



Stainless steel distributor/collector "Multidis SF" for surface heating and cooling systems with flow measuring and regulating devices 0-2 GPM in the supply (2 to 12 heating/cooling circuits)

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"! Installation, initial operation, service and maintenance must only be carried out by qualified tradesmen! The installation and operating instructions, as well as other valid documents must remain with the user of the system!

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Illustr. 1.1 Stainless steel distributor/collector "Multidis SF"

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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 as well as technical rules – must be observed.

1.2 Keeping of documents

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

1.3 Copyright

The installation and operating instructions are copyrighted.

1.4 Symbol explanation

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



DANGER

DANGER indicates an imminent dangerous situation which will lead to death or serious injury if the safety guidelines are not observed.



WARNING

WARNING indicates a possible dangerous situation which may lead to death or serious injury if the safety guidelines are not observed.



CAUTION

CAUTION indicates a possible dangerous situation which may lead to minor or moderate injury if the safety guidelines are not observed.

NOTICE

NOTICE indicates a possible damage to property which may occur if the safety guidelines are not observed.

Subject to technical modifications without notice.

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2 Safety notes

2.1 Correct use

Safety in operation 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 in surface heating and cooling systems.

Any use of the stainless steel distributor/collector “Multidis SF” outside the above applications will be considered as non-compliant and misuse. Claims of any kind against the manufacturer and/or his authorised representatives due to damages caused by incorrect use cannot be accepted.

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

2.2 Possible dangers at the installation location and during transport

The case of an external fire has not been taken into consideration when constructing the stainless steel distributor/collector “Multidis SF”.

WARNING

Hot or cold surfaces!

Risk of injury! Do not touch without safety gloves. The stainless steel distributor/collector “Multidis SF” may get very hot or cold during operation.

Sharp edges!

Risk of injury! Only touch with safety gloves. Threads, bore holes and edges are sharp.

Small components!

Risk of ingestion! Store and install the stainless steel distributor/collector “Multidis SF” out of reach of children.

Allergies!

Health hazard! Do not touch the stainless steel distributor/collector “Multidis SF” and avoid any contact if allergies against the used materials are known.

3 Transport, storage and packaging

3.1 Transport inspection

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

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: -4°F up to $+190^{\circ}\text{F}$
- Max. relative humidity of air: 95 %

3.3 Packaging

Packaging material is to be disposed of in an environmentally friendly manner.

4 Technical data

4.1 Performance data

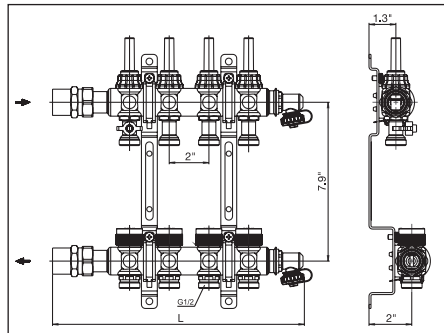
Max. operating temperature t_s :	176 °F
Min. operating temperature t_s :	14 °F
Max. operating pressure p_s :	87 psi
Max. differential pressure:	14 psi
K_{VS} value:	1.1 m³/h
Measuring range:	0-2 Gpm

Fluid: Non aggressive fluids (e.g. water and suitable water and glycol mixtures). Not suitable for steam, oily and aggressive fluids.

DANGER

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

4.2 Dimensions/Connection sizes



Illustr. 4.1 Dimensions stainless steel distributor/collector “Multidis SF”

Item no.	Circuits	Length (L)	Length (L) (Inches)
1685172	2	215 mm	8.5
1685173	3	265 mm	10.4
1685174	4	315 mm	12.4
1685175	5	365 mm	14.4
1685176	6	415 mm	16.3
1685177	7	465 mm	18.3
1685178	8	515 mm	20.3
1685179	9	565 mm	22.2
1685180	10	615 mm	24.2
1685181	11	665 mm	26.2
1404782	12	715 mm	28.2

Illustr. 4.2 Lengths stainless steel distributor/collector “Multidis SF”

5 Construction and function

5.1 Summary and 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 for the fixing of the distributor/collector in the cabinet or directly onto the wall.

The surface heating/cooling circuit connections have a G ¾ male thread (illustr. 4.1).

Printed tags for marking the surface heating/cooling circuit connections are supplied with the distributors/collectors.

For filling, flushing and bleeding of the surface heating/cooling circuits, the stainless steel distributors/collectors "Multidis SF" are equipped with fill and drain valves with connection for a G ¾ - 11.5 NH hose.

5.2 Application

The stainless steel distributors/collectors "Multidis SF" allow for the central distribution of the heating/cooling water to the different circuits of each dwelling unit. Together with electrothermal actuators and room thermostats which are available as accessories, the valve inserts M 30 x 1.5 in the return collector which are convertible to thermostatic operation, can be used for individual room temperature control. Hydronic balance is carried out using the integrated flow measuring and regulating devices.

6 Installation

6.1 Extent of supply

Before installation, check the delivery for completeness and any damages caused during transit.

6.2 Installation

The flow distributor and return collector are pre-assembled and leak tested. Mount the flow distributor (at the top) and the return collector (at the bottom) into the sound-absorbing brackets (illustr. 4.1).

NOTICE

The flow distributor always has to be installed at the top and the return collector at the bottom of the bracket.

The solder tailpipes are mounted with the help of the collar nuts (G 1 female thread with flat seals). The risers are connected to the solder tailpipes.

A thermal and sound insulation of the pipework according to valid rules, decrees, standards and guidelines has to be carried out.

The surface heating/cooling circuits are connected to the G ¾ compression connections at the flow distributor and return collector of the stainless steel distributor/collector "Multidis SF".



CAUTION

- Do not use any greasing agents or oil for the installation, as these can destroy the seals. Any dirt particles or grease or oil residues must be flushed out of the pipework before installation.
- When choosing the operating fluid, the latest technical development has to be considered.
- A strainer must be installed in front of the stainless steel distributor/collector.
- Please protect against external forces (e.g. impacts, vibrations etc.).

After installation, check all installation points for leaks.

7 Operation

7.1 Floor construction

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

7.2 Filling, bleeding, leak testing

Before initial operation, the installation has to be filled and bled with due consideration of the permissible operating pressures.

The installation can be bled during filling and during heating/cooling operation via the fill and drain valves.

Stainless steel distributor/collector "Multidis SF" for surface heating and cooling systems

The installation is filled up to the stainless steel distributor/collector "Multidis SF" via the risers. The fill and drain valves can be used for bleeding the system even during heating/cooling operation. The surface heating/cooling circuits are filled via the fill and drain valve at the end of the flow distributor. The G ¾ - 11.5 NH connection is suitable for standard DN 15 hoses. The surface heating/cooling circuits are flushed separately, so that the pipework is completely filled with water.

NOTICE

Carry out leakage test. The test results have to be recorded.

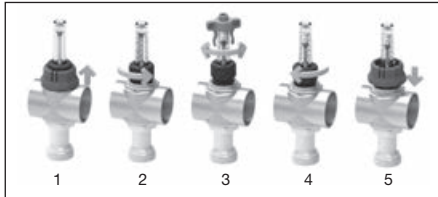
7.3 Regulation

The risers of the heating/cooling system have to be hydraulically balanced.

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

 **Observe warning advice under paragraph 2 (safety notes)!**

7.4 Setting of the flow measuring and regulating devices



Setting of the flow rate:

Setting is carried out whilst the circulation pump is in operation.

1. Open all valves in the surface heating/cooling circuit completely.
2. Remove the red cap by pulling it upward (1).
3. Loosen the black collar nut by turning it anticlockwise (2).
4. Set the flow rate at the sight glass with the help of the enclosed key (3):
clockwise = flow rate is reduced
anticlockwise = flow rate is increased
The set value can be read off at the red indicator ring inside the sight glass.
The scale shows values between 0 and 2 GPM.
5. Carry out setting of all heating/cooling circuits.
6. Check the first values and readjust if required.
7. Turn the black collar nut clockwise until stop (4).
8. Refit the red cap (5).

Illustr. 7.1 Setting of the flow measuring and regulating devices



Isolation:

Turn the enclosed key clockwise until stop (6).

Opening:

Turn the enclosed key anticlockwise until stop
= open up to presetting (7).

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

7.5 Incremental heating test

NOTICE

- The instructions of the screed manufacturers have to be observed.

Start incremental heating at the earliest:

- 21 days after laying of concrete screed

- 7 days after laying of calcium sulphate screed

Heat up with a flow temperature between 68°F and 77°F for at least 3 days, then with approx. 131°F for at least 4 days. The flow temperature is controlled via the heat generator control.

Open the valve inserts of the stainless steel distributor/collector "Multidis SF" with the help of the protection caps.

Before setting the system into operation, the valve inserts have to be equipped with automatic devices for room temperature control.

7.6 Initial operation

NOTICE

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

Near the heating pipes, the maximum permissible screed temperatures 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.

7.7 Correction factors for mixtures of water and glycol

The correction factors of the manufacturers of the antifreeze liquids have to be considered when setting the flow rate.

8 Maintenance

The stainless steel distributors/collectors "Multidis SF" are maintenance-free.

Tightness and function of the distributors/collectors and their connection points have to be checked regularly during maintenance. The stainless steel distributors/collectors "Multidis SF" must be easily accessible.

9 General conditions of sales and delivery

Oventrops general conditions of sales and delivery valid at the time of supply are applicable.