

Data Sheet

# Shut-off valve Type **SVA-S** and **SVA-L**

**With butt-weld connection F**

Designed to meet all industrial refrigeration application requirements



SVA shut-off valves are available in angleway and straightway versions and with Standard neck (SVA-S) and Long neck (SVA-L).

The shut-off valves are designed to meet all industrial refrigeration application requirements and are designed to give favourable flow characteristics and are easy to dismantle and repair when necessary.

The valve cone is designed to ensure perfect closing and withstand a high system pulsation and vibration, which can be present specifically in the discharge line.

## Features

- Modular Concept:
  - Each valve housing is available with butt-weld F connection and with several different sizes
  - Possible to convert SVA-S or SVA-L to any other product in the Flexline™ SVL family (regulating valve, check & stop valve, check valve or strainer) just by replacing the complete top part
- Fast and easy valve overhaul service. It is easy to replace the top part and no welding is needed
- Optional accessories:
  - Heavy duty industrial hand wheel for frequent operation
  - Cap for infrequent operation
- Available in angleway and straightway versions with Standard neck or Long neck (DN 15 to DN 40) for insulated systems
- Each valve type is clearly marked with type, size and performance range
- The valves and caps are prepared for sealing, to prevent operation by unauthorized persons, using a seal wire
- Internal metal backseating:
  - DN 15-65 (1/2-2 1/2 in.)
- Internal PTFE backseating:
  - DN 80-200 (3-8 in.)
- Can accept flow in both directions
- Housing and bonnet material is low temperature steel according to requirements of the Pressure Equipment Directive and other international classification authorities
- Equipped with stainless steel bolts
- Classification: DNV, CRN, BV, EAC etc. To get an updated list of certification on the products please contact your [local Danfoss Sales Company](#)

## Media

### **Refrigerants**

For natural refrigerants (Ammonia, CO<sub>2</sub>) and non-corrosive gases and liquids acc. to EN 378-1 and for brine.

### **New refrigerants**

Danfoss products are continually evaluated for use with new refrigerants depending on market requirements.

When a refrigerant is approved for use by Danfoss, it is added to the relevant portfolio, and the R number of the refrigerant (e.g. R513A) will be added to the technical data of the code number. Therefore, products for specific refrigerants are best checked at [store.danfoss.com/en/](https://store.danfoss.com/en/), or by contacting your local Danfoss representative.

## Product specification

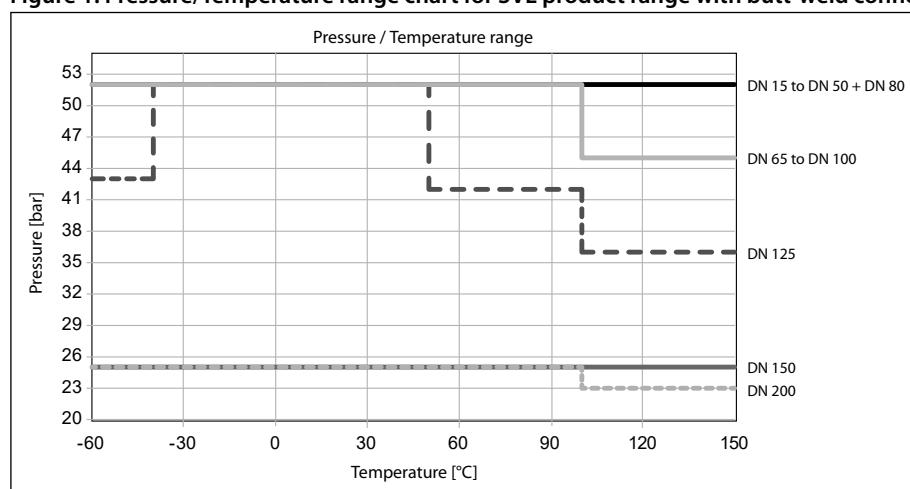
### Pressure and temperature data

Table 1: Pressure and temperature range

| Features              | Description                                                                    |
|-----------------------|--------------------------------------------------------------------------------|
| Temperature range     | -60 °C/+150 °C (-76 °F /+302 °F)                                               |
| Max. working pressure | 52 bar (754 psig) for DN15 to DN 125<br>25 bar (362 psig) for DN 150 to DN 200 |

For more detail on pressure and temperature range; please see below.

Figure 1: Pressure/Temperature range chart for SVL product range with butt-weld connection F



#### For valve sizes DN 15 to DN 50 and DN 80:

52 bar (754 psig) at -60 °C to +150 °C (-76 °F to +302 °F).

#### For valve sizes DN 65 and DN100:

52 bar (754 psig) at -60 °C to +100 °C (-76 °F to +212 °F),  
45 bar (652 psig) at +100 °C to +150 °C (+212 °F to +302 °F).

#### For valve size DN 125:

52 bar (754 psig) at -40 °C to +50 °C (-40 °F to +122 °F)  
43 bar (623 psig) at -60 °C to -40 °C (-76 °F to -40 °F),  
42 bar (609 psig) at +50 °C to +100 °C (+122 °F to +212 °F),  
36 bar (522 psig) at +100 °C to +150 °C (+212 °F to +302 °F).

#### For valve size DN 150:

25 bar (362 psig) at -60 °C to +150 °C (-76 °F to +302 °F).

#### For valve size DN 200:

25 bar (362 psig) at -60 °C to +100 °C (-76 °F to +212 °F),  
23 bar (333 psig) at +100 °C to +150 °C (+212 °F to +302 °F).

SVL housings with other connection types (DIN, ANSI, SOC and thread) are approved for a maximum working pressure of 52 bar (754 psi g) at -60 °C to +150 °C (-76 °F to +302 °F) for all sizes.

The reduced pressure in some of the SVL housings with connection type F is caused by the welding onto stainless steel pipes with reduced pipe size.

## Connections

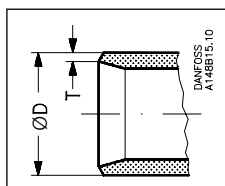


Table 2: F - connection

| Size | Size | ØD    | T  | ØD    | T     | k <sub>v</sub> -angle | k <sub>v</sub> -straight | C <sub>v</sub> -angle  | C <sub>v</sub> -straight |
|------|------|-------|----|-------|-------|-----------------------|--------------------------|------------------------|--------------------------|
| mm   | in.  | mm    | mm | in.   | in.   | m <sup>3</sup> /h     | m <sup>3</sup> /h        | US <sub>gal</sub> /min | US <sub>gal</sub> /min   |
| 15   | ½    | 21.3  | 2  | 0.839 | 0.079 | 7                     | 4.9                      | 8.1                    | 5.7                      |
| 20   | ¾    | 26.9  | 2  | 1.059 | 0.079 | 14.6                  | 10.2                     | 16.9                   | 11.8                     |
| 25   | 1    | 33.7  | 2  | 1.327 | 0.079 | 24.8                  | 17.4                     | 28.8                   | 20.2                     |
| 32   | 1¼   | 42.4  | 2  | 1.669 | 0.079 | 42.6                  | 29.8                     | 49.4                   | 34.6                     |
| 40   | 1¼   | 48.3  | 2  | 1.902 | 0.079 | 45.2                  | 31.6                     | 52.4                   | 36.7                     |
| 50   | 2    | 60.3  | 2  | 2.37  | 0.079 | 80                    | 65                       | 93                     | 76                       |
| 65   | 2½   | 76.1  | 2  | 3     | 0.079 | 120                   | 97                       | 140                    | 113                      |
| 80   | 3    | 90.9  | 2  | 3.579 | 0.118 | 182                   | 152                      | 211                    | 176                      |
| 100  | 4    | 116.3 | 2  | 4.579 | 0.118 | 313                   | 278                      | 363                    | 323                      |
| 125  | 5    | 141.7 | 2  | 5.579 | 0.118 | 514                   | 470                      | 596                    | 545                      |
| 150  | 6    | 170.3 | 2  | 6.705 | 0.118 | 785                   | 597                      | 911                    | 693                      |
| 200  | 8    | 221.1 | 2  | 8.705 | 0.118 | 1168                  | 1024                     | 1355                   | 1188                     |

### Connection:

- Butt-weld connection "F"
  - DN 15 to 65 size: 2 mm thick
  - DN 80 -200 size: 3 mm thick

## Design

### Housing

Made of special, cold resistant steel

### Valve cone

The valve cone can be turned on the spindle, thus there will be no friction between the cone and the seat when the valve is opened and closed and the special design will avoid cone spin due to pulsation and vibration when the valve is in open position. A teflon tightening ring provides perfect sealing with minimum closing force.

### Spindle

Made of polished stainless steel, ideal for leap seal sealing.

### Packing gland

The low temperature packing gland ensures a perfect tightness. The packing glands are equipped with a scraper ring to prevent penetration of dirt and ice into the packing gland.

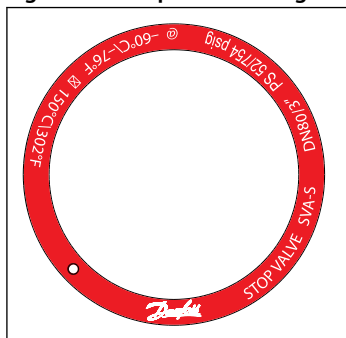
For special and/or high demanding applications/conditions which run with high constant temperatures, it is recommended to replace the packing gland with "HL Packing Gland" as spare part. For more information, please, contact your local Danfoss sales representative.

## Installation

It is recommended that the valves be installed in the direction of flow indicated by the arrow on the valve body. The valve can be installed in the opposite direction but this slightly reduces the k<sub>v</sub>-value (C<sub>v</sub>-value).

## Shut-off valve, type SVA-S and SVA-L, With butt-weld connection F

Figure 2: Example of Marking Ring



The valve is designed to withstand high internal pressure. However, the piping system in general should be designed to avoid liquid traps and reduce the risk of hydraulic pressure caused by thermal expansion. For further information refer to installation instructions for SVA.

### Material specification

Table 3: SVA-S 15-20 (1/2 - 3/4 in.)

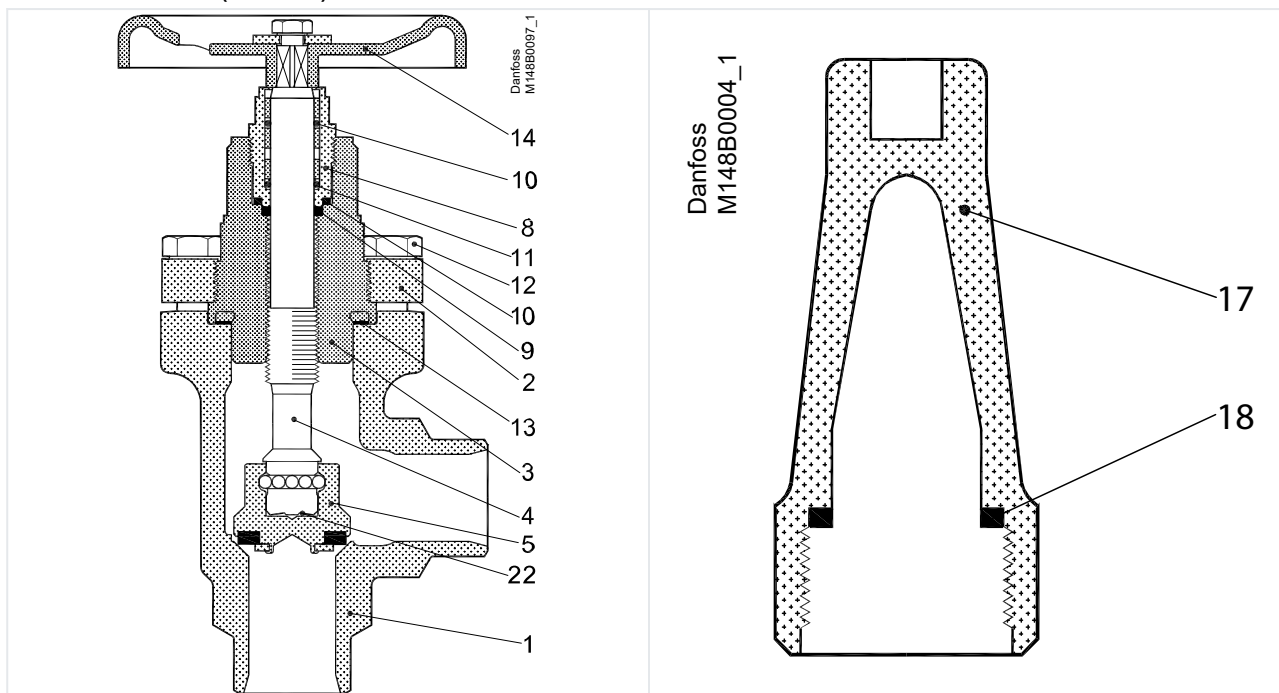


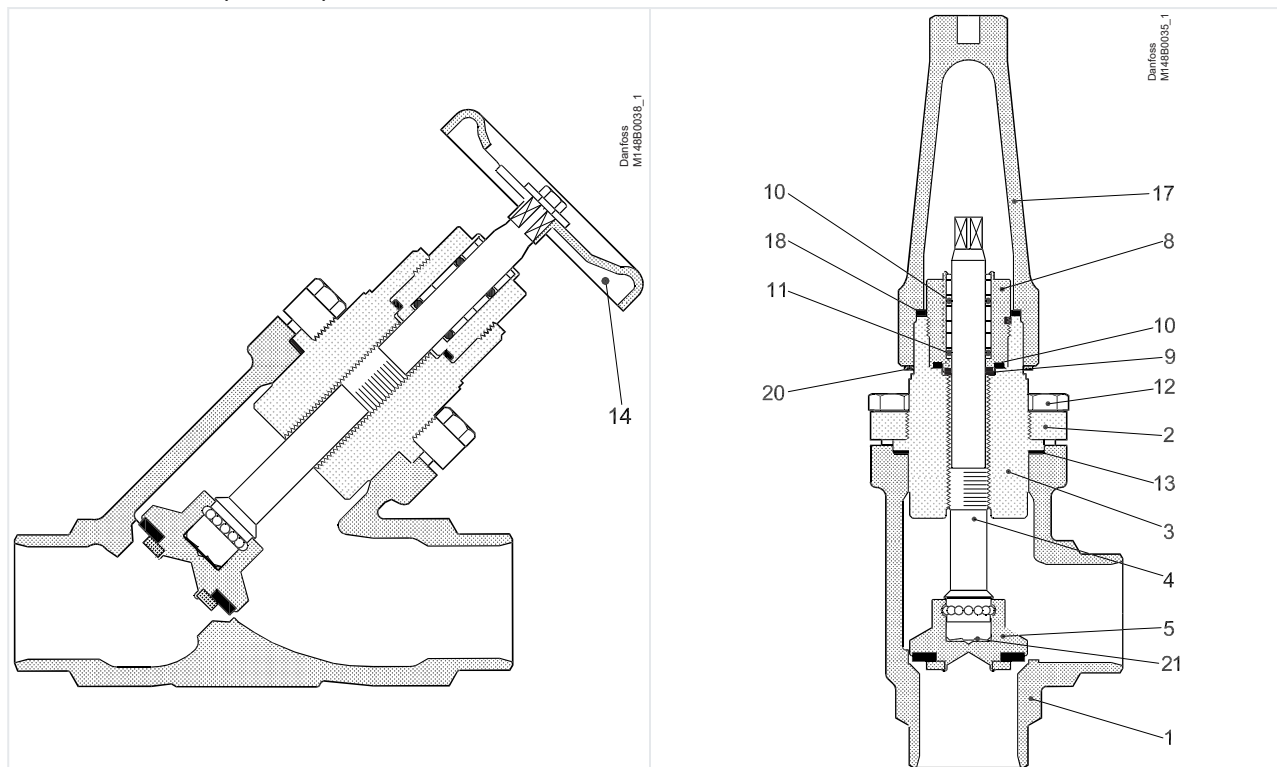
Table 4: Material specification

| No. | Part                      | Material               | EN                 | ISO            | ASTM      |
|-----|---------------------------|------------------------|--------------------|----------------|-----------|
| 1   | Housing                   | Steel                  | G20Mn5QT, 10213-3  |                | LCC, A352 |
|     |                           |                        | P285QH+QT, 10222-4 |                | LF2, A350 |
| 2   | Bonnet, Flange            | Steel                  | G20Mn5QT, 10213-3  |                | LCC, A352 |
|     |                           |                        | P285QH+QT, 10222-4 |                | LF2, A350 |
|     |                           |                        | P275NL, 10028-3    |                |           |
| 3   | Bonnet, Insert            | Steel                  | 115Mn30 10087      | Type 2 R 683/9 | AISI 1213 |
| 4   | Spindle                   | Stainless steel        | X8CrNiS18-9 10088  | Type 17 683/13 | AISI 303  |
| 5   | Cone                      | Steel                  | 115Mn30 10087      | Type 2 R 683/9 | AISI 1213 |
| 8   | Packing gland             | Stainless steel        | X8CrNiS18-9 10088  | Type 17 683/13 | AISI 303  |
| 9   | Packing washer            | Aluminium              |                    |                |           |
| 10  | O-ring                    | Chloroprene (Neoprene) |                    |                |           |
| 11  | Spring loaded Teflon ring | PTFE                   |                    |                |           |
| 12  | Bolts                     | Stainless steel        | A2-70              | A2-70          | Type 308  |
| 13  | Gasket                    | Fiber, Non-asbestos    |                    |                |           |

## Shut-off valve, type SVA-S and SVA-L, With butt-weld connection F

| No. | Part           | Material  | EN | ISO | ASTM |
|-----|----------------|-----------|----|-----|------|
| 14  | Handwheel      | Steel     |    |     |      |
| 17  | Cap            | Aluminium |    |     |      |
| 18  | Gasket for cap | Nylon     |    |     |      |
| 19  | Locking nut    | Steel     |    |     |      |
| 20  | Screw          | Steel     |    |     |      |
| 22  | Disk spring    | Steel     |    |     |      |

**Table 5: SVA-S 25-40 (1 - 1½ in.)**



**Table 6: Material specification**

| No. | Part                      | Material               | EN                 | ISO            | ASTM      |
|-----|---------------------------|------------------------|--------------------|----------------|-----------|
| 1   | Housing                   | Steel                  | G20Mn5QT, 10213-3  |                | LCC, A352 |
|     |                           |                        | P285QH+QT, 10222-4 |                | LF2, A350 |
| 2   | Bonnet, Flange            | Steel                  | G20Mn5QT, 10213-3  |                | LCC, A352 |
|     |                           |                        | P285QH+QT, 10222-4 |                | LF2, A350 |
|     |                           |                        | P275NL, 10028-3    |                |           |
| 3   | Bonnet, Insert            | Steel                  | 11SMn30 10087      | Type 2 R 683/9 | AISI 1213 |
| 4   | Spindle                   | Stainless steel        | X8CrNiS18-9 10088  | Type 17 683/13 | AISI 303  |
| 5   | Cone                      | Steel                  | 11SMn30 10087      | Type 2 R 683/9 | AISI 1213 |
| 8   | Packing gland             | Stainless steel        | X8CrNiS18-9 10088  | Type 17 683/13 | AISI 303  |
| 9   | Packing washer            | Aluminium              |                    |                |           |
| 10  | O-ring                    | Chloroprene (Neoprene) |                    |                |           |
| 11  | Spring loaded Teflon ring | PTFE                   |                    |                |           |
| 12  | Bolts                     | Stainless steel        | A2-70              | A2-70          | Type 308  |
| 13  | Gasket                    | Fiber, Non-asbestos    |                    |                |           |
| 14  | Handwheel                 | Steel                  |                    |                |           |
| 17  | Cap                       | Aluminium              |                    |                |           |
| 18  | Gasket for cap            | Nylon                  |                    |                |           |
| 20  | Identification ring       | Stainless steel        |                    |                |           |
| 21  | Disk spring               | Steel                  |                    |                |           |

Shut-off valve, type SVA-S and SVA-L, With butt-weld connection F

Table 7: SVA-L 15 - 40 (½ - 1½ in.)

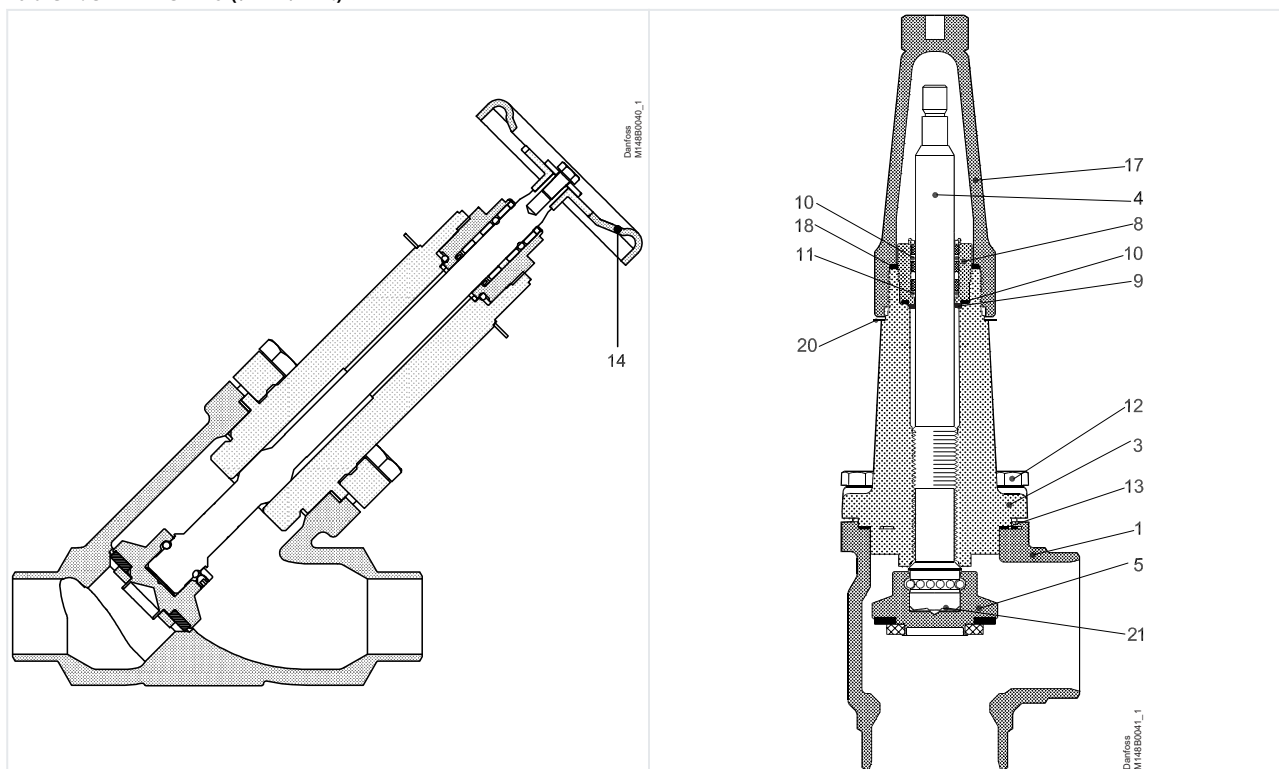


Table 8: Material specification

| No. | Part                      | Material               | EN                 | ISO            | ASTM      |
|-----|---------------------------|------------------------|--------------------|----------------|-----------|
| 1   | Housing                   | Steel                  | G20Mn5QT, 10213-3  |                | LCC, A352 |
|     |                           |                        | P285QH+QT, 10222-4 |                | LF2, A350 |
| 3   | Valve bonnet              | Steel                  | G20Mn5QT, 10213-3  |                | LCC, A352 |
|     |                           |                        | P285QH+QT, 10222-4 |                | LF2, A350 |
| 4   | Spindle                   | Stainless steel        | X8CrNiS18-9 10088  | Type 17 683/13 | AISI 303  |
| 5   | Cone                      | Steel                  | 11SMn30 10087      | Type 2 R 683/9 | AISI 1213 |
| 8   | Packing gland             | Stainless steel        | X8CrNiS18-9 10088  | Type 17 683/13 | AISI 303  |
| 9   | Packing washer            | Aluminium              |                    |                |           |
| 10  | O-ring                    | Chloroprene (Neoprene) |                    |                |           |
| 11  | Spring loaded Teflon ring | PTFE                   |                    |                |           |
| 12  | Bolts                     | Stainless steel        | A2-70              | A2-70          | Type 308  |
| 13  | Gasket                    | Fiber, Non-asbestos    |                    |                |           |
| 14  | Hand wheel                | Steel                  |                    |                |           |
| 17  | Cap                       | Aluminium              |                    |                |           |
| 18  | Gasket for cap            | Nylon (PA6)            |                    |                |           |
| 20  | Identification ring       | Stainless steel        |                    |                |           |
| 21  | Disk spring               | Steel                  |                    |                |           |

## Shut-off valve, type SVA-S and SVA-L, With butt-weld connection F

Table 9: SVA-S 50-65 (2 - 2½ in.)

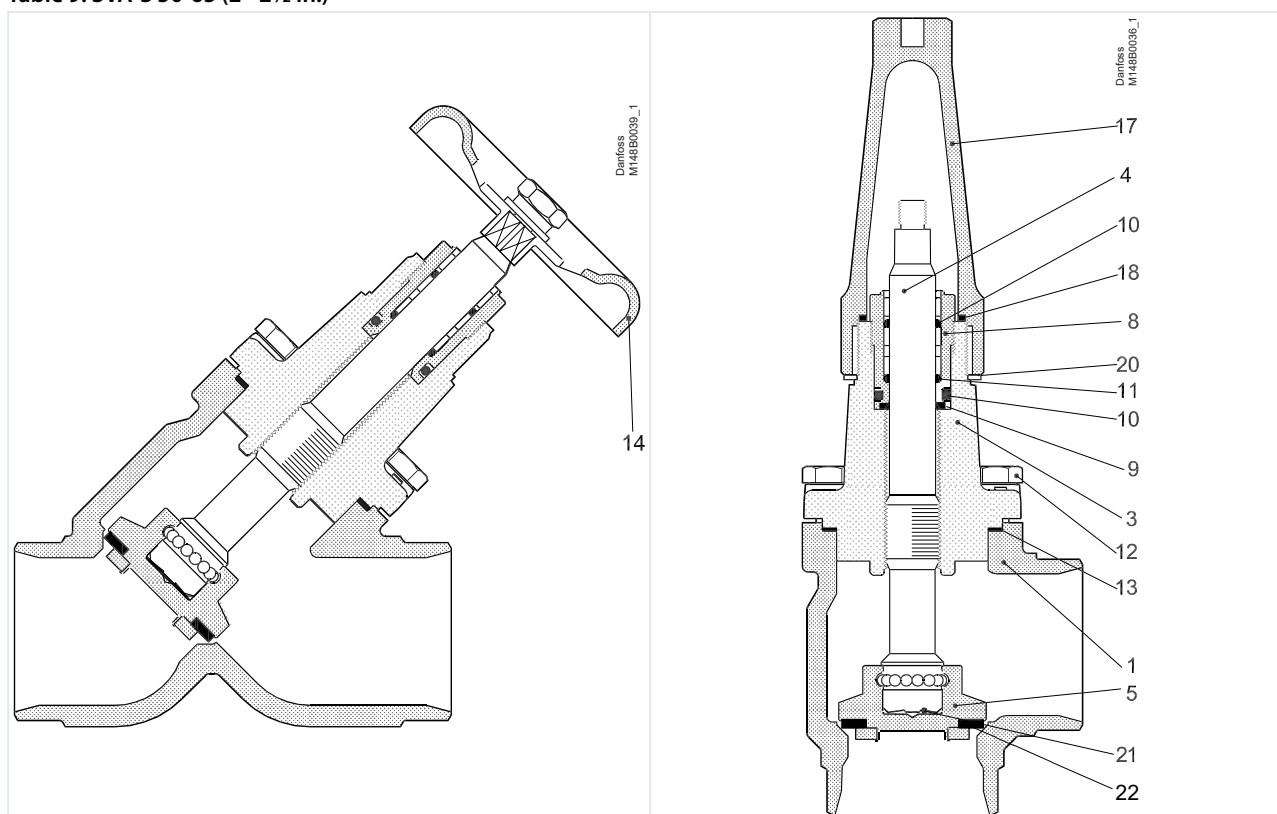


Table 10: Material specification

| No. | Part                      | Material               | EN                 | ISO            | ASTM      |
|-----|---------------------------|------------------------|--------------------|----------------|-----------|
| 1   | Housing                   | Steel                  | G20Mn5QT, 10213-3  |                | LCC, A352 |
|     |                           |                        | P285QH+QT, 10222-4 |                | LF2, A350 |
| 3   | Valve bonnet              | Steel                  | G20Mn5QT, 10213-3  |                | LCC, A352 |
|     |                           |                        | P285QH+QT, 10222-4 |                | LF2, A350 |
|     | Spindle                   | Stainless steel        | X8CrNiS18-9 10088  | Type 17 683/13 | AISI 303  |
| 5   | Cone                      | Steel                  | 11SMn30 10087      | Type 2 R 683/9 | AISI 1213 |
| 8   | Packing gland             | Stainless steel        | X8CrNiS18-9 10088  | Type 17 683/13 | AISI 303  |
| 9   | Packing washer            | Aluminium              |                    |                |           |
| 10  | O-ring                    | Chloroprene (Neoprene) |                    |                |           |
| 11  | Spring loaded Teflon ring | PTFE                   |                    |                |           |
| 12  | Bolts                     | Stainless steel        | A2-70              | A2-70          | Type 308  |
| 13  | Gasket                    | Fiber, Non-asbestos    |                    |                |           |
| 14  | Handwheel                 | Steel                  |                    |                |           |
| 17  | Cap                       | Aluminium              |                    |                |           |
| 18  | Gasket for cap            | Nylon                  |                    |                |           |
| 19  | Locking nut               | Steel                  |                    |                |           |
| 20  | Identification ring       | Stainless steel        |                    |                |           |

## Shut-off valve, type SVA-S and SVA-L, With butt-weld connection F

Table 11: SVA-S 80 - 150 (3 - 6 in.)

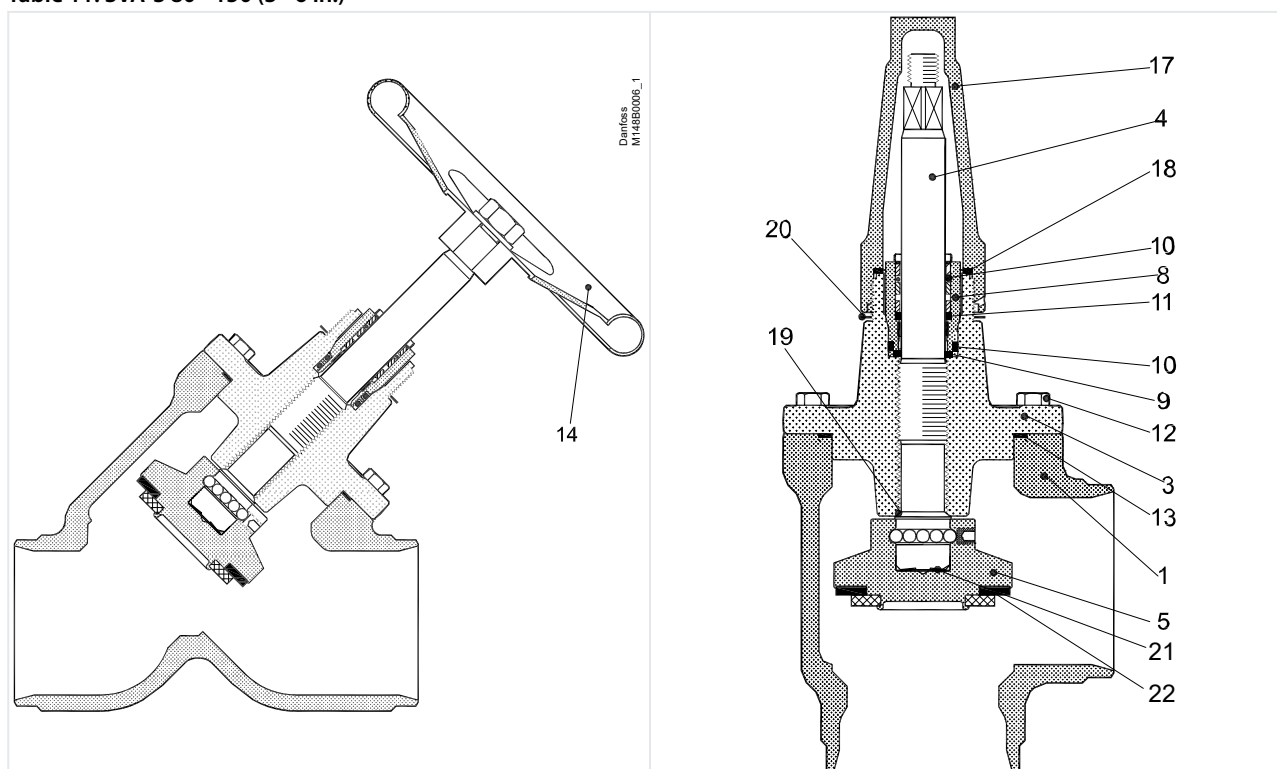


Table 12: Material specification

| No. | Part                      | Material               | EN                                      | ISO               | ASTM                   |
|-----|---------------------------|------------------------|-----------------------------------------|-------------------|------------------------|
| 1   | Housing                   | Steel                  | G20Mn5QT 10213-3                        |                   | LCC A352               |
| 3   | Valve bonnet              | Steel                  | G20Mn5QT, 10213-3<br>P285QH+QT, 10222-4 |                   | LCC, A352<br>LF2, A350 |
| 4   | Spindle                   | Stainless steel        | X5CrNi18-10 10088                       | Type 11, R 683/13 | AISI 304,<br>A276      |
| 5   | Cone Cone seal            | Steel<br>Teflon (PTFE) | 115Mn30<br>10087                        | Type 2, R 683/9   | AISI 1213              |
| 8   | Packing gland             | Stainless steel        | X8CrNiS18-9 10088                       | Type 17 R 683/13  | AISI 303               |
| 9   | Packing washer            | Aluminium              |                                         |                   |                        |
| 10  | O-ring                    | Chloroprene (Neoprene) |                                         |                   |                        |
| 11  | Spring loaded Teflon ring | PTFE                   |                                         |                   |                        |
| 12  | Bolts                     | Stainless steel        | A2-70                                   | A2-70             | Type 308               |
| 13  | Gasket                    | Fiber, Non-asbestos    |                                         |                   |                        |
| 14  | Hand wheel                | Steel                  |                                         |                   |                        |
| 17  | Cap                       | Aluminium              |                                         |                   |                        |
| 18  | Gasket for cap            | Nylon (PA 6)           |                                         |                   |                        |
| 19  | Soft backseat             | Teflon (PTFE)          |                                         |                   |                        |
| 20  | Identification ring       | Stainless steel        |                                         |                   |                        |
| 22  | Disk spring               | Steel                  |                                         |                   |                        |

# Shut-off valve, type SVA-S and SVA-L, With butt-weld connection F

Table 13: SVA-S 200 (8 in.)

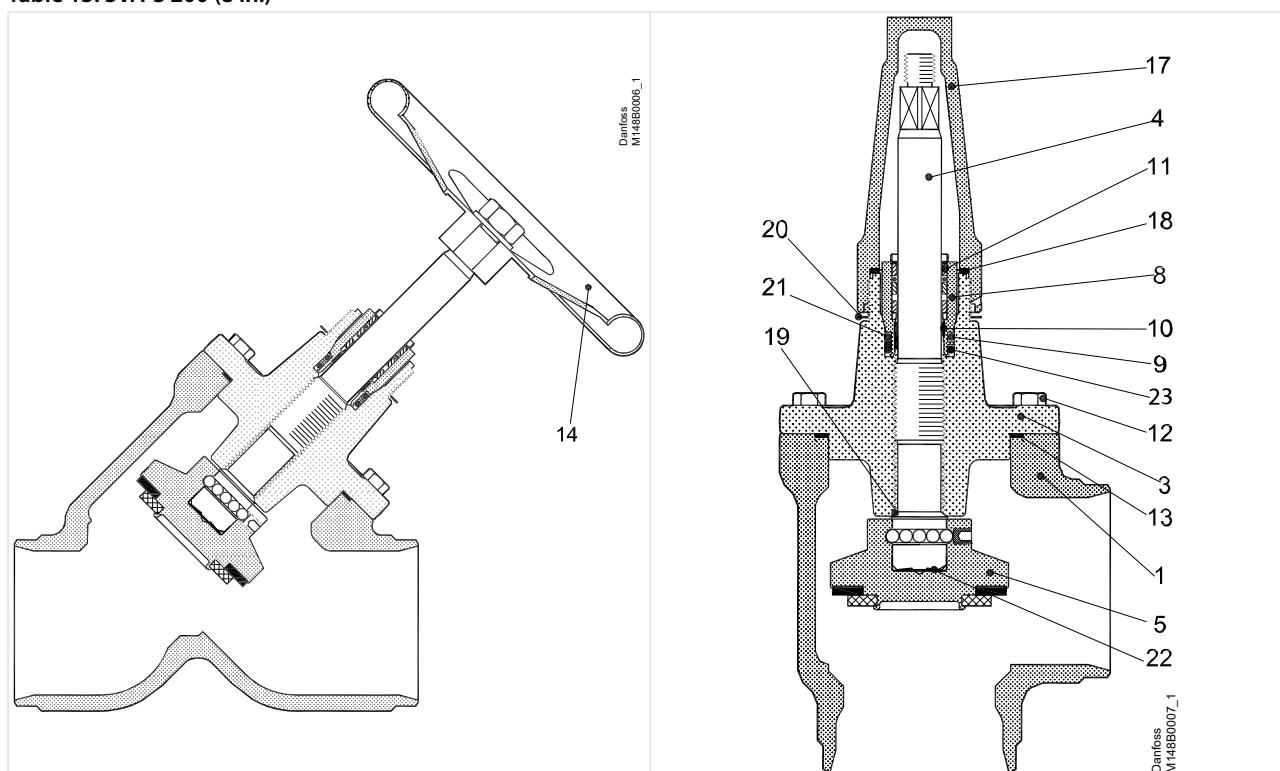


Table 14: Material specification

| No. | Part                      | Material                    | EN                  | ISO               | ASTM           |
|-----|---------------------------|-----------------------------|---------------------|-------------------|----------------|
| 1   | Housing                   | Steel                       | G20Mn5QT<br>10213-3 |                   | LCC            |
|     |                           |                             |                     |                   | A352           |
| 3   | Valve bonnet              | Steel                       | G20Mn5QT, 10213-3   |                   | LCC, A352      |
|     |                           |                             | P285QH+QT, 10222-4  |                   | LF2, A350      |
| 4   | Spindle                   | Stainless steel             | X5CrNi18-10 10088   | Type 11, R 683/13 | AISI 304, A276 |
| 5   | Cone<br>Cone seal         | Steel<br>Teflon (PTFE)      | 11SMn30<br>10087    | Type 2, R 683/9   | AISI 1213      |
| 8   | Packing gland             | Stainless steel             | X8CrNiS18-910088    | Type 17R 683/13   | AISI 303       |
| 9   | O-ring                    | Chloroprene (Neoprene)      |                     |                   |                |
| 10  | Spring loaded Teflon ring | PTFE                        |                     |                   |                |
| 11  | O-ring                    | Chloroprene (Neoprene)      |                     |                   |                |
| 12  | Bolts                     | Stainless steel             | A2-70               | A2-70             | Type 308       |
| 13  | Gasket                    | Fiber, Non-asbestos         |                     |                   |                |
| 14  | Hand wheel                | Steel                       |                     |                   |                |
| 15  | Washer                    | Stainless steel             |                     |                   |                |
| 16  | Nut                       | Stainless steel             |                     |                   |                |
| 17  | Cap                       | Aluminium                   |                     |                   |                |
| 18  | Gasket for cap            | Nylon (PA 6)                |                     |                   |                |
| 19  | Soft backseat             | Teflon (PTFE)               |                     |                   |                |
| 20  | Identification ring       | Stainless steel             |                     |                   |                |
| 21  | Wear ring                 | Teflon (PTFE)               |                     |                   |                |
| 22  | Disk spring               | Steel                       |                     |                   |                |
| 23  | O-ring                    | PTFE/Chloroprene (Neoprene) |                     |                   |                |

## Dimensions and weights

Table 15: SVA 15 - 40 (½ - 1½ in.) in angleway version with cap / hand wheel

| SVA-xx x x ANG CAP | SVA-xx x x ANG H-WHEEL |
|--------------------|------------------------|
|                    |                        |

Table 16: SVA-S

| Valve size   |     | K    | C <sub>max.1</sub> | C <sub>max.2</sub> | G    | ØD1  | ØD2  | H    | Weight |
|--------------|-----|------|--------------------|--------------------|------|------|------|------|--------|
| SVA 15 - 20  | mm  | 4    | 178                | 189                | 45   | 60   | 38   | 60   | 1.4 kg |
| SVA (½ - ¾)  | in. | 0.16 | 7                  | 7.44               | 1.77 | 2.36 | 1.5  | 2.36 | 3.1 lb |
| SVA 25 - 40  | mm  | 12   | 234                | 268                | 55   | 80   | 50   | 70   | 2.4 kg |
| SVA (1 - 1½) | in. | 0.47 | 9.21               | 10.55              | 2.17 | 3.15 | 1.97 | 2.76 | 5.3 lb |

Table 17: SVA-L

| Valve size   |     | K    | C <sub>max.1</sub> | C <sub>max.2</sub> | G    | ØD1  | ØD2  | H    | Weight |
|--------------|-----|------|--------------------|--------------------|------|------|------|------|--------|
| SVA 15 - 20  | mm  | 63   | 237                | 248                | 45   | 60   | 38   | 60   | 1.4 kg |
| SVA (½ - ¾)  | in. | 2.48 | 9.33               | 9.76               | 1.77 | 2.36 | 1.5  | 2.36 | 3.1 lb |
| SVA 25 - 40  | mm  | 74   | 296                | 330                | 55   | 80   | 50   | 70   | 2.4 kg |
| SVA (1 - 1½) | in. | 2.91 | 11.65              | 12.99              | 2.17 | 3.15 | 1.97 | 2.76 | 5.3 lb |

Specified weights are approximate values only.

Table 18: SVA 15 - 40 (½ - 1½ in.) straightway version with cap / hand wheel

| SVA-xx x x STR CAP | SVA-xx x x STRH-WHEEL |
|--------------------|-----------------------|
|                    |                       |

# Shut-off valve, type SVA-S and SVA-L, With butt-weld connection F

**Table 19: SVA-S**

| Valve size   |     | K    | C <sub>max.1</sub> | C <sub>max.2</sub> | B <sub>max.1</sub> | B <sub>max.2</sub> | E    | G    | ØD1  | ØD2  | H    | Weight |
|--------------|-----|------|--------------------|--------------------|--------------------|--------------------|------|------|------|------|------|--------|
| SVA 15 - 20  | mm  | 4    | 146                | 141                | 160                | 156                | 20   | 120  | 60   | 38   | 60   | 2.0 kg |
| SVA (½ - ¾)  | in. | 0.16 | 5.74               | 5.55               | 6.3                | 6.14               | 0.79 | 4.72 | 2.36 | 1.5  | 2.36 | 4.4 lb |
| SVA 25 - 40  | mm  | 12   | 199                | 208                | 212                | 222                | 26   | 155  | 80   | 50   | 70   | 3.0 kg |
| SVA (1 - 1½) | in. | 0.47 | 7.83               | 8.19               | 8.35               | 8.74               | 1.02 | 6.1  | 3.15 | 1.97 | 2.76 | 6.6 lb |

**Table 20: SVA-L**

| Valve size   |     | K    | C <sub>max.1</sub> | C <sub>max.2</sub> | B <sub>max.1</sub> | B <sub>max.2</sub> | E    | G    | ØD1  | ØD2  | H    | Weight |
|--------------|-----|------|--------------------|--------------------|--------------------|--------------------|------|------|------|------|------|--------|
| SVA 15 - 20  | mm  | 63   | 188                | 184                | 202                | 198                | 20   | 120  | 60   | 38   | 60   | 2.0 kg |
| SVA (½ - ¾)  | in. | 2.48 | 7.4                | 7.24               | 7.95               | 7.8                | 0.79 | 4.72 | 2.36 | 1.5  | 2.36 | 4.4 lb |
| SVA 25 - 40  | mm  | 74   | 243                | 252                | 256                | 265                | 26   | 155  | 80   | 50   | 70   | 3.0 kg |
| SVA (1 - 1½) | in. | 2.91 | 9.57               | 9.92               | 10.08              | 10.43              | 1.02 | 6.1  | 3.15 | 1.97 | 2.76 | 6.6 lb |

Specified weights are approximate values only.

**Table 21: SVA 50 - 65 (2 - 2½ in.) in angleway version with cap / hand wheel**

| SVA-xx x x ANG CAP | SVA-xx x x ANG H-WHEEL |
|--------------------|------------------------|
|                    |                        |

**Table 22: SVA-S**

| Valve size |     | K    | C <sub>max.1</sub> | C <sub>max.2</sub> | G    | ØD1  | ØD2  | H    | Weight  |
|------------|-----|------|--------------------|--------------------|------|------|------|------|---------|
| SVA 50     | mm  | 70   | 284                | 315                | 60   | 100  | 50   | 77   | 3.2 kg  |
| SVA (2)    | in. | 2.76 | 11.18              | 12.4               | 2.36 | 3.94 | 1.97 | 3.03 | 7.1 lb  |
| SVA 65     | mm  | 70   | 310                | 335                | 70   | 100  | 50   | 90   | 4.8 kg  |
| SVA (2½)   | in. | 2.76 | 12.2               | 13.19              | 2.76 | 3.94 | 1.97 | 3.54 | 10.6 lb |

# Shut-off valve, type SVA-S and SVA-L, With butt-weld connection F

**Table 23: SVA 50 - 65 (2 - 2½ in.) in straightway version with cap / hand wheel**

| SVA-xx x xSTR CAP | SVA-xx x x STRH-WHEEL |
|-------------------|-----------------------|
|                   |                       |

**Table 24: SVA-S**

| Valve size |     | K    | B <sub>max.1</sub> | B <sub>max.2</sub> | C <sub>max.1</sub> | C <sub>max.2</sub> | E    | G    | ØD1  | ØD2  | H    | Weight  |
|------------|-----|------|--------------------|--------------------|--------------------|--------------------|------|------|------|------|------|---------|
| SVA 50     | mm  | 70   | 259                | 259                | 257                | 257                | 32   | 148  | 100  | 50   | 77   | 4.2 kg  |
| SVA (2)    | in. | 2.76 | 10.2               | 10.2               | 10.12              | 10.12              | 1.26 | 5.83 | 3.94 | 1.97 | 3.03 | 9.3 lb  |
| SVA 65     | mm  | 70   | 284                | 280                | 284                | 280                | 40   | 176  | 100  | 50   | 90   | 6.3 kg  |
| SVA (2½)   | in. | 2.76 | 11.18              | 11.02              | 11.18              | 11.02              | 1.57 | 6.93 | 3.94 | 1.97 | 3.54 | 13.9 lb |

Specified weights are approximate values only.

**Table 25: SVA 80 - 200 (3 - 8 in.) angleway version with cap / hand wheel**

| SVA-xx x xANG CAP | SVA-xx x x ANGH-WHEEL |
|-------------------|-----------------------|
|                   |                       |

**Table 26: SVA-S**

| Valve size | K   | C <sub>max.1</sub> | C <sub>max.2</sub> | G     | ØD1  | ØD2  | ØH   | Weight  |
|------------|-----|--------------------|--------------------|-------|------|------|------|---------|
| SVA 80     | mm  | 76                 | 373                | 388   | 90   | 200  | 58   | 9.7 kg  |
| SVA (3)    | in. | 3                  | 14.69              | 15.28 | 3.54 | 7.87 | 2.28 | 21.4 lb |
| SVA 100    | mm  | 90                 | 432                | 437   | 106  | 250  | 58   | 15.3 kg |
| SVA (4)    | in. | 3.54               | 17                 | 17.2  | 4.17 | 9.84 | 2.28 | 33.7 lb |
| SVA 125    | mm  | 90                 | 517                | 533   | 128  | 315  | 74   | 28.1 kg |
| SVA (5)    | in. | 3.54               | 20.35              | 20.98 | 5.04 | 12.4 | 2.91 | 61.9 lb |
| SVA 150    | mm  | 90                 | 564                | 568   | 145  | 315  | 74   | 39.7 kg |

## Shut-off valve, type SVA-S and SVA-L, With butt-weld connection F

| Valve size |     | K    | C <sub>max.1</sub> | C <sub>max.2</sub> | G    | ØD1   | ØD2  | ØH    | Weight   |
|------------|-----|------|--------------------|--------------------|------|-------|------|-------|----------|
| SVA (6)    | in. | 3.54 | 22.2               | 22.36              | 5.71 | 12.4  | 2.91 | 8.62  | 87.5 lb  |
| SVA 200    | mm  | 90   | 675                | 678                | 180  | 400   | 86   | 276   | 79.5 kg  |
| SVA (8)    | in. | 3.54 | 26.57              | 26.69              | 7.09 | 15.75 | 3.39 | 10.87 | 175.3 lb |

Specified weights are approximate values only.

Table 27: SVA 80 - 200 (3 - 8 in.) straightway version with cap / hand wheel

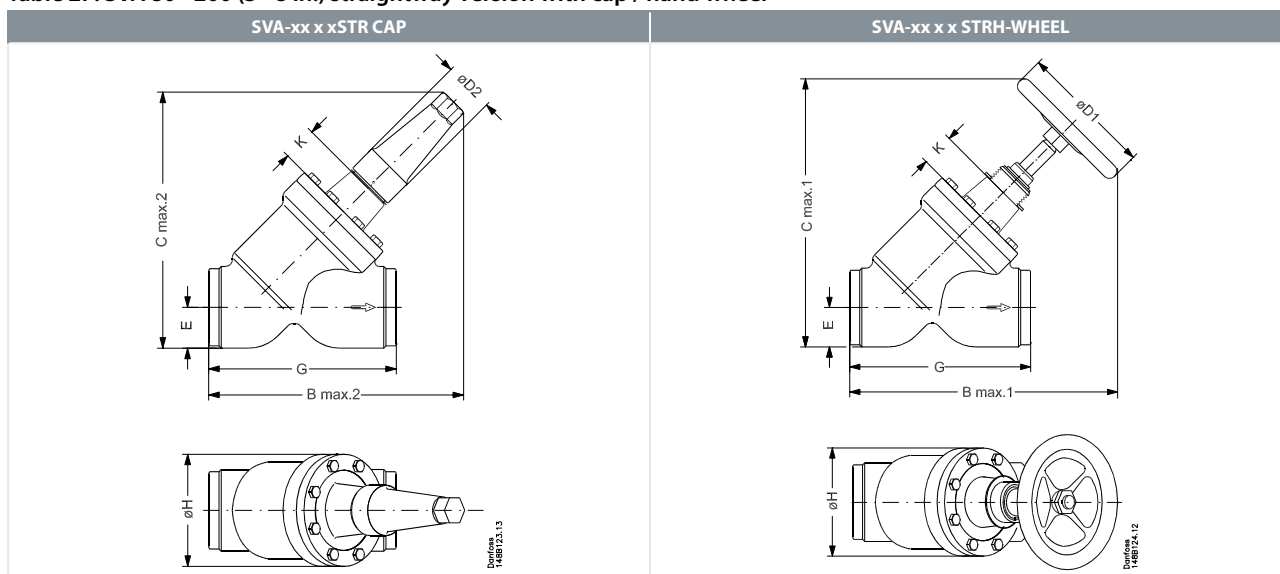


Table 28: SVA-S

| Valve size |     | K    | B <sub>max.1</sub> | B <sub>max.2</sub> | C <sub>max.1</sub> | C <sub>max.2</sub> | E    | G     | ØD1   | ØD2  | ØH    | Weight   |
|------------|-----|------|--------------------|--------------------|--------------------|--------------------|------|-------|-------|------|-------|----------|
| SVA 80     | mm  | 76   | 365                | 321                | 367                | 322                | 48   | 216   | 200   | 58   | 129   | 10.9 kg  |
| SVA (3)    | in. | 3    | 14.37              | 12.64              | 14.45              | 12.72              | 1.89 | 8.5   | 7.87  | 2.28 | 5.08  | 24.0 lb  |
| SVA 100    | mm  | 90   | 435                | 367                | 443                | 375                | 60   | 264   | 250   | 58   | 156   | 18.2 kg  |
| SVA (4)    | in. | 3.54 | 17.13              | 14.45              | 17.44              | 14.76              | 2.36 | 10.39 | 9.84  | 2.28 | 6.14  | 40.1 lb  |
| SVA 125    | mm  | 90   | 526                | 444                | 538                | 456                | 74   | 322   | 315   | 74   | 193   | 32.8 kg  |
| SVA (5)    | in. | 3.54 | 20.71              | 17.48              | 21.18              | 17.95              | 2.91 | 12.68 | 12.4  | 2.91 | 7.6   | 72.3 lb  |
| SVA 150    | mm  | 90   | 572                | 483                | 594                | 505                | 91   | 370   | 315   | 74   | 219   | 60.0 kg  |
| SVA (6)    | in. | 3.54 | 22.52              | 19.02              | 23.39              | 19.88              | 3.58 | 14.57 | 12.4  | 2.91 | 8.62  | 132.3 lb |
| SVA 200    | in. | 90   | 692                | 579                | 726                | 613                | 117  | 464   | 400   | 86   | 276   | 111.5 kg |
| SVA (8)    | in. | 3.54 | 27.24              | 22.8               | 28.58              | 24.13              | 4.61 | 18.27 | 15.75 | 3.39 | 10.87 | 245.8 lb |

Specified weights are approximate values only.

## Ordering

### Available connection sizes

#### SVA-S:

The **S** means **S**tandard bonnet length (sizes from DN50 to DN200 are insulation friendly).

#### SVA-L:

The **L** means **L**ong bonnet length (insulation friendly).

| Size | SVA-S | SVA-L |
|------|-------|-------|
| 15   | x     | x     |
| 20   | x     | x     |
| 25   | x     | x     |
| 32   | x     | x     |
| 40   | x     | x     |
| 50   |       | x     |
| 65   |       | x     |
| 80   |       | x     |
| 100  |       | x     |
| 125  |       | x     |
| 150  |       | x     |

### Type code

| Valve type                                       | SVA         | Shut-off valve                                         |                       |
|--------------------------------------------------|-------------|--------------------------------------------------------|-----------------------|
| Nominal size in mm                               |             |                                                        | Available connections |
|                                                  |             |                                                        | F                     |
| (valve size measured on the connection diameter) | 15          | DN 15 (½)                                              | x                     |
|                                                  | 20          | DN 20 (¾)                                              | x                     |
|                                                  | 25          | DN 25 (1)                                              | x                     |
|                                                  | 32          | DN 32 (1¼)                                             | x                     |
|                                                  | 40          | DN 40 (1½)                                             | x                     |
|                                                  | 50          | DN 50 (2)                                              | x                     |
|                                                  | 65          | DN 65 (2½)                                             | x                     |
|                                                  | 80          | DN 80 (3)                                              | x                     |
|                                                  | 100         | DN 100 (4)                                             | x                     |
|                                                  | 125         | DN 125 (5)                                             | x                     |
|                                                  | 150         | DN 150 (6)                                             | x                     |
|                                                  | 200         | DN 200 (8)                                             | x                     |
| Connections                                      | F           | Butt-weld connection: with 2/3 mm thick end connection |                       |
| Valve housing                                    | ANG, STR    | Angle flow, Straight flow                              |                       |
| Other equipment                                  | H-WHEEL CAP | Hand wheel Cap                                         |                       |

### Ordering SVA-S complete valves

Example:

SVA-S 200 F angleway with hand wheel = **148B6435**

|         |             |
|---------|-------------|
| ANG     | Angleway    |
| STR     | Straightway |
| CAP     | Cap         |
| H-WHEEL | Hand wheel  |

## Shut-off valve, type SVA-S and SVA-L, With butt-weld connection F

**Table 29: SVA-S Angleway(Butt-weld connection F)**

| Size |     | Type                    | MWP |      | Code number     |
|------|-----|-------------------------|-----|------|-----------------|
| mm   | in. |                         | bar | psig |                 |
| 150  | 6   | SVA-S 150 F ANG H-WHEEL | 25  | 362  | <b>148B6434</b> |
| 150  | 6   | SVA-S 150 F ANG CAP     | 25  | 362  | <b>148B6436</b> |
| 200  | 8   | SVA-S 200 F ANG H-WHEEL | 25  | 362  | <b>148B6435</b> |
| 200  | 8   | SVA-S 200 F ANG CAP     | 25  | 362  | <b>148B6437</b> |

**Table 30: SVA-S Straightway(Butt-weld connection F)**

| Size |     | Type                    | MWP |      | Code number     |
|------|-----|-------------------------|-----|------|-----------------|
| mm   | in. |                         | bar | psig |                 |
| 150  | 6   | SVA-S 150 F STR H-WHEEL | 25  | 362  | <b>148B6438</b> |
| 150  | 6   | SVA-S 150 F STR CAP     | 25  | 362  | <b>148B6440</b> |
| 200  | 8   | SVA-S 200 F STR H-WHEEL | 25  | 362  | <b>148B6439</b> |
| 200  | 8   | SVA-S 200 F STR CAP     | 25  | 362  | <b>148B6441</b> |

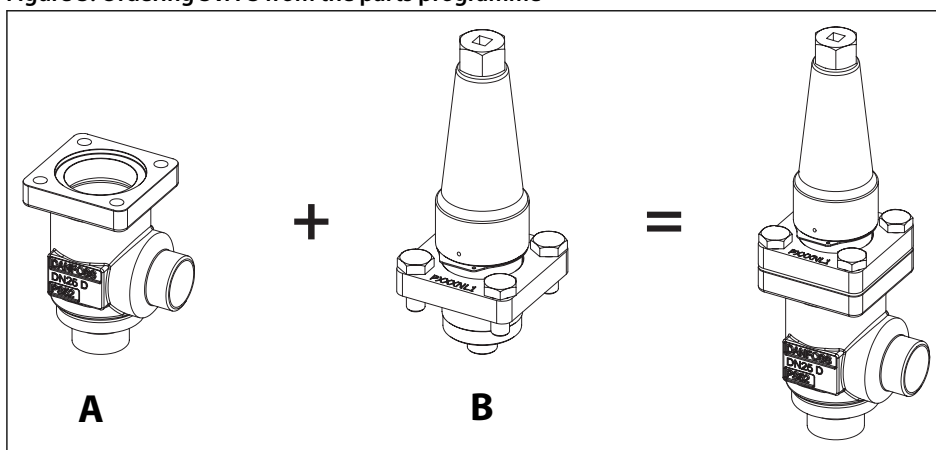
### Important!

Where products need to be certified according to specific certification societies or where higher pressures are required, the relevant information should be included at the time of order.

### Ordering SVA-S from the parts programme

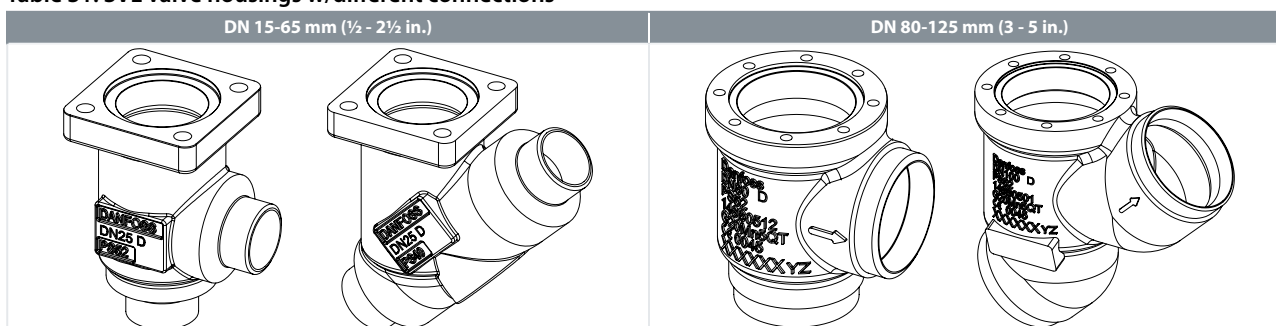
**Example :** (select from table 32 and 33)

**Figure 3: Ordering SVA-S from the parts programme**



- |          |                                                                                                                                             |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------|
| <b>A</b> | Valve housing, size 25 (1 in.), butt weld F, angleway, <b>148B6416</b> <a href="#">Table 32: SVL valve housings w/different connections</a> |
| <b>B</b> | Top part, SVA-S size 25 (1 in.) with cap <b>148B5476</b> <a href="#">Table 34: SVA complete top part including gaskets and bolts</a>        |

**Table 31: SVL valve housings w/different connections**



## Shut-off valve, type SVA-S and SVA-L, With butt-weld connection F

**Table 32: SVL valve housings w/different connections**

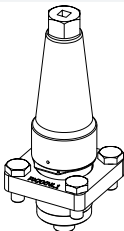
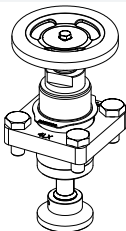
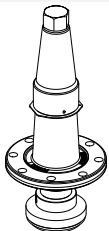
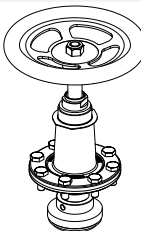
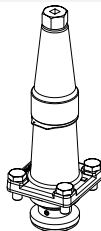
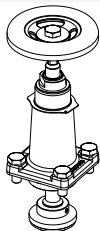
| Sizes [DN] |     | DN 15-65 mm (½ - 2½ in.) | DN 80-125 mm (3 - 5 in.) |
|------------|-----|--------------------------|--------------------------|
|            |     | Valve Housing SVL        |                          |
|            |     | Butt weld F              |                          |
| mm         | in. | ANG                      | STR                      |
| 15         | ½   | 148B6414                 | 148B6424                 |
| 20         | ¾   | 148B6415                 | 148B6425                 |
| 25         | 1   | 148B6416                 | 148B6426                 |
| 32         | 1¼  | 148B6417                 | 148B6427                 |
| 40         | 1½  | 148B6418                 | 148B6428                 |
| 50         | 2   | 148B6419                 | 148B6429                 |
| 65         | 2½  | 148B6420                 | 148B6430                 |
| 80         | 3   | 148B6421                 | 148B6431                 |
| 100        | 4   | 148B6422                 | 148B6432                 |
| 125        | 5   | 148B6423                 | 148B6433                 |

**NOTE:**

Not all sizes available for

SVA-L - see [Table 32: SVL valve housings w/different connections](#).

**Table 33: SVA complete top part including gaskets and bolts**

| SVA-S 15-65 with cap                                                               | SVA-S 15-65 with h-wheel                                                           | SVA-S 80-125 with cap                                                              | SVA-S 80-125 with h-wheel                                                          | SVA-L 15-40 with cap                                                                 | SVA-L 15-40 with h-wheel                                                             |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  |  |  |  |  |  |

**Table 34: SVA complete top part including gaskets and bolts**

| Sizes [DN] |     | SVA-S 15-65 with cap | SVA-S 15-65 with h-wheel | SVA-S 80-125 with cap | SVA-S 80-125 with h-wheel | SVA-L 15-40 with cap | SVA-L 15-40 with h-wheel |
|------------|-----|----------------------|--------------------------|-----------------------|---------------------------|----------------------|--------------------------|
|            |     | Complete top part    |                          |                       |                           |                      |                          |
| mm         | in. | SVA-S CAP            | SVA-S H-WHEEL            | SVA-L CAP             |                           | SVA-L H-WHEEL        |                          |
| 15         | ½   | 148B5276             | 148B5277                 | 148B5278              |                           | 148B5279             |                          |
| 20         | ¾   |                      |                          |                       |                           |                      |                          |
| 25         | 1   | 148B5476             | 148B5477                 | 148B5478              |                           | 148B5479             |                          |
| 32         | 1¼  |                      |                          |                       |                           |                      |                          |
| 40         | 1½  | 148B5728             | 148B5729                 |                       |                           |                      |                          |
| 50         | 2   |                      |                          |                       |                           |                      |                          |
| 65         | 2½  | 148B5822             | 148B5823                 |                       |                           |                      |                          |
| 80         | 3   | 148B5916             | 148B5917                 |                       |                           |                      |                          |
| 100        | 4   | 148B6012             | 148B6018                 |                       |                           |                      |                          |
| 125        | 5   | 148B6116             | 148B6117                 |                       |                           |                      |                          |

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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.

Some approvals may change over time. You can check the most current status at [danfoss.com](https://danfoss.com) or contact your local Danfoss representative if you have any questions.

### Pressure Equipment Directive (PED)

SVA valves are approved according to the European standard specified in the Pressure Equipment Directive and are CE marked. For further details / restrictions - see Installation Instruction.

**Table 35: Pressure Equipment Directive (PED)**

| SVA                                                                               |                |                        |                         |                          |
|-----------------------------------------------------------------------------------|----------------|------------------------|-------------------------|--------------------------|
|  | Nominal bore   | DN≤ 25 mm (1 in.)      | DN32-80 mm (1¼ - 3 in.) | DN100 - 200 mm (4-8 in.) |
|                                                                                   | Classified for | Fluid group I          |                         |                          |
|                                                                                   | Category       | Article 3, paragraph 3 | II                      | III                      |

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