

# RV DN 15÷100

Sediment strainer



# RV DN 15÷100

The RV Sediment strainer limits the passage of any solid particles present in the fluid by means of a strainer.

## SEDIMENT STRAINER

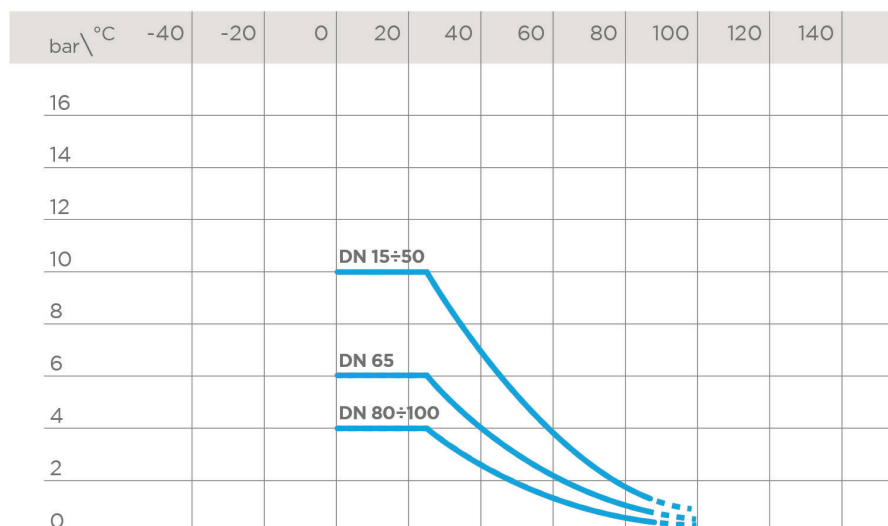
- Connection system for weld, threaded and flanged joints
- **Strainer** assembled on an **easily removed support** that facilitates cleaning or replacement
- **Valve material compatibility** (PP-H) with water conveyance, drinking water and other food substances according to **current regulations**
- Can be maintained with the valve body installed

| Technical specifications   |                                                                                                                                                                                                                                 |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Construction</b>        | Sediment strainer                                                                                                                                                                                                               |
| <b>Size range</b>          | DN 15 ÷ 100                                                                                                                                                                                                                     |
| <b>Nominal pressure</b>    | <b>DN 15÷50:</b> PN 10 with water at 20° C<br><b>DN 65:</b> PN 6 with water at 20° C<br><b>DN 80÷100:</b> PN 4 with water at 20° C                                                                                              |
| <b>Temperature range</b>   | 0 °C ÷ 100 °C                                                                                                                                                                                                                   |
| <b>Coupling standards</b>  | <b>Welding:</b> EN ISO 15494. Can be coupled to pipes according to EN ISO 15494<br><b>Thread:</b> UNI ISO 228-1, EN 10226-1/2<br><b>Flanging system:</b> ISO 7005-1, EN ISO 1092-1, EN ISO 15494, EN 558-1, ANSI B.16.5 cl. 150 |
| <b>Reference standards</b> | <b>Construction criteria:</b> EN ISO 15494<br><b>Test methods and requirements:</b> ISO 9393<br><b>Installation criteria:</b> DVS 2202-1, DVS 2207-11, DVS 2208-1, UNI 11318                                                    |
| <b>Valve material</b>      | <b>Body:</b> PP-H<br><b>Strainer:</b> PP                                                                                                                                                                                        |
| <b>Seal material</b>       | EPDM, FKM                                                                                                                                                                                                                       |

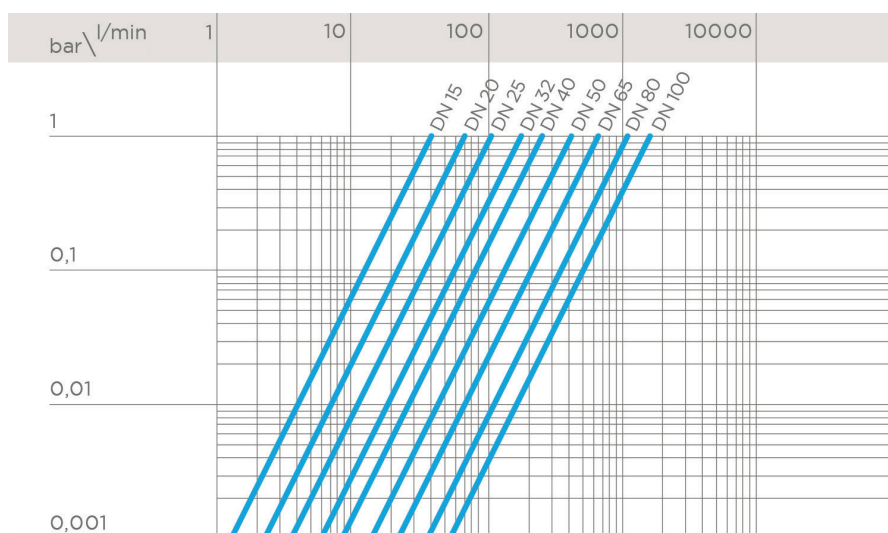
# TECHNICAL DATA

## PRESSURE VARIATION ACCORDING TO TEMPERATURE

For water and non-hazardous fluids with regard to which the material is classified as CHEMICALLY RESISTANT. In other cases, a reduction of the nominal pressure PN is required (25 years with safety factor).



## PRESSURE DROP GRAPH



## K<sub>v</sub>100 FLOW COEFFICIENT

The K<sub>v</sub>100 flow coefficient is the Q flow rate of litres per minute of water at a temperature of 20°C that will generate Δp= 1 bar pressure drop at a certain valve position. The K<sub>v</sub>100 values shown in the table are calculated with the valve completely clean.

| DN                       | 15 | 20 | 25  | 32  | 40  | 50  | 65  | 80   | 100  |
|--------------------------|----|----|-----|-----|-----|-----|-----|------|------|
| K <sub>v</sub> 100 l/min | 40 | 70 | 103 | 188 | 255 | 410 | 650 | 1050 | 1700 |

## STRAINER DIMENSIONS

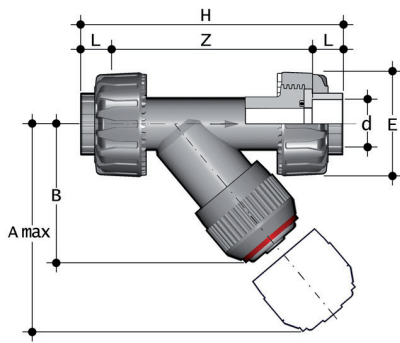
| DN                                  | 15÷20 | 25÷100 |
|-------------------------------------|-------|--------|
| number of holes per cm <sup>2</sup> | 37    | 32     |
| ASTM series equivalent in strainer  | 18    | 20     |
| ø equivalent hole μm                | 1016  | 889    |
| strainer material                   | PP    | PP     |

## TOTAL STRAINER AREA $A_{TOT}$ (CM<sup>2</sup>)

|           |    |      |    |    |    |     |     |     |     |
|-----------|----|------|----|----|----|-----|-----|-----|-----|
| DN        | 15 | 20   | 25 | 32 | 40 | 50  | 65  | 80  | 100 |
| $A_{tot}$ | 16 | 23,5 | 36 | 53 | 69 | 101 | 197 | 247 | 396 |

The information in this leaflet is provided in good faith. No liability will be accepted concerning technical data that is not directly covered by recognised international standards. FIP reserves the right to carry out any modification. Products must be installed and maintained by qualified personnel.

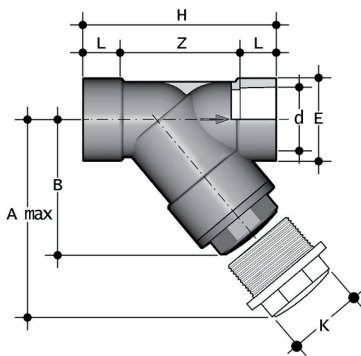
# DIMENSIONS



## RVUIM

Sediment strainer with female union ends for socket welding, metric series

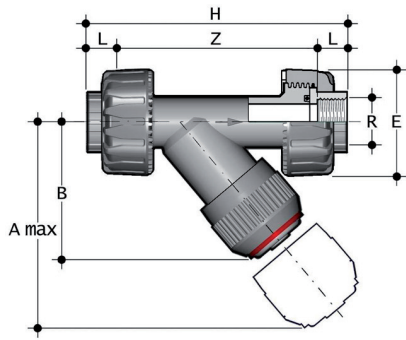
| d  | DN | PN | A max | B     | E   | H   | Z   | Fig. | g    | EPDM code | FKM code  |
|----|----|----|-------|-------|-----|-----|-----|------|------|-----------|-----------|
| 20 | 15 | 10 | 125   | 71    | 55  | 138 | 109 | A    | 148  | RVUIM020E | RVUIM020F |
| 25 | 20 | 10 | 145   | 83    | 66  | 157 | 125 | A    | 195  | RVUIM025E | RVUIM025F |
| 32 | 25 | 10 | 165   | 94    | 74  | 179 | 143 | A    | 297  | RVUIM032E | RVUIM032F |
| 40 | 32 | 10 | 190   | 109   | 86  | 205 | 164 | A    | 475  | RVUIM040E | RVUIM040F |
| 50 | 40 | 10 | 210   | 119   | 99  | 244 | 197 | A    | 675  | RVUIM050E | RVUIM050F |
| 63 | 50 | 10 | 240   | 142,5 | 120 | 294 | 239 | A    | 1100 | RVUIM063E | RVUIM063F |



## RVIM

Sediment strainer with female ends for socket welding, metric series

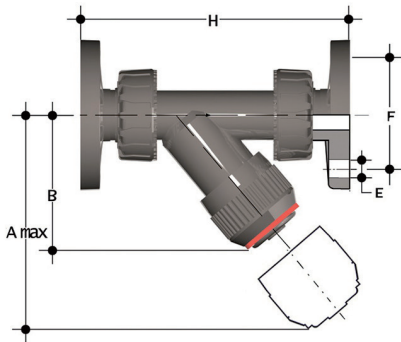
| d   | DN  | PN | A max | B   | E   | H   | K   | Z   | Fig. | g    | EPDM code | FKM code |
|-----|-----|----|-------|-----|-----|-----|-----|-----|------|------|-----------|----------|
| 75  | 65  | 6  | 300   | 176 | 103 | 241 | 96  | 179 | B    | 1580 | RVIM075E  | RVIM075F |
| 90  | 80  | 4  | 325   | 193 | 115 | 260 | 105 | 189 | B    | 1920 | RVIM090E  | RVIM090F |
| 110 | 100 | 4  | 385   | 229 | 138 | 323 | -   | 240 | C    | 3000 | RVIM110E  | RVIM110F |



## RVUFM

Sediment strainer with BSP threaded female union ends

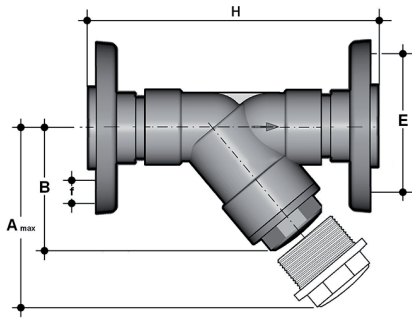
| R      | DN | PN | A max | B   | E   | H   | Z   | Fig. | g    | EPDM code | FKM code  |
|--------|----|----|-------|-----|-----|-----|-----|------|------|-----------|-----------|
| 1/2"   | 15 | 10 | 125   | 71  | 55  | 142 | 112 | A    | 148  | RVUFM012E | RVUFM012F |
| 3/4"   | 20 | 10 | 145   | 83  | 66  | 159 | 126 | A    | 195  | RVUFM034E | RVUFM034F |
| 1"     | 25 | 10 | 165   | 94  | 74  | 183 | 145 | A    | 297  | RVUFM100E | RVUFM100F |
| 1" 1/4 | 32 | 10 | 190   | 109 | 86  | 214 | 171 | A    | 475  | RVUFM114E | RVUFM114F |
| 1" 1/2 | 40 | 10 | 210   | 119 | 99  | 235 | 192 | A    | 675  | RVUFM112E | RVUFM112F |
| 2"     | 50 | 10 | 240   | 143 | 120 | 285 | 234 | A    | 1100 | RVUFM200E | RVUFM200F |



## RVUOM

Sediment strainer with female union ends and fixed flanges, drilled EN/ISO/DIN PN10/16

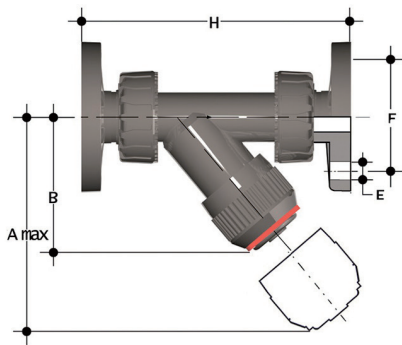
| d  | DN | PN | A max | B   | F   | f  | H   | g    | EPDM code | FKM code  |
|----|----|----|-------|-----|-----|----|-----|------|-----------|-----------|
| 20 | 15 | 10 | 125   | 72  | 65  | 14 | 163 | 248  | RVUOM020E | RVUOM020F |
| 25 | 20 | 10 | 145   | 84  | 75  | 14 | 193 | 295  | RVUOM025E | RVUOM025F |
| 32 | 25 | 10 | 165   | 95  | 85  | 14 | 211 | 397  | RVUOM032E | RVUOM032F |
| 40 | 32 | 10 | 190   | 111 | 100 | 18 | 244 | 625  | RVUOM040E | RVUOM040F |
| 50 | 40 | 10 | 210   | 120 | 110 | 18 | 277 | 825  | RVUOM050E | RVUOM050F |
| 63 | 50 | 10 | 240   | 139 | 125 | 18 | 331 | 1250 | RVUOM063E | RVUOM063F |



## RVOM

Sediment strainer with steel core backing ring , PP/FRP coated, drilled EN/ISO/DIN PN10/16

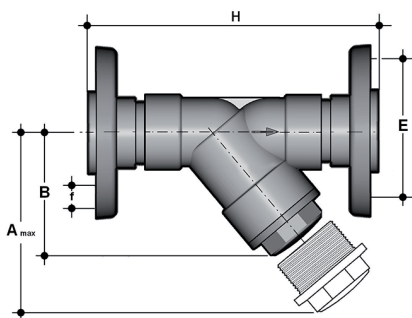
| d   | DN  | PN | A max | B   | F   | f  | H   | g    | EPDM code | FKM code |
|-----|-----|----|-------|-----|-----|----|-----|------|-----------|----------|
| 75  | 65  | 6  | 300   | 176 | 145 | 18 | 356 | 5120 | RVOM075E  | RVOM075F |
| 90  | 80  | 4  | 325   | 192 | 160 | 18 | 404 | 6020 | RVOM090E  | RVOM090F |
| 110 | 100 | 4  | 385   | 231 | 180 | 18 | 475 | 7965 | RVOM110E  | RVOM110F |



## RVUOAM

Sediment strainer with female union ends and fixed flanges, drilled ANSI B16.5 cl.150 #FF

| d      | DN | PN | A max | B   | F   | f  | H   | g    | EPDM code  | FKM code   |
|--------|----|----|-------|-----|-----|----|-----|------|------------|------------|
| 1/2"   | 15 | 10 | 125   | 72  | 60  | 16 | 175 | 248  | RVUOAM012E | RVUOAM012F |
| 3/4"   | 20 | 10 | 145   | 84  | 70  | 16 | 214 | 295  | RVUOAM034E | RVUOAM034F |
| 1"     | 25 | 10 | 165   | 95  | 79  | 16 | 237 | 397  | RVUOAM100E | RVUOAM100F |
| 1 1/4" | 32 | 10 | 190   | 111 | 89  | 16 | 253 | 625  | RVUOAM114E | RVUOAM114F |
| 1 1/2" | 40 | 10 | 210   | 120 | 98  | 16 | 289 | 825  | RVUOAM112E | RVUOAM112F |
| 2"     | 50 | 10 | 240   | 139 | 121 | 19 | 333 | 1250 | RVUOAM200E | RVUOAM200F |



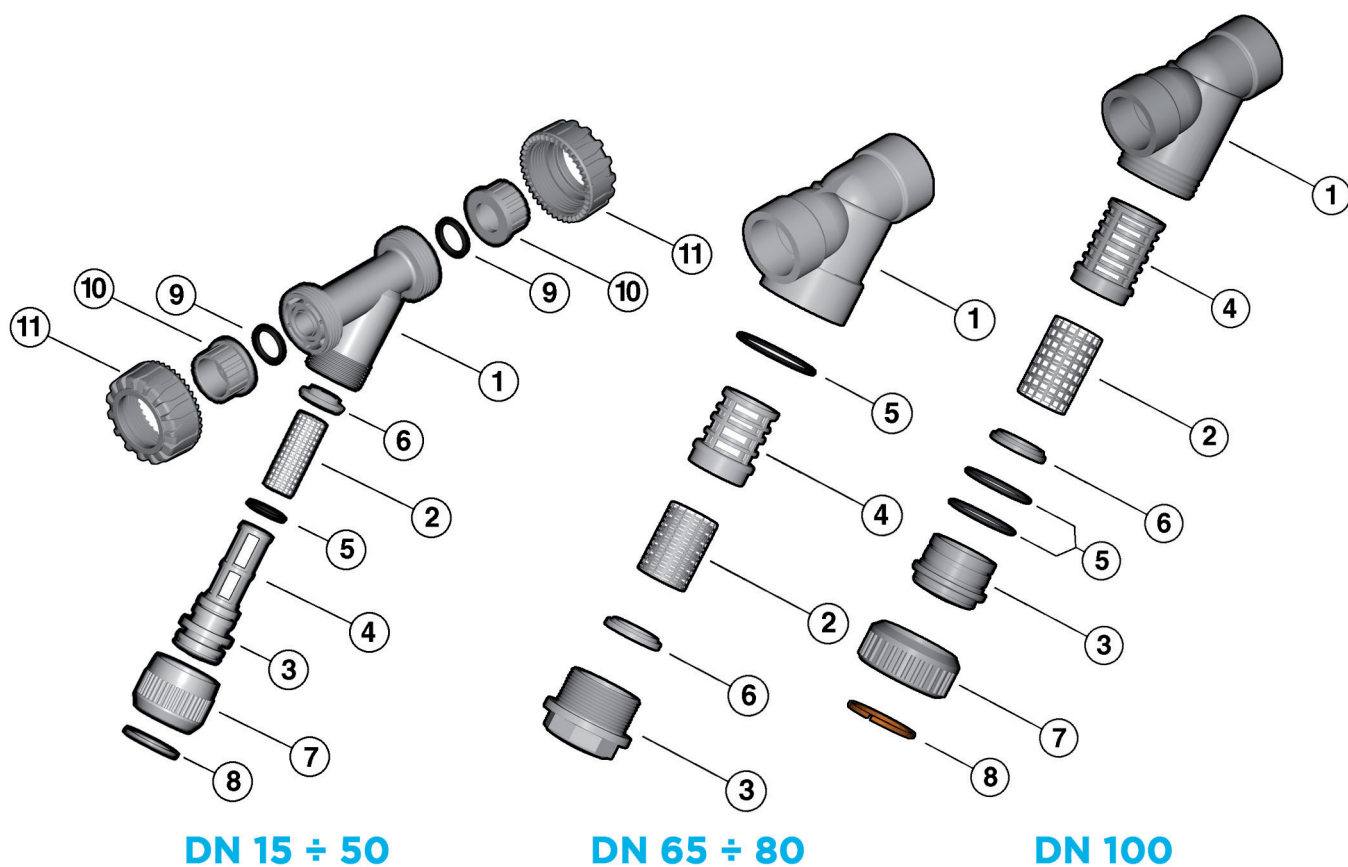
## RVOAM

Sediment strainer with steel core backing ring , PP/FRP coated, drilled ANSI B16.5 cl.150 #FF

| d - Size    | DN  | PN | A max | B   | F     | f  | H   | g    | EPDM code | FKM code  |
|-------------|-----|----|-------|-----|-------|----|-----|------|-----------|-----------|
| 75 - 2 1/2" | 65  | 6  | 300   | 179 | 139,7 | 18 | 356 | 4725 | RVOAM212E | RVOAM212F |
| 90 - 3"     | 80  | 4  | 325   | 192 | 152,4 | 18 | 404 | 5175 | RVOAM300E | RVOAM300F |
| 110 - 4"    | 100 | 4  | 385   | 231 | 190,5 | 18 | 475 | 7405 | RVOAM400E | RVOAM400F |

# COMPONENTS

## EXPLODED VIEW



- 1** Body (PP-H - 1)
- 2** Strainer (PP-H - 1)\*
- 3** Bonnet (PP-H - 1)
- 4** Strainer support (PP-H - 1)

- 5** O-Ring (EPDM or FKM - 1)\*
- A-B**
- 5 C** O-Ring (EPDM or FKM - 2)\*
- 6** Washer (PP-H - 1)
- 7** Union nut (PP-H - 1)

- 8** Retaining ring (PP-H - 1)
- 9** Socket seal O-Ring (EPDM or FKM - 2)\*
- 10** End connector (PP-H - 2)\*
- 11** Union nut (PP-H - 2)

\* Spare parts  
The material of the component and the quantity supplied are indicated between brackets



## DISASSEMBLY

### DN 15÷50 (FIG. A) - DN 100 (FIG. C)

- 1) Isolate the sediment strainer from the fluid flow and empty the system upstream.
- 2) Unscrew the union nut (7) and separate the bonnet-support (3-4) from the body (1).
- 3) Remove the bottom washer (6) from the bonnet-support (3-4).
- 4) Remove the retaining ring (8) and separate the union nut (7) from the bonnet (3).
- 5) Remove the O-Ring from the bonnet (5).

### DN 65÷80 (FIG. B)

- 1) Isolate the sediment strainer from the fluid flow and empty the system upstream.
- 2) Unscrew the bonnet (3) and separate it from the body (1).
- 3) Remove the support (4) from the bonnet (3).
- 4) Remove the washer (6) from the bonnet (3) and the O-Ring (5) from its seating in the body.

## ASSEMBLY

### DN 15÷50 (FIG. A) - DN 100 (FIG. C)

- 1) Insert the O-Ring (5) in its seating in the bonnet (3).
- 2) Insert the bonnet (3) in union nut (7) and fix the two components using the retaining ring (8).
- 3) Insert the strainer (2) in the bonnet support (3-4) and hold in place with the washer (6).
- 4) Insert the bonnet (3) in the body (1) and tighten the union nut (7).

### DN 65÷80 (FIG. B)

- 1) Insert the O-Ring (5) in the body (1)
- 2) Insert the washer (6) in the bonnet (3)
- 3) Insert the strainer (2) in its support (4)
- 4) Insert the support (4) in the bonnet (3)
- 5) Screw the bonnet (3) in the body (1)



**Note:** maintenance operations can be carried out with the valve body installed. During assembly, it is advisable to lubricate the rubber seals. Mineral oils are not recommended for this task as they react aggressively with EPDM rubber.

Fig. A

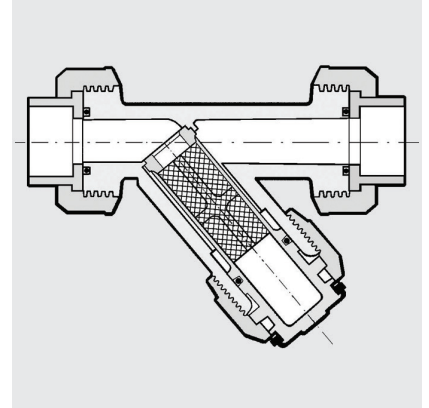


Fig. B

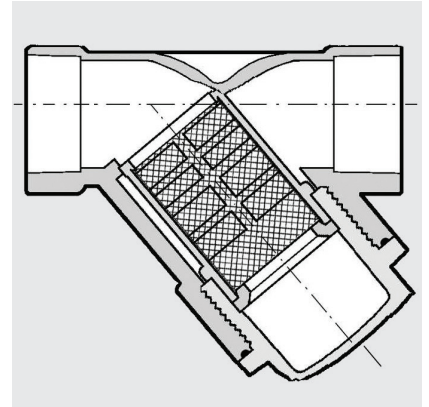
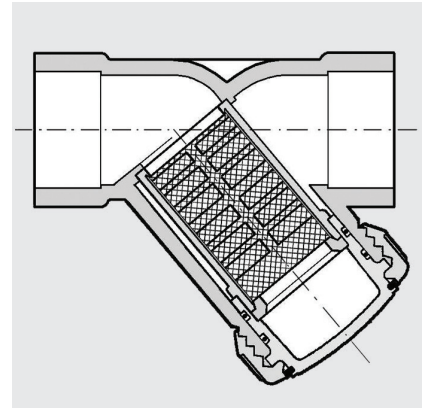


Fig. C



# INSTALLATION

## DN 15÷50 (fig. A)

The sediment strainer can be installed in any position, making sure that the arrow stamped on the body indicates the direction of fluid flow and that the strainer part is facing downwards. To avoid damaging the strainer, appropriate devices must be installed on the line to prevent backflow.

- 1) Unscrew the union nuts (11) and slide them onto the pipe.
- 2) Heat weld the end connectors (10) onto the pipe segments.
- 3) Position the sediment strainer between the end connectors
- 4) Tighten the union nuts.

## DN 65÷80 (fig. B) e DN 100 (fig. C)

The joint must be made by solvent welding the pipe directly into the socket of the valve body.

## WARNINGS

- Always check the cleanliness of the filter elements.