

### “Multidis SF” Stainless steel distributor/collector 1” for surface heating and cooling systems

#### Stainless steel distributor/collector “Multidis SF” for surface heating and cooling systems, type 163 41 (illustr. 1) and type 163 40 (illustr. 2)

2 to 12 heating circuits

Max. working pressure: 6 bar

Max. differential pressure: 1 bar

Max. working temperature: 70 °C

$k_{VS}$  value: 1.2 m<sup>3</sup>/h (type 163 41, with flow measuring and regulating devices” 1-4 l/min)

$k_{VS}$  value: 1.9 m<sup>3</sup>/h (type 163 40, with regulating inserts)

#### Installation:

Distributor and collector are pre-assembled and leak tested at works.

The distributors/collectors “Multidis SF” are suitable for left and right hand side connection.

Mount distributor (top) and collector (bottom) in soundabsorbing brackets as illustrated.

Install stainless steel distributor/collector “Multidis SF” in the Oventrop cabinet or onto the wall with the help of the enclosed screws and dowels.

The stainless steel distributor/collector “Multidis SF” can be equipped with Oventrop ball valves, item no. 140 63 83 or 140 63 84 (illustr. 4). Suitable flat seals are supplied with the distributor/collector.

Standard heat meters 1” and ¾” may be connected. As a result, the depth and length of stainless steel distributor/collector “Multidis SF” are enlarged. This has to be taken into consideration when choosing the cabinet.

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 of the underfloor heating are connected to the ¾” compression connections at the stainless steel distributor and connector.

Oventrop offers compression fittings for use with the composition pipe “Copipe” as well as copper and plastic pipes.

Installation of the compression fittings is simplified by using the ring spanner, item no. 140 10 91.

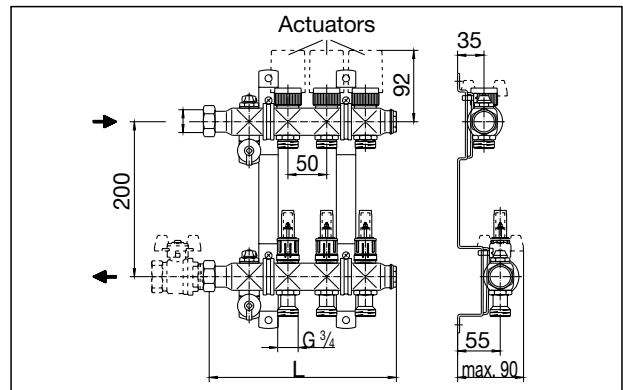
Printed tags for marking the different heating circuits are supplied with the distributors/collectors.

#### Filling, bleeding, leak testing:

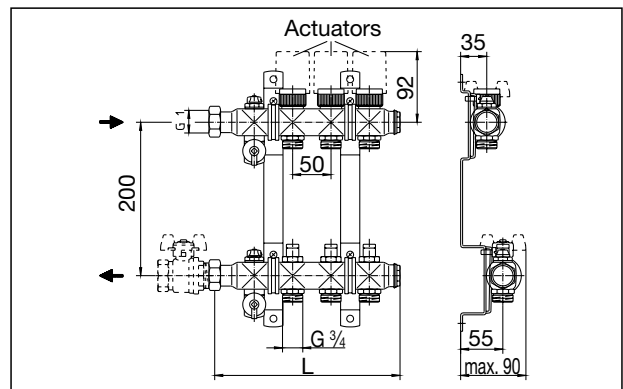
The installation is filled up to the distributor/collector “Multidis SF” at the opened ball valves via the risers. The vent plugs can be used for bleeding the system even when the system is in operation.

The surface heating / cooling circuits are filled via the fill and drain valves with the ball valve being closed before the initial connection of the surface heating / cooling circuit. The ¾” connection is suitable for standard hose connections DN 15, e.g. Oventrop item no. 103 45 52. The underfloor heating circuits are flushed separately so that the pipework is completely filled with water.

Carry out leak test before laying the concrete screed.



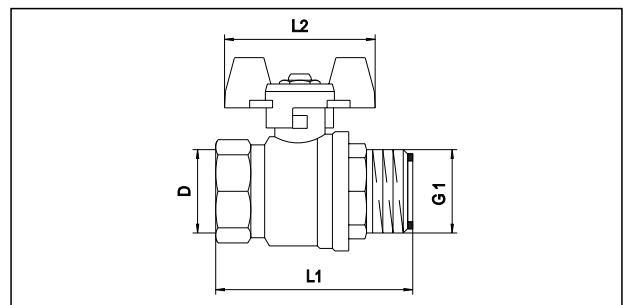
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Item nos.	Outlets	Length (L)	Length with ball valves 140 63 84
163 40/41 52	2	200 mm	280 mm
163 40/41 53	3	255 mm	335 mm
163 40/41 54	4	310 mm	390 mm
163 40/41 55	5	365 mm	445 mm
163 40/41 56	6	420 mm	500 mm
163 40/41 57	7	475 mm	555 mm
163 40/41 58	8	530 mm	610 mm
163 40/41 59	9	585 mm	665 mm
163 40/41 60	10	640 mm	720 mm
163 40/41 61	11	695 mm	775 mm
163 40/41 62	12	750 mm	830 mm

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Item nos.	Size	D	L <sub>1</sub>	L <sub>2</sub>
140 63 83	DN 20	G ¾	55 mm	55 mm
140 63 84	DN 25	G 1	80 mm	60 mm

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### Regulation:

Hydronic balance of the surface 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".

### Stainless steel distributor/collector "Multidis SF" type 163 41 (illustr. 6)

#### Setting of the flow rate by using the flow measuring and regulating devices:

Setting is carried out with the pump being in operation.

Open all valves of the heating circuit completely.

Lift the locking sleeve (1) until it clicks into position.

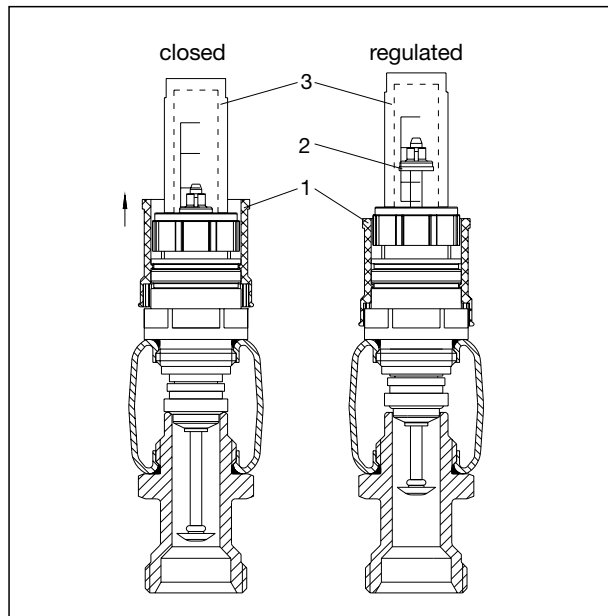
Set the calculate flow rate by turning the locking sleeve (1) of the first flow measuring and regulating devices.

The set value can be read off the red indicator ring (2) inside the viewing glass (3), the scale shows values between 1 and 4 l/min.

Carry out settings of all surface heating / cooling circuits.

The first values are checked and re-set if required.

With the setting being completed, the flow measuring and regulating devices have to be protected against unauthorised tampering by pushing the locking sleeve (1) down.



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### Stainless steel distributor/collector "Multidis SF" type 163 40 (illustr. 7)

#### Setting of the flow rate by using the regulation insert:

Open black cap (1) with the help of a 5 mm spanner.

Close valve stem (2) clockwise by using the 5 mm spanner.

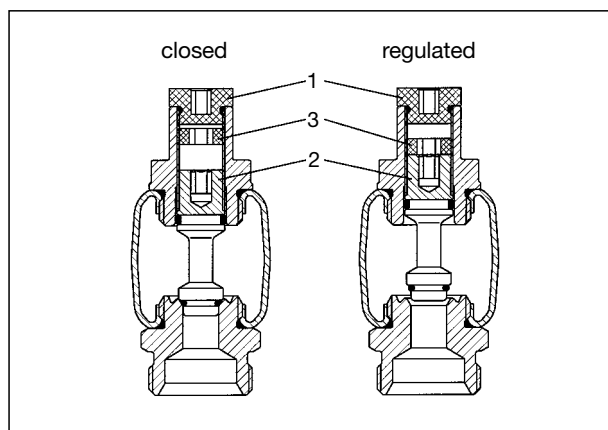
Now open valve stem (2) anticlockwise according to calculated value of presetting (example: presetting 2,5 = 2,5 turns, design chart see page 12).

Turn black setting screw (3) clockwise against the valve stem (2) by using a 6 mm spanner.

The set value can be restored easily if the surface heating / cooling circuit is e.g. closed later by using the valve stem (2).

Close cap (1) with the help of a 5 mm spanner.

Repeat operation for all surface heating / cooling circuits.



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### Heating up, taking into operation:

Heat up the heating concrete according to DIN EN 1264-4 or ZVSHK documentation FBH D1 to D4.

Start heating up:

- at the earliest 21 days after having laid the concrete floor
- at the earliest 7 days after having laid anhydrite concrete floor

3 days with a flow temperature of about 25 °C, then 4 days with the max. design temperature.

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

Other instructions of the concrete manufacturers have to be observed.

Before setting the system into operation, the valve inserts of the flow distributor have to be equipped with automatic controls for individual room temperature adjustment. All Oventrop actuators and room thermostats, e.g. electrothermal actuator, item no. 101 24 65, and room thermostat, item no. 115 20 51 or 115 25 51, are suitable.

The maximum permissible concrete temperatures may not be exceeded:

- 55 °C for concrete and anhydrite concrete,
- 45 °C for mastic asphalt concrete
- or according to the recommendations of the concrete manufacturer

Further information can be taken from the technical information "Multidis SF"-Stainless steel distributor/collector 1" for surface heating / cooling systems.

Chart for distributor/collector type 163 40: Valve insert open and regulating inserts for different presettings

