



# Angle-seat externally operated valve **AV210A - AV210H**

For use in industrial applications

## Description

AV210 is an externally operated valve for use in demanding industrial applications. The valve can operate at very high medium temperatures and viscosities, and is insensitive to dirt particles in the medium; thus, it is often called a “troubleshooter” valve. The valve is available in bronze and stainless steel.

## Features & benefits

- For all fluids and gases
- Flow range: 0 – 234 m<sup>3</sup>/h / 0 – 275 USgal/ min
- Unpressurized closed (NC) bidirectional versions and unpressurized opened (NO) version closing against the flow direction
- The valves can be used for rough vacuum
- Control connection G 1/8
- Valves comply with Pressure Equipment Directive 2014/68/EU
- NC version: bi-directional, closing against or closing with the flow direction
- NO version: always closing against the flow direction

## Ordering

### Product code numbers

Table: Bronze/SS, AV210 with ISO thread connection NC/NO

| Connection<br>ISO228/1 | Orifice<br>[mm] | K <sub>v</sub> value<br>[m <sup>3</sup> /h] | Control head<br>diameter<br>[mm] | Sealing | Function |          |          |          |
|------------------------|-----------------|---|----------------------------------|---------|----------|----------|----------|----------|
|                        |                 |   |                                  |         | Bronze   |          | SS       |          |
|                        |                 |   |                                  |         | NC       | NO       | NC       | NO       |
| G 3/8                  | 15              | 4.5   | 40                               | PTFE    | 042N4400 | –        | –        | –        |
|                        |                 | 4.9   | 50                               |         | 042N4401 | –        | 042N4450 | –        |
| G 1/2                  | 15              | 5.3   | 40                               |         | 042N4402 | –        | –        | –        |
|                        |                 | 5.7   | 50                               |         | 042N4403 | 042N4431 | 042N4451 | 042N4481 |
| G 3/4                  | 20              | 10  | 50                               |         | 042N4404 | 042N4432 | 042N4452 | 042N4482 |
|                        |                 |   | 63                               |         | 042N4405 | –        | 042N4453 | –        |
| G 1                    | 25              | 20  | 63                               |         | 042N4406 | 042N4433 | 042N4454 | 042N4483 |
|                        |                 |   | 90                               |         | 042N4407 | –        | 042N4455 | –        |
| G 1 1/4                | 32              | 29  | 90                               |         | 042N4408 | –        | 042N4456 | –        |
|                        |                 |   | 110                              |         | 042N4409 | 042N4435 | 042N4457 | 042N4485 |
| G 1 1/2                | 40              | 46  | 90                               |         | 042N4410 | –        | 042N4458 | –        |
|                        |                 |   | 110                              |         | 042N4411 | 042N4436 | 042N4459 | 042N4486 |

Table: Bronze/SS, AV210 with NPT thread connection NC/NO

| Connection<br>NPT | Orifice<br>[mm] | Flow value                         |                                | Control head<br>diameter<br>[mm] | Sealing | Function |          |
|-------------------|-----------------|------------------------------------|--------------------------------|----------------------------------|---------|----------|----------|
|                   |                 | K <sub>v</sub> [m <sup>3</sup> /h] | C <sub>v</sub> [USgal/<br>min] |                                  |         | Bronze   | SS       |
|                   |                 |                                    |                                |                                  |         | NC       | NC       |
| 1/2               | 15              | 5.7                                | 6.5                            | 50                               | PTFE    | 042N4503 | 042N4551 |
| 3/4               | 20              | 10                                 | 11.5                           | 50                               |         | 042N4504 | 042N4552 |
| 1                 | 25              | 20                                 | 23                             | 63                               |         | 042N4506 | 042N4554 |
| 1 1/4             | 32              | 29                                 | 33                             | 90                               |         | 042N4508 | –        |
| 1 1/2             | 40              | 46                                 | 53                             | 90                               |         | 042N4509 | 042N4557 |
| 2                 | 50              | 67                                 | 77                             | 110                              |         | 042N4511 | 042N4559 |

## Accessories code numbers

### Position indicator

#### Figure: Position indicator



### Features

The control box to check the open/closed positions with two mechanical limit switches is suitable for assembling on the whole range of valves.

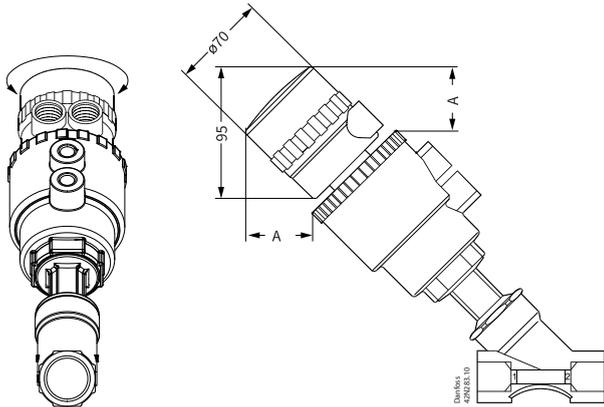
Level of protection: IP65

Ambient temperature: from -20 – 70 °C (-4 – 158 °F)

Access lead nr.2 PG11

Body material: Polyamide (cap in Lexan/polycarbonate)

**Figure: Valve**

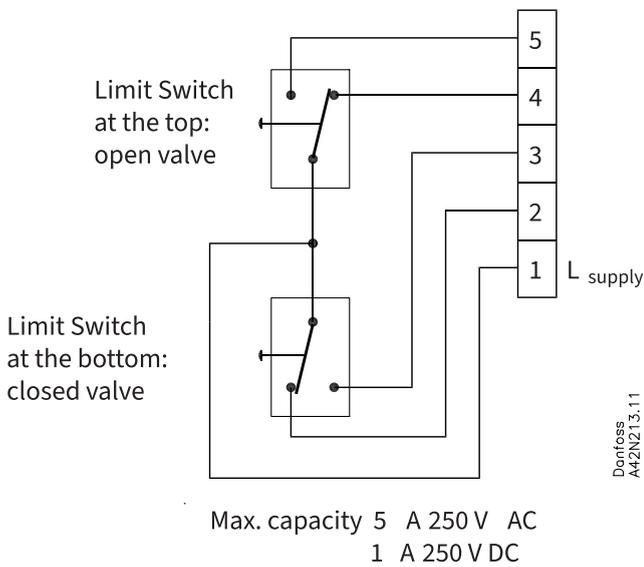


**Table: Position indicator ordering**

| Actuator size |      | A    |      | Code number |
|---------------|------|------|------|-------------|
| [mm]          | [in] | [mm] | [in] |             |
| ø50           | 2    | 52.1 | 2.1  | 042N4820    |
| ø63           | 2½   | 47.5 | 1.9  | 042N4821    |
| ø90           | 3½   | 37.7 | 1.5  | 042N4822    |
| ø110          | 4½   | 29.5 | 1.2  | 042N4823    |

\* Limit Switch Box incl. 2 switches

**Figure: Wiring diagram for position indicator**



**Namur flange**

- Namur flange for actuator ø50-110:
- for assembly of 3/2 solenoid valves
  - according to EN 15714-3

**Figure: Namur flange****Table: Namur flange ordering**

| Actuator size | Code number |
|---------------|-------------|
| ø50-110       | 042N4811    |

**Repair kit****The repair kit contains:**

1. Two gaskets (1) (On actuator size 40 (diameter control head) only one gasket included).
2. One complete valve plate unit (plug and pin) (2).

**NOTE:**

One gasket is for bronze, and one is for stainless steel.

Figure: Kit



Figure: Valve

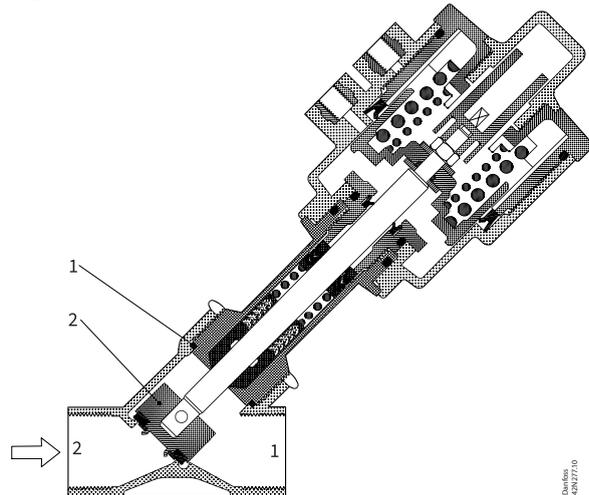


Table: Repair kit ordering, bronze/stainless steel

| Connection     |          | Control head diameter [mm] | Material         |          | Code number |
|----------------|----------|----------------------------|------------------|----------|-------------|
| ISO 228/1 [in] | NPT [in] |                            | Valve plate unit | Gasket   |             |
| G 3/8          |          | 40                         | PTFE             | Graphite | 042N4800    |
| G 3/8          |          | 50                         | PTFE             | Graphite | 042N4801    |
| G 1/2          |          | 40                         | PTFE             | Graphite | 042N4802    |
| G 1/2          | 1/2      | 50                         | PTFE             | Graphite | 042N4803    |
| G 3/4          | 3/4      | 50 – 63                    | PTFE             | Graphite | 042N4804    |
| G 1            | 1        | 63                         | PTFE             | Graphite | 042N4805    |
| G 1            |          | 90                         | PTFE             | Graphite | 042N4806    |
| G 1 1/4        | 1 1/4    | 90                         | PTFE             | Graphite | 042N4807    |
| G 1 1/2        | 1 1/2    | 90 – 110                   | PTFE             | Graphite | 042N4808    |
| G 2            | 2        | 110                        | PTFE             | Graphite | 042N4809    |

Control valves, types EV310A and EV310B

Figure: Type EV310A



Figure: Type EV310B



- Valves for industrial applications
- Available in de-energized closed and de-energized open versions
- Available with or without manual operation

See separate data sheets regarding code numbers, technical data and coil options for Danfoss EV310A and EV310B valves.

## Overview

### Product portfolio

Table: Portfolio overview

| Features                                 | AV210  |   |
|--|--|---|
|  |  |  |
| <b>Body material</b>                     | Brass  | Stainless steel   |
| <b>DN [mm]</b>                           | 15 – 50  | 15 – 50   |
| <b>Connection ISO</b>                    | G 3/8 – G 2  | G 1/2 – G2  |
| <b>Connection NPT (Only NC)</b>          | 1/2 – 2  | 1/2 – 2   |
| <b>Sealing material</b>                  | PTFE   | PTFE  |
| <b>Function</b>                          | NC, NO   | NC, NO  |
| <b>K<sub>v</sub> [m<sup>3</sup>/h]</b>   | 4.5 – 67   | 4.9 – 67  |
| <b>Control head diameter [mm]</b>        | 40, 50, 63, 90, 110  | 50, 63, 90, 110   |
| <b>Differential pressure range [bar]</b> | 0 – 16   | 0 – 16  |
| <b>Control pressure NC [bar]</b>         | 4 – 10   | 4 – 10  |
| <b>Control pressure NO [bar]</b>         | 1.8 – 10   | 1.8 – 10  |
| <b>Function NC</b>                       | Closing against and with the flow  | Closing against and with the flow   |
| <b>Function NO</b>                       | Only closing against the flow  | Only closing against the flow   |
| <b>Temperature range [°C]</b>            | -30 – 180  | -30 – 180   |

## Product details

### General data

Table: Technical data

|   |  |  |
|---|--|--|
| <b>Media</b>                              | Bronze   | For water, oil and compressed air                |
|   | Stainless  | For neutral, aggressive liquid and gaseous media |
| <b>Media temperature</b>                  | PTFE   | -30 – 180 °C / -22 – 356 °F                      |
| <b>Ambient temperature [°C] / [°F]</b>    | -30 – 60 °C / -22 – 140 °F   |  |
| <b>Pressure</b>                           | Pressure range can be extended for use in rough vacuum, typically up to 99% vacuum (10 mbar), depending on the application |  |
| <b>K<sub>v</sub> value</b>                | DN15   | 4.5 – 5.7 m <sup>3</sup> /h                      |
|   | DN20   | 10 m <sup>3</sup> /h                             |
|   | DN25   | 20 m <sup>3</sup> /h                             |
|   | DN32   | 29 m <sup>3</sup> /h                             |
|   | DN40   | 46 m <sup>3</sup> /h                             |
|   | DN50   | 67 m <sup>3</sup> /h                             |
| <b>Min. Opening differential pressure</b> | 0 bar  |  |
| <b>Max. Opening differential pressure</b> | Up to 30 bar   |  |
| <b>Max. working pressure</b>              | Up to 30 bar   |  |
| <b>Max. test pressure</b>                 | DN1.5 – 4.5  | 52.5 bar   |
|   | DN6 – 10   | 37.5 bar   |
|   | DN15 – 25  | 24 bar   |
| <b>Control medium</b>                     | Air  |  |
| <b>Tightness</b>                          | Internally / Externally:   | Better than 0.4 mbar l/sec (25 ccm air per min.) |
| <b>Viscosity</b>                          | Max. 600 cSt / 3000 SSU  |  |

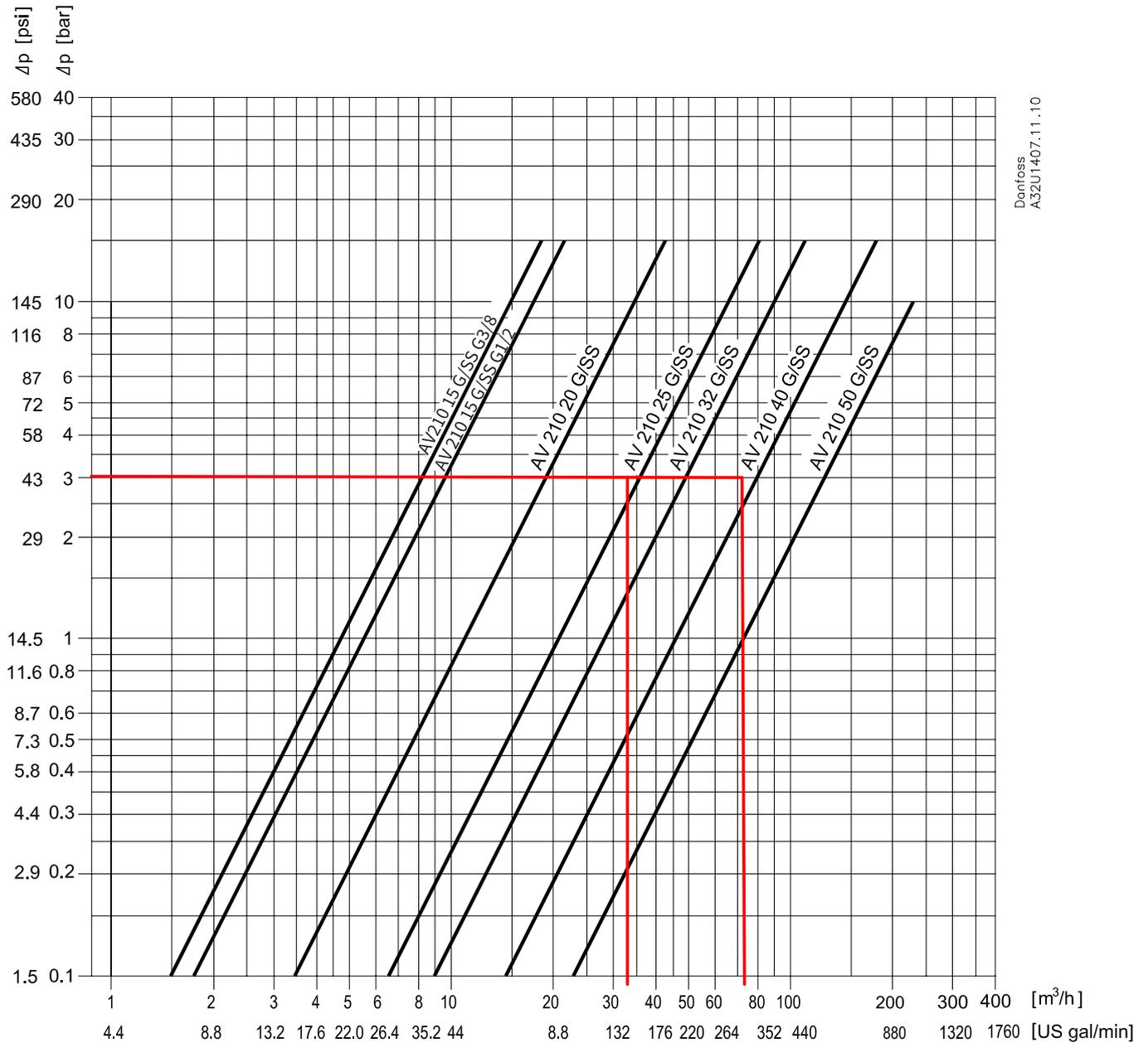
### Materials

Table: Materials

| Components                   | Materials       | Specifications          |
|------------------------------|-----------------|-------------------------|
| <b>Valve body</b>            | Bronze          | RG 5                    |
|                              | Stainless steel | AISI 316                |
| <b>Intermediate piece</b>    | Bronze          | Brass                   |
|                              | Stainless steel | Stainless steel         |
|                              |                 | W.no.2.0402<br>AISI 316 |
| <b>Seat control and nut:</b> | Stainless steel | AISI 316                |
| <b>Spindle</b>               | Stainless steel | AISI 316                |
| <b>Spindle gasket</b>        | PTFE            |                         |
| <b>Gasket</b>                | Graphite        |                         |
| <b>Valve plate unit</b>      | PTFE            |                         |
| <b>Control head</b>          | PA66            |                         |

## Capacity

Figure: Capacity diagram, Water



Danfoss  
A32U1407.11.10

Table: Time to open/close

| Main type                         | ø50 – 63 mm/<br>2 – 2 ½ in.<br>control head<br>Closing with the<br>flow direction | ø50 – 63 mm/<br>2 – 2 ½ in.<br>control head/<br>41<br>Closing against the<br>flow direction | ø90 – 110 mm/<br>3 ½ – 4 ½ in.<br>control head<br>Closing with the<br>flow direction | ø90 – 110 mm/<br>3 ½ – 4 ½ in.<br>control head<br>Closing against<br>the flow direction |
|-----------------------------------|---|---|--|---|
| Time to open [ms] <sup>(1)</sup>  | 40 – 180  | 50 – 350  | 80 – 780   | 100 – 460   |
| Time to close [ms] <sup>(1)</sup> | 160 – 500   | 120 – 350   | 580 – 1270   | 360 – 790   |

<sup>(1)</sup> The times are indicative.

## Pressure and temperature data

### Differential pressure range for NC/NO

**Table: Differential pressure NC, closing against the flow**

| Connection<br>ISO228/1 | Connection NPT | Orifice | Control head<br>diameter | Max working pressure |       | Differential pressure,<br>min. to max. |         | Control pressure <sup>(1)</sup><br>(Values for closing<br>against<br>the flow) |          |
|------------------------|----------------|---------|--------------------------|----------------------|-------|--|---------|--|----------|
|                        |                |         |                          | [bar]                | [psi] | [bar]                                  | [psi]   | [bar]  | [psi]    |
| G 3/8                  |                | 15      | 40                       | 16                   | 232   | 0 – 16                                 | 0 – 232 | 4.2 – 10   | 61 – 145 |
|                        |                |         | 50                       | 16                   | 232   | 0 – 16                                 | 0 – 232 | 4 – 10   | 58 – 145 |
| G 1/2                  | 1/2            | 15      | 40                       | 16                   | 232   | 0 – 16                                 | 0 – 232 | 4.2 – 10   | 61 – 145 |
|                        |                |         | 50                       | 16                   | 232   | 0 – 16                                 | 0 – 232 | 4 – 10   | 58 – 145 |
| G 3/4                  | 3/4            | 20      | 50                       | 10                   | 140   | 0 – 10                                 | 0 – 140 | 4 – 10   | 58 – 145 |
|                        |                |         | 63                       | 16                   | 232   | 0 – 16                                 | 0 – 232 | 4 – 10   | 58 – 145 |
| G 1                    | 1              | 25      | 63                       | 11                   | 160   | 0 – 11                                 | 0 – 160 | 4 – 10   | 58 – 145 |
|                        |                |         | 90                       | 16                   | 232   | 0 – 16                                 | 0 – 232 | 4 – 8  | 58 – 116 |
| G 1 1/4                | 1 1/4          | 32      | 90                       | 14                   | 203   | 0 – 14                                 | 0 – 203 | 4 – 8  | 58 – 116 |
| G 1 1/2                | 1 1/2          | 40      | 90                       | 11                   | 160   | 0 – 11                                 | 0 – 160 | 4 – 8  | 58 – 116 |
|                        |                |         | 110                      | 16                   | 232   | 0 – 16                                 | 0 – 232 | 4 – 8  | 58 – 116 |
| G 2                    | 2              | 50      | 110                      | 10                   | 140   | 0 – 10                                 | 0 – 140 | 4 – 8  | 58 – 116 |

<sup>(1)</sup> For NC, closing with the flow: See figure 2 - 5 / Diagrams, NC for closing with the flow direction (Port 1 to 2)

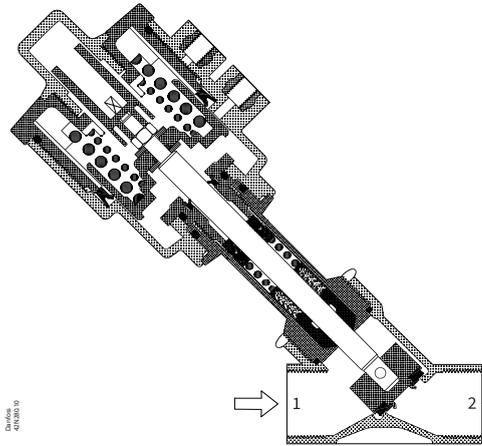
**Table: Differential pressure NO, closing against the flow**

| Connection<br>ISO228/1 | Orifice | Control head<br>diameter | Max working<br>pressure  | Differential<br>pressure,<br>min. to max. | Control pressure |      |
|------------------------|---------|--------------------------|--|---|------------------|------|
|                        |         |                          |  |   | Min.             | Max. |
|                        | [mm]    | [mm]                     | [bar]  | [bar]                                     | [bar]            |      |
| G 1/2                  | 15      | 50                       | See figure 7 – 10 / Diagrams, NO for closing against the<br>flow direction (Port 2 to 1) |   | 10               |      |
| G 3/4                  | 20      | 50                       |  |   | 10               |      |
| G 1                    | 25      | 63                       |  |   | 10               |      |
| G 1 1/2                | 40      | 90                       |  |   | 8                |      |

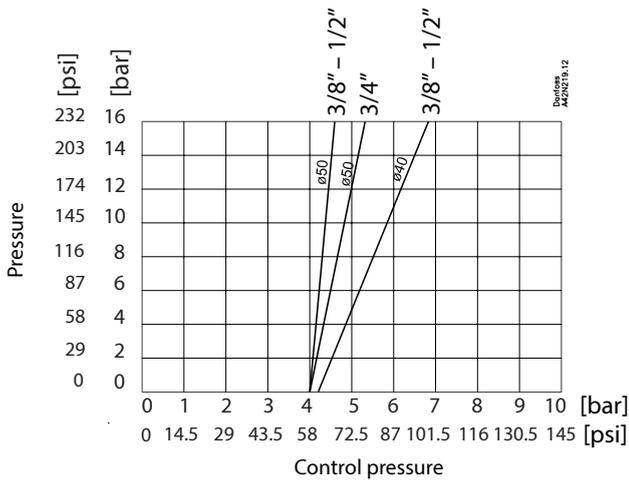
**Diagrams, NC for closing with the flow direction (Port 1 to 2)**

Recommended only for compressible media for extended pressure range

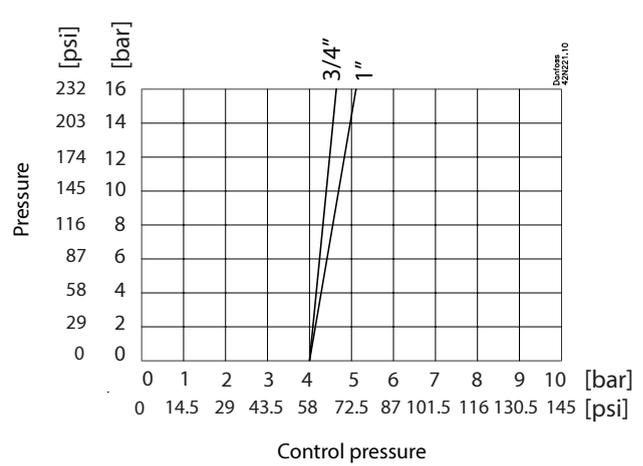
**Figure: Valve connection**



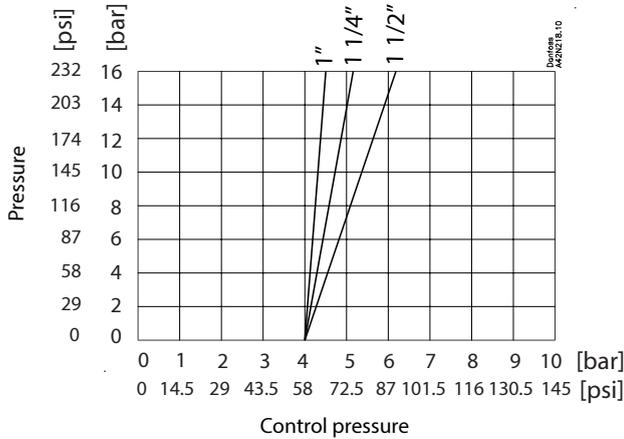
**Figure: Control head  $\varnothing 40 - \varnothing 50$  mm / 2 in**



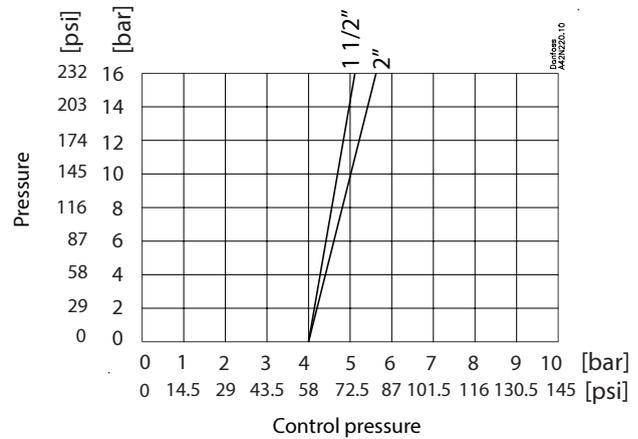
**Figure: Control head  $\varnothing 63$  mm / 2 1/2 in**



**Figure: Control head  $\varnothing 90$  mm / 3 1/2 in**

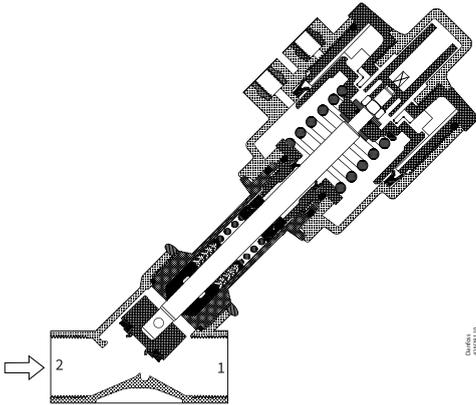


**Figure: Control head  $\varnothing 110$  mm / 4 1/2 in**

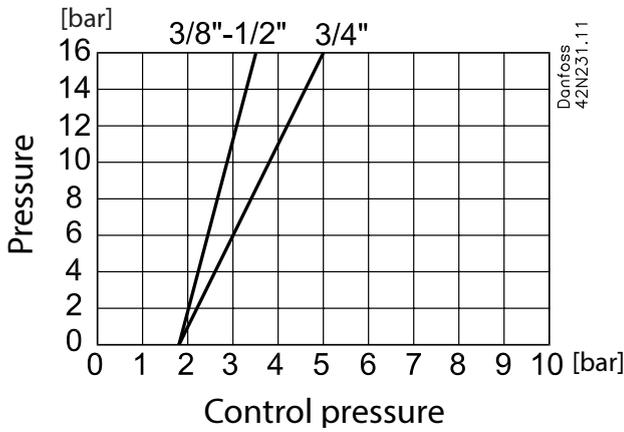


**Diagrams, NO for closing against the flow direction (Port 2 to 1)**

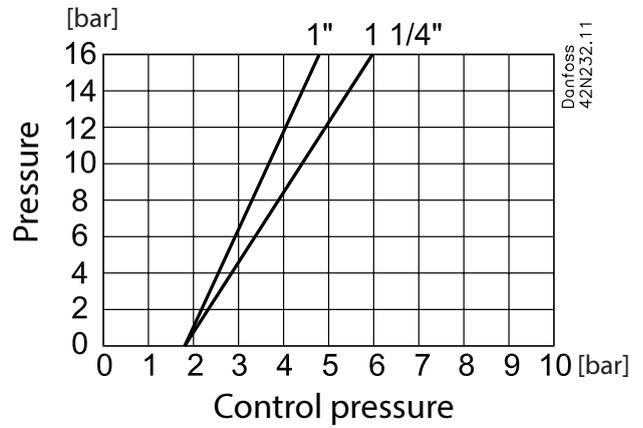
**Figure: Valve connection**



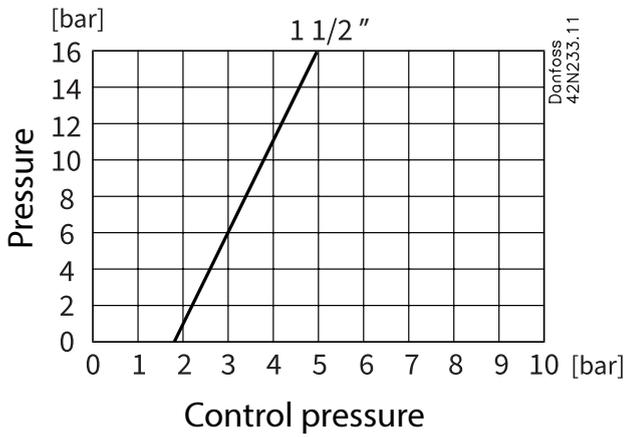
**Figure: Control head ø50 mm**



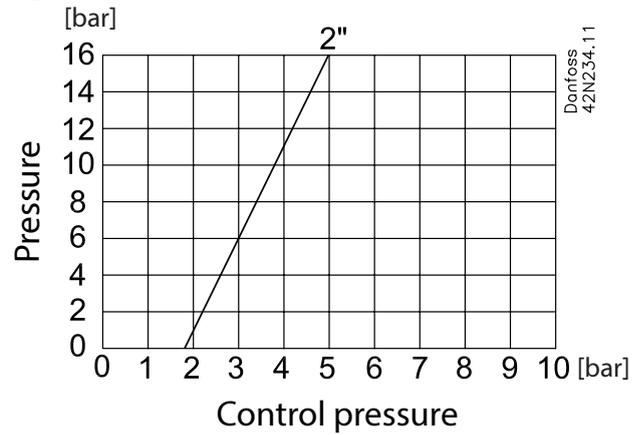
**Figure: Control head ø63 mm**



**Figure: Control head ø90 mm**



**Figure: Control head ø110 mm**



## Dimensions

### Dimension and weight, bronze valve body

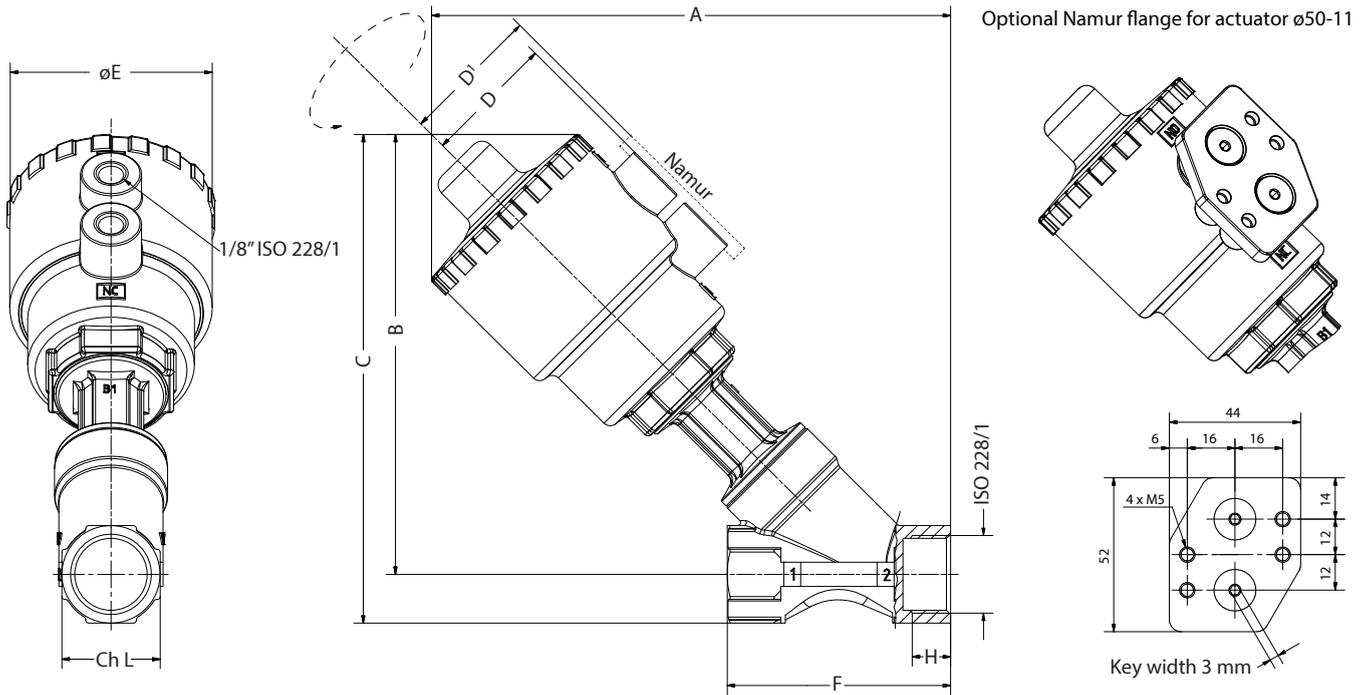
Table: ISO Connection

| Connection ISO 228/1 | Orifice size | Control head diameter | A    | B    | C    | D    | D1   | øE    | F    | H    | ch.L | Weight |
|----------------------|--------------|-----------------------|------|------|------|------|------|-------|------|------|------|--------|
| [in]                 | [mm]         | [mm]                  | [mm] | [mm] | [mm] | [mm] | [mm] | [mm]  | [mm] | [mm] | [mm] | [kg]   |
| G 3/8                | 15           | 40                    | 144  | 121  | 134  | 35   | -    | 61    | 65   | 12   | 27   | 1.1    |
| G 3/8                | 15           | 50                    | 163  | 140  | 153  | 44   | 50.5 | 70    | 65   | 12   | 27   | 1.1    |
| G 1/2                | 15           | 40                    | 144  | 121  | 134  | 35   | -    | 61    | 65   | 13   | 27   | 1.0    |
| G 1/2                | 15           | 50                    | 163  | 140  | 153  | 44   | 50.5 | 70    | 65   | 13   | 27   | 1.0    |
| G 3/4                | 20           | 50                    | 173  | 147  | 163  | 44   | 50.5 | 70    | 75   | 14.3 | 27.5 | 1.2    |
| G 3/4                | 20           | 63                    | 191  | 165  | 181  | 50.5 | 57   | 84.4  | 75   | 14.3 | 27.5 | 1.2    |
| G 1                  | 25           | 63                    | 206  | 176  | 196  | 50.5 | 57   | 84.4  | 90   | 17.5 | 41   | 1.6    |
| G 1                  | 25           | 90                    | 246  | 216  | 236  | 66.2 | 72.7 | 116.4 | 90   | 17.5 | 41   | 1.7    |
| G 1 1/4              | 32           | 90                    | 255  | 220  | 245  | 66.2 | 72.7 | 116.4 | 110  | 19   | 50   | 3.0    |
| G 1 1/2              | 40           | 90                    | 270  | 235  | 264  | 66.2 | 72.7 | 116.4 | 120  | 18   | 58   | 3.4    |
| G 1 1/2              | 40           | 110                   | 306  | 271  | 300  | 77.4 | 83.9 | 140.6 | 120  | 18   | 58   | 4.0    |
| G 2                  | 50           | 110                   | 316  | 276  | 311  | 77.4 | 83.9 | 140.6 | 150  | 20   | 70   | 5.3    |

Table: NPT Connection

| Conn NPT | Orifice size |       | Control head diameter |       | A    |      | B    |      | C    |      | D    |      | D <sup>1</sup> |      | øE    |      | F    |      | H    |      | ch.L |      | Weight |       |
|----------|--------------|-------|-----------------------|-------|------|------|------|------|------|------|------|------|----------------|------|-------|------|------|------|------|------|------|------|--------|-------|
| [in]     | [mm]         | [in]  | [mm]                  | [in]  | [mm] | [in] | [mm] | [in] | [mm] | [in] | [mm] | [in] | [mm]           | [in] | [mm]  | [in] | [mm] | [in] | [mm] | [in] | [mm] | [in] | [kg]   | [lbs] |
| 1/2      | 15           | 1/2   | 50                    | 2     | 163  | 6.4  | 140  | 5.5  | 153  | 6.0  | 44   | 1.7  | 50.5           | 1.99 | 70    | 2.8  | 65   | 2.6  | 13   | 0.5  | 27   | 1.1  | 1.0    | 2.2   |
| 3/4      | 15           | 3/4   | 50                    | 2     | 173  | 6.8  | 147  | 5.8  | 163  | 6.4  | 44   | 1.7  | 50.5           | 1.99 | 70    | 2.8  | 75   | 3.0  | 14.3 | 0.6  | 27.5 | 1.1  | 1.2    | 2.6   |
| 1        | 25           | 1     | 63                    | 2 1/2 | 206  | 8.1  | 176  | 6.9  | 196  | 7.7  | 50.5 | 2.0  | 57             | 2.24 | 84.4  | 3.3  | 90   | 3.5  | 17.5 | 0.7  | 41   | 1.6  | 1.6    | 3.5   |
| 1 1/4    | 32           | 1 1/4 | 90                    | 3 1/2 | 255  | 10.0 | 220  | 8.7  | 245  | 9.6  | 66.2 | 2.6  | 72.7           | 2.86 | 116.4 | 4.6  | 110  | 4.3  | 19   | 0.7  | 50   | 2.0  | 3.0    | 6.6   |
| 1 1/2    | 40           | 1 1/2 | 90                    | 3 1/2 | 270  | 10.6 | 235  | 9.3  | 264  | 10.4 | 66.2 | 2.6  | 72.7           | 2.86 | 116.4 | 4.6  | 120  | 4.7  | 18   | 0.7  | 58   | 2.3  | 3.4    | 7.5   |
| 2        | 50           | 2     | 110                   | 4 1/2 | 316  | 12.4 | 276  | 10.9 | 311  | 12.2 | 77.4 | 3.0  | 83.9           | 3.30 | 140.6 | 5.5  | 150  | 5.9  | 20   | 0.8  | 70   | 2.8  | 5.3    | 11.7  |

Figure: Dimension



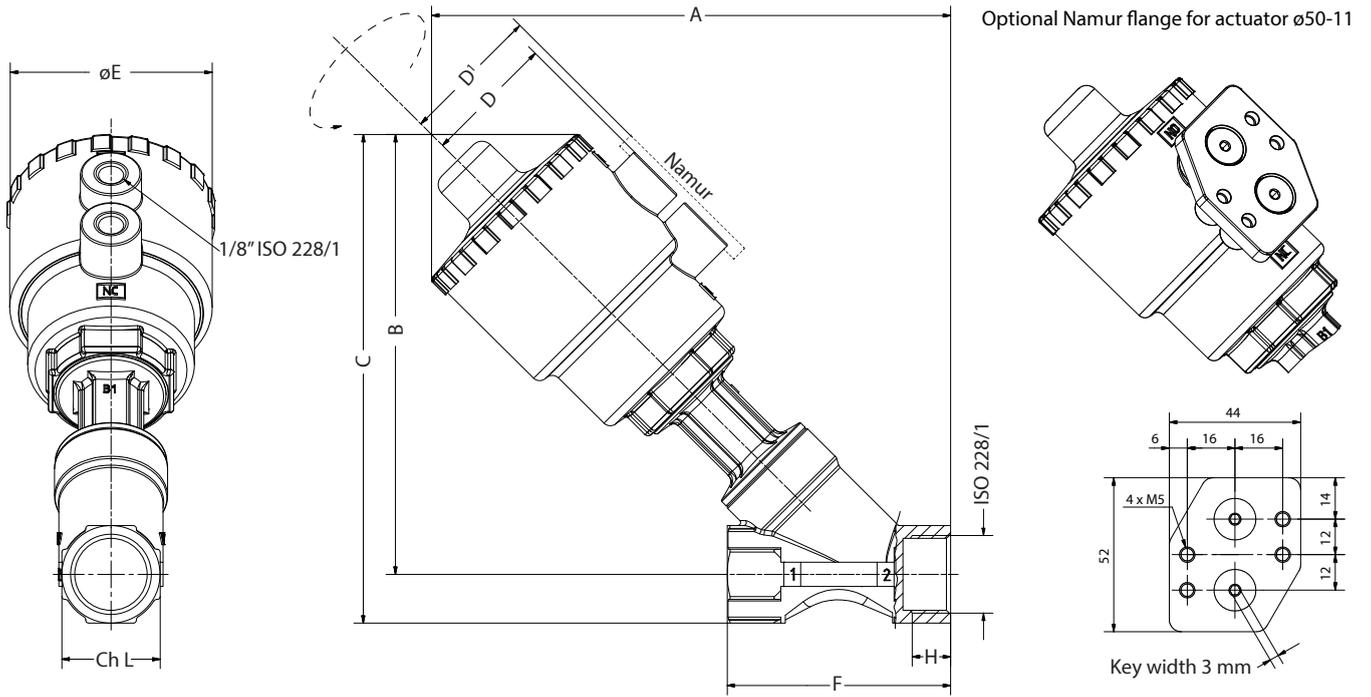
Dimension and weight, stainless steel valve body  
Table: ISO Connection

| Connection ISO 228/1 | Orifice size | Control head diameter | A    | B    | C     | D    | D <sup>1</sup> | øE    | F    | H    | ch.L | Weight |
|----------------------|--------------|-----------------------|------|------|-------|------|----------------|-------|------|------|------|--------|
| [in]                 | [mm]         | [mm]                  | [mm] | [mm] | [mm]  | [mm] | [mm]           | [mm]  | [mm] | [mm] | [mm] | [kg]   |
| G 3/8                | 15           | 40                    | 190  | 156  | 169   | 44   | -              | 70    | 85   | 12   | 25   | 1.1    |
| G 1/2                | 15           | 50                    | 190  | 156  | 169   | 44   | 50.5           | 70    | 85   | 15   | 25   | 1.0    |
| G 3/4                | 20           | 50                    | 195  | 160  | 176   | 44   | 50.5           | 70    | 95   | 16.3 | 31   | 1.2    |
| G 3/4                | 20           | 63                    | 213  | 178  | 194.4 | 50.5 | 70             | 84.4  | 95   | 16.3 | 31   | 1.2    |
| G 1                  | 25           | 63                    | 219  | 182  | 202   | 50.5 | 70             | 84.4  | 105  | 19.5 | 38   | 1.6    |
| G 1                  | 25           | 90                    | 259  | 222  | 242   | 66.2 | 72.7           | 116.4 | 105  | 19.5 | 38   | 1.7    |
| G 1 1/4              | 32           | 90                    | 266  | 226  | 249   | 66.2 | 72.7           | 116.4 | 120  | 19   | 47   | 3.0    |
| G 1 1/2              | 40           | 90                    | 271  | 230  | 258   | 66.2 | 72.7           | 116.4 | 130  | 18   | 54   | 3.4    |
| G 1 1/2              | 40           | 110                   | 307  | 266  | 294   | 77.4 | 83.9           | 140.6 | 130  | 18   | 54   | 4.0    |
| G 2                  | 50           | 110                   | 321  | 276  | 310   | 77.4 | 83.9           | 140.6 | 150  | 20   | 66   | 5.3    |

Table: NPT Connection

| Conn NPT | Orifice size |       | Control head diameter |       | A    |      | B    |      | C     |      | D    |      | D <sup>1</sup> |      | øE    |      | F    |      | H    |      | ch.L |      | Weight |       |
|----------|--------------|-------|-----------------------|-------|------|------|------|------|-------|------|------|------|----------------|------|-------|------|------|------|------|------|------|------|--------|-------|
| [in]     | [mm]         | [in]  | [mm]                  | [in]  | [mm] | [in] | [mm] | [in] | [mm]  | [in] | [mm] | [in] | [mm]           | [in] | [mm]  | [in] | [mm] | [in] | [mm] | [in] | [mm] | [in] | [kg]   | [lbs] |
| 1/2      | 15           | 1/2   | 50                    | 2     | 190  | 7.5  | 156  | 6.1  | 169   | 6.7  | 44   | 1.7  | 50.5           | 1.99 | 70    | 2.8  | 85   | 3.3  | 15   | 0.6  | 25   | 1.0  | 1.0    | 2.2   |
| 3/4      | 15           | 3/4   | 50                    | 2     | 195  | 7.7  | 160  | 6.3  | 176   | 6.9  | 44   | 1.7  | 50.5           | 1.99 | 70    | 2.8  | 95   | 3.7  | 16.3 | 0.6  | 31   | 1.2  | 1.2    | 2.6   |
| 3/4      | 15           | 3/4   | 63                    | 2 1/2 | 213  | 8.4  | 178  | 7.0  | 194.4 | 7.7  | 50.5 | 2.0  | 57             | 2.24 | 84.4  | 3.3  | 95   | 3.7  | 16.3 | 0.6  | 31   | 1.2  | 1.2    | 2.6   |
| 1        | 25           | 1     | 63                    | 2 1/2 | 219  | 8.6  | 182  | 7.2  | 202   | 8.0  | 50.5 | 2.0  | 57             | 2.24 | 84.4  | 3.3  | 105  | 4.1  | 19.5 | 0.8  | 38   | 1.5  | 1.6    | 3.5   |
| 1 1/4    | 32           | 1 1/4 | 90                    | 3 1/2 | 266  | 10.5 | 226  | 8.9  | 249   | 9.8  | 66.2 | 2.6  | 72.7           | 2.86 | 116.4 | 4.6  | 120  | 4.7  | 19   | 0.7  | 47   | 1.9  | 3.0    | 6.6   |
| 1 1/2    | 40           | 1 1/2 | 90                    | 3 1/2 | 271  | 10.7 | 230  | 9.1  | 258   | 10.2 | 66.2 | 2.6  | 72.7           | 2.86 | 116.4 | 4.6  | 130  | 5.1  | 18   | 0.7  | 54   | 2.1  | 3.4    | 7.5   |
| 2        | 50           | 2     | 110                   | 4 1/2 | 321  | 12.6 | 276  | 10.9 | 310   | 12.2 | 77.4 | 3.0  | 83.9           | 3.30 | 140.6 | 5.5  | 150  | 5.9  | 20   | 0.8  | 66   | 2.6  | 5.3    | 11.7  |

Figure: Dimension



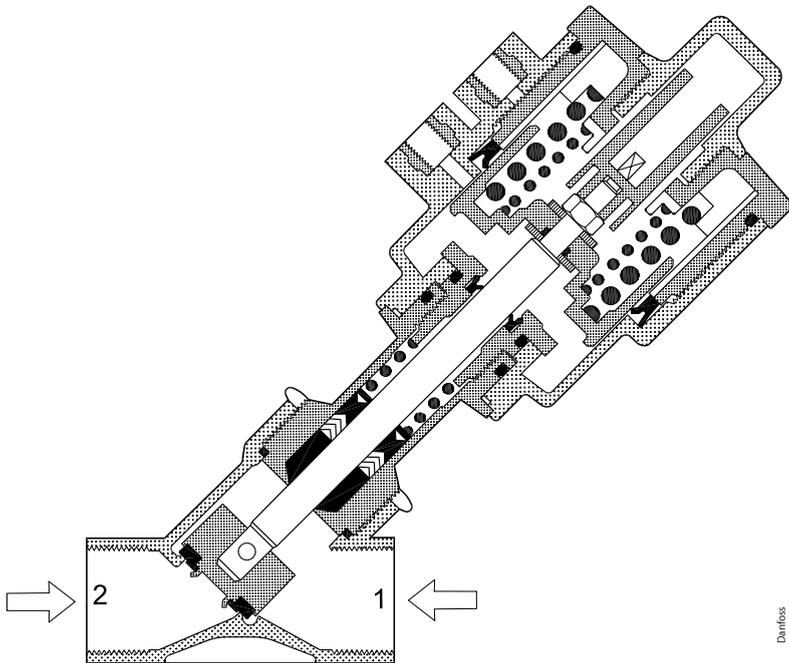
**Mounting**

**NC**

**Mounting: Bi-directional**

Closing against the flow (Port 2 to 1), recommended to avoid water hammer.

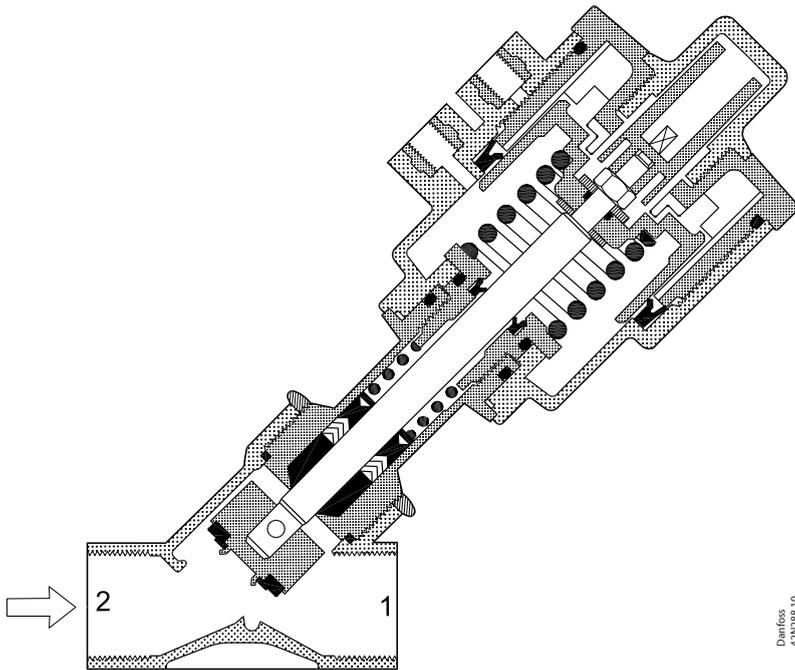
Closing with the flow direction (Port 1 to 2), recommended only for compressible fluids for extended pressure range.



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**NO Mounting**

Closing against the flow (Port 2 to 1), recommended to avoid water hammer.



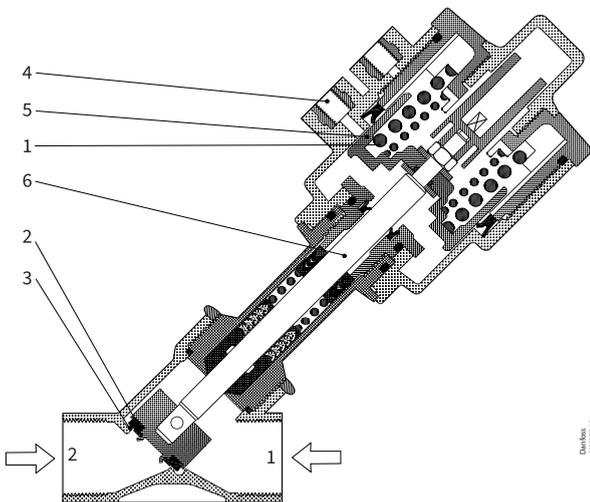
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**Connections**

**NC ISO / NPT Connection**

AV210 unpressurized closed version (NC) bidirectional.

The valve is kept closed by the spring (1), which presses the seat gasket (2) against the valve seat (3). When the pressure is applied to the control connection (4), the control piston (5), the spindle (6) and thus the seat gasket (2) are raised, and the valve opens with or against the pressure of the medium.



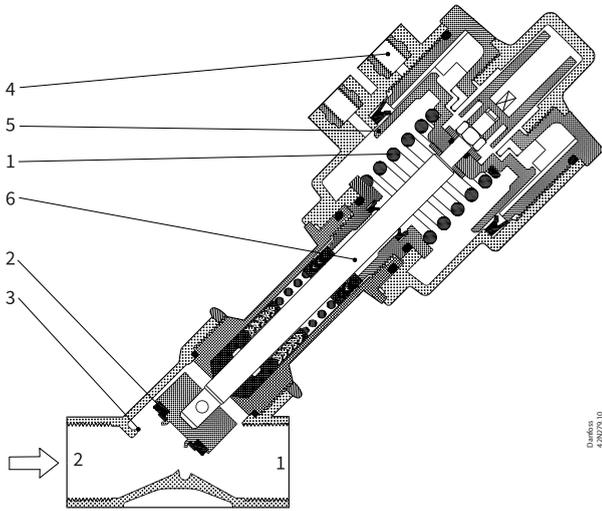
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|   |                    |
|---|--------------------|
| 1 | Spring             |
| 2 | Seat gasket        |
| 3 | Valve seat         |
| 4 | Control connection |
| 5 | Control piston     |
| 6 | Spindle            |

**NO ISO Connection**

AV210 unpressurized open version (NO):

The valve is kept open by the spring (1), which keeps the seat gasket (2) away from the valve seat (3). When pressure is applied to the control connection (4), the control piston (5), the spindle (6) and thus the seat gasket (2) are lowered, and the valve closes against the pressure of the medium.



|   |                    |
|---|--------------------|
| 1 | Spring             |
| 2 | Seat gasket        |
| 3 | Valve seat         |
| 4 | Control connection |
| 5 | Control piston     |
| 6 | Spindle            |

## Certificates, declarations and approvals

The list contains all certificates, declarations, and approvals for this product type. Individual code number may have some or all of these approvals, and certain local approvals may not appear on the list.

When you click on the link you will be directed to the latest version of the 'Declaration of Conformity'. Products developed and sold before this date of issue conform to the directives/standards in force at the time of their sale.

| Approval type              | Title                                    | Certification body | Approval topic |
|----------------------------|--|--------------------|----------------|
| Export Control Declaration | <a href="#">External Operated Valves</a> | Danfoss            |                |

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