MODULAR MANIFOLDS WITH INTERCEPTION VALUES WITH MANUAL HANDWHEEL
R53VM - R53VT SERIES

R53VM | R53VT

Description

The modular manifolds with bayonet connection R53VM and R53VT, equipped with a thermostat-controlled valve, are designed for systems distributing hot water for heating and cold water for air-conditioning, with the aim of simplifying and speeding up installation. The result is a highly flexible product that's practical, attractive and ergonomic. They are widely used in radiant panel distribution and in radiator distribution requiring the interception of the individual circuits and their thermoregulation. The innovative solution of the single module with bayonet connection allows the extremely quick creation (without the need for tools or interposed sealing elements) of manifolds with a high water flow rate and multiple connections on the basis of the worksite requirements. The use of modular manifolds also means that warehouse stock can be limited to just two components: R53VM intermediate module and R53VT pair of end modules.

Versions and product codes

Products code	Series	Dimensions
R53VMY006	R53VM	DN32x18
R53VTY006	R53VT	1"x18xDN32
R53VTY007	R53VT	1"1/4x18xDN32

Characteristics

The R53VM e R53VT modules with bayonet connection are made via the hot moulding method that produces smaller dimensions and thicknesses with notable transit sections for the fluids and hence limited pressure loss and flow noise. They take a bonnet with an AISI304 stainless steel cantilever rod that removes any obstacles in the fluid's path, thereby reducing the level of turbulence. The R53VM and R53VT modules should preferably be used for return manifolds so that the flow of water from the circuits strikes the disc of the bonnet from the front, keeping it in contact with the thrust pin of the manual handwheel or the electro-thermal heads and avoiding vibrations or detachments in the event of notable differential pressure levels. Thanks to the special bayonet profile, the modules are manually assembled and the hydraulic seal is guaranteed by the pre-assembled O-rings. The connection of the R53VM intermediate modules with the components (valves, taps, pipes, etc.) is made with the two R53VT end modules with their female thread - available in the two measurements 1" and 1 1/4". The external structure of the R53VT end modules ensures the easy assembly of the components using just a spanner, without applying any strain on the already-assembled modules.
The R53VM and R53VT modules are fitted with base 18 adapter connections for connecting the distribution pipes.

Technical data

- Temperature range: 5÷110 °C
- Max. working pressure: 10 bar
- Body in hot-moulded brass CW617N - EN 12165
- Seal rings in propylene ethylene
- Transit section DN32
- Thermostat-controlled valve equipped with bonnet with stainless steel rod (in one single piece)
- ABS handwheel
- Threaded end pieces available in the measurements 1" and 1 1/4"
- Centre distance of assembled module connections: 50 mm
- Connection for base 18 adapters R178, R179, R179AM

Installation

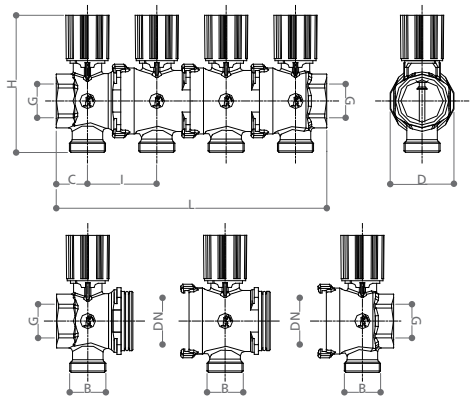
The R53VM modules with bayonet connection are manually assembled to produce manifolds with the necessary number of connections. The operation is extremely simple and doesn't require any tools, but it's important to check that the machined end parts are clean and free of impurities, and

to lightly lubricate the O-ring with silicone grease if necessary. To prevent any material from entering and damaging the O-rings, it is a good idea to wait until the moment of assembly before taking the modules out of their packaging. To enable the bayonet connection of the individual modules, position them side by side with their vertical axes rotated by 90°. Push lightly in the axial direction until they reach their end stop, then rotate the two modules by 90° so that the male and female parts of the bayonet connection are in line with each other.
To put together a distribution manifold you will need a pair of R53VT terminals and the right number of R53VM modules for the number of connections you want to make. The modules assembled can be of different

types (it is even possible to connect different manifold models), but they must necessarily have a nominal diameter of DN32. To produce a 5-connection modular manifold for example, you will need a pair of R53VT terminals plus three R53VM modules. For a manifold with just two connections, the pair of R53VT terminals is sufficient.
The modules with bayonet connection are coupled with the accessory components thanks to the R53VT terminals with thread, available in the measurements 1" and 1 1/4". The grip with spanners (needed to tighten the male threads to the terminals) should be made using the special flat seats on the modules. Under no circumstances should you use pliers or other

tools to apply a torsion or crushing strain on the modules, to avoid creating deformations that could make them unsuitable for assembly or jeopardise the hydraulic seal.
After assembling the DN32 manifolds with the required number of connections, they have to be fitted in a suitably sized box - R500, R501 or R502 - using the R588D shaped brackets, for wall-mounting, or in a niche using the R588F clamps. Once the manifolds have been fixed and the supply lines have been hooked up, you must connect the circuits using base 18 adapters (3/4"E) of a type compatible with the pipe material. The R53VM modular elements and R53VT terminal elements are suitable for the assembly of Giacomini electro-thermal normally closed heads R473, or normally open heads R478. The heads, which enable the interception of the water flow for the various circuits using ambient thermostats or switches, are connected by removing the manual handwheel with the aid of a screwdriver. The final stage is to identify the various connections by using the adhesive labels R522.

Dimensions

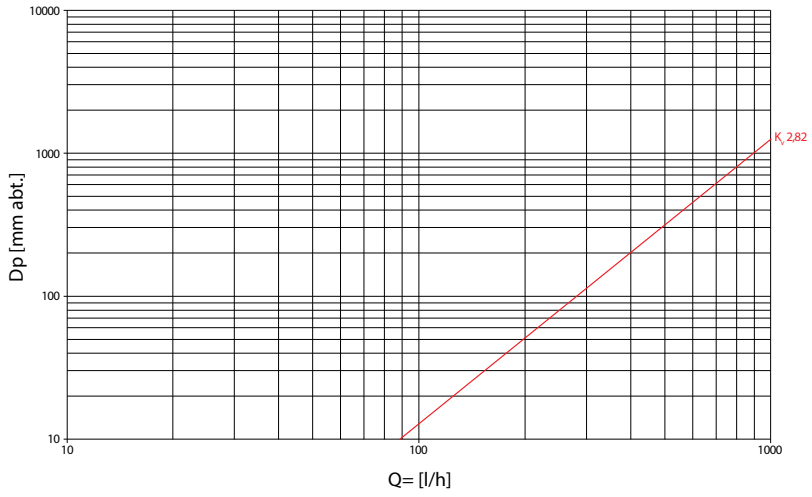


R53VT+R53VM	1"xDN32	1 1/4"xDN32
G	1"	1 1/4"
B	18	18
Ex	39	48
I	50	50
C	23	27
D	48	48
DN	32	32
H	100	100
W	66	66

Outlets	2	3	4	5	6	7	8	9	10	11	12
R53VT	1	1	1	1	1	1	1	1	1	1	1
R53VM	0	1	2	3	4	5	6	7	8	9	10
L 3/4"xDN32	95	145	195	245	295	345	395	445	495	545	595
L 1 1/4"xDN32	104	154	204	254	304	354	404	454	504	554	604

Losses of pressure

The R53VM and R53VT modules with bayonet connection should be used for return manifolds; they have no preferential water inlet direction. The pressure drops indicated in the diagram refer to the single connection with the thermostat-controlled valve fully open or with the electro-thermal head open. The variation in water temperature and hence in its density implies pressure drop swings of about ± 1% (for the same water flow rate); this figure is not significant for calculation purposes.



Product specifications

R53VM

Modular return manifold with bayonet connection - made of brass. Interception valve with manual handwheel, suitable for electro-thermal command. Coupling centre distance 50 mm. Temperature range 5÷110 °C. Max. working pressure 10 bar. Available with connection for base 18 adapters R178, R179, R179AM.

R53VT

Pair of terminals for modular return manifolds with bayonet connection - made of brass. Interception valves with manual handwheel, suitable for electro-thermal command. Coupling centre distance 50 mm. Temperature range 5÷110 °C. Max. working pressure 10 bar. Available with connection for base 18 adapters R178, R179, R179AM.