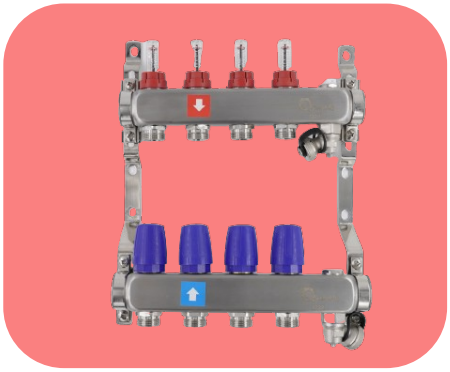
Stainless steel manifold block with flow meters, air vents and drain valve

ZQSSM0325W02-12

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PRODUCT DESCRIPTION

Manifold blocks are designed to distribute the flow of the working medium of water heating systems to consumers. In this case, the “consumer” is understood as a separate heating device or a group of devices, a circuit or a “UFH” loop, individual parts or branches of the system.

The manifold block combines stainless steel supply and return manifolds, flow meters, thermostatic valves (with the possibility of installing an electrothermal actuator) and mounting brackets.

Manifold blocks can operate both on water and low-freezing (glycol) coolant.

Manifold blocks are produced with the number of outputs from 2 to 12.

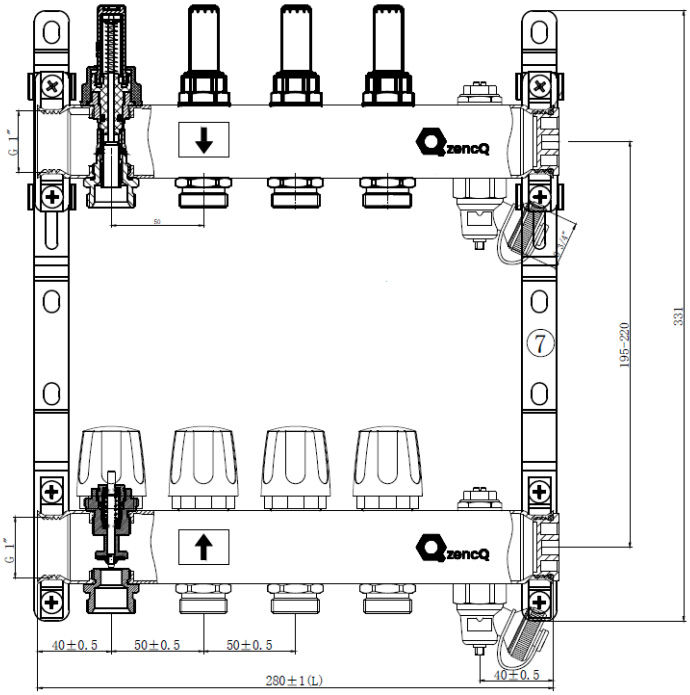
Accession of circulation loops is carried out by means of a fitting of the eurocone standard 3/4" (M).

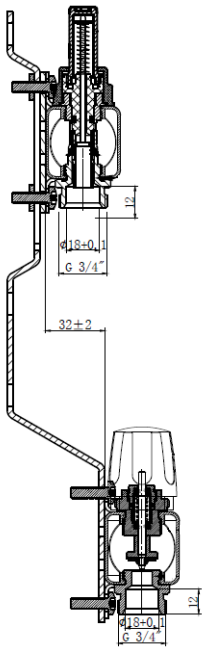
The units are equipped with a manual valve for air removal and a drain cock for draining/filling the system with working medium.

TECHNICAL PARAMETERS	
Maximum working medium temperature	90 °C
Permissible ambient temperatures	-10 ÷ +40 °C
Working pressure PN	10 bar
Outlet thread diameter	¾"
Thermostatic valve thread diameter	M30*1,5
Center distance (between outputs)	50 mm
Thread type	Cylindrical
Wall thickness	1,5 mm
Conditional throughput of the adjusting valve at the indications of the flow meter	0-5 l/m

ASSORTMENT			
2 outlets	ZQSSM0325W02	8 outlets	ZQSSM0325W08
3 outlets	ZQSSM0325W03	9 outlets	ZQSSM0325W09
4 outlets	ZQSSM0325W04	10 outlets	ZQSSM0325W10
5 outlets	ZQSSM0325W05	11 outlets	ZQSSM0325W11
6 outlets	ZQSSM0325W06	12 outlets	ZQSSM0325W12
7 outlets	ZQSSM0325W07		

DIMENSIONS

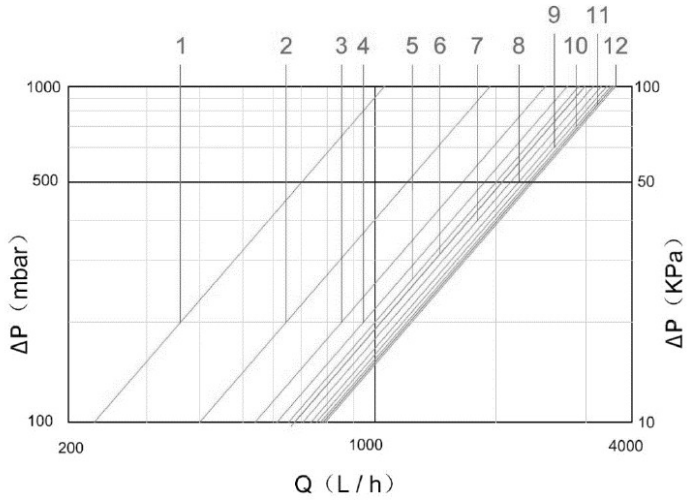




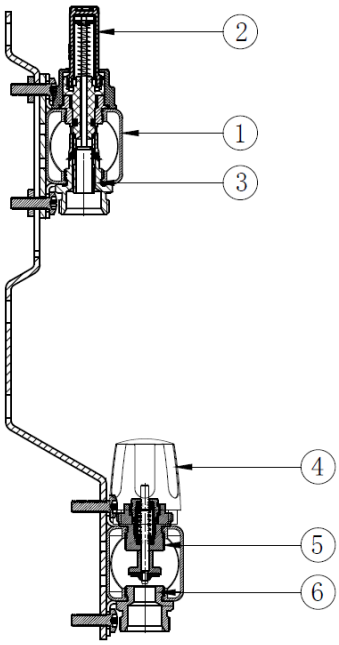
DIMENSIONS, L (mm)	
2	180
3	230
4	280
5	330
6	380
7	430
8	480
9	530
10	580
11	630
12	680

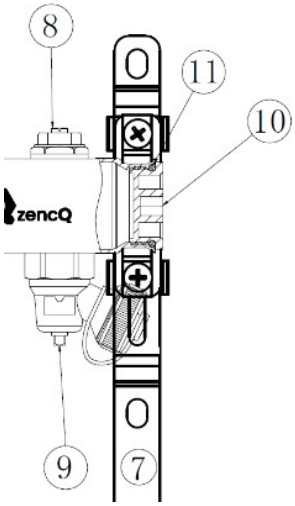
HYDRAULIC CHARACTERISTICS

FLOW METERS	
0,5 l/m	0,11 m3/h
1 l/m	0,22 m3/h
2 l/m	0,43 m3/h
3 l/m	0,65 m3/h
4 l/m	0,86 m3/h
5 l/m	1,1 m3/h



FLOW RATE OF MANIFOLD BEAM											
Outlets	2	3	4	5	6	7	8	9	10	11	12
Kv, m3/h	1,65	2,23	2,55	2,81	2,97	3,13	3,26	3,34	3,38	3,42	3,5





OPERATING PRINCIPLE

The transported medium enters the supply manifold with flow meters (1), which is made of stainless steel AISI304. Further, it is distributed along the contours passing through the mating part of the valve (3).

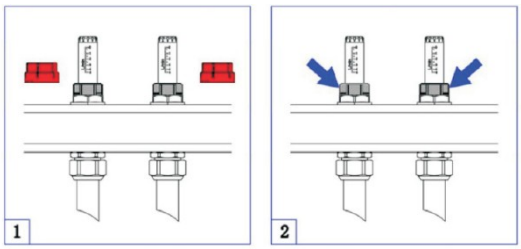
The cooled water returns to the lower beam with thermostatic valves (5) passing through their mating part (6). The thread on the adjustable part of the valve is M30 * 1.5. It is possible to install a servomotor or an electrothermal head on a thermostatic valve. In the basic delivery, the valve is completed with an adjustable cover (4).

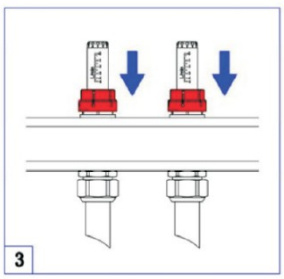
Manifold beams are placed on fasteners (7).

A manual valve (8) is used to release the air. For filling / draining the coolant, a drain valve (9).

DESIGN AND MATERIALS		
1	Body	Stainless steel AISI304
2	Flow meter	-
3	Counter part of the flowmeter	Brass CW617N
4	Thermostatic valve cover	ABS plastic
5	Thermostatic valve	Brass CW617N
6	Counterpart of the thermostatic valve	Brass CW617N
7	Brackets	Steel A3
8	Manual air vent	Brass CW617N
9	Drain valve	Brass CW617N
10	Cap	Brass CW617N
11	Seal	EPDM

FLOW METER SETUP





The loops are balanced using adjusting valves with flow meters. For balancing with the circulation pump on, for each loop, the following operations must be performed:

1. Remove the red protective sleeve

2. Completely close the valve by turning the black sleeve so that the flow indicator moves to "0". Set the required flow rate (in l/min) according to the flow meter using the black bushing. Rotate counterclockwise.

3. Put on the protective sleeve.

To replace the valve, unscrew it from the manifold using the brass nut. Remove the defective valve and replace with a new one. Remove the defective valve and replace with a new one.

INSTALLATION REQUIREMENTS

1. The fittings should not experience loads from the pipeline (during bending, compression, tension, torsion, distortion, vibration, uneven tightening of fasteners, etc.). If necessary, supports or compensators should be provided to eliminate the load on the fittings from the pipeline.
2. The misalignment of the connected pipelines should not exceed 3 mm with a length of up to 1 m plus 1 mm for each subsequent meter.
3. Lever spanners are not allowed for mounting.
4. It is recommended to install the manifolds with the air vent up in a vertical position.
5. The assembly of the manifold block and the connection of pipelines should be carried out using sealing materials.
6. Balancing of the contours of UFH is carried out using flow meters.
7. Thermostatic valves should be on the return manifold, and flow meters with control valves should be on the supply manifold.
8. After installation, the system must be subjected to a hydraulic test with a static pressure of 1.5 times the design working pressure in the system, but not less than 6 bar.

OPERATION AND MAINTENANCE REQUIREMENTS

1. Manifolds must be operated at the pressure and temperature specified in the specification table.
2. It is strictly forbidden to allow the working medium to freeze inside the manifold.
3. Disassembly of the manifolds is allowed only when the coolant is drained.
4. The following types of connectors should be used to connect pipelines to manifold outlets:

CONNECTORS			
№	Code	Nut thread	Pipe parameters, mm
1	ZQEK001	¾"	16*2,0
2	ZQEK002	¾"	16*2,2

MANUFACTURER

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Address of production: Shamen Industrial Area, Yuhuan, Taizhou, Zhejiang, China 317607
Country of origin: China