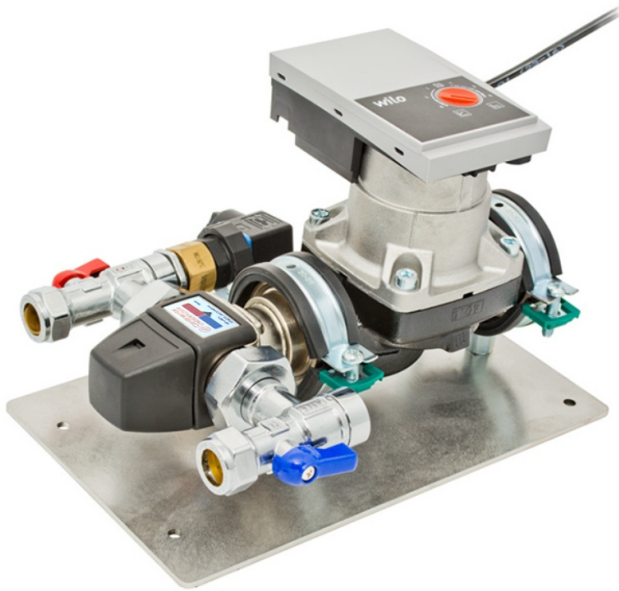


HeatMax™ Small Area Pump Mixer 32008



Boxed set pre-assembled for immediate installation, including:

- Thermostatic mixing valve adjustable from 35°C to 60°C
- Temperature switch for pump control on inlet water temperature
- Wilo Yonos Para RS25/6-RKA pump
- 1/2" BSP female connection to underfloor flow and return
- Generally nickel plated for improved appearance
- Built-in isolating valve in flow/return elbow
- 15mm compression connection flow and return
- TMV body kvs 1.3

1. General

1.1 The HeatMax™ Small Area Mixer has been designed for control of flow and water temperature in an underfloor heating system. It is pre-assembled and tested to ensure that it can be fitted with the minimum of on-site labour and commissioned immediately once fitted.

1.2 It is designed to connect to the existing heating system with 15mm compression connections for the flow and return. The temperature switch to supply power to the pump will remain open until the existing heating system water is above 50°C, then the switch will close switching on the pump which will allow the TMV to mix flow and return to the required UFH temperature.

2. Connections & Dimensions

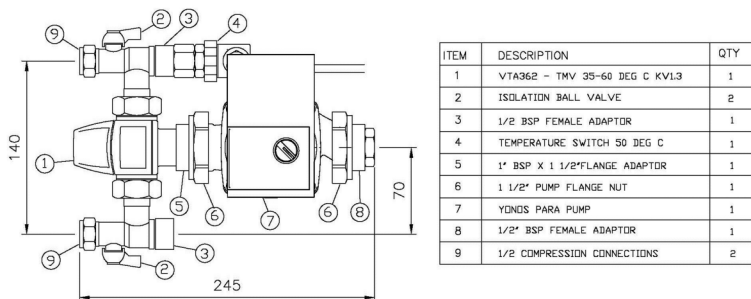


Fig.1 Overall Connections and Dimensions

3. Technical Data

Maximum static pressure	10 bar
Maximum differential pressure	3 bar
Maximum temperature	95°C
Operating temperature Range	Adjustable between 35°C and 60°C
Inlet connections	15mm compression
Outlet connections	1/2" BSP Female
Overall dimensions mm	
Kvs	1.3

4. Installation

4.1 Remove the assembly carefully from the packaging and check to ensure that all components are in place and that there is no damage to them.

4.2 The HeatMax™ Small Area Pump Mixer is supplied for connection with return to the left hand side but can be altered very simply for connection to the right hand side.

Rotating the return /supply connections.

4.3 Using an appropriate spanner, loosen the rotating flange nut securing the mixed outlet of the TMV to the pump inlet.

4.4 The upper assembly can then be rotated through 180° reversing the connections. Care should be taken not to over stretch the cable connection to the temperature switch. Retighten pump flange nut.

4.5 The pump mixer can be attached to the heating system. Using the dimensions shown in Figs. 1, ensure that there is sufficient space for installation and maintenance at the intended position.

5. Commissioning

5.1 Filling the UFH system – The TMV is modified to allow the return flow port to be always partly open as such care should be taken to ensure the UFH is fully filled and not bypasses through the TMV.

5.2 The pump mixer and underfloor circuits can now be filled and commissioned in accordance with the manifold instructions. Prior to filling, a final check of all joints should be made to ensure no connections have loosened during transit.

5.3 The pump is supplied with a pre-connected 1m long 3-core lead assembly ready for connection to the electrical controls system. Ensure that the pump is filled and vented, operate the controls system to call for heat then select the desired pump setting.

5. Commissioning cont.

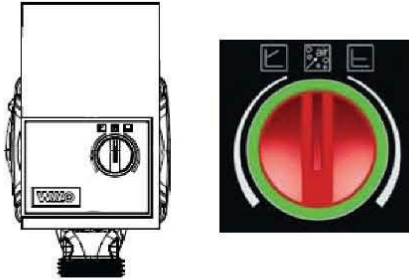


Fig. 6 Yonos Para control panel and operating dial

The control panel is at the front of the pump. It has one dial with 3 operating modes, see above. The “POWER ON” light field around the dial shows that the mains supply has been switched on.

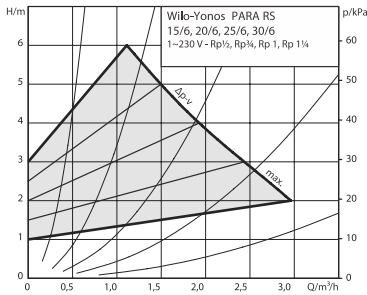


Fig. 7 Δp -c, constant differential pressure

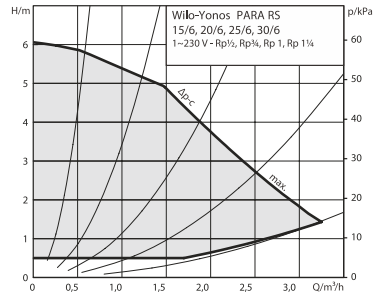


Fig. 8 Δp -v, variable differential pressure

Setting the control mode

To select the control mode symbol and set the desired delivery head, turn the operating knob to the required mode as described below. The maximum setting is obtained by rotating fully either clockwise or anti-clockwise until the dial stops



Variable differential pressure (Δp -v): The knob for the control mode Δp -v is set on the left of the middle position. The differential-pressure setpoint H is increased linearly over the permitted volume flow range between $\frac{1}{2}H$ and H. The differential pressure generated by the pump is adjusted to the corresponding differential-pressure setpoint. See Fig. 7 above



Constant differential pressure (Δp -c): The knob for the control mode Δp -c is set on the right of the middle position. The differential-pressure setpoint H is kept constant over the permitted volume flow range at the set differential-pressure setpoint up to the maximum pump curve. his control mode is recommended for underfloor-heating circuits. See Fig. 8 above



Venting function: The middle position as shown above is for the venting function. By turning the operating knob to the symbol for venting the venting function is activated after 3 seconds. The venting function lasts 10 minutes and is indicated with quick green LED blinking. Noises may be heard when the venting function is running. The process can be stopped if desired by turning the knob away from the venting function. After 10 minutes, the pump stops and goes automatically to Δp -c mode, maximum setting.

6.4 Once the system has been filled and pressure tested, the mixed flow temperature must be adjusted to the correct level for the system design. To achieve this the thermostatic mixing valve can be adjusted between 35°C and 60°C as shown in Fig 10 below. Allow sufficient time for the temperature to stabilise then check this using a temperature measuring device on the mixed outlet.

Setting Number	1	2	3	4	5	6
Temperature °C	35	40	45	50	55	60

Fig. 10 Choose the setting number to give the correct temperature for your system. The setting numbers are a guide only and should be checked against the fitted temperature gauge.

Want more information?

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