In North America for Technical Assistance
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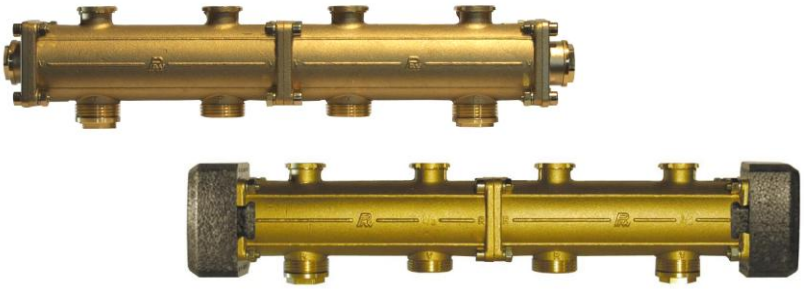
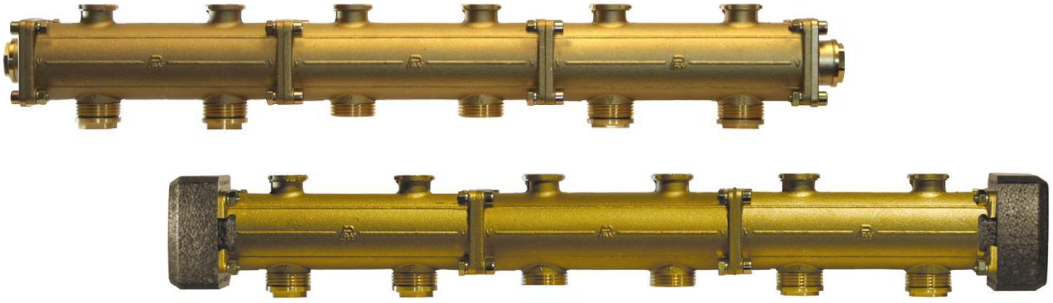
Installation and User Guide

Modular Distribution Manifold
Residential Series – ¾” DN20



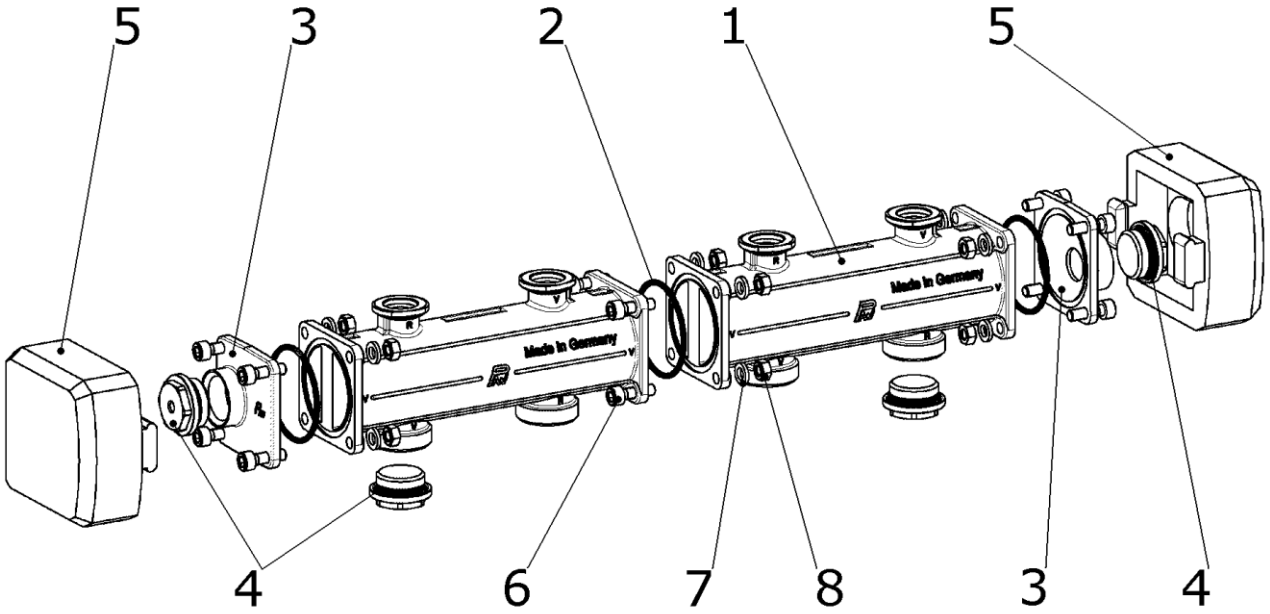
MV2- 3/4”
Insulation removed / Insulation end caps assembled
(Insulation is included in the zone modules)



MV3- 3/4”
Insulation removed / Insulation end caps assembled
(Insulation is included in the zone modules)

MV4-3/4”
Insulation removed / Insulation end caps assembled
(Insulation is included in the zone modules)

Scope of Supply



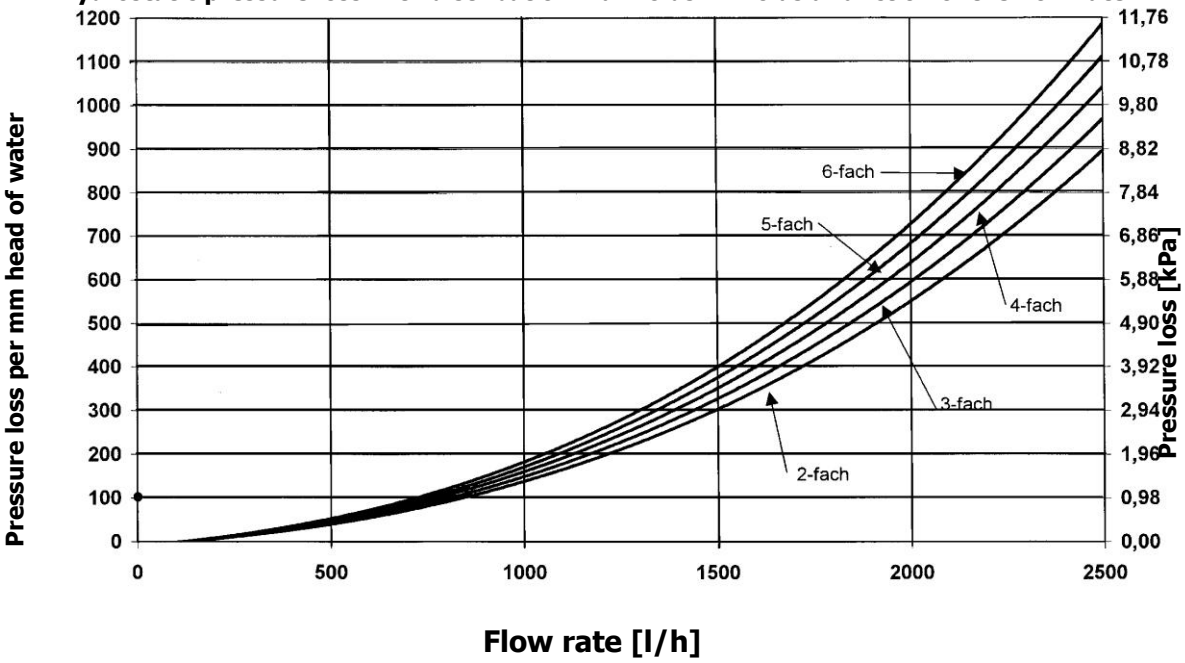
Item	***Item code***	***Designation***	***qty, depending on type***
1	G3012	Modular manifold DN20, brass	2 / 3 / 4
2	E350391	O-Ring, Ø 48mm /1 7/8” x 2,5 mm/3/32”, EPDM/NBR	3 / 4 / 5
3	G3021	Caps supply/return, manifold DN20	2
4	E20905	Plug ¾”, with O-Ring and thread M6	4 / 6 / 8
5	E172010	End cap insulation set for manifold DN20, V404	2
6	E800620	Hexagon socket head screw, M6 x 20	12 / 16 / 20
7	E800601	Split washer 6mm/1/4”	12 / 16 / 20
8	E800600	Hex nut M6	12 / 16 / 20

Specifications

Modular Distribution Manifold DN20

Material	
Fittings	Brass
Seals	NBR / EPDM
Thermal insulation	EPP
Specifications	
Maximum operating pressure	8 bar/ 116psi
Maximum temperature	110°C/230°F; short-term 130°C/266°F
Dimensions	
Inlet (Boiler side)	BSP 1" male thread flat union / BSP ¾" female thread
Outlet	3/4" flange for nut 1", flat union
Spacing (supply/ return)	90 mm/3 ½"
Overall height	80 mm/ 3 1/8"
Width of thermal insulation	MV2: 440 mm/17 1/3" ;MV3: 620 mm/24 7/16" ; MV4: 800 mm/31 ½"

Hydrostatic pressure loss with distribution manifolds DN20 as a function of the flow rate



Important note
These installation and use instructions have been designed carefully to the best of our knowledge and belief. The illustrations used are to be considered as conceptual.
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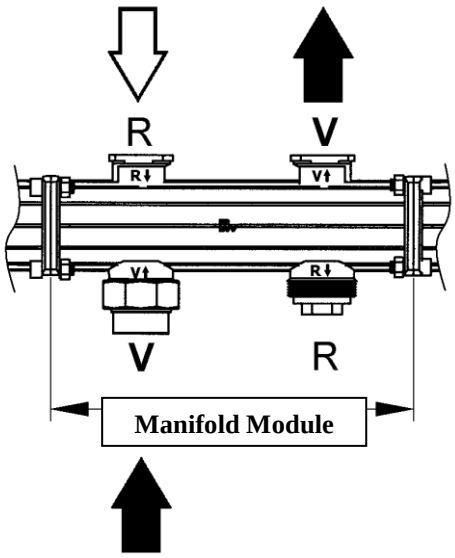
General Information

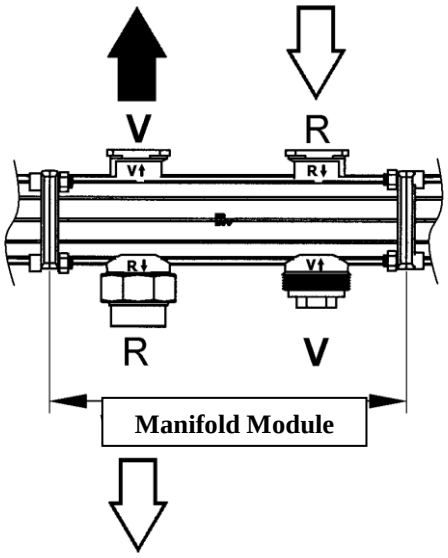
These modular distribution manifolds are suitable for reversing supply – return lines depending on installation requirements. The incoming and outgoing supply and return lines are to be connected to the manifold according to the cast-in marks **("V" = supply and "R" = return)**. In the event these marks should be inverted turn the manifold horizontally by 180 degrees.
All ports (connection) marked with a **"V" (Supply)** are connected to the supply chamber whereas all ports marked with an **"R" (Return)** are connected to the return chamber.

! Attention !

Right-hand Supply



Left-hand Supply

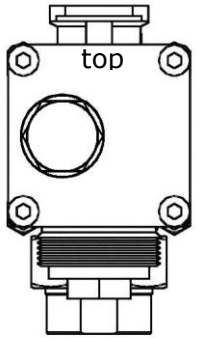


To connect <u>supply line on the left-hand side</u> turn the manifold horizontally by 180° so that the cast-in marks (supply and return) match with the connected heating circuits.

Boiler connection ports may be in offset, if necessary. However, the connection mark or designation (flow direction) must always be checked!
That is to say: The boiler supply line may be connected to any manifold port marked with a **"V" (supply)** and the return line may be connected to any port marked with an **"R" (return)**.

To use the manifold for large boiler outputs and maintain a greater flow, it is advisable to split the boiler supply and return lines (connect each line twice to the manifold). This makes it possible to considerably reduce pressure losses without increasing the size of the manifold!

The side covers of the modular distribution manifolds are mounted so that the connections and plugs stay close to the „**front**"or „**rear**" (of the manifold). One port is allocated to the supply chamber, whereas the second nozzle is allocated to the return chamber.



Manifold – side view, without insulation

Attention!

Turning the side covers by 90° (the plug is on the "top" or "bottom") will lead to a "short-circuit" between supply and return chamber (functioning in this case like a hydraulic bypass and wrong circulation could happen).

As an alternative to the plugs in the side covers may be also installed a connecting set for the expansion tank (integrated into the return line).

High-quality EPDM / NBR O-rings ensure static seal at the side covers and between the various manifold modules. Avoid any contact of these O-rings with organic greases or oils! Use silicone grease (tap grease) only for "lubrication"!

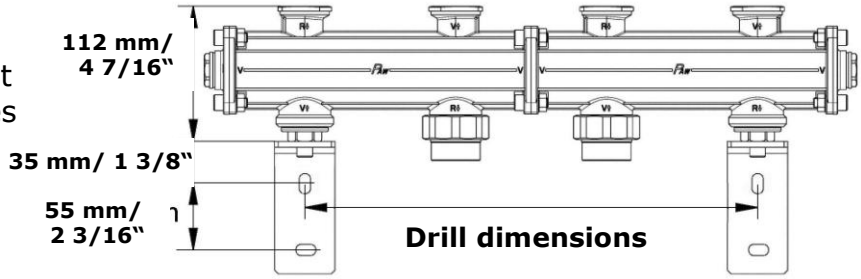
Modular distribution manifolds can be extended using an extension module (block) in the case if an additional zone pump module has to be connected.

PAW modular distribution manifolds ¾" can be connected directly to a boiler with ¾" connections or using threaded reducing adapters, to a boiler with 1" connections.
Manifold can be mounted onto the wall using wall brackets. All ¾'' plugs are made with a M6 female thread for wall bracket connection.

Installation of Modular Distribution Manifold

Remove the insulation end caps before starting the assembly of the manifold in order to avoid damage.

Assembly with Wall Brackets



Find a suitable place for installation (taking into consideration the overall height and size of the heating modules to be assembled). Mark the holes and distance between the holes to be drilled for the wall mounting brackets (270 mm/ 10 5/8" for a 2-fold manifold or 450 mm/17 ¾" for a 3 and 4-fold modular manifold); 5 and 6-fold modular manifolds must be attached on the wall with 2 sets of brackets. Drill holes (Ø 8mm/ 5/16" drill bit), install anchors and mount brackets using supplied screws and washers.

Align brackets before tightening screws

Install and tighten modular manifold onto wall brackets. Depending on the holes of the wall brackets chosen it is possible to attach the modular manifold at various axial distances from the wall (70 mm/ 2 ¾", 85 mm/ 3 3/8" or 100 mm/ 4" from the wall). PAW wall brackets are designed so that the rear thermal insulation shell can be pushed in upon completion of assembly and commissioning (including pressure/leak test).

Note:

Always install the insulation after pressure test, and commissioning.

Connecting to the Boiler

Connect modular manifold (without forgetting the gaskets) to the boiler supply and return ports accordingly to the boiler manufacturer installation instructions.

When Assembly is Completed

Once the modular manifold is affixed, you can proceed with mounting of the zone pump modules and piping connections.

Check all threaded connections that they are securely fastened upon completion of installation. Push in the thermal insulation shell only when plumbing (pipe installation) is completed and a leak test has been performed.