

Technical submittal



Products: **Dorchester DR-SG 70-538, 80-538, 100-538, 120-538**

Project:

Customer:

Date:

- Storage tank, heat exchanger and coil all manufactured from stainless steel
- Enhanced durability under challenging water conditions
- NOx under 40 mg/kWh across the range (Class 6)
- Quick and easy burner access
- Operated via the popular Siemens LMS Mini controls platform
- Integrated flue non-return valve
- Can deliver flow rates to satisfy high demand environments
- Suitable for natural gas and LPG systems (conversion kit included).



Model:			DR-SG 70-538 AA031262	DR-SG 80-538 AA031263	DR-SG 100-538 AA031264	DR-SG 120-538 AA031265
Part Number:						
Energy	Max Heat Input (Gross)	kW	69.9	80	100	120
	Max Power Output (Net)	kW	73.4	84	105	126
	Building regulations Part L, EN89 100% efficiency (NCV)	%	106	106	106	106
	Building regulations Part L, EN89 100% efficiency (GCV)	%	95.5	95.5	95.5	95.5
	Standby Loss	kWh/day	3.2	3.2	3.2	3.2
	Building regulations Part L, Maintenance Consumption (EN89)	kWh/day	5.6	5.6	5.6	5.6
	ErP efficiency rating		A	n/a	n/a	n/a
	Water Heater Efficiency (ErP)	%	92.7	91.3	90.8	90
	ErP Load Profile		3XL	3XL	3XL	3XL
Water	Storage Capacity	L	538	538	538	538
	1st 10 mins at ΔT 50°C	l/10'	475	500	550	600
	1st hour at ΔT 50°C	l/60'	1500	1700	2000	2300
	Continuous Flow at ΔT 50°C	l/hr	1280	1460	1820	2190
	Max DHW temperature setpoint	°C	80	80	80	80
	Max operating pressure (open vented)	bar	7	7	7	7
	Max operating pressure (unvented)	bar	6.5	6.5	6.5	6.5
	Heat-up time (mins) 50°C rise		26	23	18	15
	Heat-up time (mins) 55°C rise		29	25	20	17
Gas	Gas Inlet Pressure (Nominal nat gas)	mbar	20	20	20	20
	Gas flow rate (Nominal nat gas)	m³/hr	7.4	8.5	11	12.7
	Gas Inlet Pressure (Nominal, LPG)	mbar	37	37	37	37
	Gas flow rate (LPG)	m³/hr	2.7	3.1	4	4.7
Flues	Max flue gas temperature	°C	100	100	100	100
	Nominal flue gas operating temp	°C	56.8	58.8	59.8	59.3
	Flue Gas Volume @15°C	kg/h	104.4	118.8	158.4	187.2
	NOx emissions	mg/kWh	39.5	39.5	39.5	39.5
	Pressure at flue outlet	Pa	65	95	155	200
	Air inlet/Flue outlet diameter	mm	130	130	130	130
	Max system length – concentric flues	m	20	20	20	20
Electrical	Electrical Supply V230 V AC (+10%, -15%) 50Hz					
	Fuse rating	amp	6.3	6.3	6.3	6.3
	Power consumption (maximum)	W	69	90	160	270
	Power consumption (standby)	W	4.5	4.5	4.5	4.5
	Sounds Power Level (LWA)	dBA	67	69	74	78
Misc	Number of Anodes		3	3	3	3
	Dry weight	kg	240	240	240	240
	Filled Weight	kg	778	778	778	778

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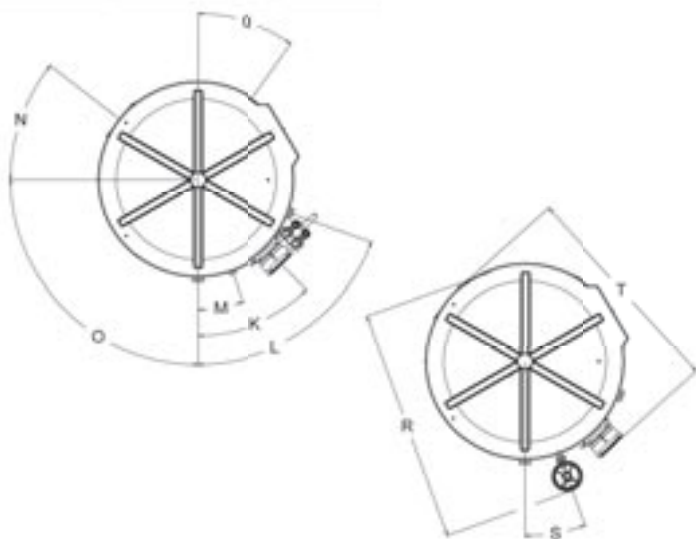
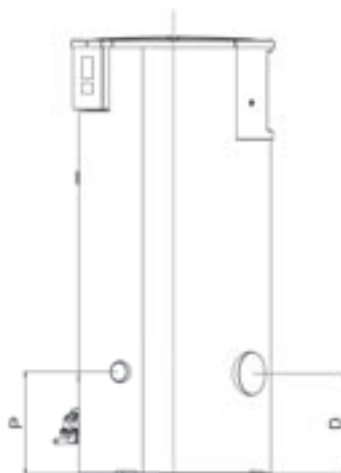
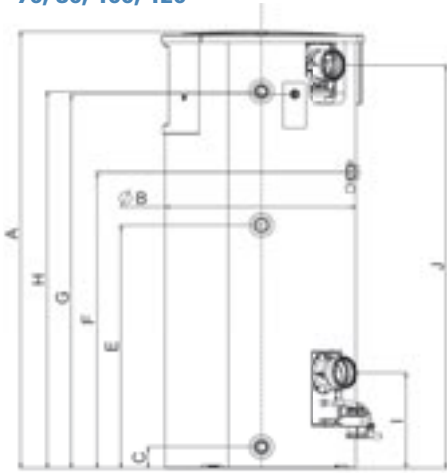
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Dorchester DR-SG XX-538 70, 80, 100, 120



Connections

	Dorchester DR-SG XX-538			
	70	80	100	120
1 Hot water outlet	Rp 1" ½			
2 Loop return	Rp 1" ½			
3 Cold water inlet	Rp 1" ½			
4 T&P valve	Rp 1" ½			
5 Gas inlet	R 1"			
6 Air inlet	Ø 130			
7 Flue outlet	Ø 130			

Clearances

ALL MODELS		DR-SG
Clearance – front (service)	mm	Min 500
Clearance – sides	mm	500
Clearance – rear	mm	500
Clearance – top	mm	175

Dimensions

	DR-SG XX-538
A Overall height	2028
B Diameter	Ø 890
C Height to cold water inlet	100
D Height to inspection hatch	467
E Height to secondary return	1129
F Height to T&P valve connection	1373
G Height to gas connection	1735
H Height to hot water outlet	1748
I Height to flue outlet	442
J Height to air inlet	1871
K Angle position of flue outlet	45°
L Angle position of T&P valve fitting	70°
M Angle position of gas connection	20°
N Angle position of inspection hatch	38°
O Angle position of HMI	90°
P Height of lower anode fitting	470
Q Angle position of lower anode fitting	35°
R Overall width with LPG conversion kit	639
S Angle position of gas connection with LPG conversion kit	20°
T Max installed width	1020
U Height to condensate trap outlet	151

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