

Technical submittal



Products: **Varmax mk2 390 & 450 kW**

Project:

Customer:

Date:

- > Improved efficiency on split temperature systems due to high and low temperature return connections.
- > Non-dependent on system flow allowing wide differential temperatures.
- > Easy installation with no requirement for dedicated primary circuit and no minimum flow rates.
- > Quick and easy to disassemble with updated casing access.
- > Tolerant to a wide range of system water conditions with a corrosion resistant stainless steel heat exchanger.
- > Long life backed up by a 5-year heat exchanger warranty.
- > Well insulated for low standby losses.
- > NOx emissions comply with ErP legislation lower than 56mg/kWh.
- > Match heating system loads accurately with outputs up to 637kW from a single boiler and ability to cascade multiple boilers.
- > Simple flue system design as the flue gas non-return valve is built in to provide effective protection from re-circulation of flue gases through non-firing boilers.
- > Built in boiler sequence controls capable of controlling up to 16 boiler modules, multiple heating circuits and a hot water circuit using the master/slave principle.

	Boiler model	Units	390	450
Energy	Building regulations Part L seasonal efficiency	% gross	96.2	96.2
	Boiler output – maximum 80/60°C, NG & LPG*	kW	382.3	441.9
	Boiler output – maximum 50/30°C, NG & LPG*	kW	415	478
	Boiler output – minimum 80/60°C, Nat Gas	kW	87	87
	Boiler input (gross) - maximum, NG & LPG*	kW	390	450
	Boiler input (net) – maximum, NG & LPG*	kW	351	405
Water	Water content	litres	287	287
	System design flow rate @ 30°C ΔT rise	l/s	3	3.5
	Water side pressure loss @ 30°C ΔT rise	mbar	34	43
	System design flow rate @ 20°C ΔT rise	l/s	4.6	5.3
	Water side pressure loss @ 20°C ΔT rise	mbar	85	107
	System design flow rate @ 11°C ΔT rise	l/s	8.3	9.5
	Water side pressure loss @ 11°C ΔT rise	mbar	255	321
	Maximum water pressure	barg	6	6
Gas	Maximum flow temperature setting	°C	85	85
	Gas flow rate natural gas (G20) - maximum	m³/hr	41.3	47.6
	Maximum gas inlet pressure, Nat Gas	mbar	25	25
Flue	Nominal inlet pressure, Nat Gas	mbar	20	20
	Maximum flue gas temperature @ 80/60°C Nat Gas	°C	62.5	64.8
	Pressure at boiler flue spigot @ 80/60°C Nat Gas B23P	Pa	180	193
	Dry NOx emission**	mg/kWh	32	35
Electrical	NOx Class		6	6
	Electrical supply		230V 1Ph 50Hz	
	Power consumption – maximum boiler modulation	W	545	717
	Approx shipping weight	kg	592	592
	Noise emission @1m: @max. modulation	dB (A)	84	89

*390kW, 450kW, 525kW and 600kW models Nat Gas only

** (0% excess oxygen, mg/kWh dry air free); NG/LPG



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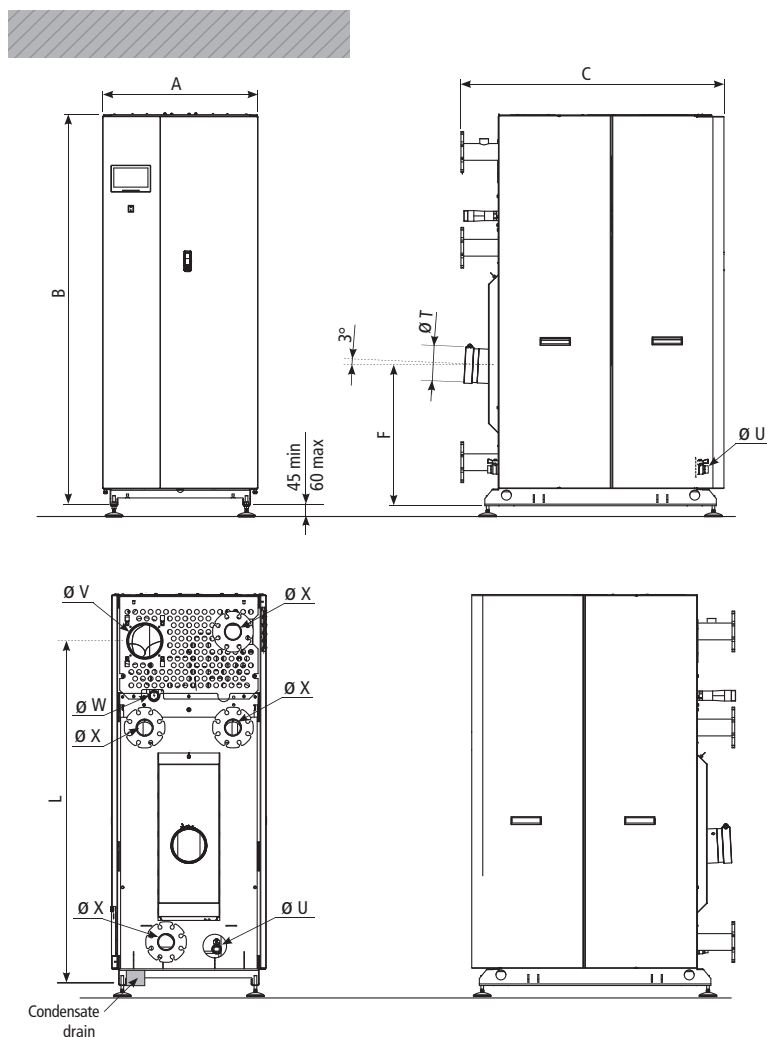
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Dimensions



Note: All dimensions in mm unless otherwise stated.

For full dimensional info (connection heights etc), refer to manual.

Dimensions

Dimensions	Units	390	450
A Width	mm	900	900
B Height	mm	2023	2023
C Depth	mm	1369	1369
Front clearance	mm	700	700
Back clearance	mm	500	500
Top Clearance	mm	427	427
Side Clearance	mm	450	450
T Ø Flue Outlet	mm	200	200
U Ø Drain Connection (Male)		G 1"	G 1"
V Ø Air Inlet	mm	180	180
W Ø Gas Connection (Male)		R 2"	R 2"
X Ø Flow / Return Connection		DN80	DN80

Accessories and options:

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