

ModuSat® XR Single Plate Direct Heating Unit

The Evinox ModuSat® single plate double circuit heat interface unit (HIU) provides high efficiency heating and independent fast recovery hot water, designed for installation with a suitable external DHW storage tank fed by the unit (not Evinox supply).

The unit consists of a single plate heat exchanger, combined with electronic PID control using Pressure Independent Control Valve (PICV) with modulating actuator achieving a low primary return temperature as well as providing differential pressure control and flow rate regulation.

The SP-DC heat interface unit uses a diverter valve to switch secondary flow either through the heating circuit or fed to the external DHW tank and operates in DHW priority mode to provide fast recovery of hot water.

In addition to this the ModuSat® can provide direct control of underfloor heating output temperature without the need for any underfloor pumps, blending valves or mixing valves. Available in a range of plate sizes and connection configurations, the SP-DC HIU is suitable for many different type of installation.

Application

The ModuSat® SP-DC unit is designed to operate with Evinox SmartTalk® two-way communication system for remote metering and diagnostics.

Heating

The heating circuit consists of a plate heat exchanger (PHE), safety relief valve, pressure gauge, flow and return temperature sensors, Wilo PWM circulation pump and expansion vessel.

The heating circuit flow temperature is controlled by the modulation of the primary flow rate with the integrated PICV actuator. Weather compensation is applied to the set heating temperature using SmartTalk® 2-way communication. Suitable for radiators, underfloor heating or fan coil units.

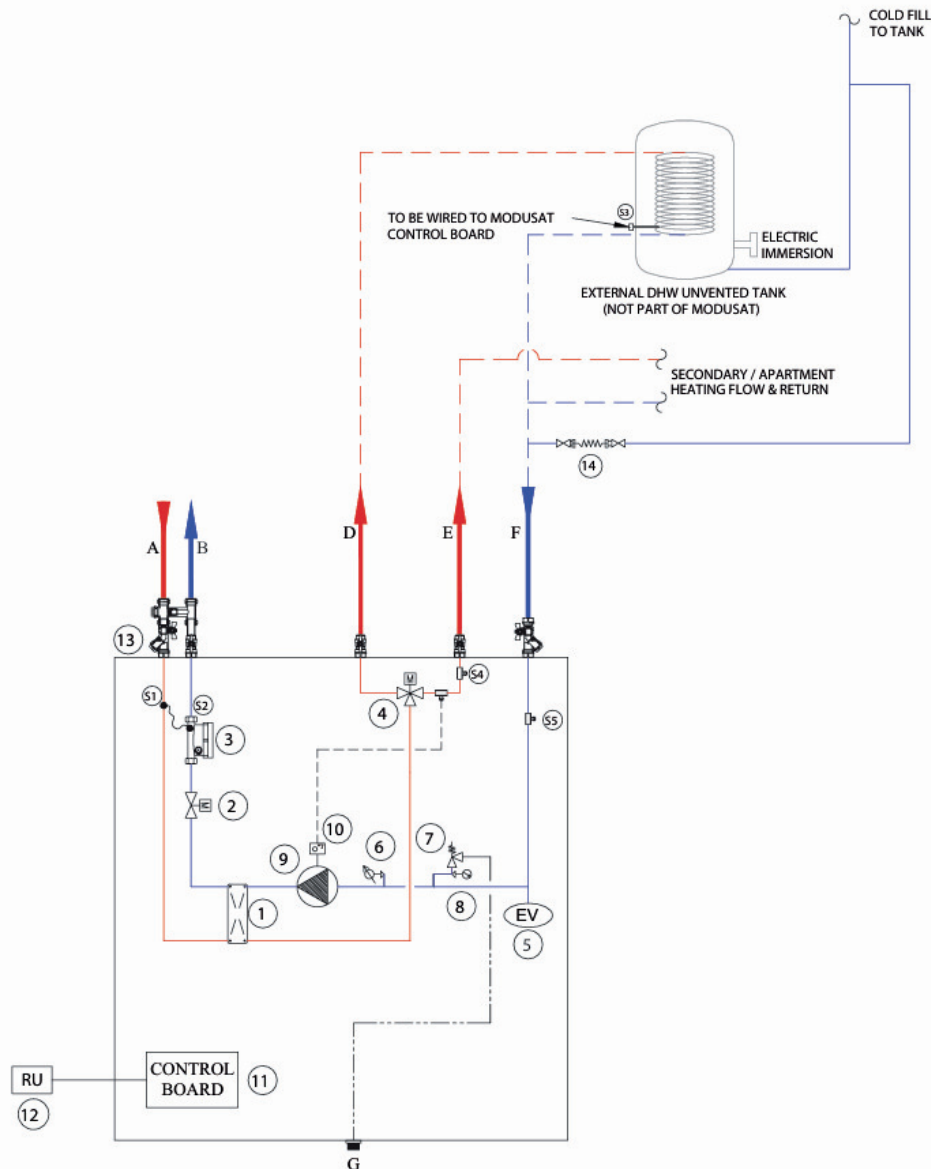
Domestic Hot Water is generated in an external unvented cylinder (not Evinox supply).



Features & Benefits

- Pipe & case insulation (Optional)
- Pipework constructed from copper
- External filling loop (Optional)
- SmartTalk two-way communication
- Remote monitoring, alarms, and diagnostics
- Wilo PWM Pump – Provides compliance with EU ErP Directive 2015
- 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

Typical ModuSat® Single Plate Double Circuit



Components

A Primary / LTHW flow
B Primary / DH Return
D DHW tank coil flow Domestic hot water outlet
E Secondary / Apartment heating flow
F Secondary / Apartment heating common return
G Connection for safety discharge

Primary Circuit Side

1 Insulated plate heat exchanger (Heating)
2 Pressure independent heating control valve with actuator
3 Heat Meter

Heating Secondary Side Circuit

4 Motorised diverter valve
5 Heating expansion vessel
6 Low pressures witch

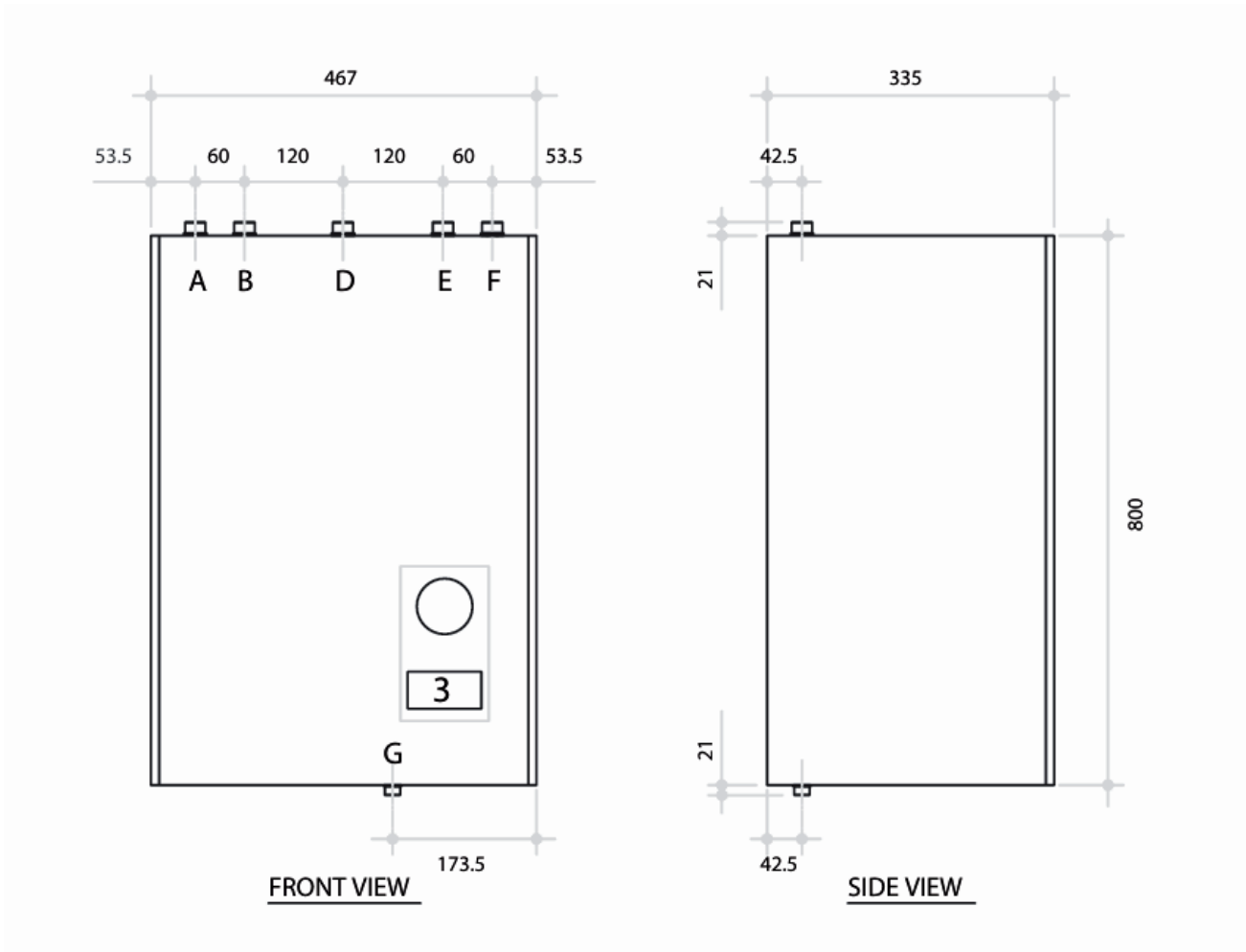
7 Safety relief discharge

8 Manometer
9 Heating circulation pump
10 Safety thermostat (Optional)

Controls & Other Items

11 Electronic control board
12 ViewSmart room control unit
13 Strainer & IV assembly
14 Filling loop (External)

Typical ModuSat® XR Single Plate Direct Heating



Please note: Bottom connection configuration also available

Connections		
	A, B, D, E, F	G
ModuSat® SP-DC	3/4"	1/2"

Typical Heating Performances

Circuit	ModuSat® SP-DC 20	ModuSat® SP-DC 20	ModuSat® SP-DC R70	ModuSat® SP-DC R70
Heating Performance (kW)	10	10	23	23
Heating flow rate (kg/s)	0.239	0.239	0.275	0.275
Heating flow/return (°C)	45 / 35	45 / 35	60 / 40	60 / 40
Primary flow/return (°C)	80 / 37.7	70 / 37.7	80 / 41.9	70 / 42.2
Primary flow (kg/s)	0.057	0.074	0.145	0.198
Residual pump head (kPa)	42	42	37	37

Technical Features

- Nominal pressure: 16 bar
- Power supply voltage: 220/240 Volt (AC) 50 Hz
- Max supply temperature (Primary): 95 °C
- Brazing material: Copper
- Heating expansion vessel: 8L
- Max allowable primary pressure drop: 4 bar
- Optional casing and pipework insulation available
- External filling loop