Manifolds for heating distribution

Description

The Barberi manifolds for heating distribution are of coplanar type and allow easy installations, strong structure, space-saving and a reduced thermal waste towards external area. The waste is further limited by the presence of the cover in isolating material. The manifolds are produced with section steel parts, later welded and coated with a black protective paint. The Barberi manifolds are manufactured in conformity with sales standard and could so be installed either in traditional application or coupled with pre-assembled heating distribution units, just like the Barberi Trolli Heating ones. Apart from traditional manifolds, Barberi offers manifolds' versions with integrated hydraulic compensator, which allows the hydraulic disconnection between main and secondary circuit. All manifolds are supplied with brackets for wall mounting.

Range of product

Art.	*Description*
P72	Insulated heating manifold and brackets
P74	Insulated heating manifold with integrated hydraulic compensator and brackets

Technical detail

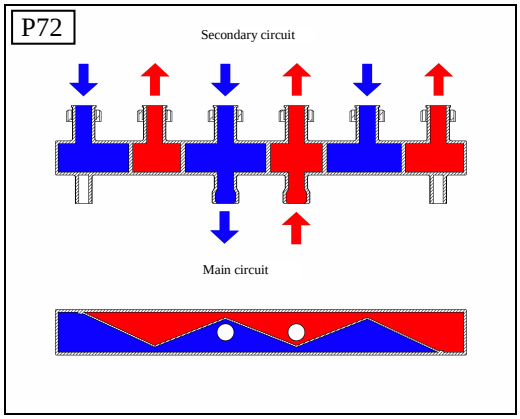
Max working temperature: **110℃**
Max working pressure: **4 bar**
Female connections: **UNI EN 10226-1**
Male connections: **UNI ISO 228-1**
Threaded connections with running nuts: **UNI ISO 228-1**
Suitable fluids: **water, mix water and glycol**(max 30%)

Material

Manifold Body
- Body: **Steel S235**
- Connection: **Steel S235**

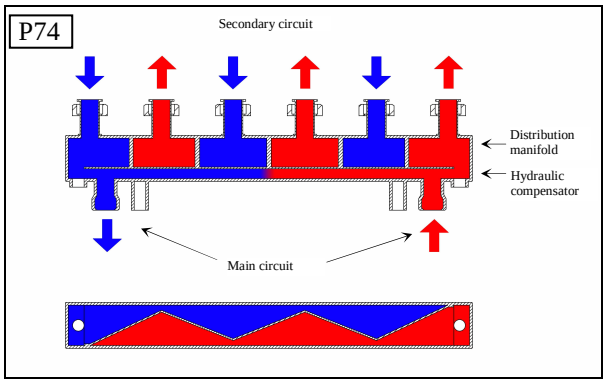
Insulation shell
- Body: **EPP**
  - Density 38 kg/m^3
  - Thermal conductivity 0,022W/mK(10℃)
- Body: **PUR** (Big grain polyurethane coated with aluminium embossed surface)
  - Density 40 kg/m^3
  - Thermal conductivity 0.025W/mk

Working way

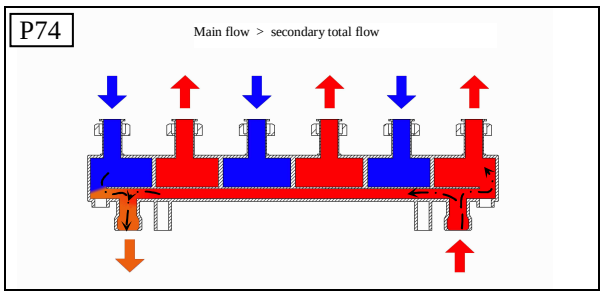


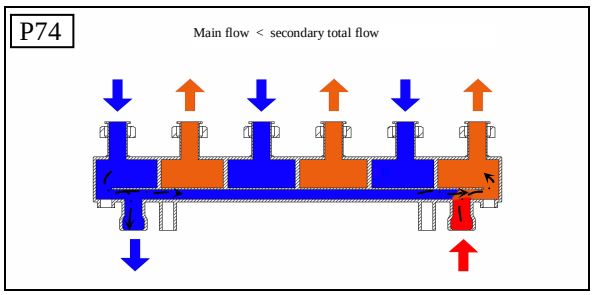
Coplanar manifold art.ref.P72 allows the distribution of a thermal fluid coming from a source (main circuit). Supply and return circuit of the installation (red and blue area in the secondary circuit) are divided by a vertical wall of sinusoidal shape. This shape allows to get wide space for aspiration and re-supply, avoiding bad functioning between secondary circuits' pumps.
Moreover, the vertical wall allows a great passage between different areas, reducing the influence of pressure drops.
Normally this manifold is installed together with hydraulic compensator to avoid the main pump's influence on the secondary pumps and vice versa.

Manifolds for heating distribution

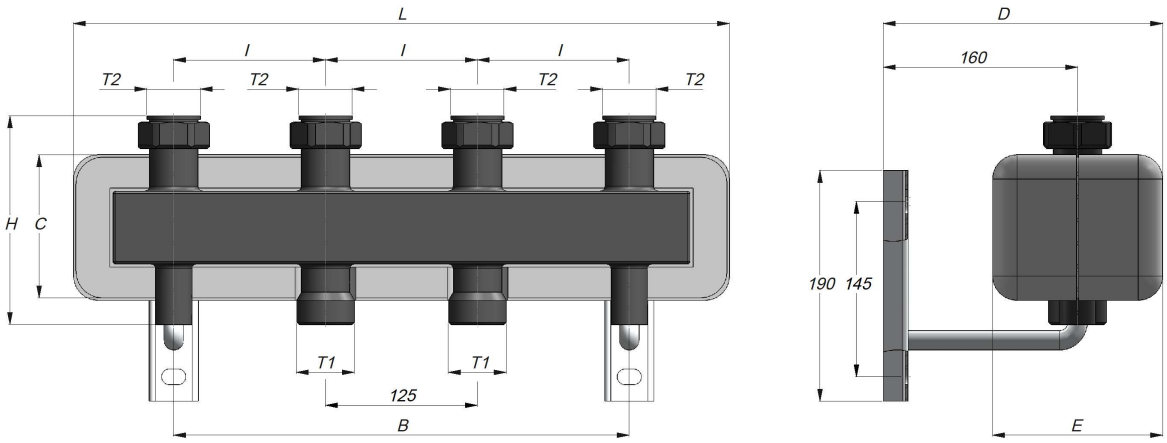


The heating manifold art.ref.P74 with integrated hydraulic compensator combines distribution's manifold advantages of art.ref.P72 with the hydraulic compensator directly connected with the manifold. This solution, suggested where a limited number of areas is to be served (less than 4), avoids the need for other compensators and can be installed in small areas. The hydraulic compensator, also known as hydraulic separator, allows the main and secondary circuits' pumps to work independently, respecting the flow rates of the project. This, to further satisfy energy policies, protects the pumps extending their lives. In the next 3 figures possible situations are showed; besides, the main flow is the same as secondary flow; low on left the main flow is bigger and low on right side the main flow is little than the secondary flow.





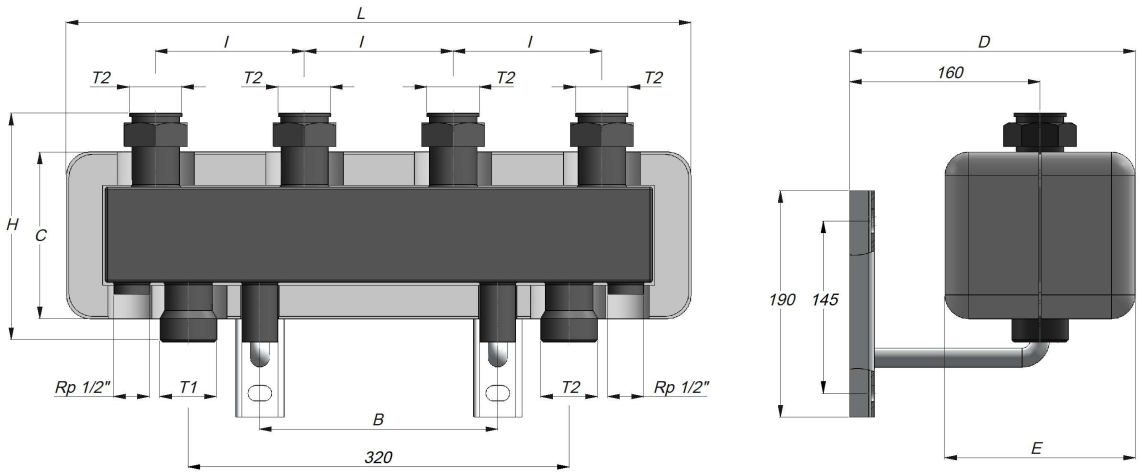
Dimension



Art.	T1	T2	L	H	D	I	C	B	E	No. areas	Thermal power (ΔT20°K) [kW]	Nominal flow [m3/h]	Weight	No. Pcs
P72040002	G 1"1/2 M	G 1"1/2*	540	172	238	125	135	375	156	2	70	3		1
P72040003	G 1"1/2 M	G 1"1/2*	790	172	238	125	135	625	156	3	70	3		1
P72040004	G 1"1/2 M	G 1"1/2*	1040	172	238	125	135	875	156	4	70	3		1
P72040005	G 1"1/2 M	G 1"1/2*	1291	172	238	125	135	1125	156	5	70	3		1
P72040006	G 1"1/2 M	G 1"1/2*	1541	172	238	125	135	1375	156	6	70	3		1
▶ **P72**M25002	G 1"1/2 M	R 1"	540	172	238	125	135	375	156	2	70	3		1
▶ **P72**M25003	G 1"1/2 M	R 1"	790	172	238	125	135	625	156	3	70	3		1
▶ **P72**M25004	G 1"1/2 M	R 1"	1040	172	238	125	135	875	156	4	70	3		1
▶ **P72**M25005	G 1"1/2 M	R 1"	1291	172	238	125	135	1125	156	5	70	3		1
▶ **P72**M25006	G 1"1/2 M	R 1"	1541	172	238	125	135	1375	156	6	70	3		1

L-E in mm
Weight in kg
▶ on demand
* running nut

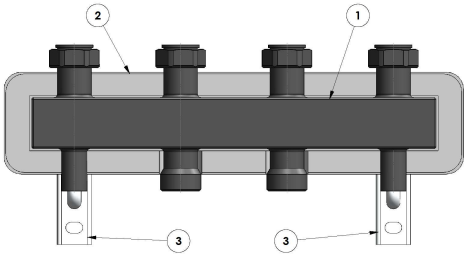
Manifolds for heating distribution



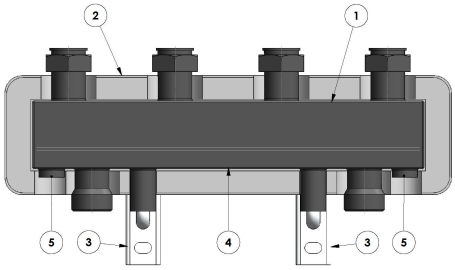
Art.	T1	T2	L	H	D	I	C	B	E	No. areas	Thermal power (ΔT20°K) [kW]	Nominal flow [m3/h]	Weight	No. Pcs
P74040002	G 1"1/2 M	G 1"1/2*	525	205	245	125	170	200	170	2	70	3		1
P74040003	G 1"1/2 M	G 1"1/2*	790	205	245	125	170	450	170	3	70	3		1

L-E in mm
Weight in kg
on demand
* running nut

Components



art. P72	
1	Manifold
2	Insulation shell
3	Brackets



art. P74	
1	Manifold
2	Insulation shell
3	Brackets
4	Hydraulic compensator
5	Connections to expansion vessel or filling/flush

Manifolds for heating distribution

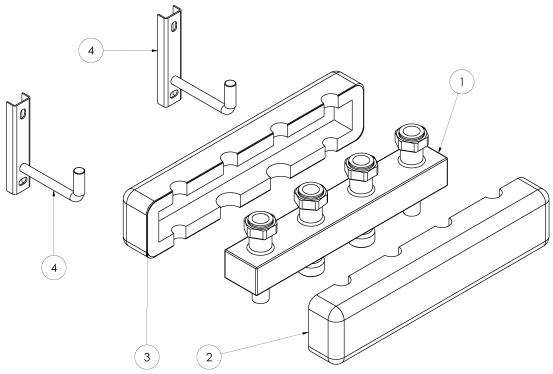
Installation

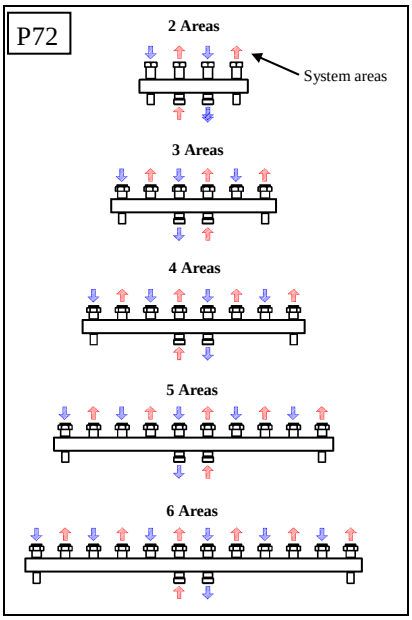
The installation of every hydraulic component must be carried on by qualified personnel since these are devices which carry the fluid to such temperature and pressure to represent a possible danger for people and things.

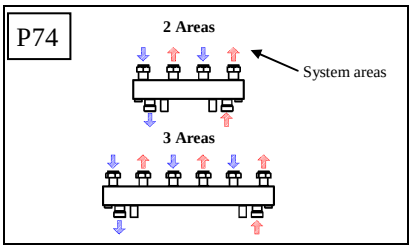
Introduction

Distribution manifold is composed of parts as per figure:

- Manifold(1)
- Front insulation shell (2),
- Back insulation shell (3),
- Brackets(4)







Housing

Installations' options of the distribution manifold are indicated in the chart.

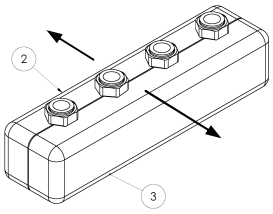
	Scheme 1	Scheme 2
Art. P72	ok	ok
Art. P74	ok	ok

In following figures are represented the hot and cold fluid through different manifolds based on a right version supply.

Wall installation

1. Pick up the pre-assembled manifold from the box

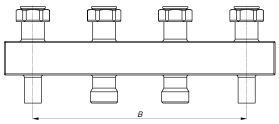
2. Open the cover pulling part 2) and 3) from the showed upper parts



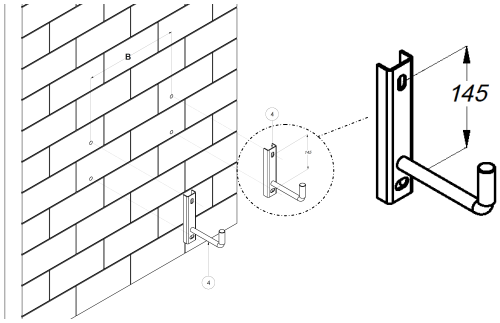
3. Measure the distance between sockets where brackets will be inserted. By the same way, the distance can be deducted from chart.

Manifolds for heating distribution

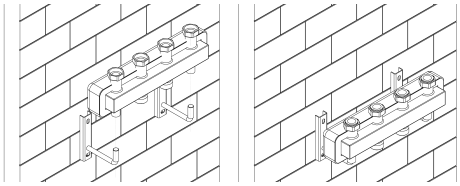
article	B[mm]
P72040002	375
P72040003	625
P72040004	875
P72040005	1125
P72040006	1375
P72M25002	375
P72M25003	625
P72M25004	875
P72M25005	1125
P72M25006	1375
P74040002	200
P74040003	450



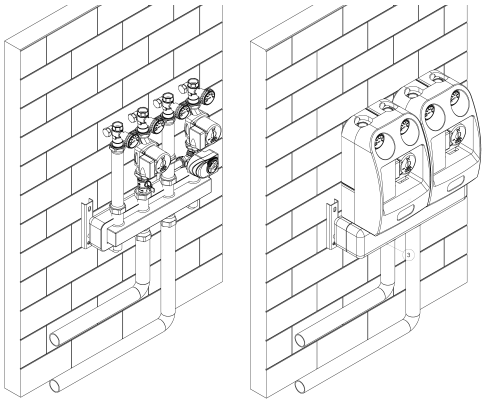
4. Do the necessary holes in a suitable wall to mount the brackets, blocking them with suitable screws or plugs.



5. Mount the manifold at the wall including its back cover. It is possible to mount the manifold without the cover (if it would possible to install this last part after pipes installation).



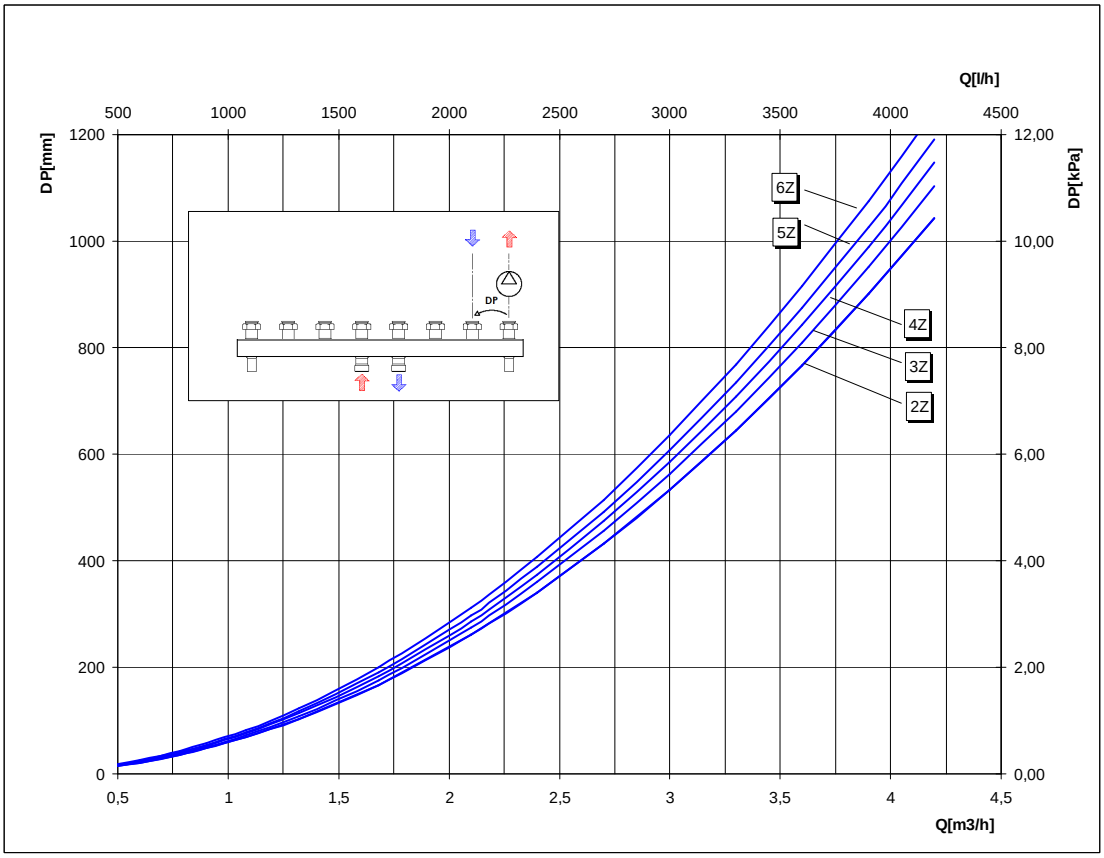
6. Install main and secondary circuit's pipes and later the distribution manifold's covers and the heating units' covers.



Manifolds for heating distribution

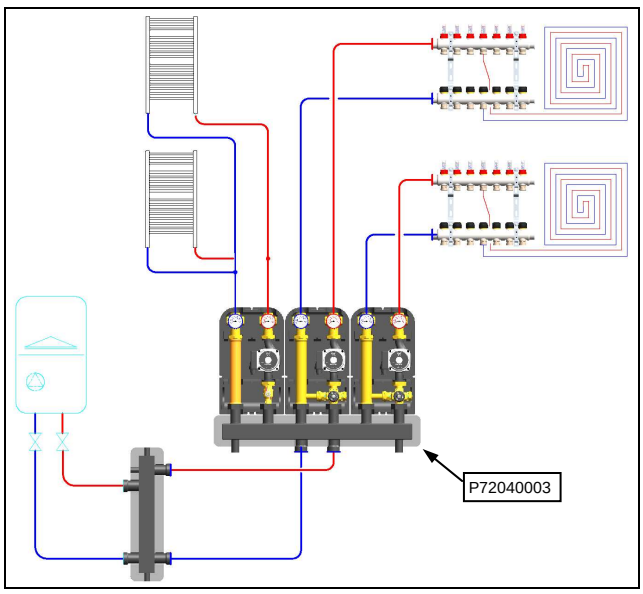
Diagrams

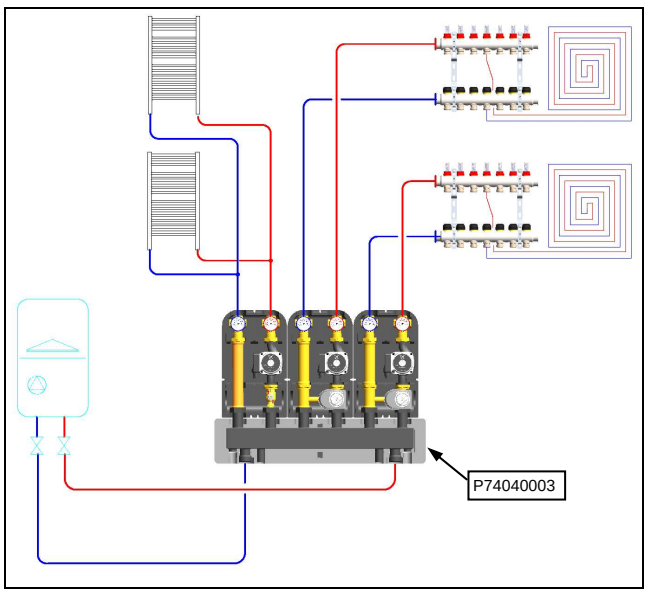
Supply and return pressure drop of area worst covered by manifold



Z = number of manifold's areas

Example of installation





Manifolds for heating distribution

Term of contract

This text refers to a specific code of the product. For each version of the groups the designer must modify the specifications.

Article code P72040002
Distribution manifold with G1”1/2M flat face main connection and G1”1/2F running nut secondary circuit connection. Number 2 available areas with 125mm centreline between supply and return secondary connection, suitable for pre-assembled heating units 01G, 02G and 03G; centreline for main connection 125mm. Insulated manifold minimal amount of space 520, 172, 140 (length, height, depth). Manifold is composed of: black painted steel body, insulation, wall mounting brackets. Insulating cover is in black EPP 50kg/m3. Max. temperature of thermal fluid 110℃.Max pressure of thermal fluid 4bar. Rated flow 3m3/h, rated power 70kw with temperature difference between main flow and return of 20℃.

Article code P74040002
Distribution manifold with integrated hydraulic compensator with G1”1/2M flat face main connection and G1”1/2F running nut secondary circuit connection. Number 2 available areas with 125mm centred dimension between supply and return secondary connection, suitable for pre-assembled heating units 01G, 02G and 03G; centreline for main connection 320mm. Encumbrance of insulated manifold 525, 205, 170 (length, height, depth). Manifold is composed of: black painted steel body, insulation, wall mounting brackets. Insulating cover is in black EPP 50kg/m3. Max. temperature of thermal fluid 110℃.Max pressure of thermal fluid 4 bar. Rated flow 3m3/h, rated power 70kw with temperature difference between main flow and return of 20℃.

Accessories

Art. 38D025000

Shut-off ball valve with integrated thermometer 0 - 120°C (30 - 250°F). Pump connection with running fitting 1”1/2 F. Flat gasket D45 x d33.3 x 2.

Maximum temperature:: **90°C**
Maximum pressure: **10 bar**

article	dimension	handle
38D 025 000	*G 1"1/2 x G 1"*	*red*

Art. 39D020000R

Shut-off ball valve. Pump connection with running fitting 1”1/2 F. Plane gasket D45 x d33.3 x 2.

Maximum temperature:: **90°C**
Maximum pressure: **10 bar**

article	dimension	handle
39D 020 000 R	*G 1"1/2 M x G 1"1/2 F*	*red*

Art. 37D025000

Shut-off ball valve with integrated thermometer 0 - 120°C (30 - 250°F) and check insert. Pump connection with running fitting 1”1/2 F. Flat gasket D45 x d33.3 x 2.

Maximum temperature:: **90°C**
Maximum pressure: **10 bar**

article	dimension	handle
37D 025 000	*G 1"1/2 x G 1"*	*blue*

Art. 44D025000

Pair of spigots with flat washer

Maximum temperature:: **90°C**
Maximum pressure: **10 bar**

article	dimension
44D 025 000	*G 1" x G 1"1/2*

Manifolds for heating distribution

Art. 44D025000

Brackets for wall mounting of distribution manifold

article	hole distance
P72 000 00S	*145 mm*

Related Products

Art. P73
Hydraulic compensator

02G
Distribution group with thermostatic regulation

Art. 01G
Direct distribution group

Art. 03G
Distribution group with motorized mixing valve