

Varmax single boiler technical data

Single boiler models 120, 140, 180, 225, 275, 320, 390, 450

	Model	Units	120	140	180	225	275	320	390	450
Energy	Building regulations Part L seasonal efficiency	% gross	96.13	96.13	96.33	96.33	96.24	96.24	96.22	96.22
	Boiler output - maximum 80/60°C, NG & LPG. 390kW and 450kW models Nat Gas only.	kW	117	136	175	219	268	312	381	439
	Boiler output - maximum 50/30°C, NG & LPG. 390kW and 450kW models Nat Gas only.	kW	127	148	191	238	290	338	415	478
	Boiler output - minimum 80/60°C, Nat Gas.	kW	27.3	27.2	41.8	41.8	64.3	64.3	85	84.7
	Boiler output - minimum 80/60°C, LPG	kW	38	37.8	61.3	61.3	87.6	87.7	N/A	N/A
	Boiler input (gross) - maximum, NG & LPG. 390kW and 450kW models Nat Gas only.	kW	120	140	180	225	275	320	390	450
	Boiler input (net) - maximum, NG & LPG. 390kW and 450kW models Nat Gas only.	kW	120	140	180	225	275	320	390	450
Water	Standby loss	W	182	182	213	213	259	259	311	311
	Water content	litres	116	116	151	151	239	239	287	287
	System design flow rate @ 30°C ΔT rise	l/s	0.9	1.1	1.4	1.7	2.1	2.5	3	3.5
	Water side pressure loss @ 30°C ΔT rise	mbar	27	33	25	36	36	53	34	43
	System design flow rate @ 20°C ΔT rise	l/s	1.4	1.6	2.1	2.6	3.2	3.7	4.6	5.3
	Water side pressure loss @ 20°C ΔT rise	mbar	60	75	57	81	82	119	77	97
	System design flow rate @ 11°C ΔT rise	l/s	2.5	2.9	3.8	4.7	5.8	6.8	8.3	9.5
	Water side pressure loss @ 11°C ΔT rise	mbar	198	248	188	268	271	393	255	321
	Minimum water pressure	barg	1	1	1	1	1	1	1	1
	Maximum water pressure	barg	6	6	6	6	6	6	6	6
	Minimum flow temperature setting	°C	22	22	24	24	20	20	23	23
	Maximum flow temperature setting	°C	85	85	85	85	85	85	85	85
	Gas	Gas flow rate, NG (G20) - maximum	m³/hr	12.7	14.8	19.1	23.8	29.1	33.9	41.3
Maximum gas inlet pressure, Nat Gas		mbar	25	25	25	25	25	25	25	25
Nominal inlet pressure, Nat Gas		mbar	20	20	20	20	20	20	20	20
Minimum gas inlet pressure, Nat Gas		mbar	17	17	17	17	17	17	17	17
Gas flow rate, LPG (G31) - maximum		m³/hr	4.9	5.7	7.4	9.2	11.3	13.1	N/A	N/A
Nominal inlet pressure, LPG		mbar	37	37	37	37	37	37	N/A	N/A
Flue	Approx. flue gas volume Nat Gas @ 15°C, 8.8–9.2% CO ₂ @ N.T.P	m³/hr	167.5	195.2	251.8	313.8	383.7	447	544.6	627.6
	Maximum flue gas temperature @ 80/60°C Nat Gas	°C	60.8	62.1	61	62.3	61.7	63.4	62.5	64.8
	Pressure at boiler flue spigot @ 80/60°C	Pa mbar	200	200	115	165	122	176	180	193
	Approx. flue gas volume LPG @ 15°C, 10.4–10.8% CO ₂ @ N.T.P	m³/hr	153.9	179	232.4	288.9	354.9	411.4	N/A	N/A
	Maximum flue gas temperature @ 80/60°C LPG	°C	60.3	62.6	60.3	62.2	63	65.4	N/A	N/A
	Pressure at boiler flue spigot @ 80/60°C LPG	Pa mbar	167	200	103	136	118	157	N/A	N/A
Dry NOx emission (0% excess oxygen, mg/kWh dry air free); NG/(LPG)	mg/kWh	30	30	30	30	40	40	35	35	
Electrics	Electrical supply		230V, 1Ph, 50Hz	230V, 1Ph, 50Hz	230V, 1Ph, 50Hz	230V, 1Ph, 50Hz	230V, 1Ph, 50Hz	230V, 1Ph, 50Hz	230V, 1Ph, 50Hz	230V, 1Ph, 50Hz
	Power consumption - maximum boiler modulation	W	204	311	179	320	238	352	480	660
	Start current (per module)	Amp	3.5	5.4	3.1	5.6	4.1	6.1	8.3	11.5
	Run current (per module)	Amp	0.89	1.35	0.78	1.39	1.03	1.53	2.09	2.87
	Approx shipping weight	kg	340	340	393	393	502	502	592	592
Noise emission @1m: @max. modulation	dB (A)	65	65	61	61	61	61	68	68	

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580-956

Varmax dual boiler technical data

MODELS

kW
OUTPUT

Dual boiler models 550, 640, 780, 900

	Model	Units	550	640	780	900
Energy	Building regulations Part L seasonal efficiency	% gross	96.24	96.24	96.22	96.22
	Boiler output - maximum 80/60°C, NG & LPG. 780kW and 900kW models Nat Gas only.	kW	536	624	762	878
	Boiler output - maximum 50/30°C, NG & LPG. 780kW and 900kW models Nat Gas only.	kW	580	676	830	956
	Boiler output - minimum 80/60°C, Nat Gas.	kW	64.3	64.4	85	84.9
	Boiler output - minimum 80/60°C, LPG	kW	87.6	87.7	N/A	N/A
	Boiler input (gross) - maximum, NG & LPG. 780kW and 900kW models Nat Gas only.	kW	550	640	780	900
	Boiler input (net) - maximum, NG & LPG. 780kW and 900kW models Nat Gas only.	kW	550	640	780	900
	Standby loss	W	518	518	622	622
Water	Water content	litres	478	478	574	574
	System design flow rate @ 30°C ΔT rise	l/s	4.3	5	6.1	7
	Water side pressure loss @ 30°C ΔT rise	mbar	36	53	34	43
	System design flow rate @ 20°C ΔT rise	l/s	6.4	7.4	9.1	10.5
	Water side pressure loss @ 20°C ΔT rise	mbar	82	119	77	97
	System design flow rate @ 11°C ΔT rise	l/s	11.6	13.5	16.5	19.1
	Water side pressure loss @ 11°C ΔT rise	mbar	271	393	255	321
	Minimum water pressure	barg	1	1	1	1
	Maximum water pressure	barg	6	6	6	6
	Minimum flow temperature setting	°C	20	20	23	23
	Maximum flow temperature setting	°C	85	85	85	85
Gas	Gas flow rate, NG (G20) - maximum	m³/hr	58.2	67.7	82.6	95.2
	Maximum gas inlet pressure, Nat Gas	mbar	25	25	25	25
	Nominal inlet pressure, Nat Gas	mbar	20	20	20	20
	Minimum gas inlet pressure, Nat Gas	mbar	17	17	17	17
	Gas flow rate, LPG (G31) - maximum	m³/hr	22.5	26.2	N/A	N/A
	Nominal inlet pressure, LPG	mbar	37	37	N/A	N/A
Flue	Approx. flue gas volume Nat Gas @ 15°C, 8.8–9.2% CO ₂ @ N.T.P	m³/hr	767.4	894	1089.2	1255.2
	Maximum flue gas temperature @ 80/60°C Nat Gas	°C	61	60.8	60.3	62.1
	Pressure at boiler flue spigot @ 80/60°C	Pa mbar	127	151	177	200
	Approx. flue gas volume LPG @ 15°C, 10.4–10.8% CO ₂ @ N.T.P	m³/hr	709.8	822.8	N/A	N/A
	Maximum flue gas temperature @ 80/60°C LPG	°C	62.8	64.7	N/A	N/A
	Pressure at boiler flue spigot @ 80/60°C LPG	Pa mbar	121	132	N/A	N/A
Electrics	Dry NOx emission (0% excess oxygen, mg/kWh dry air free); NG/(LPG)	mg/kWh	40	40	35	35
	Electrical supply		230V, 1Ph, 50Hz	230V, 1Ph, 50Hz	230V, 1Ph, 50Hz	230V, 1Ph, 50Hz
	Power consumption - maximum boiler modulation	W	476	704	960	1320
	Start current (per module)	Amp	8.3	12.2	16.7	23
	Run current (per module)	Amp	2.07	3.06	4.17	5.74
Approx shipping weight	kg	1050	1050	1240	1240	
Noise emission @1m: @max. modulation	dB (A)	61	61	68	68	