

Preassembled manifolds with flow meter, series CPRFL



Main features

- Available in the versions with :
 - Head connections DN 1.1/4" F
 - Side outlet connections 3/4" M
 - Centre distance between the outlet connections 50 mm
- Patented flow meter for control and measurement of the water flow rate.
- Low pressure drops

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Description

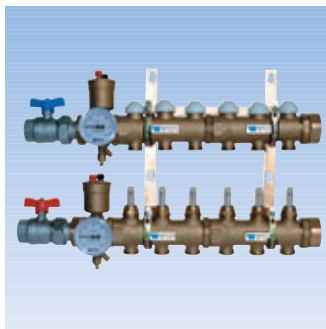
The preassembled manifolds of the **CPRFL series** allow building up systems for distributing the heat carrier fluid to heating and air conditioning installations (above all for heating systems with radiant floor heating panels).

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

- Head connections 1 1/4" MF
- Side outlet connections 3/4" M
- Centre distance between the outlet connections 50 mm

The manifolds, supplied already preassembled on brackets, are provided with :

- Delivery manifolds complete with flow meters series FLMR
- Return manifolds series 822MM
- Two ball shut-off valves series 210
- Two end-pieces for manifolds series 823MP complete with drain cocks series 238, air vent valves series MVD and immersion thermometers series T



CPRFL

Preassembled manifold consisting of : delivery manifolds complete with flow meters series FLMR. Return manifolds series 822MM. Two ball shut-off valves series 210. Two end-pieces for manifolds series 823MP complete with drain cocks series 238, air vent valves series MVD and immersion thermometers serie TB. Centre distance between side outlet connections: 50 mm.

N.B.: inspection box not included in the supply.

Type	Part number	Size	Outlets	Weight (Kg.)
CPRFL	CPRFL54TM3	1.1/4" F	3-3/4" M	12,8
CPRFL	CPRFL54TM4	1.1/4" F	4-3/4" M	13,3
CPRFL	CPRFL54TM5	1.1/4" F	5-3/4" M	13,9
CPRFL	CPRFL54TM6	1.1/4" F	6-3/4" M	14,5
CPRFL	CPRFL54TM7	1.1/4" F	7-3/4" M	14,9
CPRFL	CPRFL54TM8	1.1/4" F	8-3/4" M	15,6
CPRFL	CPRFL54TM9	1.1/4" F	9-3/4" M	17,4
CPRFL	CPRFL54TM10	1.1/4" F	10-3/4" M	18,6
CPRFL	CPRFL54TM11	1.1/4" F	11-3/4" M	19,8
CPRFL	CPRFL54TM12	1.1/4" F	12-3/4" M	20,3



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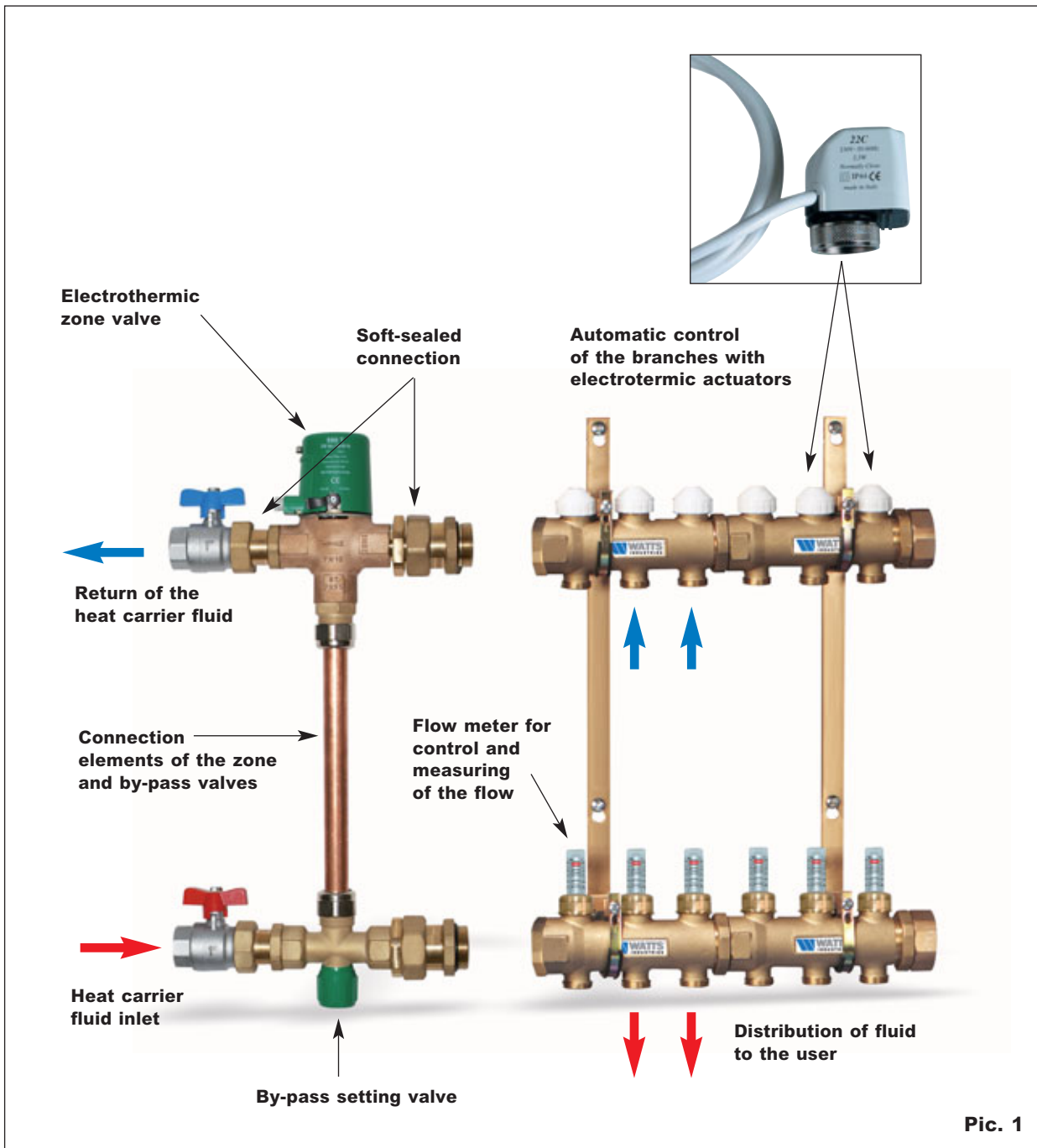
Flow meter control cap

Type	Description
226	Flow meter control cap

Application

The preassembled manifolds of the **CPRFL series** are used for distributing the heat carrier fluid in heating systems, above all in heating systems with radiant floor heating panels.

The use of 2- or 3-way zone valves of the **ZONAKIT series** upstream of the preassembled manifolds (in Pic.1 the 3-way version with by-pass) and relative thermal energy metering components allows providing the manifolds of the **CPRFL series** with zone control and billing of the thermal energy for allocation of the running costs to each individual user.



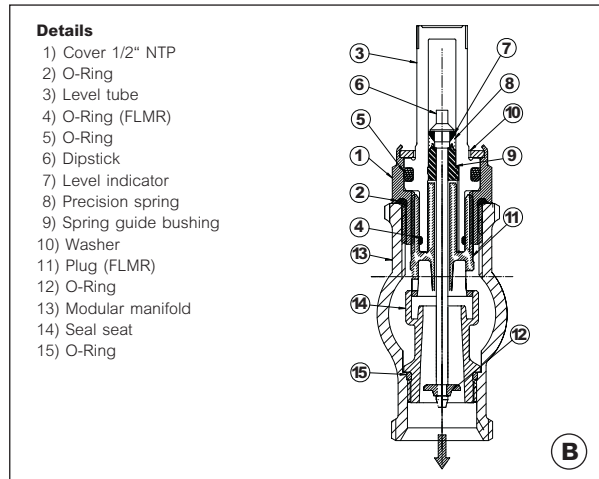
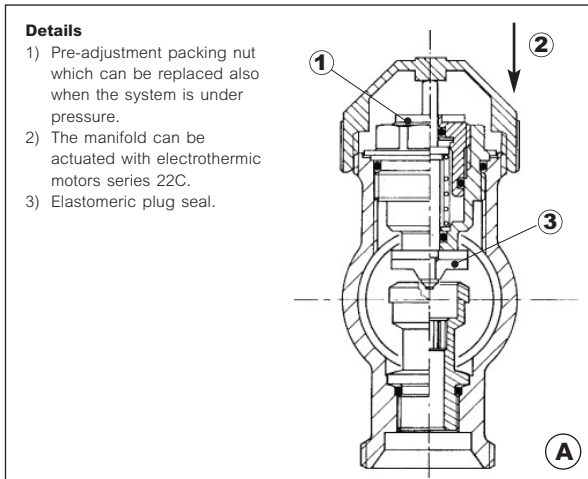
Pic. 1

Operation

The operation of the **series CPRFL** manifolds is based on the automatic movement of the plug shutting off the heat carrier fluid, obtained by installing electrothermic actuators, **series 22C** on the return manifolds after unscrewing the protective white cap (Pic. 1). The ON/OFF action of the plug is given by a thermostat wax expansion element inside the actuators series 22C against a signal emitted by a room thermostat series BATTERY ELECTRONIC (or room timing chrono-thermostat series MILUX).

For control and measurement of the water flow rate for each branch, use the flow meter with control cap **series 226**: turn clockwise for closing or reducing the flow rate or anti-clockwise for opening or increasing the flow rate.

For the hydraulic flow rate and pressure drops characteristics of the manifolds, see relative tables and charts given in the following pages.



The reliability of the manifolds **series CPRFL** 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.

Technical features	
Kvs coeff. Side outlets 822MM	2.28
Liquids which can be used	Water also with glycol ≤ 50%
Setting and measuring range	0 ÷ 6 l/min
Max. temperature	90 °C
Operating temperature	80 °C
Max pressure	10 bar
Outlet max. flow coefficient	Kvs = 1.8
Reading error	± 10% f.s. i.e. ± 0.6 l/min. (with DP at the ends between 10 kPa and 50 kPa)
Leakage	Max. permissible leakage with plug closed ≤ 0,02% Kvs FLMR
Flow meter tightening torque on replacement manifold	30 Nm

Design features	
Body and internal parts	Brass CW617N
Plug seals	EPDM
O-ring	EPDM
Packing nut	Polyacetal plastic
Cap for 822MM	Polypropylene

Hydraulic characteristics								
Kv values in the various preadjustment positions								
Setting positions	1	2	3	4	5	6	7	A
822MM 1.1/4"	0.26	0.55	0.91	1.23	1.52	1.79	2.0	2.28

Installation

Preassembled manifolds **series CPRFL** are inserted in inspection boxes **series 839M** 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:

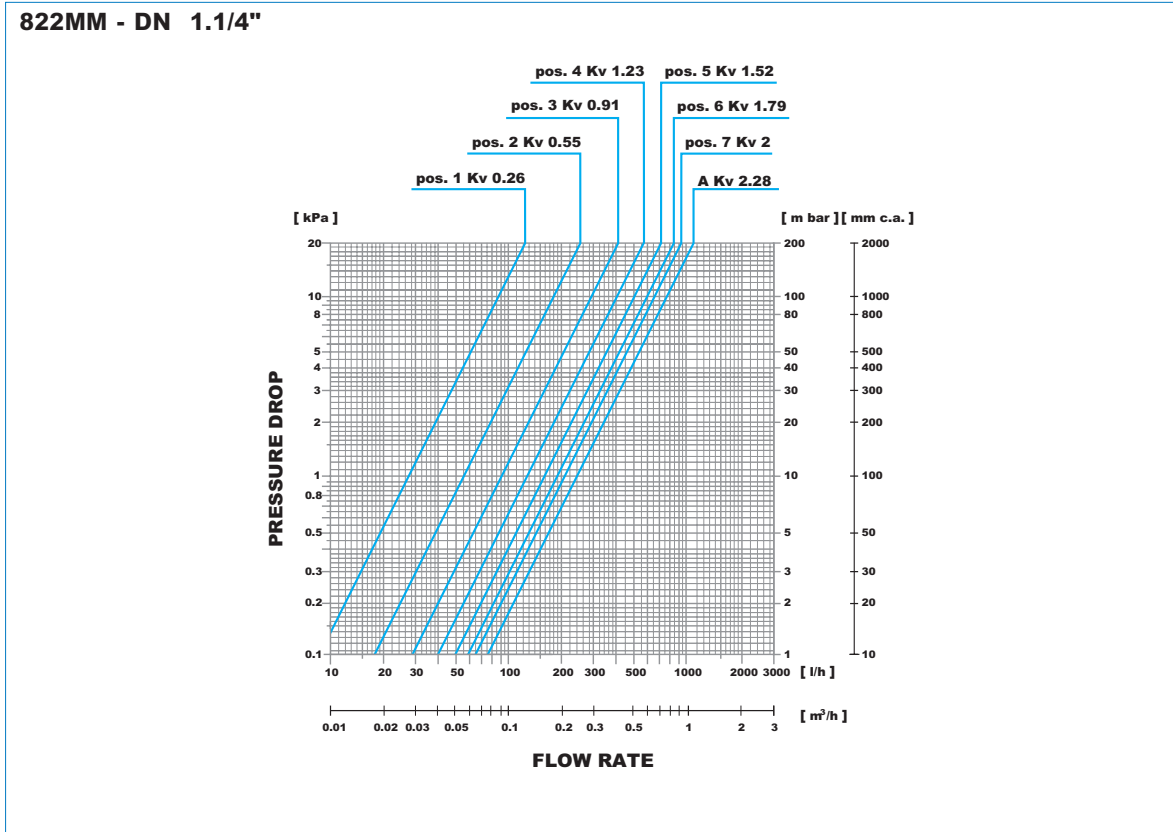
- To keep the manifolds with the centre-line of the main pipe in horizontal position
- To install the manifold with the flow meters on the supply line and the manifold with built-in adjustment devices on the return circuit, so that the plug movement is opposite to the direction of flow.

It is recommended to use special spanners (**art. 829M** or open-ended spanners) for tightening the fittings on the pipes and manifold joints.

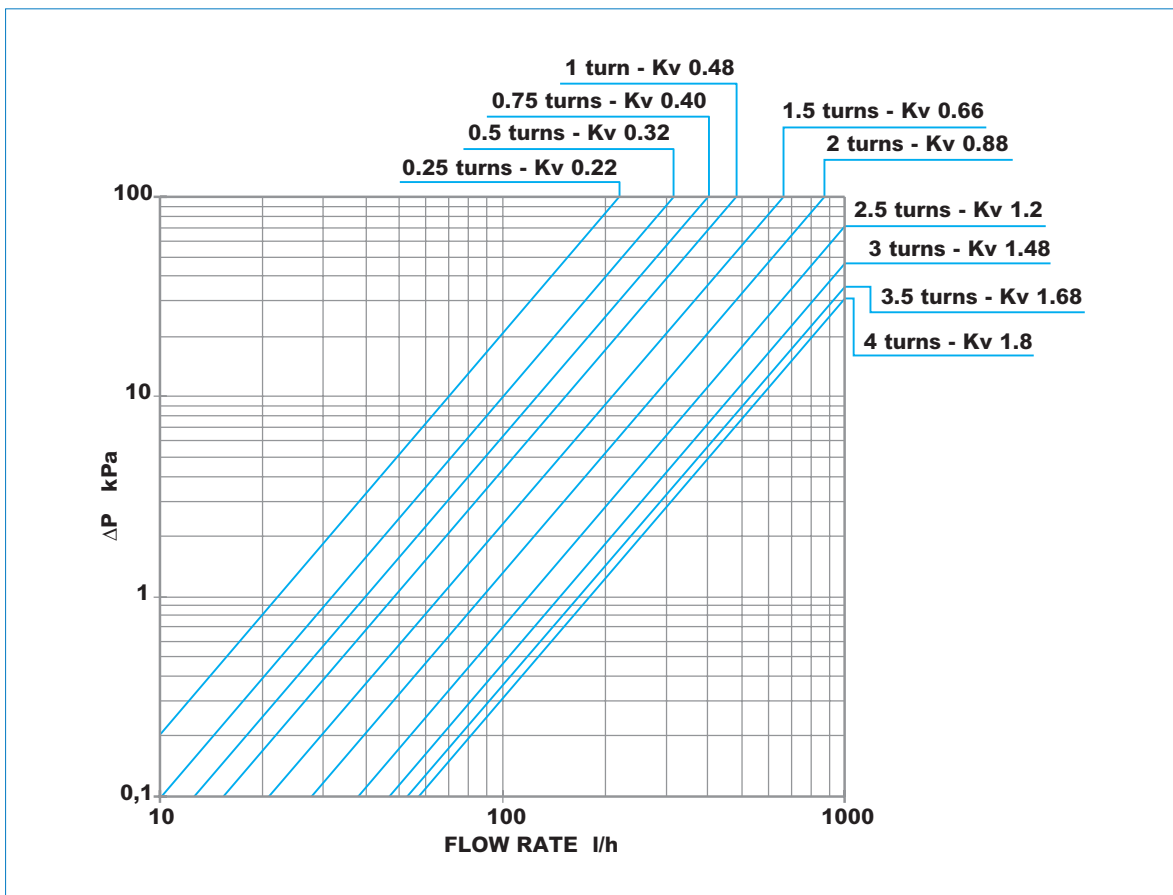
When the number of the user is lower than the connections available on the manifolds, plugs of the **834M series** can be used.

Flow rate / Pressure drop charts

Manifold with control valves. Preadjustments

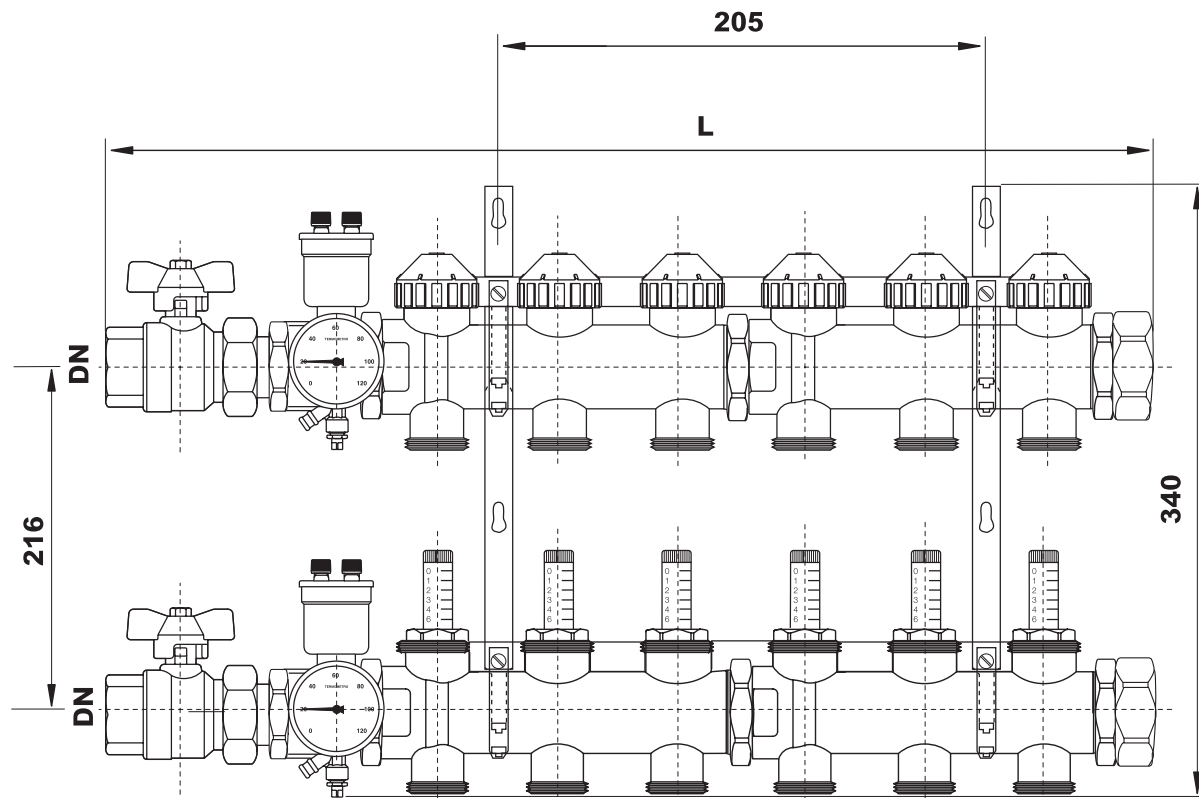


Flow meters 0-6 l/m measurement + control



Overall dimensions (mm)

CPRFL



Number of Outlets	L - 1.1/4"
3	350
4	400
5	500
6	500
7	550
8	600
9	650
10	700
11	750
12	800

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