

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 |
| | Storage Capacity | L | 538 | 538 | 538 | 538 |
| Water | 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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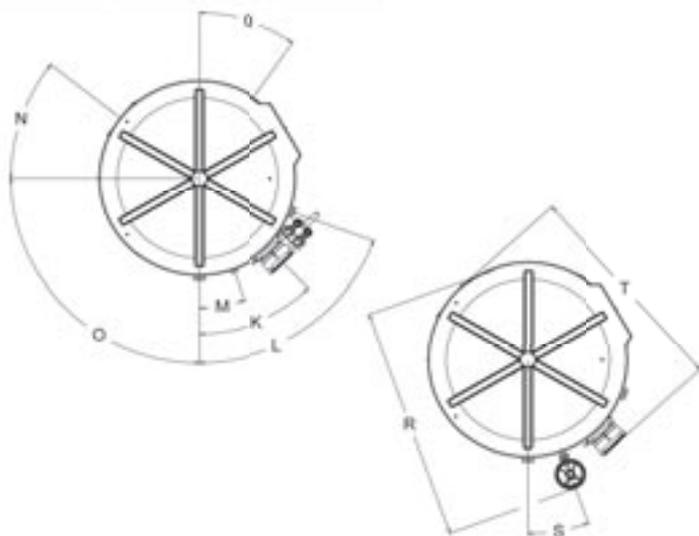
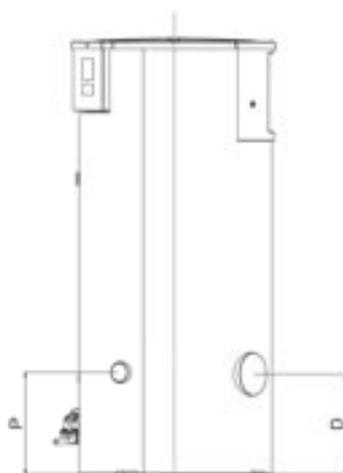
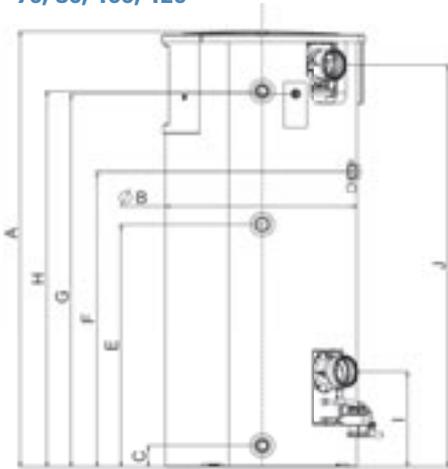
Products: **Dorchester DR-SG 70-538, 80-538, 100-538, 120-538**

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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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