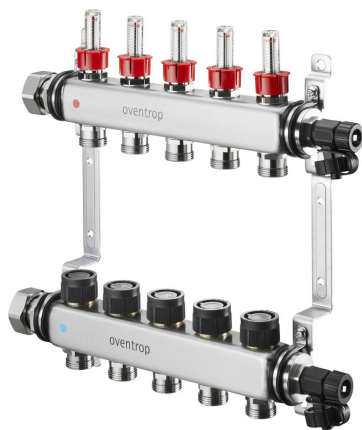


# Multidis SF

## Presetable Heating Circuit Manifold optionally with Flow Indicators



Item no. 14063



Item no. 14065

Heating circuit manifold made of stainless steel for surface heating and cooling systems with forced circulation. For connecting two to twelve heating circuits to the heat or cooling generator.

The heating circuit manifold consists of a flow distributor, a return collector, wall brackets and fixing material. The heating circuit manifolds are completely pre-assembled with rotatable fill and drain cocks, vent plugs and end caps. To simplify the installation of the heating circuit pipes, the return collector (bottom) is moved forward in the wall bracket.

The flow distributor is equipped with integrated flow measuring and regulating devices or with simple regulating inserts. The return collector is equipped with valve inserts with M 30 x 1.5 connection thread to connect optional actuators. These are factory-fitted with a protection cap, which can also be used to temporarily shut off the heating circuit.

The heating circuit connections with G  $\frac{3}{4}$  external thread are suitable for Oventrop compression fittings. Sound insulation according to DIN 4109.

### Functions

- Regulation of the heating circuit flow rate
- Flow rate check per heating circuit (item no. 14063)
- Heating circuit shutoff
- Filling, venting, draining
- M 30 x 1.5 connection thread for actuators

### Features

- + Static setting of the flow rate, optionally with flow indicators
- + High-quality stainless steel version
- + Complete with wall brackets for installation in a surface-mounted or a flush-mounted cabinet or in a niche

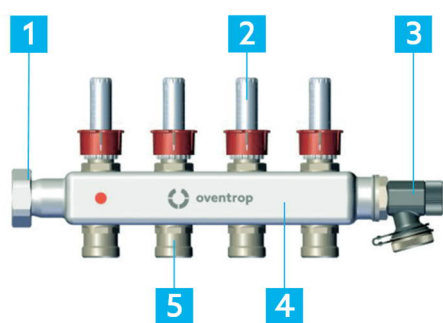
# Product Details

## Technical Data

|                              | Item no. 14063<br>with flow measuring and regulating devices                                                                 | Item no. 14065<br>with regulating inserts                                                                 |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Heating circuits             | 2...12                                                                                                                       | 2...12                                                                                                    |
| Variant                      | Flow distributor: flow measuring and regulating devices<br>Return collector: valve inserts with connection thread M 30 x 1.5 | Flow distributor: regulating inserts<br>Return collector: valve inserts with connection thread M 30 x 1.5 |
| Operating temperature        | -10...70 °C                                                                                                                  | -10...90 °C                                                                                               |
| Operating pressure           | max. 6 bar                                                                                                                   | max. 10 bar                                                                                               |
| Differential pressure        | max. 100 kPa (1 bar)                                                                                                         | max. 100 kPa (1 bar)                                                                                      |
| Medium                       | Heating and cooling water according to VDI 2035 or ÖNORM 5195, water-glycol mixtures with max. 50% glycol content            |                                                                                                           |
| Kvs value heating circuit    | 0.9                                                                                                                          | 1.9                                                                                                       |
| Actuator connection          | M 30 x 1.5                                                                                                                   |                                                                                                           |
| Valve stroke                 | 1.8 mm                                                                                                                       |                                                                                                           |
| Closing dimension            | 11.8 mm                                                                                                                      |                                                                                                           |
| Closing force actuator       | 90...150 N                                                                                                                   |                                                                                                           |
| Heating circuit connection   | G ¾ external thread, Eurocone according to DIN EN 16313                                                                      |                                                                                                           |
| Supply and return connection | G 1 union nut                                                                                                                |                                                                                                           |

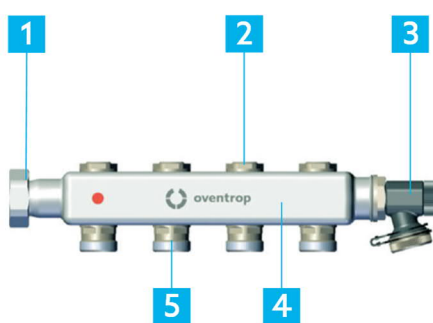
## Design

Flow distributor design item no. 14063



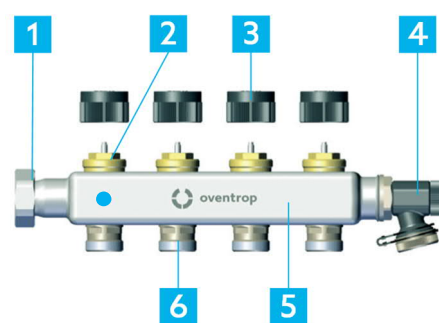
- 1 G 1 union nut
- 2 Flow measuring and regulating device
- 3 Fill and drain cock
- 4 Flow distributor
- 5 Heating circuit connection

Flow distributor design item no. 14065



- 1 G 1 union nut
- 2 Regulating insert
- 3 Fill and drain cock
- 4 Flow distributor
- 5 Heating circuit connection

Return collector design



- 1 G 1 union nut
- 2 Valve insert
- 3 Protection cap
- 4 Fill and drain cock
- 5 Return collector
- 6 Heating circuit connection

# Functions

## Shutoff

### HEATING CIRCUITS

Individual heating circuits can be shut off via the regulating inserts.

- Item no. 14063: Turn the adjustment bonnet of the flow measuring and regulating device manually clockwise as far as it will go
- Item no. 14065: Turn the regulating plug of the insert clockwise as far as it will go using a 5 mm Allen key

In the return, the heating circuits can be briefly shut off with the supplied protection caps.

### HEATING CIRCUIT MANIFOLD

For a complete shutoff of the heating circuit manifold to the system, ball valves must be placed between the manifold and the system connection. These are not included in the scope of delivery. Suitable flat sealing ball valves for the manifolds are:

- For the supply and return, red T-handle: item no. 1406383 (DN 20) and 1406384 (DN 25)
- For the supply, red T-handle and thermometer: item no. 1406483 (DN 20) or 1406484 (DN 25)
- For the return, blue T-handle and thermometer: item no. 1406583 (DN 20) or 1406584 (DN 25)

The different nominal sizes refer to the connection on the system side. The connection on the manifold side is always G 1, matching the G 1 unions nuts of the manifolds. See also chapter "Accessories" further on.

## Flow regulation

The flow through the individual heating circuits must be throttled by means of the regulating inserts/flow measuring and regulating devices in the supply to ensure hydronic balancing of the heating circuits connected to the manifold. The set values are determined by a room-by-room heating load calculation, which can be carried out e.g. with the free OVplan design software.

### WITH FLOW MEASURING AND REGULATING DEVICES (ITEM NO. 14063)

Each heating circuit is set by adjusting the flow measuring and regulating devices. The setting range is 0 to 5 litres per minute. During setting, the circulation pump does not have to be in operation and, if necessary, set to constant speed operating mode. The setting should be done before the actuators are mounted. If actuators are already mounted, they should be removed. If this is not possible, make sure that all actuators are in the fully open position.



### WITH REGULATING INSERTS (ITEM NO. 14065)

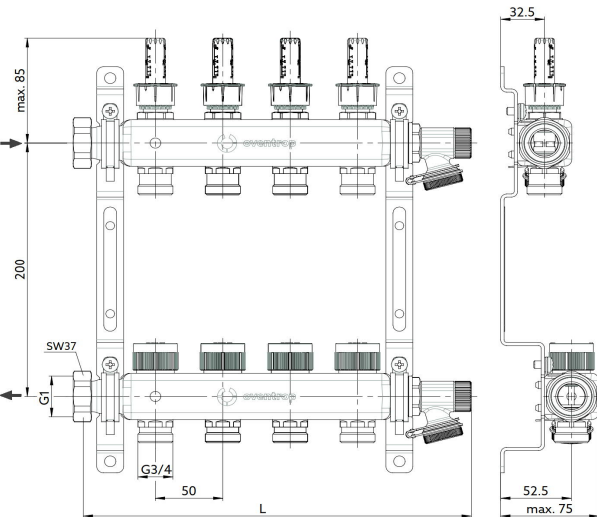
Each heating circuit is set by throttling the regulating inserts. When designing with OVplan, the set values are determined in the calculation and can be adopted directly. The set value is given in counterclockwise turns from the closed position of the regulating insert. Presetting 2 therefore corresponds to two full turns.

Alternatively, the set value can be determined from the pressure loss chart at the end of this data sheet. Flow rate and pressure loss are required to determine the set value. The point of intersection of the two values in the chart corresponds to the preset value. Setting of the regulating inserts can be carried out at any time.

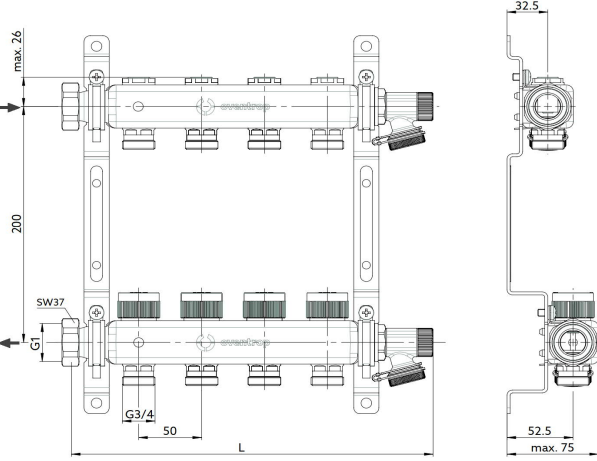


# Dimensions and Item Numbers

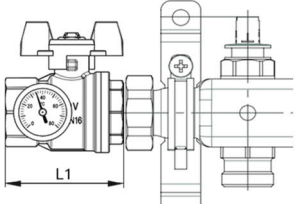
## Multidis SF with flow measuring and regulating devices (item no. 14063)

|                                                                                   | Number of heating circuits |        |          |
|-----------------------------------------------------------------------------------|----------------------------|--------|----------|
|                                                                                   | Length (L)                 |        | Item no. |
|  | 2                          | 188 mm | 1406352  |
|                                                                                   | 3                          | 238 mm | 1406353  |
|                                                                                   | 4                          | 288 mm | 1406354  |
|                                                                                   | 5                          | 338 mm | 1406355  |
|                                                                                   | 6                          | 388 mm | 1406356  |
|                                                                                   | 7                          | 438 mm | 1406357  |
|                                                                                   | 8                          | 488 mm | 1406358  |
|                                                                                   | 9                          | 538 mm | 1406359  |
|                                                                                   | 10                         | 588 mm | 1406360  |
|                                                                                   | 11                         | 638 mm | 1406361  |
|                                                                                   | 12                         | 688 mm | 1406362  |

## Multidis SF with regulating inserts (item no. 14065)

|                                                                                     | Number of heating circuits |        |          |
|-------------------------------------------------------------------------------------|----------------------------|--------|----------|
|                                                                                     | Length (L)                 |        | Item no. |
|  | 2                          | 188 mm | 1406552  |
|                                                                                     | 3                          | 238 mm | 1406553  |
|                                                                                     | 4                          | 288 mm | 1406554  |
|                                                                                     | 5                          | 338 mm | 1406555  |
|                                                                                     | 6                          | 388 mm | 1406556  |
|                                                                                     | 7                          | 438 mm | 1406557  |
|                                                                                     | 8                          | 488 mm | 1406558  |
|                                                                                     | 9                          | 538 mm | 1406559  |
|                                                                                     | 10                         | 588 mm | 1406560  |
|                                                                                     | 11                         | 638 mm | 1406561  |
|                                                                                     | 12                         | 688 mm | 1406562  |

## Additional lengths for shutoff ball valves

|                                                                                     | Item no. ball valve |       |                      |
|-------------------------------------------------------------------------------------|---------------------|-------|----------------------|
|                                                                                     | Nominal size        |       | Additional length L1 |
|  | 1406383             | DN 20 | 55 mm                |
|                                                                                     | 1406384             | DN 25 | 80 mm                |
|                                                                                     | 1406483             | DN 20 | 73 mm                |
|                                                                                     | 1406484             | DN 25 | 85 mm                |
|                                                                                     | 1406583             | DN 20 | 73 mm                |
|                                                                                     | 1406584             | DN 25 | 85 mm                |

## Accessories

### Ball valves

|                                                                                   |                                                              | Size             | Suitable for    | Item no. |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------|------------------|-----------------|----------|
|  | Ball valve, flat sealing, with red T-handle                  | DN 20: G ¾ x G 1 | All Multidis SF | 1406383  |
|                                                                                   |                                                              | DN 25: G 1 x G 1 | All Multidis SF | 1406384  |
|  | Ball valve, flat sealing with red T-handle and thermometer   | DN 20: G ¾ x G 1 | All Multidis SF | 1406483  |
|                                                                                   |                                                              | DN 25: G 1 x G 1 | All Multidis SF | 1406484  |
|  | Ball valve, flat sealing, with blue T-handle and thermometer | DN 20: G ¾ x G 1 | All Multidis SF | 1406583  |
|                                                                                   |                                                              | DN 25: G 1 x G 1 | All Multidis SF | 1406584  |

### Surface-mounted cabinet

|                                                                                    |                                                    | No.   | Inner width | Item no. |
|------------------------------------------------------------------------------------|----------------------------------------------------|-------|-------------|----------|
|  | Steel, galvanised. Frame and door white lacquered. | No. 1 | 600 mm      | 1401171  |
|                                                                                    | Depth surface-mounted element: 160 mm              | No. 2 | 750 mm      | 1401172  |
|                                                                                    | Height surface-mounted element: 760...870 mm       | No. 3 | 1,000 mm    | 1401173  |
|                                                                                    |                                                    | No. 4 | 1,250 mm    | 1401174  |

### Flush-mounted cabinet

|                                                                                     |                                                                           | No.   | Inner width | Item no. |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------|-------|-------------|----------|
|  | Steel, galvanised. Frame and door white lacquered. With removable screen. | No. 1 | 560 mm      | 1401151  |
|                                                                                     |                                                                           | No. 2 | 700 mm      | 1401152  |
|                                                                                     | Depth flush-mounted element: 115...180 mm                                 | No. 3 | 900 mm      | 1401153  |
|                                                                                     | Height flush-mounted element: 760...885 mm                                | No. 4 | 1,200 mm    | 1401154  |

### Compression fittings

|                                                                                     |                                                                                                                                                                                                                                                                                 | For pipe    | Item no. |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------|
|  | Cofit S compression fitting for Copipe multi-layer composite pipes and plastic pipes according to DIN EN 16313, clamping ring and union nut made of brass, union nut nickel-plated, outlet made of bronze, metal to metal sealing plus O-Ring<br>2-fold for G ¾ external thread | 14 x 2 mm   | 1507934  |
|                                                                                     |                                                                                                                                                                                                                                                                                 | 16 x 2 mm   | 1507935  |
|                                                                                     |                                                                                                                                                                                                                                                                                 | 17 x 2 mm   | 1507937  |
|                                                                                     |                                                                                                                                                                                                                                                                                 | 18 x 2 mm   | 1507938  |
|                                                                                     |                                                                                                                                                                                                                                                                                 | 20 x 2 mm   | 1507939  |
|                                                                                     |                                                                                                                                                                                                                                                                                 | 20 x 2,5 mm | 1507940  |
|  | Ofix K compression fitting for plastic pipes according to DIN EN 4726, PE-X according to DIN 16892/16893, PB according to DIN 16968 and PP according to DIN 8078 A1, metal to metal sealing plus O-Ring<br>2-fold, for G ¾ external thread                                      | 12 x 2 mm   | 1016870  |
|                                                                                     |                                                                                                                                                                                                                                                                                 | 14 x 2 mm   | 1016873  |
|                                                                                     |                                                                                                                                                                                                                                                                                 | 16 x 2 mm   | 1016874  |
|                                                                                     |                                                                                                                                                                                                                                                                                 | 17 x 2 mm   | 1016876  |
|                                                                                     |                                                                                                                                                                                                                                                                                 | 18 x 2 mm   | 1016877  |
|                                                                                     |                                                                                                                                                                                                                                                                                 | 20 x 2 mm   | 1016879  |

## Actuator

|                                                                                   | Type                                                                                                                     | Cable length | Suitable for    | Item no. |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|--------------|-----------------|----------|
|  | Aktor T thermal actuator, on/off<br>With fixed cable and stroke position<br>indicator, IP54, 230 V AC<br>Normally closed | 1 m          | All Multidis SF | 1012415  |
|                                                                                   |                                                                                                                          | 2 m          | All Multidis SF | 1012452  |
|                                                                                   |                                                                                                                          | 5 m          | All Multidis SF | 1012455  |
|                                                                                   |                                                                                                                          | 10 m         | All Multidis SF | 1012459  |

## Electrical connecting block

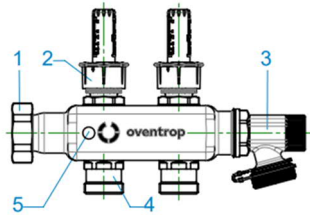
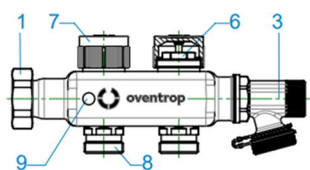
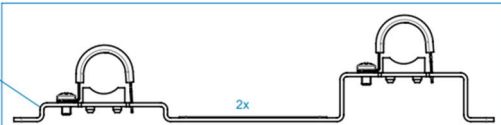
|                                                                                   |                                                                                                          | Version      | Item no. |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|--------------|----------|
|  | 6 control zones, heating                                                                                 | 230 V / 24 V | 1400980  |
|                                                                                   | 10 control zones, heating / cooling (change-over),<br>pump control                                       | 230 V        | 1400981  |
|                                                                                   |                                                                                                          | 24 V         | 1400982  |
|                                                                                   | 10 control zones, heating / cooling (change-over), pump and<br>boiler control and integrated time switch | 230 V        | 1400983  |

## Electrical connecting blocks with adaptive hydronic balancing

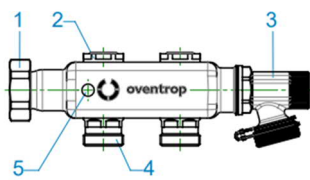
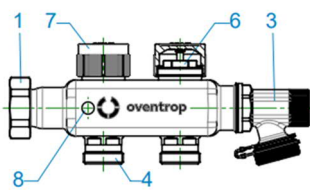
|                                                                                     |                                                                                                                                                                       | Version                       | Item no. |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------|
|    | FloorCon F <b>200</b><br>8 control zones / 12 heating circuit, pump control heating<br>and cooling (change-over), 230 V                                               | Without channel<br>allocation | 1400984  |
|                                                                                     |                                                                                                                                                                       | With channel<br>allocation    | 1400985  |
|   | FloorCon F <b>300</b><br>8 control zones / 12 heating circuits, pump control heating<br>and cooling (change-over), 230 V                                              | Length 0.85 meter             | 1029094  |
|                                                                                     |                                                                                                                                                                       | Length 2.1 Meter              | 1029095  |
|  | Return temperature sensor<br>Must be ordered in addition to FloorCon. The temperature<br>sensor is required 1x per heating circuit. Suitable for pipe<br>Ø 12...20 mm | Length 0.85 meter             | 1029094  |
|                                                                                     |                                                                                                                                                                       | Length 2.1 Meter              | 1029095  |

## Spare parts

### Multidis SF with flow measuring and regulating devices (item no. 14063)

|                                                                                   | Pos. | Article                                           | Item no. |
|-----------------------------------------------------------------------------------|------|---------------------------------------------------|----------|
|  | 2    | Flow measuring and regulating device, 0...5 l/min | 1408038  |
|                                                                                   | 3    | Fill and drain cock G 3/4                         | 1408104  |
|                                                                                   | 4    | Connection nipple, long                           | 1408129  |
|                                                                                   | 6    | Valve insert                                      | 1404091  |
|                                                                                   | 8    | Connection nipple, short                          | 1408126  |
|                                                                                   | 10   | Wall bracket                                      | 1408110  |
|  | 7    |                                                   |          |
|                                                                                   | 9    |                                                   |          |
|  |      |                                                   |          |

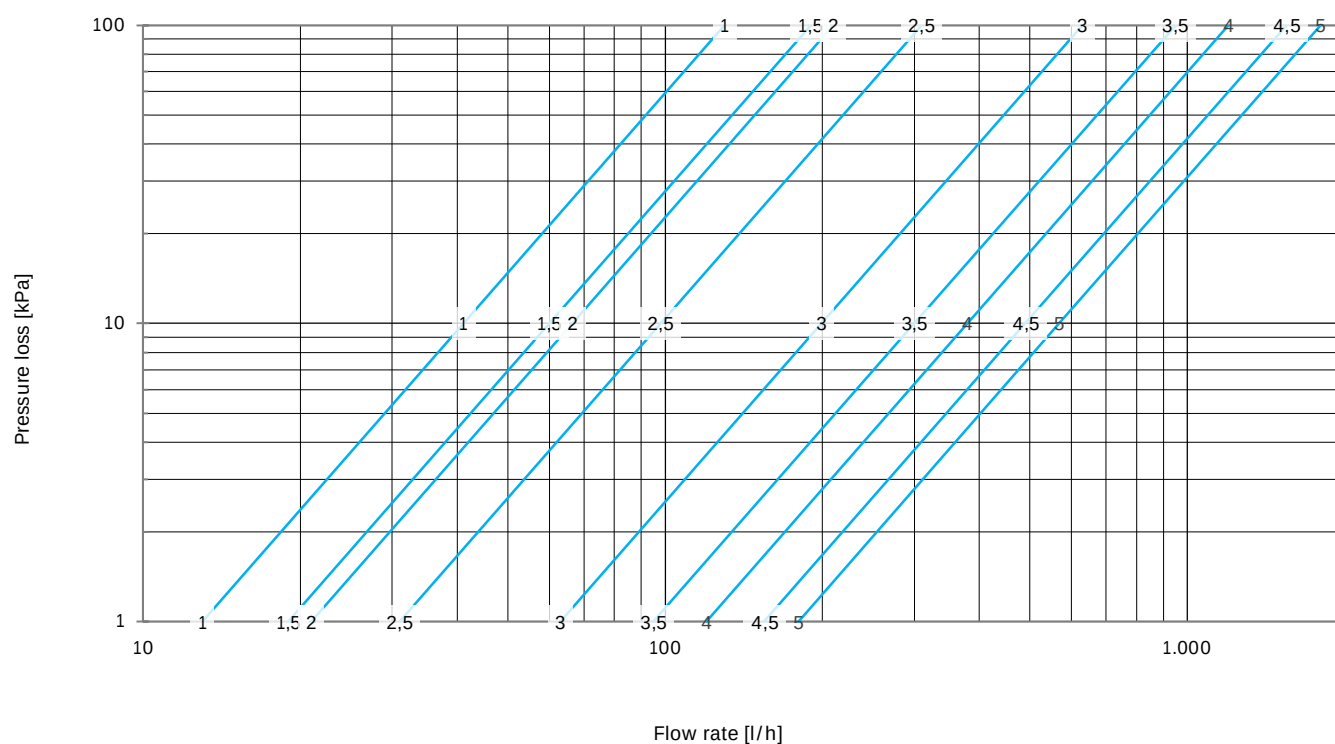
### Multidis SF with regulating inserts (item no. 14065)

|                                                                                     | Pos. | Article                   | Item no. |
|-------------------------------------------------------------------------------------|------|---------------------------|----------|
|  | 2    | Regulating insert         | 1408122  |
|                                                                                     | 3    | Fill and drain cock G 3/4 | 1408104  |
|                                                                                     | 4    | Connection nipple, short  | 1408126  |
|                                                                                     | 6    | Valve insert              | 1404091  |
|                                                                                     | 9    | Wall bracket              | 1408110  |
|  | 7    |                           |          |
|                                                                                     | 8    |                           |          |
|  |      |                           |          |

# Design

## Multidis SF with regulating inserts (item no. 14065)

### Flow chart



### Kv values

| Presetting | 1    | 1,5  | 2    | 2,5  | 3    | 3,5  | 4   | 4,5  | 5   | Kvs |
|------------|------|------|------|------|------|------|-----|------|-----|-----|
| Kv value   | 0.13 | 0.19 | 0.21 | 0.31 | 0.63 | 0.95 | 1.2 | 1.55 | 1.8 | 1.9 |