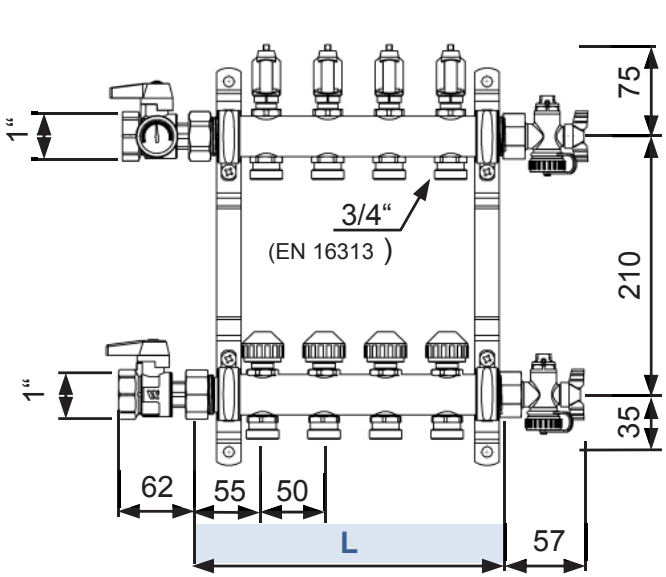
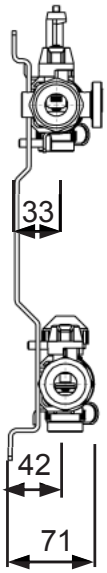
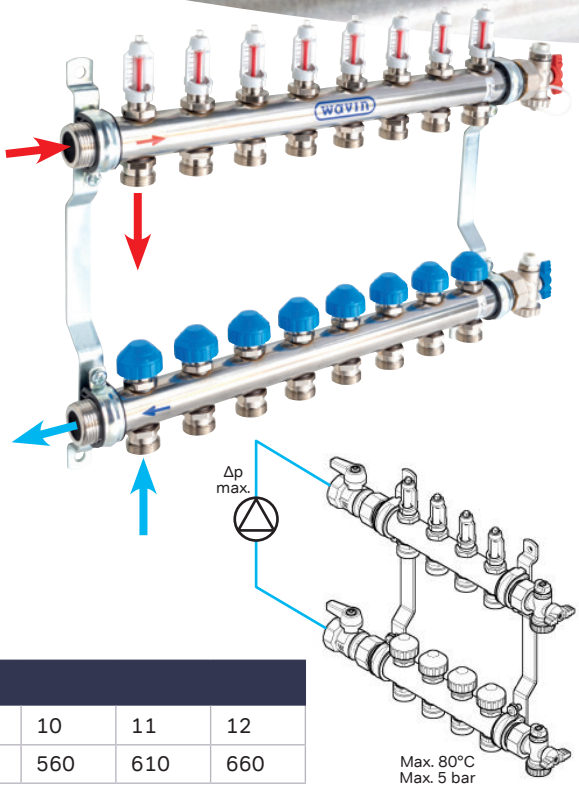
Installation Instruction Sheet

Wavin Stainless Steel Manifold







MANIFOLD DIMENSIONS											
Ports	2	3	4	5	6	7	8	9	10	11	12
L	160	210	260	310	360	410	460	510	560	610	660

Requirements

Prior to starting work, the fitter must read, understand and heed these installation and operating instructions.
The manifolds for floor heating may only be installed, adjusted and maintained by trained specialists. Trainees may only work on the product under the supervision of an experienced person. Only if the above instructions have been adhered to will the manufacturer accept any liability in line with statutory provisions. Every instruction contained in these installation and operating instructions is to be heeded when using the manifolds.

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Intended Use

The manifolds are used for distributing and regulating the volume of flow in low temperature floor heating or cooling systems.
The manifolds are to be operated using heating water as per VDI 2035. In the case of systems, the heating water of which contains corrosive particles or other contaminants, dirt traps or filters with a mesh size of no more than 0.8mm are to be fitted in order to protect the measuring and control devices.
The max. permissible continuous operating pressure is 5 bar at 80°C. The max. permissible test pressure is 10 bar at 20°C. During the pressure test, the return valves must be closed.
Using the manifolds for any purpose other than that set out in these instructions constitutes improper use. The manufacturer accepts no liability for damage resulting from improper use of the manifolds.
For safety and guarantee reasons, no conversion or modification is permitted.
The manufacturer accepts no liability if connections and accessories made by other manufacturers are used.

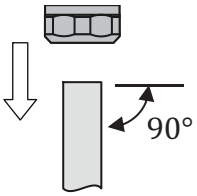
Installation / Commissioning

Installation in manifold cabinet:
The manifold brackets are fitted to the sliding C profile rails, using the supplied bolts. Please heed the relevant installation instructions.

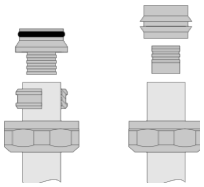
Hydraulic connections:
Depending on scope of delivery the manifolds could be supplied with a ball valve set (KH-SET) and/or a flush-and-fill unit (SBE). The manifold headers each have a 1" or 1¼" male thread for fitting the ball valve and the flush-and-fill unit, with flat joints. The union nuts are to be tightened with an SW 38 ring spanner or open-ended spanner with approx. 35 – 45 Nm. When connecting pipes to connections, please refer to the pipe installation instructions as well.
The heating circuits for the individual rooms are labelled with the self-adhesive labels provided. These can be stuck to the manifold itself.

Flushing and filling the heating circuits:
To flush and fill the heating circuits, fit hoses with ½" or ¾" hose nozzles are screwed to the male thread of the SBE. Slowly open and close the SBE during flushing and filling operation.
During the filling and flushing process, the ball valves KH-SET must remain closed, otherwise the high water pressure might damage the heating system or might activate the safety relief valve. Only fill and flush the manifold in the direction of flow! Please avoid high differential pressure (> 1 bar) and pressure shocks.

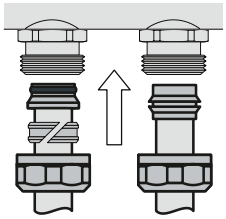
Installation of Tubes



Cut off the plastic, copper or multilayer pipe at a right angle and deburr / calibrate.
Push the sleeve nut over the tube.



Push the clamping ring over the pipe and insert hose nozzle.



Push the conical end of the pipe all the way into the connection on the manifold.

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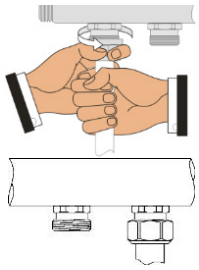
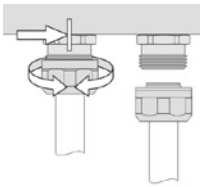
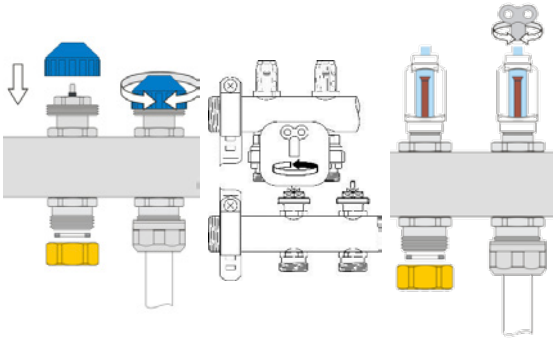


Screw on the clamping ring nut by hand. Push the plastic, copper or multilayer pipe up to the stop.

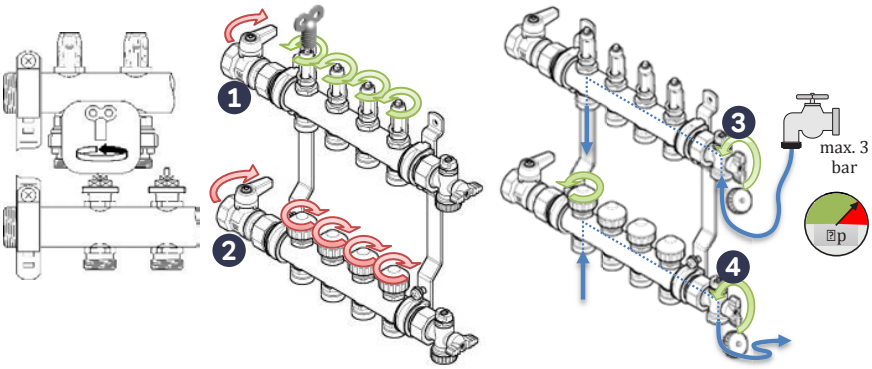


Counter the outlet screw connection using an open-end wrench 24mm and tighten the clamping ring nut using an open-end wrench 30 mm (Force approx. 25-30 Nm or 18 lb ft).
Do not exceed the max. torque stated in the installation instructions for the compression joint used.

Rinsing and Filling The Circuits

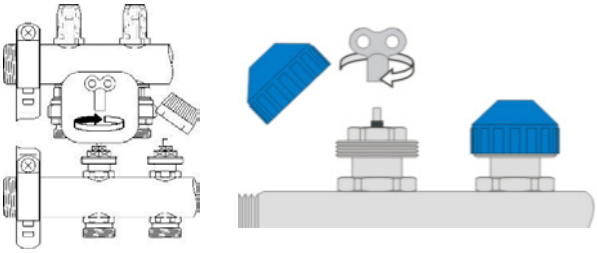


The valves in the return can be closed, e.g. for rinsing and filling the heating circuits. For that purposes put the protective cap on the valve and close it by turning clockwise.
The flow meter can be closed with an air vent key. However, this is not necessary for filling and flushing of the circuits. If the flow meter is shut off, the following order must be observed when opening to avoid malfunction or damage: First open the flow meter, then the control valve. Sequence must be observed!
(*) For permanent shut-off a cap ¾" incl. washers should be mounted to the connection on site.



Close the ball valves **1 + 2**. Close all control valves by means of the protective caps. Attach the fill- and drain hose to the SBE **3** in the supply; the discharge outlet **4** must be open! **All flow meters must be completely open!** Close all control valves in the return, only the valve off of the circuit which should be rinsed must be completely open! Flush the circuits each by each with clear water. After rinsing close the control valve and rinse/fill the next circuit. Remove the hose after end of the rinsing and filling procedure from the SBE.

Flow Adjustment



Remove the plastic cap and close the valve by turning the air vent key clockwise (= min. setting).

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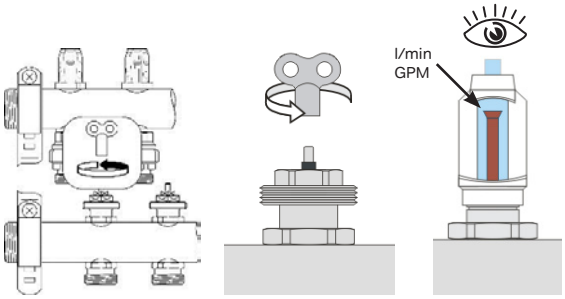
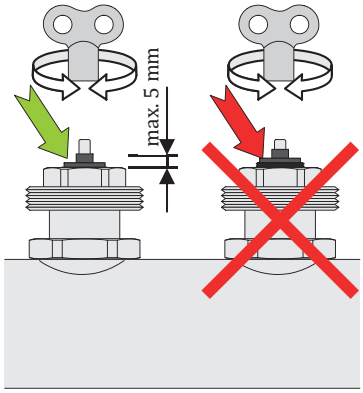
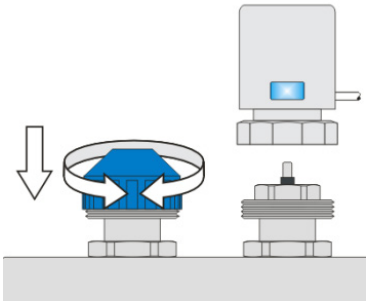


Adjust the required flow rate by turning the regulation spindle of the return control valve to the left. Read off the actual flow value at the flow meter. **The flow meter does not serve for flow adjustment!** After all circuits were regulated, check the flow values and re-adjust if necessary.



The fine thread of the adjusting spindle must not be seen above the edge of the size 19 hex! Based on closed status, the valve is open (full flow) after 2.5 to 3 turns to the left.



Once adjustment work is complete, the protective cap / actuator should be screwed back on. This prevents the valves from accidental adjustment and from getting dirty.

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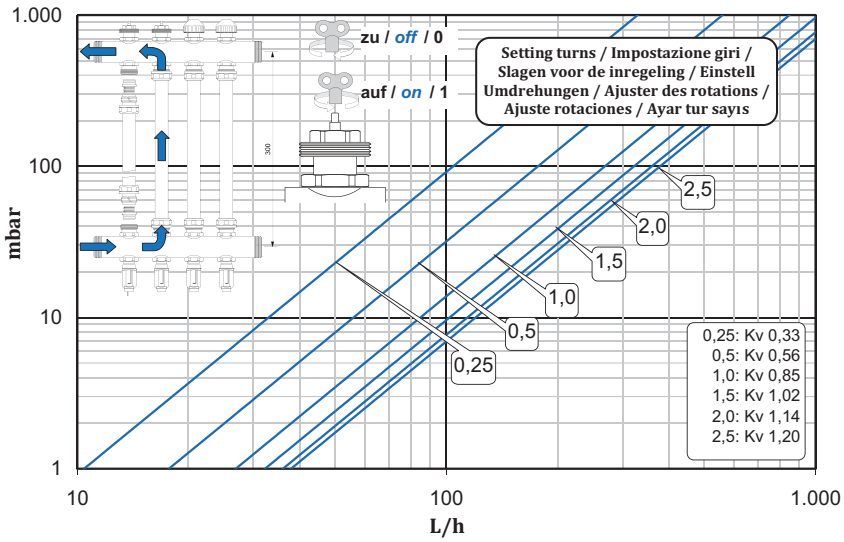
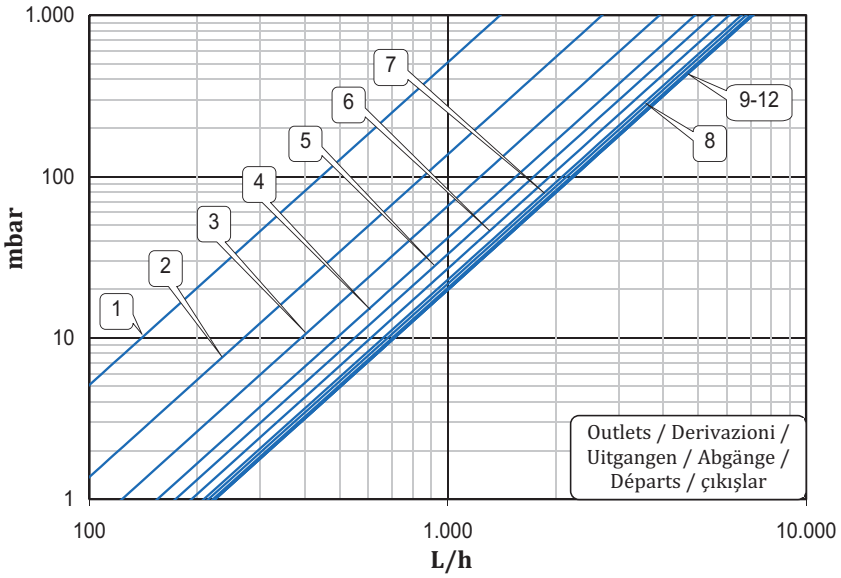
Adjustment of Regulation Valves

The adjustment diagram already considers the single pressure losses of the flow meter, the flow control valve as well as 2 pieces of compression fittings.



Total Pressure Drop



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