



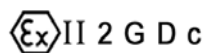
**Swing Check Valves Type Bolted Cover**  
**Class 300 DN 50-500 (2" – 20")**  
 Carbon, Alloy and Stainless Steel



## Fig. VR300BC

**Design:**

**BS 1868 & API 6D / ISO 14313**  
**ASME B16.34**

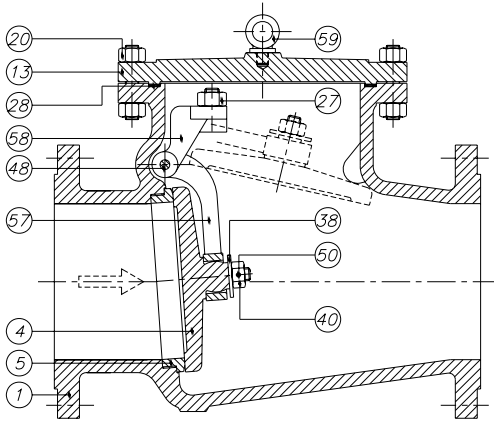




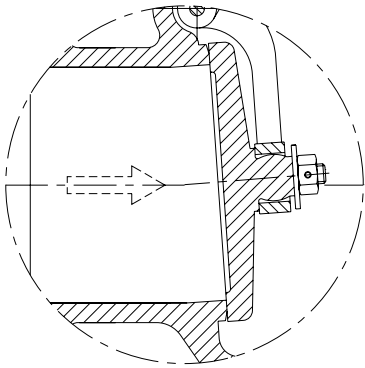
# Swing Check Valves Class 300

## Type Bolted Cover

### Parts and materials



#### Stainless Steel Construction



#### Trim Material

| API 600 Trim No. | Nominal Trim           | Stem / Backseat (1) | Seating Surface Body / Wedge |
|------------------|------------------------|---------------------|------------------------------|
| 1                | F6                     | 13Cr                | 13Cr                         |
| 2                | 304                    | 18Cr-8Ni            | 18Cr-8Ni                     |
| 3                | F310                   | 25Cr-20Ni           | 25Cr-20Ni                    |
| 4                | Hard F6                | 13Cr                | Hard 13Cr                    |
| 5                | Hardfaced              | 13Cr                | Co-Cr A (2)                  |
| 5A               | Hardfaced              | 13Cr                | Ni-Cr                        |
| 6                | F6 and Cu-Ni           | 13Cr                | 13Cr and Cu-Ni               |
| 7                | F6 and Hard F6         | 13Cr                | 13Cr and Hard 13Cr           |
| 8                | F6 and Hardfaced       | 13Cr                | 13Cr and Co-Cr A (2)         |
| 8A               | F6 and Hardfaced       | 13Cr                | 13Cr and Ni-Cr               |
| 9                | Monel                  | Ni-Cu Alloy         | Ni-Cu Alloy                  |
| 10               | 316                    | 18Cr-8Ni-Mo         | 18Cr-8Ni-Mo                  |
| 11               | Monel and Hardfaced    | Ni-Cu Alloy         | Ni-Cu Alloy and Trim 5 or 5A |
| 12               | 316 and Hardfaced      | 18Cr-8Ni-Mo         | 18Cr-8Ni-Mo and Trim 5 or 5A |
| 13               | Alloy 20               | 19Cr-29Ni           | 19Cr-29Ni                    |
| 14               | Alloy 20 and Hardfaced | 19Cr-29Ni           | 19Cr-29Ni and Trim 5 or 5A   |
| 15               | Hardfaced              | 18Cr-8Ni            | Co-Cr A (2)                  |
| 16               | Hardfaced              | 18Cr-8Ni-Mo         | Co-Cr A (2)                  |
| 17               | Hardfaced              | 18Cr-10Ni-Cb        | Co-Cr A (2)                  |
| 18               | Hardfaced              | 19Cr-29Ni           | Co-Cr A (2)                  |

(1) ...and small internal parts that normally contact the service fluid

(2) Trademark material Stellite 6

| Item | Description        | Material of construction** |                              |                           |                              |
|------|--------------------|----------------------------|------------------------------|---------------------------|------------------------------|
|      |                    | Carbon Steel               | Carbon Steel (Low Temp.)     | Alloy Steel               | Stainless Steel              |
| 1    | Body               | A 216 Gr.WCB               | A 352 Gr.LCB                 | A 217 Gr.C5               | A 351 Gr.CF8M                |
| 4    | Disc               | A 105 + ER 410             | A 182 Gr.F304                | A 182 Gr.F6a              | A 182 Gr.F316                |
| 5    | Seat Ring          | A 105 + Stellite           | A 182 Gr.F304                | A 182 Gr.F6a + Stellite   | -----                        |
| 13   | Cover              | A 216 Gr.WCB / A 515 Gr.70 | A 352 Gr.LCB / A 182 Gr.F304 | A 217 Gr.C5               | A 351 Gr.CF8M                |
| 20   | Cover Bolt & Nut   | A 193 Gr.B7 / A 194 Gr.2H  | A 193 Gr.B7 / A 194 Gr.2H    | A 193 Gr.B7 / A 194 Gr.2H | A 193 Gr.B7 / A 194 Gr.2H(3) |
| 27   | Bracket Stud & Nut | A 193 Gr.B8 / A 194 Gr.8   | A 193 Gr.B8 / A 194 Gr.8     | A 193 Gr.B8 / A 194 Gr.8  | A 193 Gr.B8M / A 194 Gr.8M   |
| 28   | Gasket             | SPW S.S. 304 / Graphite    | SPW S.S. 304 / Graphite      | SPW S.S. 304 / Graphite   | SPW S.S. 316 / Graphite      |
| 38   | Washer             | AISI 410                   | AISI 304                     | AISI 410                  | AISI 316                     |
| 40   | Disc Nut           | AISI 304                   | AISI 304                     | AISI 304                  | AISI 316                     |
| 48   | Hinge Pin *        | A 182 Gr.F6a               | A 182 Gr.F304                | A 182 Gr.F6a              | A 182 Gr.F316                |
| 50   | Split Pin          | AISI 304                   | AISI 304                     | AISI 304                  | AISI 316                     |
| 57   | Hinge              | A 216 Gr.WCB / A 515 Gr.70 | A 352 Gr.LCB                 | A 217 Gr.C5               | A 351 Gr.CF8M                |
| 58   | Hinge Bracket      | A 216 Gr.WCB / A 515 Gr.70 | A 352 Gr.LCB                 | A 217 Gr.C5               | A 351 Gr.CF8M                |
| 59   | Lifting Hook       | A 105                      | A 105                        | A 105                     | A 105                        |

(3) Zinc coating

\* It's also manufactured with Hinge Pin Passing through Body with Plug

\*\* Standard constructions with Trim 8, 2 and 10, other options are available

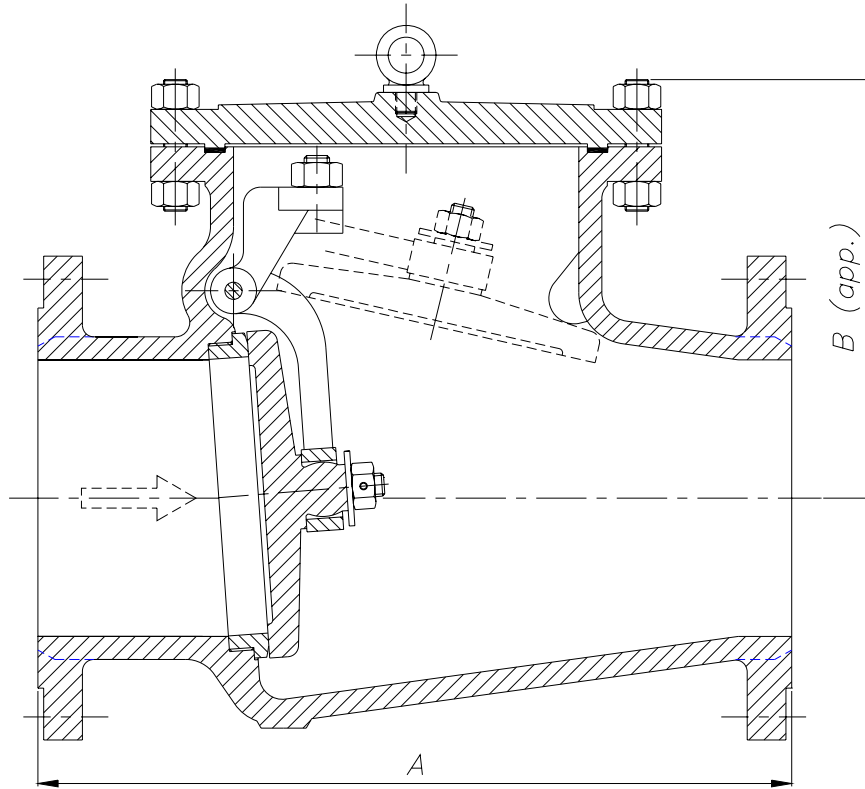




# Swing Check Valves Class 300

## Type Bolted Cover

### Dimensions



| DN        | A (RF/BW) | B   | WEIGHT |
|-----------|-----------|-----|--------|
| 50 (2")   | 267       | 158 | 21     |
| 65 (2½")  | 292       | 167 | 35     |
| 80 (3")   | 318       | 188 | 43     |
| 100 (4")  | 356       | 259 | 60     |
| 125 (5")  | 400       | 281 | 85     |
| 150 (6")  | 444       | 319 | 131    |
| 200 (8")  | 533       | 401 | 213    |
| 250 (10") | 622       | 483 | 384    |
| 300 (12") | 711       | 555 | 449    |
| 350 (14") | 838       | 585 | 680    |
| 400 (16") | 864       | 615 | 840    |
| 450 (18") | 978       | 643 | 1025   |
| 500 (20") | 1016      | 681 | 1180   |

(\* Dimensions in mm and weight in kg  
For other sizes consult to the technical department.



# Swing Check Valves Class 300

## Type Bolted Cover

### General Characteristics, Cv, P&T Rating

|                                |                                 |             |           |  |
|--------------------------------|---------------------------------|-------------|-----------|--|
| <b>GENERAL CHARACTERISTICS</b> | Fig. VR300BC                    |             |           |  |
| <b>DESIGN STANDARDS</b>        |                                 |             |           |  |
| Valves design                  | BS 1868 & API 6D                | ASME B16.34 |           |  |
| End to End Dimensions          | ASME B16.10 & ISO 5752          |             |           |  |
| Flanged Dimensions             | ASME B16.5 & ISO 7005-1 Part. 1 | BS 3293     | MSS SP-44 |  |
| Buttweld Dimensions            | ASME B16.25                     |             |           |  |
| Visual Inspection              | MSS SP- 55                      |             |           |  |
| Marking                        | MSS SP-25 & ISO 5209            |             |           |  |
| <b>TESTS AND CERTIFICATES</b>  |                                 |             |           |  |
| Pressure testing               | API 598 & ISO 5208              | EN 12266-1  | MSS SP-61 |  |
| Other                          | ATEX, CE                        |             |           |  |

#### Cv Values in U.S. Gallons/min.

| DN       | Cv   | DN        | Cv    |
|----------|------|-----------|-------|
| 50 (2")  | 125  | 250 (10") | 3400  |
| 65 (2½") | 190  | 300 (12") | 4900  |
| 80 (3")  | 280  | 350 (14") | 6100  |
| 100 (4") | 490  | 400 (16") | 8700  |
| 125 (5") | 800  | 450 (18") | 11550 |
| 150 (6") | 1150 | 500 (20") | 14000 |
| 200 (8") | 2250 |           |       |

#### Pressure-Temperature (STANDARD CLASS According to ASME B16.34)

| Temp<br>°C | MATERIAL        |                 |                |                       |
|------------|-----------------|-----------------|----------------|-----------------------|
|            | A216 WCB<br>Bar | A352 LCB<br>Bar | A217 C5<br>Bar | A351 CF8M (**)<br>Bar |
| -29 to 38  | 51,0            | 47,9            | 51,7           | 49,6                  |
| 95         | 46,5            | 45,1            | 51,3           | 42,7                  |
| 150        | 45,1            | 44,1            | 49,3           | 38,6                  |
| 205        | 43,8            | 42,7            | 48,6           | 35,5                  |
| 260        | 41,3            | 40,3            | 45,8           | 33,1                  |
| 315        | 37,9            | 36,9            | 41,7           | 31,0                  |
| 345        | 36,9            | 36,2            | 40,7           | 30,7                  |
| 375        | 36,9            |                 | 39,3           | 29,6                  |
| 400        | 34,8            |                 | 36,5           | 29,3                  |
| 425        | 28,2            |                 | 35,1           | 28,9                  |
| 450        | 18,6            |                 | 33,4           | 28,9                  |
| 485        | 11,7            |                 | 25,5           | 28,6                  |
| 510        | 7,2             |                 | 18,9           | 26,5                  |
| 540        | 3,4             |                 | 13,8           | 24,1                  |
| 565        |                 |                 | 10,0 *         | 23,8 *                |
| 595        |                 |                 | 6,9 *          | 21,0 *                |
| 620        |                 |                 | 4,1 *          | 16,2 *                |
| 650        |                 |                 | 2,4 *          | 12,7 *                |
| 675        |                 |                 |                | 10,0 *                |
| 705        |                 |                 |                | 7,9 *                 |
| 735        |                 |                 |                | 6,5 *                 |
| 760        |                 |                 |                | 5,2 *                 |
| 790        |                 |                 |                | 4,1 *                 |
| 815        |                 |                 |                | 2,8 *                 |

\* FOR WELD END VALVES ONLY. FLANGED END RATINGS TERMINATE AT 540°C

\*\* A351 CF8M at temperatures over 538°C (1000°F) to be used only if Carbon contents is 0,04% or higher.