

Single brass manifolds for radiant panel heating systems Series 822MM - 822MR - 822MME - 822MRE



Main features

- Available in the versions with :
 - Head connections DN 1" MF and 1.1/4" MF
 - Side outlet connections 2,3,4 with DN 1/2" M, 3/4" M, 3/4" M EUROCONUS
 - Centre distance between the outlet connections 50 mm
- Low pressure drops
- Complying with UNI EN 1982 standard.

Description

The Modul manifolds of the **822MM, 822MR, 822MME, 822MRE series** allow building up systems for distributing the heat carrier fluid to heating and air conditioning installations (above all for radiant panel heating systems).

The manifolds are available with NTP threading and in the following versions :

- Head connections 1"MF, 1 1/4"MF
- Side outlet connections 1/2"M, 3/4"M, 3/4"M EUROCONUS.

The manifolds are provided with :

- **Prefitted O-ring** to allow easy assembly of the manifolds by ensuring water tightness without resorting to conventional means (sealing with hemp).
- Locking nut which also allows correct alignment between the side outlet connections.
- **Control devices** in series **822MM, and shut-offs in series 822MR** hence reducing space required for installation and allowing control of each single circuit.

822MM



Single modular brass **return manifold** with prefitted seal and lock nut. Built in control valves, thermostat adaptable with electrothermic actuators series 22C. Side outlet connections: 1/2" M - 3/4" M. Male/female head connections: 1" - 1.1/4". Differential pressure: 1.5 bar. Kvs of outlets: 2.28

Type	Part No.	Size body	Outlets	Center distance	Weight (g)
822MM	822MM1TMN2	1" MF	2-1/2" M	50 mm	570
822MM	822MM1TMN3	1" MF	3-1/2" M	50 mm	750
822MM	822MM1TMN4	1" MF	4-1/2" M	50 mm	980
822MM	822MM1TM2	1" MF	2-3/4" M	50 mm	560
822MM	822MM1TM3	1" MF	3-3/4" M	50 mm	760
822MM	822MM1TM4	1" MF	4-3/4" M	50 mm	1000
822MM	822MM54TMN3	1.1/4" MF	3-1/2" M	50 mm	900
822MM	822MM54TMN4	1.1/4" MF	4-1/2" M	50 mm	1150
822MM	822MM54TM3	1.1/4" MF	3-3/4" M	50 mm	1000
822MM	822MM54TM4	1.1/4" MF	4-3/4" M	50 mm	1300

822MR



Single modular brass **supply manifold** with prefitted seal and lock nut. Built in balancer register lockshield. Side outlet connections: 1/2" M - 3/4" M. Male/female head connections: 1" - 1.1/4". Kvs of outlets: 2.61

Type	Part No.	Size body	Outlets	Center distance	Weight (g)
822MR	822MR1TMN2	1" MF	2-1/2" M	50 mm	660
822MR	822MR1TMN3	1" MF	3-1/2" M	50 mm	890
822MR	822MR1TMN4	1" MF	4-1/2" M	50 mm	1180
822MR	822MR1TM2	1" MF	2-3/4" M	50 mm	650
822MR	822MR1TM3	1" MF	3-3/4" M	50 mm	900
822MR	822MR1TM4	1" MF	4-3/4" M	50 mm	1190
822MR	822MR54TMN3	1.1/4" MF	3-1/2" M	50 mm	1100
822MR	822MR54TMN4	1.1/4" MF	4-1/2" M	50 mm	1350
822MR	822MR54TM3	1.1/4" MF	3-3/4" M	50 mm	1150
822MR	822MR54TM4	1.1/4" MF	4-3/4" M	50 mm	1450

822MME



Single modular brass **return manifold** with prefitted seal and lock nut. Built in control valves, thermostat adaptable with electrothermic actuators series 22C. Side outlet connections: 3/4" M **EUROCONO**. Male/female head connections: 1" - 1.1/4". Differential pressure: 1.5 bar. Kvs of outlets: 2.28

Type	Part No.	Size body	Outlets	Center distance	Weight (g)
822MME	822MM1TME2	1"	2-3/4"	50 mm	560
822MME	822MM1TME3	1"	3-3/4"	50 mm	760
822MME	822MM1TME4	1"	4-3/4"	50 mm	1000
822MME	822MM54TME3	1.1/4"	3-3/4"	50 mm	1000
822MME	822MM54TME4	1.1/4"	4-3/4"	50 mm	1300



822MRE

Single modular brass **supply manifold** with prefitted seal and lock nut, built in brass balancer register lockshield. Side outlet connections: 3/4" M **EUROCONO**. Male/female head connections: 1" - 1.1/4". Kvs of outlets: 2.61

Type	Part No.	Size body	Outlets	Center distance	Weight (g)
822MRE	822MR1TME2	1"	2-3/4"	50 mm	650
822MRE	822MR1TME3	1"	3-3/4"	50 mm	900
822MRE	822MR1TME4	1"	4-3/4"	50 mm	1190
822MRE	822MR54TME3	1.1/4"	3-3/4"	50 mm	1150
822MRE	822MR54TME4	1.1/4"	4-3/4"	50 mm	1450

Application

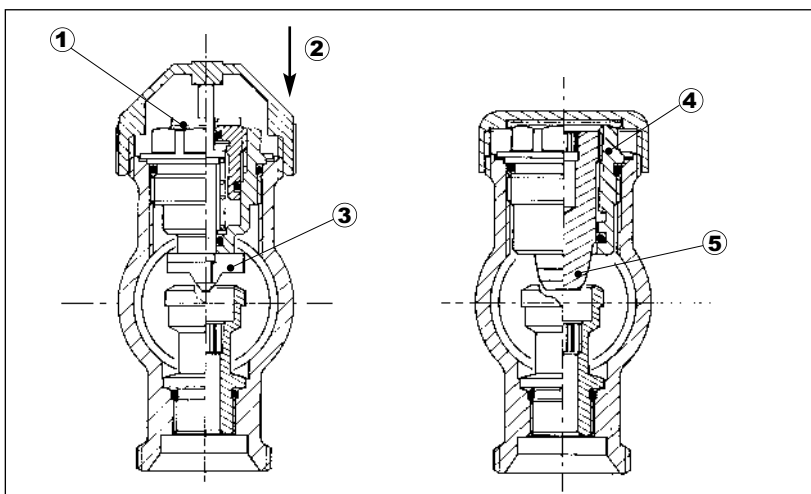
The manifolds of the **822MM, 822MR, 822MME, 822MRE series** are used for distributing the heat carrier fluid in air conditioning systems by forming "spider" type horizontal networks which feed the individual terminal units via pairs of copper or plastic pipes (supply and return). Above all, the Modul manifolds are suitable for engineering the distribution system in radiant panel heating installations. Thanks to their easy modular arrangement, the manifolds, including those of **805M series**, allow many plant engineering solutions and dimensioning of distribution units of all types, with multiple branching. The use of 2,3-way zone valves upstream of the manifolds, with relative heat metering components form part of the automatic control systems for subdividing running costs.

Operation

The operation is based on the automatic movement of the plug shutting off the heat carrier fluid, obtained with electrothermic actuators, **22C series** through an electrical signal transmitted by a room or room timing thermostat. The ON/OFF action of the plug is given by a thermostat wax expansion element inside the actuators **22C series** and activated by a PTC thermistor, against a signal emitted by a room thermostat (or room timing thermostat). For the hydraulic flow rate and pressure drops characteristics of the manifolds, see relative charts. The reliability of the manifolds belonging to **822MM, 822MR, 822MME, 822MRE series**, is ensured by 100% testing of the production: testing consists of a hydraulic seal test of the manifold assembly to detect any microporosity and body resistance test at operating pressure.

Design features	
Body and internal parts	Brass CW617N
Plug seals	EPDM
O-ring	EPDM
Packing nut	Poliacetal resin
Cap for 822MR	Polypropylene
Cover for 822MM	Brass CW614N
Adjustment lockshield	Brass CW614N

Technical features	
Max. pressure	10 bar
Max. temperature	110 °C
Kvs coeff. side outlets 822MM	2.28
Kvs coeff. side outlets 822MR	2.61
Liquids which can be used	Water also with glycol ≤ 50%



Details

- 1) Pre-adjustment packing nut which can be replaced also when the system is under pressure.
- 2) The manifold can be actuated with electrothermic motors series 22C.
- 3) Elastomeric plug seal.
- 4) Threaded plug separate from the flow.
- 5) Linear preadjustment cone.

Hydraulic characteristics

Kv values in the various preadjustment positions								
Setting positions	1	2	3	4	5	6	7	A
822MM 1" - 11/4"	0.26	0.55	0.91	1.23	1.52	1.79	2.0	2.28
N° opening turns	0.5	1	1.5	2	2.5	3	3.5	A
822MR 1" - 11/4"	0.35	0.68	1.1	1.4	1.78	2.1	2.3	2.61

Installation

Manifolds **822MM, 822MR, 822MME, 822MRE series**, are inserted in inspection boxes placed in the centre of gravity position with respect to the users in order to minimize use of pipe and to ensure improved hydraulic balancing. This arrangement also allows the necessary maintenance of all components and accessories (shut-off, control and air vent valves).

It is recommended :

- To keep the manifolds with the centre-line of the main pipe in horizontal position
- To install the manifold with lockshields (**822MR**) on the supply line and the manifold with built-in adjustment devices (**822MM**) on the return circuit, so that the plug movement is opposite to the direction of flow.

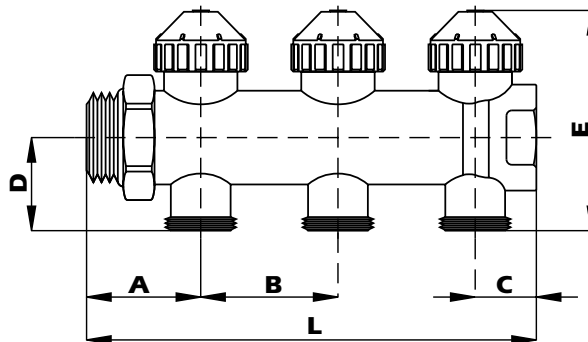
The manifolds of **822MM, 822MR, 822MME, 822MRE series** can be provided with an O-ring sealed male end piece complete with locking nut, **series 823MT** including connections for air vent **Part No. 2161C38** and vent valve **series 238, 290** as well as a 1/2" outlet for further branching .

Install at least two shut-offs (butterfly valve **series 3800** or ball valve **series 210**) and a balancing valve between the main pipes and manifolds. The use of special spanners (**series 829M** or open-ended spanners) is recommended for tightening the fittings on the pipes and the manifold joints.

When the number of users is smaller than the number of available connections on the manifolds, use plugs **series 834M**.

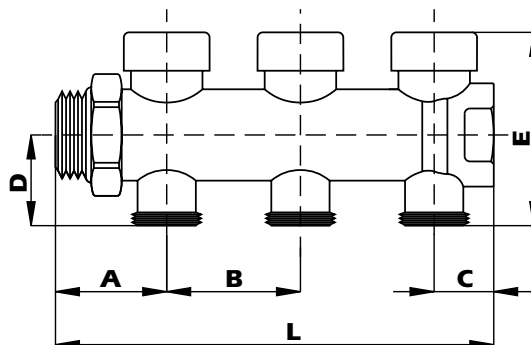
Overall dimensions (mm)

822MM - 822MME



DN		L	A	B	C	D	E
	2 Outlets	3 Outlets	4 Outlets				
1"	114	164	214	40	50	24.5	80
1.1/4"	-	168	218	41	50	24.5	86

822MR - 822MRE

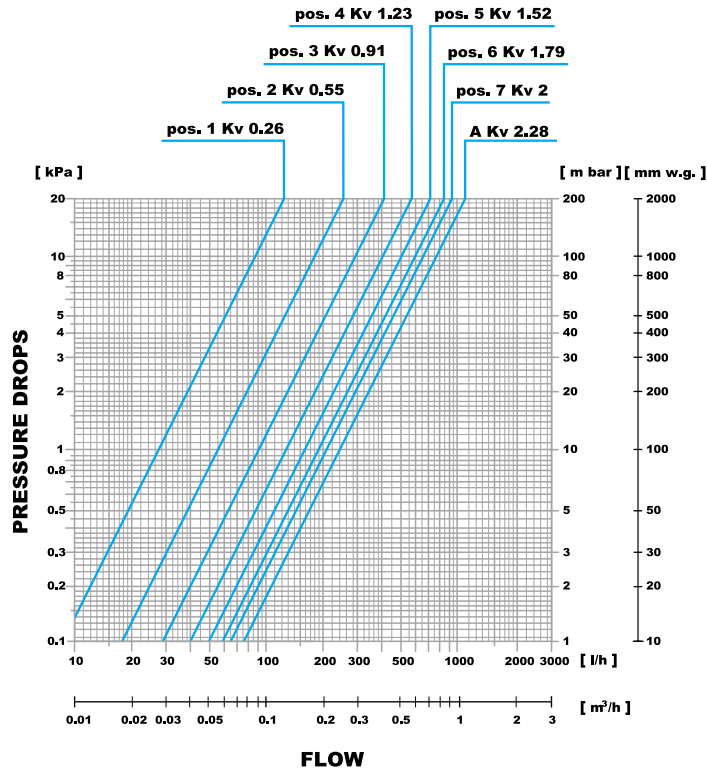


DN		L	A	B	C	D	E
	2 Outlets	3 Outlets	4 Outlets				
1"	114	164	214	40	50	24.5	72
1.1/4"	-	168	218	41	50	27.5	77

Flow rate/pressure drop charts

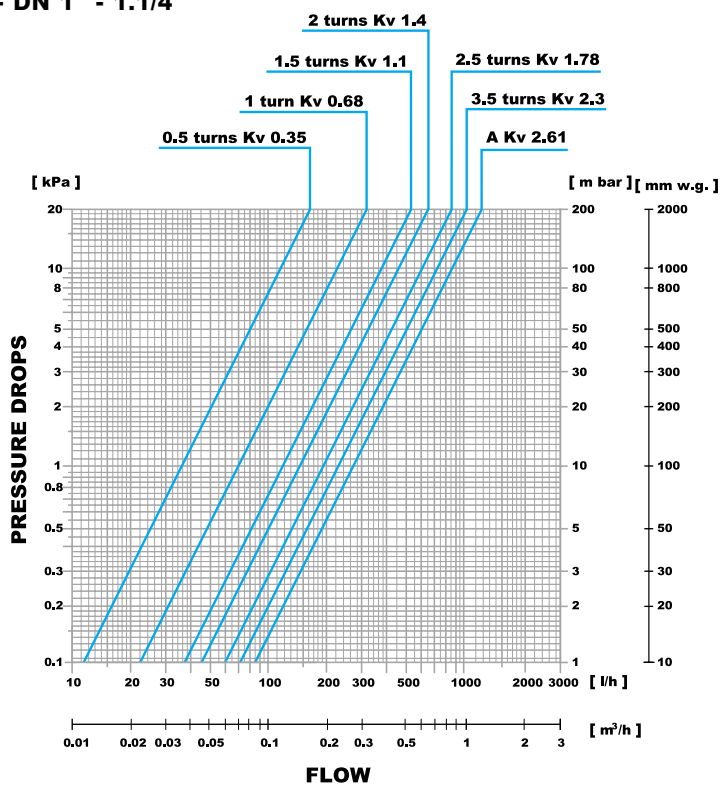
Manifold with control valves. Preadjustments

822MM/822MME - DN 1" - 1.1/4"



Manifold with lockshields. Opening in turns

822MR/822MRE - DN 1" - 1.1/4"



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