head, ignition unit, ignition cable, ignition electrodes, burner controller with operating unit, flame sensor, actuators, flange gasket, limit switch on hinged flange, fixing screws		●
LMO39 digital burner controller		●
Preset, capacity-based mixing assembly		●
SQN72 air damper actuator		●
Burner-mounted oil pump		●
2 oil solenoid valves, two-stage nozzle head with pre-installed oil nozzle 1 additional oil safety solenoid valve		●
Motor-mounted contactor for DOL start [1]		●
IP 54 protection		●
Combustion head extension	by 100 mm by 200 mm	○ ○
Oil hoses 1300 mm long in lieu of 1000 mm		○
Oil pressure gauge with ball valve, pump-mounted		○
Vacuum pressure gauge with ball valve, in supply		○
VZO8 oil meter > 150 kg	without transmitter with LF transmitter for external wiring with HF transmitter for external wiring	○ ○ ○
Motor with 230 V contactor and overcurrent protection		○

[1] The necessary motor protection can be provided either by a circuit breaker (supplied in a control panel by others) or integral overcurrent protection (optional extra).

Green Fuels (GF)

Fuel Version		Oil Standard
GF-**M**	**Blended bio-oil (3.0–20.9%)** Blend of mineral and esterified oils in accordance with fuel standard DIN SPEC 51603-6	●
GF-**P**	**Paraffinic oil** in accordance with fuel standard DIN/TS 51603-8	–
GF-**B30**	**Blended bio-oil (21.0–30.9%)** Blend of mineral and esterified oils in accordance with fuel standard DIN SPEC 51603-6	○
GF-**B100**	**Blended bio-oil (31.0–99.9%)** Blend of mineral and esterified oils in accordance with fuel standard DIN SPEC 51603-6	–
GF-**B100**	**Bio-oil (FAME)** Fatty Acid Methyl Ester in accordance with fuel standard EN 1421	–

● Standard
○ Optional
– Not available