

Technical information
Monobloc burners

Weishaupt monarch[®] burners
WM20 80–3000 kW



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WM 20

Gas

Oil

Dual-fuel



Load control

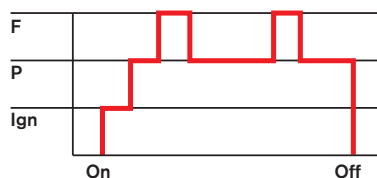
Model designation

WM 20

Two-stage (Z) with low-impact start

- The burner is driven, via a two-point signal (e.g. thermostat or pressure control) to full or partial load in response to heat demand. The burner undergoes a low-impact start with nozzle 1.

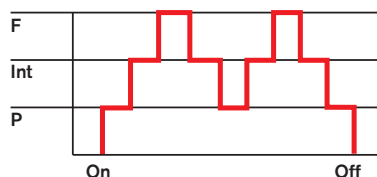
Two-stage



Three-stage (T)

- The burner is driven, via a two-point signal (e.g. thermostat or pressure control) to full, intermediate, or partial load in response to heat demand. Two-stage load control with low-impact start or low-impact changeover is also possible.

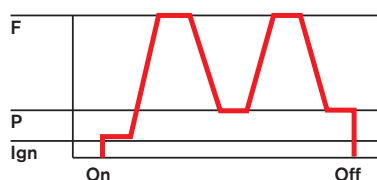
Three-stage



Sliding-two-stage (ZM)

- The burner is driven, via a two-point signal (e.g. thermostat or pressure control) to full or partial load in response to heat demand. Combustion remains CO and soot-free between load points.

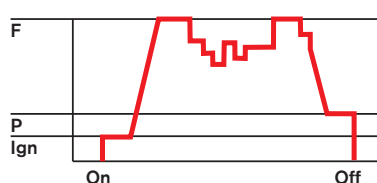
Sliding-two-stage



Modulating (ZM)

- An electronic controller makes infinitely variable load adjustments in response to heat demand.
- Available modulating executions:
 - W-FM 100 with optional load controller
 - W-FM 200 with standard load controller
- Alternatively, a controller can be mounted in the cover over the burner's integral electronic controls or in a separate control panel.

Modulating



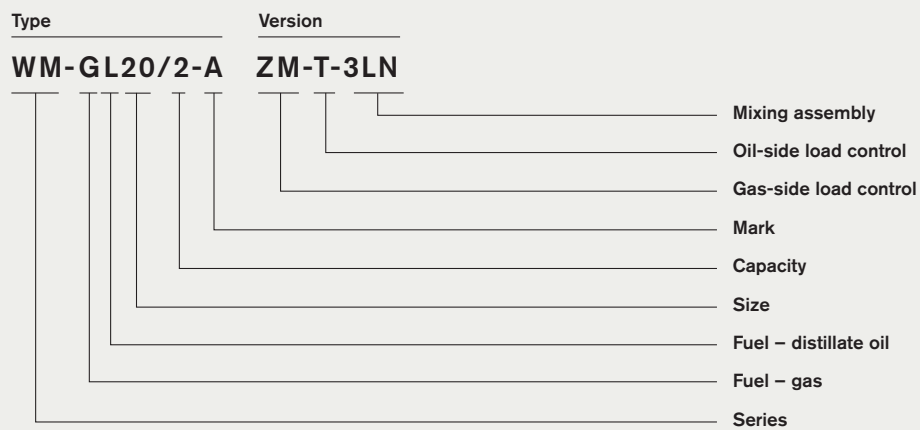
F = Full load (nominal load)

Int = Intermediate load

P = Partial load (Min. load)

Ign = Ignition load

Model designation

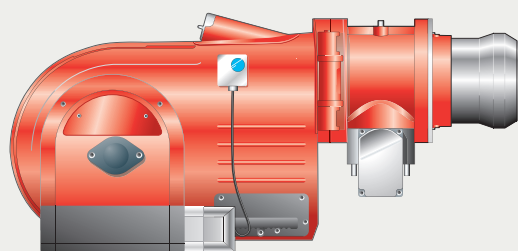


Details	Code	Meaning	Associated fuel
Series	WM	Weishaupt monarch® burner	
Fuel *	G L	Gas Class D / Class A2 oil	
Load control *	ZM ZMI Z T R	Sliding-two-stage / modulating High-turndown, sl.-2-st. / mod. Two-stage Three-stage Sliding-two-stage / modulating	Gas Gas Oil Oil Oil
Mixing assembly	– LN 3LN 4LN PLN	Standard Low-NO_x multiflam® multiflam® for FGR Premix Low-NO_x	Gas / oil Gas Gas / oil Gas / oil Gas

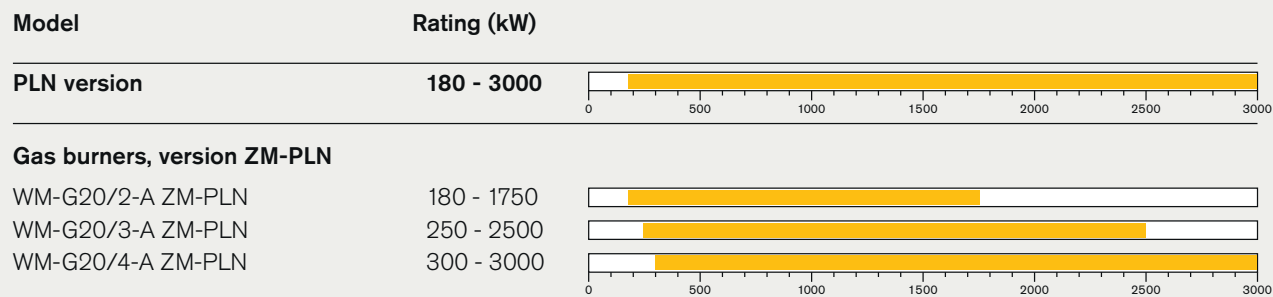
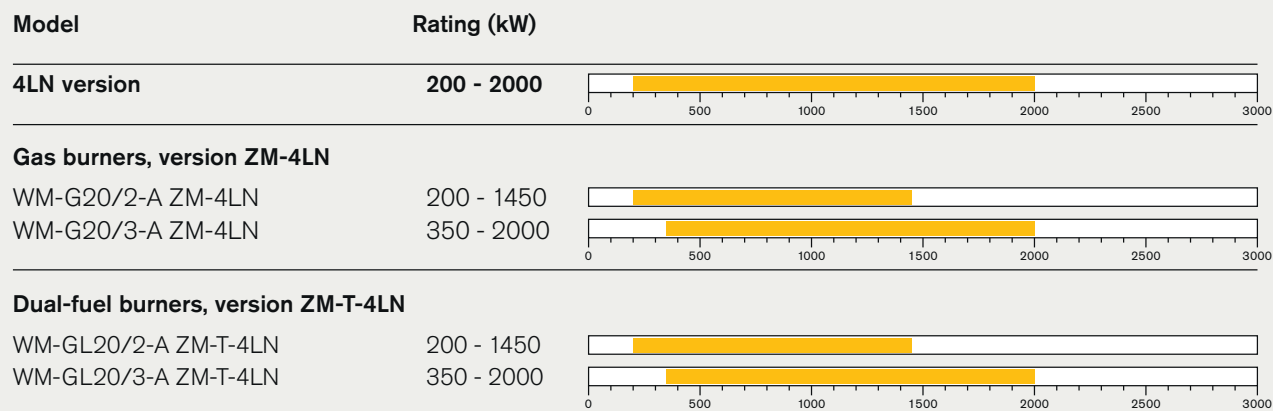
*) Dual-fuel burners use a combination of codes (GL, ZM-T, ZM-R).

Operating ranges

WM 20



Model	Rating (kW)	
Standard, LN and ZMI versions	80 - 2600	
Oil burners, versions T and R		
WM-L20/1-A T and R	400 - 1400	
WM-L20/2-A T and R	600 - 2100	
WM-L20/3-A T and R	800 - 2600	
Gas burners, version ZM		
WM-G20/2-A ZM	150 - 2100	
WM-G20/3-A ZM	350 - 2600	
Gas burners, version ZM-LN		
WM-G20/2-A ZM-LN	250 - 1600	
WM-G20/3-A ZM-LN	300 - 2000	
Dual-fuel burners, versions ZM-T and ZM-R		
WM-GL20/2-A ZM-T and R	150 - 2000	
WM-GL20/3-A ZM-T and R	250 - 2450	
Gas burner, version ZMI		
WM-G20/2-A ZMI	80 - 2000	

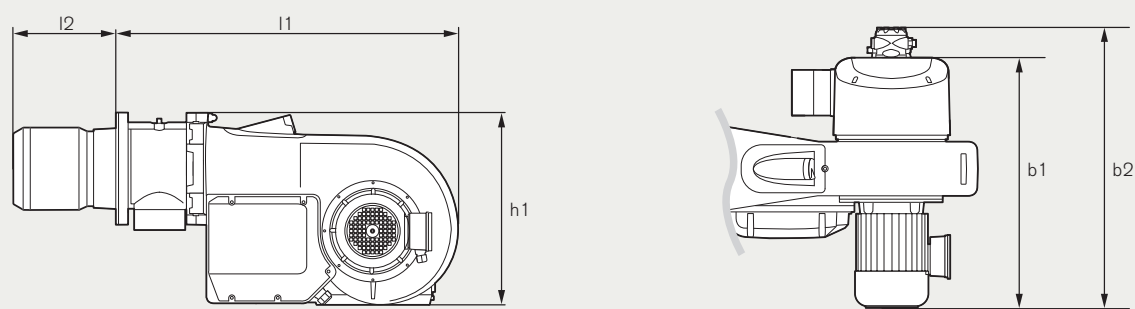




Dimensions

WM 20

Standard, LN, and ZMI versions



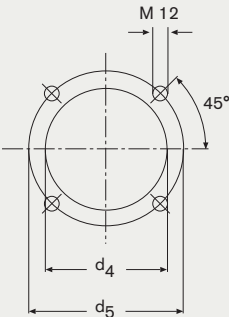
Dimensions – Standard and LN versions

Dimension	Oil T / R	Gas ZM / ZM-LN	Dual-fuel ZM-T / ZM-R
l1 – Burner length excluding combustion head	810	1010	1010
l2 – Combustion head length	217–257	231–272	231–266
h1 – Overall burner height (excluding optional air inlet flange, excluding underslung oil pump)	573	573	573
b1 – Overall burner width excluding oil pump (incl. 20 mm additional projection for frequency convertor)	810	770	810
b2 – Overall burner width including oil pump	895 ¹⁾	–	895 / 899 ¹⁾

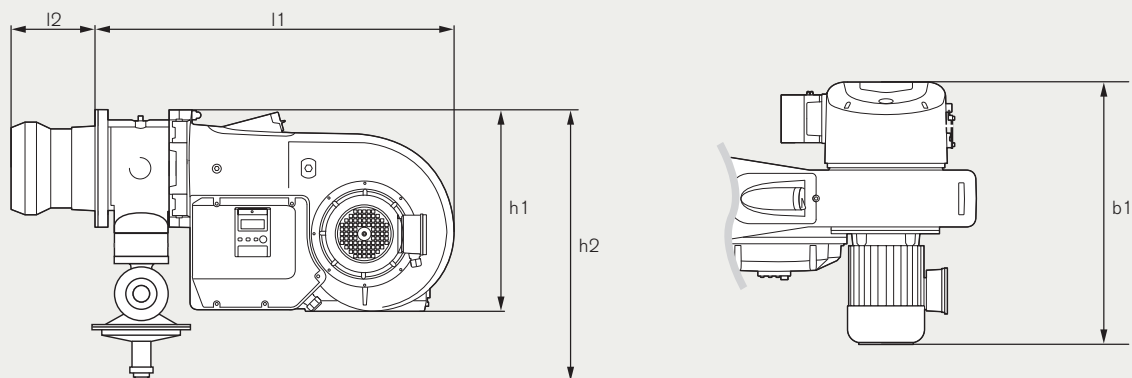
¹⁾ Additional 130 mm projection for pump with electromagnetic clutch
ⓘ Electromagnetic clutch is standard on ZM-R-version dual-fuel burners

Mounting plate drilling dimensions

Dimension	Version Standard / LN	Version ZMI
d4 – Inner diameter	240–270	270
d5 – Outer diameter	298	298



Dimensions in mm



Dimensions – ZMI version

Dimension	Version ZMI
l1 – Burner length excluding combustion head	1010
l2 – Combustion head length	231–266
h1 – Overall burner height without zero governor (excluding optional air inlet flange)	573
h2 – Overall burner height with zero governor – sizes Rp1 to DN125 (excluding optional air inlet flange)	646–999
b1 – Overall burner width (incl. 20 mm additional projection for frequency convertor)	770

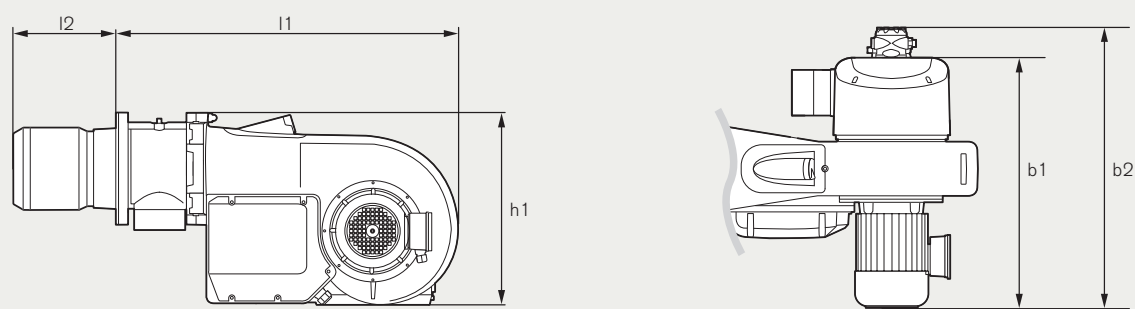
Dimensions in mm



Dimensions

WM 20

3LN, 4LN, and FGR versions



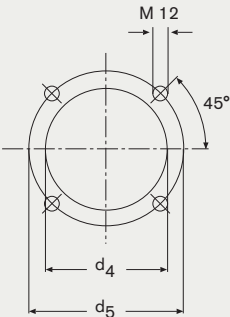
Dimensions – 3LN and 4LN versions

Dimension	Oil T / R	Gas ZM	Dual-fuel ZM-T / ZM-R
l1 – Burner length excluding combustion head	810	1010	1010
l2 – Combustion head length	295–320 / 361	295–320	231–325 / 361
h1 – Overall burner height (excluding optional air inlet flange, excluding underslung oil pump)	573	573	573
b1 – Overall burner width excluding oil pump	810 / 867	867	790 / 867
b2 – Overall burner width including oil pump	895 / 937 ¹⁾	-	875 / 937 ¹⁾

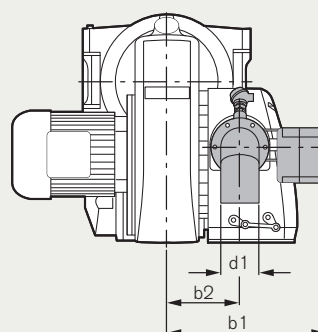
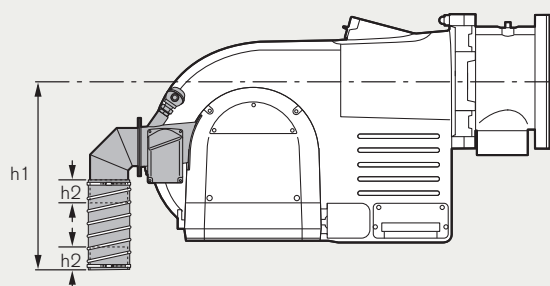
¹⁾ Additional 130 mm projection for pump with electromagnetic clutch
① Electromagnetic clutch is standard on ZM-R-version dual-fuel burners

Mounting plate drilling dimensions

Dimension	Version T / ZM / ZM-T	Version R / ZM-R
d4 - Inner diameter	270	305
d5 - Outer diameter	298	330



Dimensions in mm



Dimensions – FGR (flue gas recirculation)

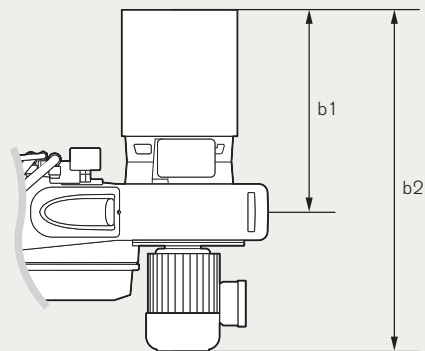
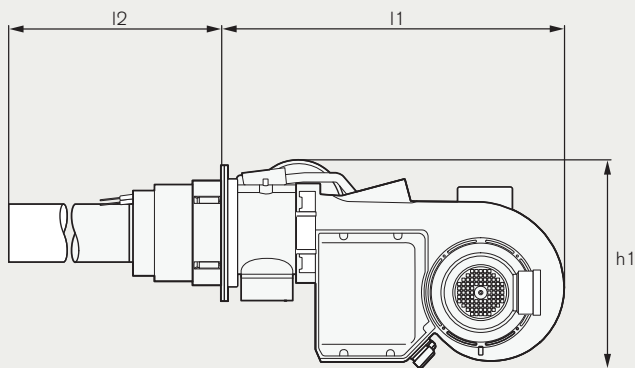
Dimension	Version 4LN
h1 – Centreline of burner mounting flange to bottom edge of hose	614 ± 10
h2 – Flanged elbow insertion depth	60 ± 10
b1 – Centreline of burner mounting flange to outer edge of actuator	397
b2 – Centreline of burner mounting flange to centreline of flanged elbow	182
d1 – Flanged elbow diameter	95

Dimensions in mm

Dimensions

WM 20

PLN version

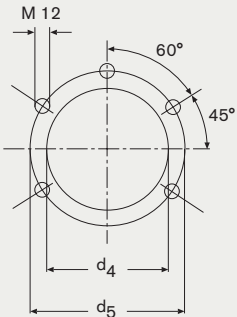


Dimensions – PLN version

Dimension	Version ZM-PLN
l1 – Burner length excluding burner tube	1012
l2 – Burner tube length: WM-G20/2, ...20/3, ...20/4	1023 / 1423 / 1623
h1 – Overall burner height	625
b1 – Width from burner centreline to outer edge of air inlet filter	545
b2 – Overall burner width: WM-G20/2, ...20/3, ...20/4	969 / 1009 / 1066

Mounting plate drilling dimensions

Dimension	Version ZM-PLN
d4 – Inner diameter	370
d5 – Outer diameter	400



Dimensions in mm