

EN Stainless steel distributor/collector “Multidis SF” for surface heating and cooling with flow measuring and regulating devices 0 - 5 l/min in the supply (2 to 12 heating circuit connections)

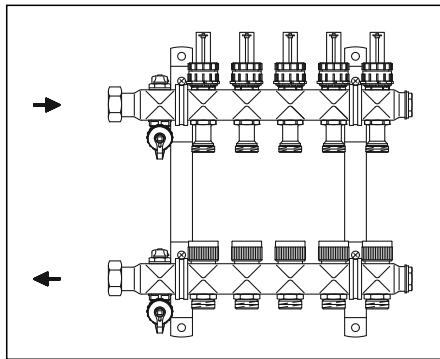
Installation and operating instructions for the specialised installer

Read installation and operating instructions in their entirety before installing the stainless steel distributor/collector “Multidis SF”!

The installation and operating instructions as well as all other valid documents have to remain with the user of the system!

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1. General information

1.1. Information regarding installation and operating instructions

These installation and operating instructions serve the installer to install the stainless steel distributor/collector “Multidis SF” professionally and to put it into operation.

Other valid documents:


Manuals of all system components.

1.2. Keeping of documents


These installation and operating instructions should be kept by the user of the system.

1.3. Symbol explanation


Safety guidelines are displayed by symbols. These guidelines are to be observed to prevent accidents, damage to property and malfunctions.



DANGER!
Imminent danger to life and limb!



ATTENTION!
Potential dangerous situation for product, system and environment!



NOTE!
Useful information and notes!

1.4. Copyright

The installation and operating instructions are copyrighted.

2. Safety notes

2.1. Correct use

Operating safety is only guaranteed if the stainless steel distributor/collector “Multidis SF” is used correctly.


The stainless steel distributor/collector “Multidis SF” is used in hot water central heating and/or cooling systems for individual room temperature control.

Any use of the product outside the above circumstances will be considered as non-compliant and misuse.

Claims of any kind against the manufacturer and/or its authorised representatives due to damages caused by incorrect use cannot be accepted.

The observance of the operating and installation instructions is part of the compliance terms.

2.2. Possible dangers at the installation location



DANGER! Hot surfaces
The stainless steel distributor/collector “Multidis SF” can get very hot during operation. Do not touch without safety gloves.

3. Transport, packaging and storage

3.1. Transport inspection

Upon receipt, check delivery for any damages caused during transit.

Any damages must be reported immediately upon receipt.

3.2. Storage

The stainless steel distributor/collector "Multidis SF" must only be stored under the following conditions:

- Do not store in open air, keep dry and free from dust.
- Do not expose to aggressive fluids or heat sources.
- Protect from direct sunlight and mechanical agitation.
- Storage temperature: -20°C up to +55°C, max. relative humidity of air: 95 %

! ATTENTION:

- Please protect against external forces (e.g. impacts, vibrations etc.)
- External components such as handwheels, pressure test points and actuators should not be used as lever points during installation.
- Suitable means of transport and fitting devices have to be used.

4. Technical data

4.1. Performance data

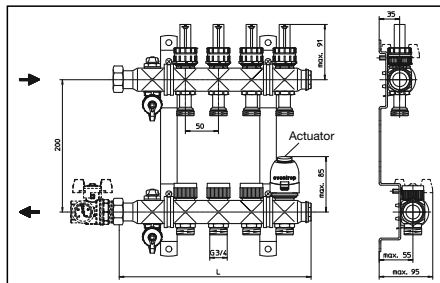
Max. working pressure:	6 bar
Max. differential pressure:	1 bar
Max. working temperature:	80 °C
k_{vs} value:	1.1 m ³ /h
Measuring range:	0-5 l/min



DANGER!

Suitable measures (e.g. safety valves) have to be taken so that the maximum working pressure and the maximum and minimum temperatures are not exceeded or undercut.

4.2. Dimensions / Connection dimensions



Illustr. 4.1: Dimensions stainless steel distributor/collector "Multidis SF"

Item no.	Outlets	Length (L)	Length with ball valves 14064/6583
140 43 52	2	190 mm	263 mm
140 43 53	3	240 mm	313 mm
140 43 54	4	290 mm	363 mm
140 43 55	5	340 mm	413 mm
140 43 56	6	390 mm	463 mm
140 43 57	7	440 mm	513 mm
140 43 58	8	490 mm	563 mm
140 43 59	9	540 mm	613 mm
140 43 60	10	590 mm	663 mm
140 43 61	11	640 mm	713 mm
140 43 62	12	690 mm	763 mm

Illustr. 4.2: Lengths for stainless steel distributor/collector "Multidis SF"

Item no.	Size	D	L1	L2
140 63 83	DN 20	G3/4	55 mm	57 mm
140 63 84	DN 25	G1	80 mm	60 mm
140 64 83 (with thermometer and red T-handle)	DN 20	G3/4	73 mm	60 mm
140 65 83 (with thermometer and blue T-handle)	DN 20	G3/4	73 mm	60 mm
140 64 84 (with thermometer and red T-handle)	DN 25	G1	85 mm	60 mm
140 65 84 (with thermometer and blue T-handle)	DN 25	G1	85 mm	60 mm

Illustr. 4.3: Ball valve dimensions

5. Construction and function

5.1. Summary / Functional description

The stainless steel distributors/collectors "Multidis SF" are designed for use in surface heating and cooling systems with circulation pump.

The risers can be connected to the distributor/collector from either the left or right hand side.

The brackets allow the fixing of the distributor/collector in the cabinet or directly on the wall. The stainless steel distributors/collectors can be equipped with the ball valves displayed in illustr. 4.3. The flat sealing ball valves are directly connected to the collar nuts (G 1 female thread) of the distributors/collectors.

Standard heat meters G 1 and G ¾ can be connected. When choosing the cabinet, please take into consideration that this will result in an enlarged depth and length of the stainless steel distributor/collector "Multidis SF". The heating/cooling circuit connections have a G ¾ male thread according to DIN EN 16313 (cone "Euro"). Printed tags for marking the heating/cooling circuit connections are supplied with the distributors/collectors.

For filling and flushing the heating/cooling circuit, the distributor/collector is equipped with fill and drain valves with a connection for a DN 15 hose connection. The installation can be bled during the filling process and when the heating/cooling system is in operation via the vent plug.

5.2. Application

The stainless steel distributors/collectors "Multidis SF" allow a central distribution of the heating/cooling water to the different circuits of each living zone. It is recommended to equip the distributors/collectors with ball valves (illustr. 4.3). They allow the isolation of the supply and the return pipe, e.g. for maintenance work. Together with the electrothermal actuators and room thermostats which are available as accessories, the valve inserts M 30 x 1.5 in the return collector for subsequent conversion to thermostatic operation can be used for individual room temperature control. Hydronic balance is carried out using the flow measuring and regulating devices integrated in the flow distributor.

6. Installation

6.1. Extent of supply

Upon receipt, check the delivery for completeness and any transport damages.

6.2. Installation

The flow distributor and return collector are preassembled and leak tested at works. Mount flow distributor (top) and return collector (bottom) in the sound-absorbing brackets (illustr. 4.1).

! ATTENTION!

The flow distributor is always located in the bracket at the top and the return collector in the bracket at the bottom.

The ball valves 140 64/65 83 (DN 20) and 140 64/65 84 (DN 25) (with thermometer and red or blue T-handle) as well as 140 63 83 (DN 20) and 140 63 64 (DN 25) (without thermometer and with red T-handle) which are available as accessories, are mounted with the help of the collar nuts (G1 female thread with flat seals). The risers are connected to the female threaded port of the ball valves, e.g. by using the Oventrop "Combi-System":

- Composition pipe "Copipe"
- Press fittings "Cofit P"
- Screwed fittings "Cofit S"

The pipes have to be insulated against heat loss and for soundproofing according to the valid rules, standards and regulations.

The surface heating/cooling circuits are connected to the G $\frac{3}{4}$ compression connections at the flow distributor and return collector.

6.3. Floor construction

Regarding thermal and sound insulation, the floor construction must comply with the valid rules, standards and regulations.

6.4. Filling, bleeding, leak testing

The installation is filled up to the stainless steel distributor/collector "Multidis SF" at the open ball valves via the risers. The vent plugs can be used for bleeding the system even when the system is in operation.

The surface heating/cooling circuits are filled via the fill and drain valve in front of the first heating/cooling circuit connection of the flow distributor with the ball valves being closed. The G $\frac{3}{4}$ connection is suitable for standard hose connections DN 15, e.g. Oventrop item no. 103 45 52. The surface heating/cooling circuits are flushed separately, so that the pipework is completely filled with water.

! ATTENTION!

Carry out leak test according to DIN EN 1264. The test results must be recorded.

6.5. Incremental heating test

! ATTENTION!

Incremental heating of concrete and anhydrite screed must be carried out according to DIN EN 1264-4.

Start incremental heating at the earliest:

- 21 days after having laid the concrete screed
- 7 days after having laid the anhydrite screed

Heat up slowly!

- 3 days with a flow temperature of about 25°C, then
- 4 days with a flow temperature of about 55°C.

Flow temperature regulation only via the boiler control. Open valve inserts of the stainless steel distributor/collector "Multidis SF" with the help of the protection caps.



NOTE!

Other instructions of screed manufacturers have to be observed!

Before setting the system into operation, the valve inserts of the return collector have to be equipped with automatic controls for individual room temperature control. All Oventrop actuators and room thermostats, e.g. electrothermal actuator, item no. 101 28 15 and room thermostat, item no. 115 20 51, are suitable.

6.6. Initial operation

! ATTENTION!

The flow temperature must be co-ordinated with the surface heating/cooling system.

Near the heating pipes, the maximum permissible screed temperatures according to DIN must not be exceeded. In cooling systems, the temperature near the cooling pipes must not reach the dew point. The general instructions of the manufacturers must be observed.

7. Operation

7.1. Regulation

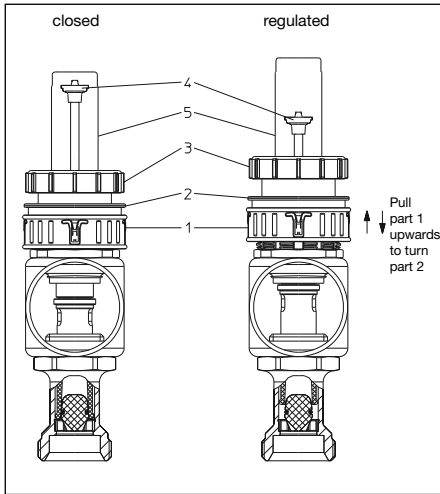
Hydronic balance of the heating/cooling system has to be carried out between the various risers.

Regulation of the surface heating/cooling circuits is carried out at the stainless steel distributor/collector "Multidis SF".

7.2. Setting of the flow measuring and regulating devices (illustr. 7.1)

Setting is carried out whilst the pump is in operation.

- Open all valves of the heating/cooling system completely.
- Lift the locking ring (1) until it clicks into position.
- Wind up locking cap (2).
- Set calculated flow rate by turning the handwheel (3) of the first flow measuring and regulating device.
- The set value can be read off at the red indicator ring (4) inside the viewing glass (5). The scale shows values between 0 and 5 l/min.
- Carry out setting of all heating/cooling circuits.
- The first values are checked and readjusted if required.
- With the setting being completed, close locking cap (2) until stop.
- Protect setting of the flow measuring and regulating devices by pushing the locking ring (1) down.



Illustr. 7.1: Setting of flow measuring and regulating devices

7.3. Isolation and opening (illustr. 7.2)

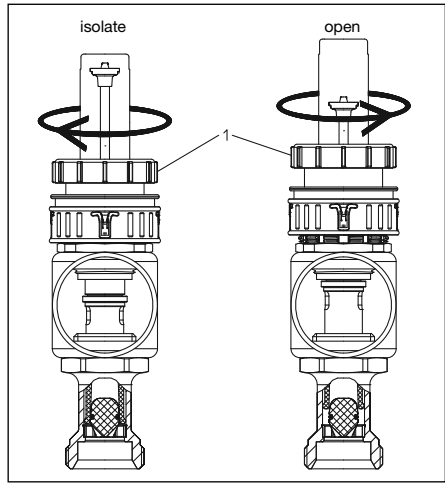
Each heating/cooling circuit can be isolated without modification of the set flow rate which means that the set flow rate is restored after reopening an isolated heating/cooling circuit. The functions "setting" and "isolation" are thus autonomous.

Isolation:

The heating/cooling circuit is closed by turning the handwheel (1) clockwise.

Opening:

Turn handwheel (1) anticlockwise until stop. The flow measuring and regulating device is opened and the set flow rate is restored.



Illustr. 7.2: Isolation and opening of the flow measuring and regulating devices

8. Warranty

Oventrops warranty conditions valid at the time of supply are applicable.