ModuSat® XR Single Plate Domestic Hot Water

Heat interface unit for instantaneous domestic hot water (DHW), with electronic PID control using a Pressure Independent Control Valve (PICV) with modulating actuator, providing a low DHW primary return temperature as well as differential pressure control and flow rate regulation.

Application

The ModuSat® XR Single Plate DHW unit is compact and wall mounted, meaning it fits perfectly in an apartment utility room or kitchen cupboard, and offers a simple solution for providing instantaneous hot water in communal and district systems.

These units are designed to operate with the Evinox SmartTalk® two-way communication system for remote metering and diagnostics.

Domestic Hot Water

Domestic hot water is heated via a plate heat exchanger and the temperature is regulated by the modulation of primary flow rate with the integrated PICV actuator.

Features & Benefits

- A range of sizes available to suit small studio apartments or large family homes
- KIWA approved unit provides compliance with the UK Water Regulations (Equal to WRAS approval)
- WRAS approved components
- Pipework constructed from copper
- External filling loop (Optional)
- SmartTalk two-way communication
- Remote monitoring, alarms, and diagnostics
- Includes inbuilt TCP/IP technology to operate on an Ethernet network if required
- Capable of reading an electricity meter (Option for ENE3)
- Flushing bypass kit enables the primary side of the system to be flushed and cleaned without damage to the unit
Components
A  Primary / LTHW flow
B  Primary / LTHW return
C  Domestic cold water inlet
D  Domestic hot water outlet

Primary Side Circuit
1  Insulated plate heat exchanger (Domestic Hot Water)
2  DHW Pressure Independent Control Valve with actuator
3  Heat meter

DHW Secondary Side Circuit
4  Flow sensor
5  Blending valve (For additional DHW safety only)

Controls & Other Items
6  Electronic control board
7  ViewSmart room control unit
8  Flushing by-pass kit
### Dimensions

#### Typical ModuSat® XR Single Plate DHW

<table>
<thead>
<tr>
<th>Connections</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>A, B, C, D</td>
<td>a</td>
</tr>
<tr>
<td>SP-DHW 55 &amp; 70</td>
<td>60</td>
</tr>
<tr>
<td>SP-DHW 100</td>
<td>90</td>
</tr>
</tbody>
</table>

Front View

![Front View Diagram](image)

Side View

![Side View Diagram](image)
Technical Details

Typical DHW Performances at 10/50°C

<table>
<thead>
<tr>
<th>ModuSat® XR Single Plate DHW 55</th>
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<th>ModuSat® XR-ECO Single Plate DHW 70</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary flow (°C)</td>
<td>80</td>
<td>70</td>
</tr>
<tr>
<td>Primary Return* (°C)</td>
<td>23.8</td>
<td>24.9</td>
</tr>
<tr>
<td>Power (kW)</td>
<td>70</td>
<td>55</td>
</tr>
<tr>
<td>DHW flow (l/min)</td>
<td>25.1</td>
<td>19.7</td>
</tr>
<tr>
<td>DHW (°C)</td>
<td>10 / 50</td>
<td></td>
</tr>
<tr>
<td>Primary pressure drop* (kPa)</td>
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Typical DHW Performances at 10/55°C

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<tr>
<td>Power (kW)</td>
<td>58</td>
<td>35</td>
</tr>
<tr>
<td>DHW flow (l/min)</td>
<td>18.5</td>
<td>11.2</td>
</tr>
<tr>
<td>DHW (°C)</td>
<td>10 / 55</td>
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</tr>
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*Industry best practice guides, such as the London Heat Network Manual and CIBSE/ADE Heat Networks Code of Practice (CP1) recommend a primary return temperature of less than 25°C from domestic hot water production at design load. ModuSat XR units deliver return temperatures significantly below this across a wide range of primary system operating conditions, from as low as 55°C (Please refer to figures listed for “Primary return °C” in all tables above).

Typical performance figures for hot water are shown. Other selections are available to suit project requirements. Modusat XR typical performances comply with best practice recommendations from the CIBSE/ADE CP1 and BSRIA Guide BG62/2015.

Technical features

- Max operating pressure: 16 bar
- Power supply voltage: 220/240 Volt (AC) 50 Hz
- Max supply temperature (Primary): 95 °C
- Min DCW static pressure: 1 bar
- Brazing material: Copper
- Max allowable primary pressure drop: 4 bar
- Optional casing and pipework insulation available
- External filling loop
- Integral hot water mixing valve for extra safety