# **S3 MANIFOLD ASSEMBLY**

## Overview

The Warmup Stainless Steel Manifold range provides flexible zoning and water regulation for 2 to 12 underfloor heating circuits. Supplied complete with Taconova TopMeters, Fill/Drain Valves, Air Vents and a Thermomanometer, it is equipped with all the features needed to commission an underfloor heating system quickly and confidently.

Available separately, the Warmup Mixing Unit provides water temperature regulation between 20°C and 60°C, for tailored system performance.

Mixing units are required for all installations where the temperature of the water provided by the heat source either does or could exceed the design water temperature of the floor heating system. This includes all heat sources which intermittently 'over heat' due to sterilisation cycles or uncontrolled heating.



MANIFOLD & MIXING UNIT	
1 Mounting Bracket	8 Manual Air Vent
2 Flow Gauge	9 Capillary Thermostat
3 Thermometer - secondary	10 Mixing Unit
4 Thermomanometer	11 Fill/Drain Valve
5 Grundfos UPM3 Circulator	12 Primary Isolation Valve
6 Secondary - Flow	13 Secondary - Return
7 Electrothermic Actuator (Option)	14 Primary pipework

			Width/No. of Ports										
Manifold Type	Height	Depth	2	3	4	5	6	7	8	9	10	11	12
Excluding Mixing Unit	340	95	190	240	290	340	390	440	490	540	590	640	690
Including Mixing Unit	450	128	490	540	590	640	690	740	790	840	890	940	990
Bracket Spacing (A)			165	215	265	315	365	415	465	515	565	615	665





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### Features

#### Manifold

Thermomanometer on the flow arm allows for easy pressure testing, system commissioning and 'at a glance' operational checks thereafter

 ${\tt Taconova}\ {\tt TopMeter}\ {\tt flow}\ {\tt gauges}\ {\tt provide}\ {\tt quick}, {\tt accurate}\ {\tt and}\ {\tt reliable}\ {\tt water}\ {\tt regulation}$ 

5th Generation Möhlenhoff actuators combine their renowned reliability with just 1W power usage





#### **Mixing Units**

Full control mixing valve with adjustable bypasses enables renewable heat sources to be used with no loss in efficiency

Gundfoss UPM3 25/70 circulator provides constant pressure regulation, for stable circuit flow rates

Anti-tampering device fitted within Capillary Thermostat deters unwanted adjustments

## **Technical Specifications**

MANIFOLD - TECHNICAL SPECIFICATIONS				
MATERIAL	304 Stainless Steel			
PORTS AVAILABLE	2 - 12			
TEMPERATURE RANGE	-5°C to +60°C			
MAX OPERATING PRESSURE	6 Bar			
MAX TEST PRESSURE	10 Bar			
ADJUSTMENT RANGE	0 - 5 l/min			
MEASURING ACCURACY	±10% (of highest nominal value)			
MANIFOLD ARM DIMEN- SIONS	40 mm X 40 mm			
PIPE FITTING CENTRES	50 mm			
PIPE FITTING DIAMETERS	G-3/4"			

<b>ACTUATORS - TECHNI</b>	CAL SPECIFICATIONS
OPERATING VOLTAGE	220-240 V AC 50/60Hz
OPERATING TEMPERATURE	0 to +60 °C
POWER	1 W
DE-ENERGIZED POSITION	Normally Closed
INRUSH CURRENT	max. 550 mA
STROKE	4 mm
IP RATING	IP54
STORAGE TEMPERATURE	-25 to 60 °C
APPROVAL AND MARKING	CE, UKCA

### Grundfos UPM3 25-70 130 - TECHNICAL SPECIFICATIONS

OPERATING VOLTAGE	230 V ac 50Hz
CONNECTIONS	G1 1/2
WEIGHT	1.9 (kg)
SYSTEM PRESSURE	Max. 1.0 MPa (10 bar)
MINIMUM INLET PRES- SURE	0.05 MPa (0.50 bar) at 95°C liquid temperature
LIQUID TEMPERATURE	+2°C to +110°C (TF110)
ENCLOSURE CLASS	IP44 (non-condensing) K: IPx4D (condensing)
MOTOR PROTECTION	No external protection needed
APPROVAL AND MARKING	VDE, CE, UKCA