

Water Temperature Control - VPG & PPG Pump Group

Pipe Dimensions	9.9mm PEX	✓	12mm PEX	✓	16mm PEX	✓	16mm MLC	✓	20mm PEX	✓
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Introduction

- The pre-assembled sets are designed for control of both water temperature and flow rates in secondary UFH circuits. All sets are robust and engineered for use in new and old domestic and commercial applications. The range of three sets gives flexibility to match individual project duties without compromising performance.
- The sets are supplied for left-hand primary connections. The VPG-10 can be handed by removing the brackets and rotating the pump through 180°. Right hand installation for PPG-20 is possible.
- Please read these instructions completely before commencing installation, this will reduce both initial setup and commissioning time.

Set Contents

- Wilo A-Rated energy efficient pump
- 1" Ball valves with butterfly handles
- Brass interconnecting piping
- Mounting brackets
- Rubber lined pipe clips
- 1" Brass manifold ball valve connection set
- Manifold bracket spacer set
- Excenter fittings for direct manifold coupling (PPG-20)
- Secondary water temperature immersion pocket (PPG-20)
- DUOmix TMV with electro-thermal actuator (VPG-10 only)
- 3-port rotary shoe valve (PPG-20)

Note: Move controller and 230V valve actuator for PPG-20 sold separately.

VPG-10 with actuator (1061091)



PPG-20 (1059839)



VPG and PPG Installation

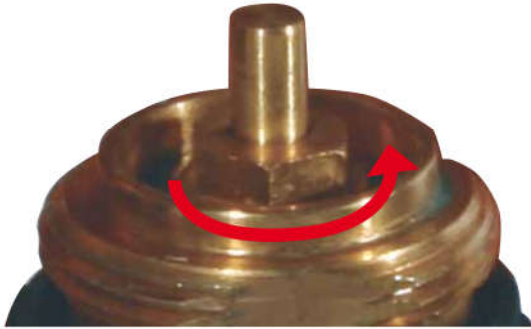
- For future reference record the set name and batch number found on the box label.
Set Product Name: _____
- In a majority of cases and as recommended, these instructions have been written assuming that the UFH manifold and VPG/PPG set will be coupled together..
- All fittings, except the pump unions, compression nut, brackets and manifold connectors, are supplied sealed with liquid thread sealing compound.
- **When tightening fittings to the sets always ensure the liquid sealed components are sufficiently restrained to prevent rotation and breaking of thread seals.**
- Identify all components and ensure adequate space for mounting the set is provided.
- The PPG set is supplied at a pitch of 175mm and comes with excenter fittings that enables direct coupling to the UFH manifolds which have a pitch of 225mm. The VPG-10 however is supplied at a pitch of 225mm and does not require any additional fittings.

Please follow the installation procedure below:-

- Apply thread sealant to the 1" BSPM end of the manifold connection sets and fit to the manifold ball valves.
- Remove the plastic dust caps from the manifold connections of the VPG/PPG and offer the VPG/PPG assembly up to the manifold and mark the bracket fixing locations.
- Lay the VPG/PPG aside and prepare the wall fixings, (not supplied), then fix the VPG/PPG to the wall.
- Insert the fibre washers between the manifold connection set flanges and the VPG/PPG and tighten the swivel nuts.
- Ensure the pump shaft is horizontal by loosening and retightening the pump unions. See pump installation instructions for further details.

VPG-10, DUOmix Actuator Installation

- Prior to fitting the valve actuator, the temperature setting of the TMV requires adjusting using a 10mm spanner.
- The fully down/clockwise rotated position corresponds to the minimum temperature setting of 35°C, and the fully up/anticlockwise rotated position corresponds to the maximum setting of 60°C.



- For intermediate temperature settings rotate the nut anticlockwise from the fully down position through an angle of 60° (one nut flat) for approximately every 4°C temperature rise required, see table below.

Rotation from fully closed (60° is one nut flat)						
0°	60°	120°	180°	240°	300°	360°
35	39	43	48	52	56	60
Approx. mixed flow temp. °C						

- Typically, the maximum water temperature setting for solid floors is 45°C and 60°C for timber suspended and floating floors.
- To install the actuator, position over the valve head and apply a downward pressure to compress the pin and hand tighten the actuator swivel nut. The primary hot port is now in the closed position until the actuator is energised, as shown by the actuator indicator.



Remote Coupling of Set and Manifold(s)

- The set can be used for supplying mixed water to a remote manifold(s).
- Like the primary system, the correctly sized interconnecting pipe size between the set and manifold(s) is essential for satisfactory operation of the UFH system.
- The area served by a set, as given in the Selection Guide, will be reduced when remotely coupling the mixing set and

PPG-20, Motorized Valve Actuator Installation

- The PPG-20 is designed for use with the Move Controller X-157 (product code 1071693) and 230V valve actuator (product code 1002357); both are ordered and supplied separately.
- Set the valve shaft in the mid-position of the scale plate, between the 9 and 12 o'clock position, and remove the handle without changing the position of the valve spindle.
- Place the white sleeve on the spindle.
- Screw the actuator ant-rotation stud into its position beneath the valve cover plate.



- Fit the actuator to the valve by removing the actuator knob, and securing together with the central screw. Refit knob back on the actuator - red line indicator should be pointing to the 3 o'clock position.
- Fit the red plastic scale to the actuator cover directly above the knob. Use the one with the larger scale to the left-hand side.
- Should manual operation of the valve be required simply pull and twist the knob in the desired direction.



manifold(s), as some of the pump head will be used to overcome the interconnecting pipe pressure loss.

- For further advice on remote coupling and interconnecting pipe sizes please refer to the Uponor Technical Department (See telephone number on back page).