

Description

For easy and practical installation of the mixing and circulation groups in the thermal plant, ICMA offers a brass manifold, provided with insulation shells and head plugs.

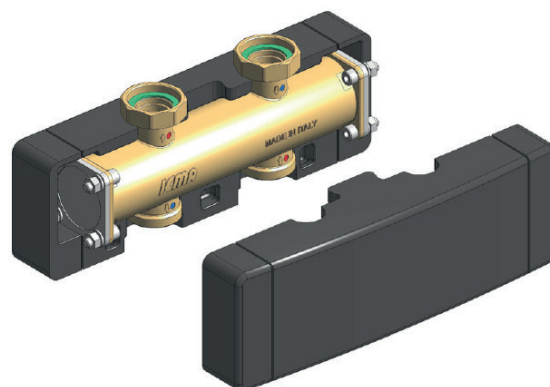
The 785 manifolds can be connected in series, to serve as many user's points as required (at high or low temperatures), for easier installation operations and reduced overall dimensions.

The main advantage of these manifolds is that they receive in one single "body" both the delivery fluid coming from the boiler and the return fluid from the plant. This can be realized thanks to the special inner structure of the manifold, consisting of two separate chambers, duly sized to keep both flows apart.

The 785 manifolds are supplied equipped with insulation shells.

These are in PPE, to guarantee correct thermal insulation and optimum strength to steam penetration. Also the sealing O-ring and the tightening bolts are provided, to connect several manifolds in series or to install the special head plugs in a safe and simple manner.

The female union assemblies G1" or G3/4", the wall support assemblies, the head plugs and the G1" plugs with closing O-Ring, if required, the lower manifold inlets, are supplied separately. This makes it possible to order as many as required, according to the type of installation.



Technical characteristics

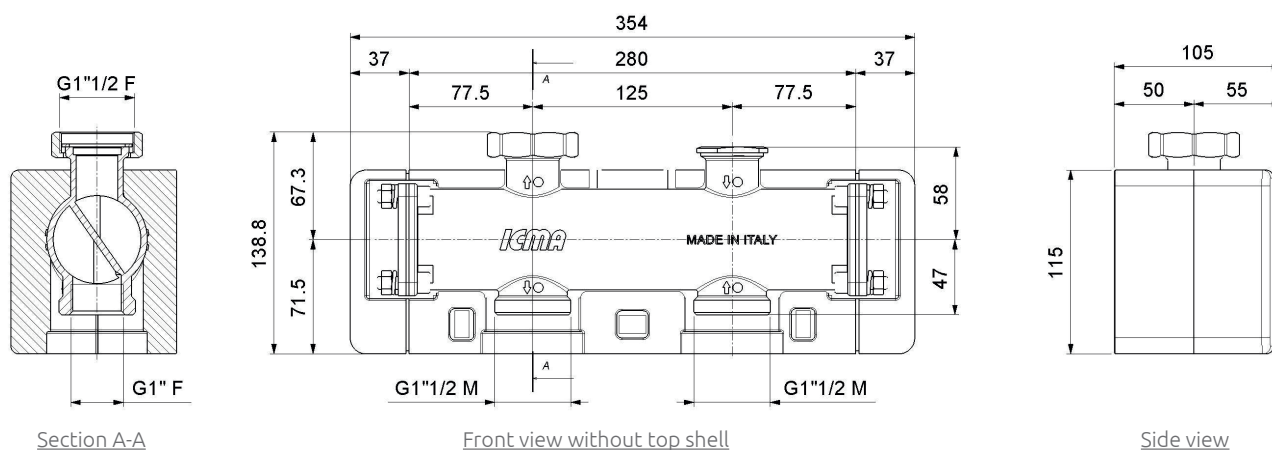
MATERIALS:

Body:	Brass CB753S
Caps and unions:	Brass CW617N - EN 12165
Head plug:	Brass CW617N - EN 12165
Tightening bolts:	Stainless Steel
Flat gaskets:	EPDM Perox
Sealing gaskets:	EPDM Perox
Insulation shells:	PPE
Conductivity of shells $\lambda(\Delta T)$:	0.041 (W/mK)

TECHNICAL DATA:

Fluids used:	Water and glycol solutions
Maximum percentage of glycol:	50%
Maximum operating pressure:	10 bar
Maximum temperature:	95°

Dimensions



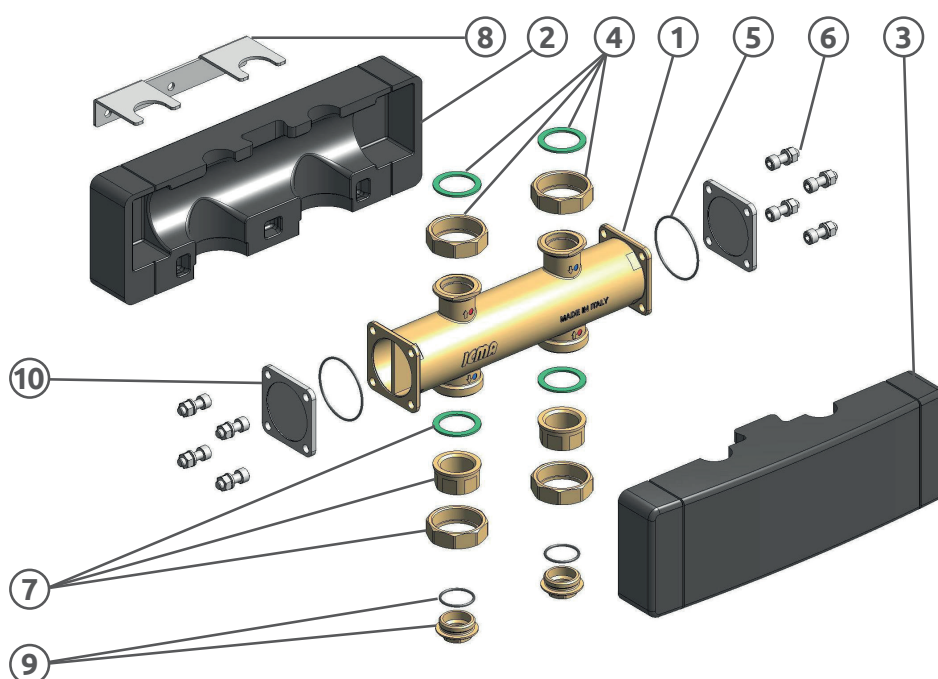
Components list

Components of manifold 785:

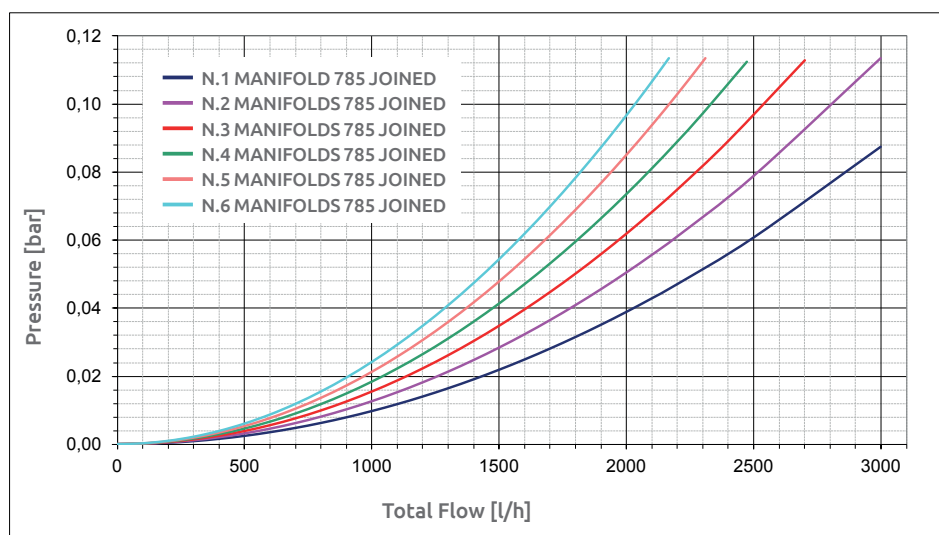
1. Manifold body.
2. Rear insulation shell.
3. Front insulation shell.
4. Cap G1"1/2 with gasket.
5. Sealing O-Ring.
6. Tightening bolts (screw+nut+washer).

Components to be ordered separately:

7. Female union assembly G 1" with cap and gasket (code 82789AF05).
7. Female union assembly G3/4" with cap and gasket (code 82789AE05).
8. Wall support assembly: supporting bracket with screws and blocks (code 2788AE05).
9. Plug G1" with sealing O-Ring (code 87173AF05).
10. Manifold head closing plug (code 87790AF05).



Hydraulic specifications (Manifolds flow rate performance curves 785)



COLLECTOR NUMBER	Kv m ³ /h
1	10,1
2	8.9
3	8
4	7.4
5	6.9
6	6.4

/ Connection in series of several manifolds and installation of the head plugs

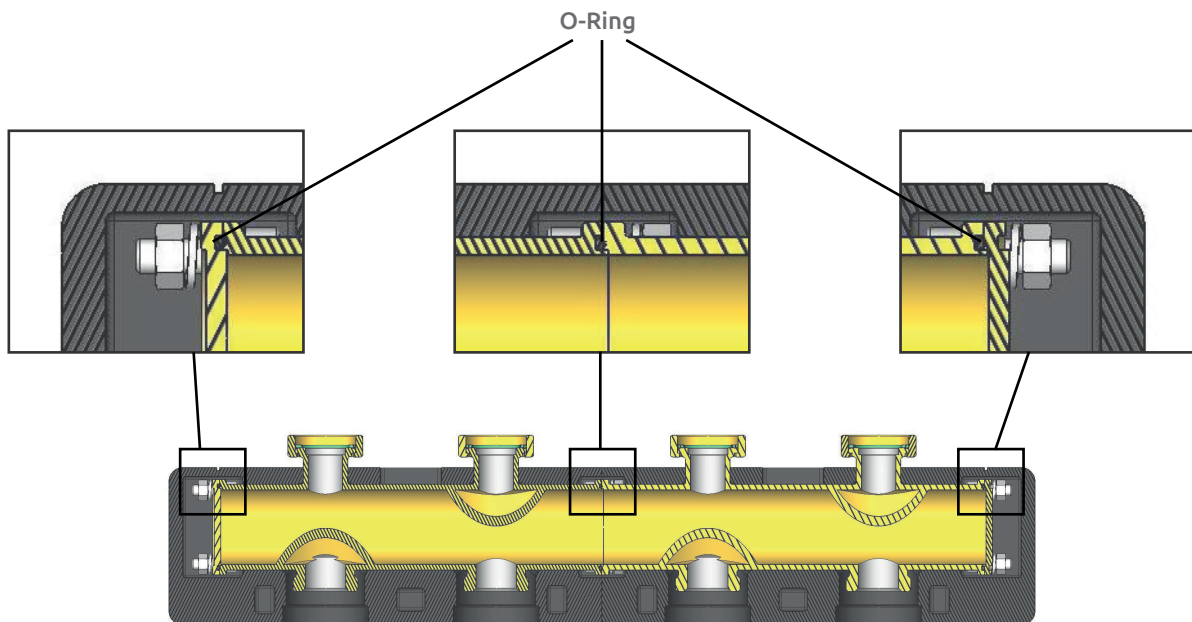
It is possible to assemble two or more manifolds in series, to serve as many circuits as required, keeping one single boiler to heat the heat conveying fluid at high temperatures.

When coupling two manifolds, great attention must be paid to the arrangement of the ends: one side houses the seat of the sealing O-Ring, the other side only houses the discharge for coupling to the next manifold. The manifolds orientation is not significant: it is important to have the right space to insert the sealing O-Ring (please refer to the diagrams below).

It is then necessary to close the ends of the manifold (or of the series of manifolds) using the head plugs provided (article 87790AF05, to be ordered separately). Attention must be paid to the different arrangements of the plug at both sides (one side houses the sealing O-Ring, the other side houses the discharge for coupling to the manifold).

When the orientation of the manifolds and the plugs is set, mount the assembly. Carefully position the sealing O-Ring in the relevant seats and fix the manifolds and the plugs using the screws, the lock washers and the nuts provided with the manifolds and with the plugs. These must be installed as shown in the pictures below.

If two or more manifolds are to be connected in series close the lower outlets not in use using the G1" plugs with O-Ring seals (article 87173AF05 which can be ordered separately).



/ Installation

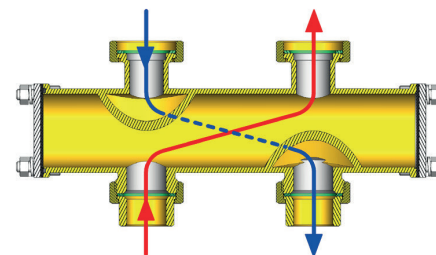
The manifolds for thermal plant can be wall mounted using the "wall support assembly" provided, which consists of a bracket and the fixing blocks with screws. When the bracket is fixed to the wall, insert the "rear insulation shell" and then the manifold. Then proceed with the hydraulic connections. Upon assembly completion, also install the front insulation shell.

It is required the installation of a hydraulic separator between the boiler and the manifold, to make the circuits independent and prevent any interferences between the pumps installed.

When several manifolds in series are installed, it is possible to connect an expansion vessel at one of the free lower outlets. This will absorb the volume increase resulting from the heating of the heat conveying fluid.

/ Manifold flow diagram

The diagram shows the path of the fluid inside the manifold. The delivery fluid, coming from the boiler, is shown in red, while the fluid returning from the plant is shown in blue. Both fluids are divided by a special wall located inside the manifold. The fluids directions, given as an example in the diagram, can be reversed, according to the selected model of Mixing and circulation group (right of left).



/ Installation diagram

The diagram below shows an example for the installation of three manifolds 785 with three mixing and circulation groups: the first "variable point" type R001, the second "fixed point" type R002. They serve each a radiant panels system respectively, and a third mixing and circulation group for "high/low direct temperature" R003 serving a high temperature heating radiator system. Between the boiler and the manifold a hydraulic separator is installed, which avoids any possible interferences among the pumps installed, to assure correct circulation of the heat conveying fluid inside the circuits.

