

BBS-10
Ball Check Valves
Eccentric Design



Ball check valve designed for continuous flushing to suit hygienic applications in horizontal installations

- Fully traceable materials
- Various process connections available
- Suitable for CIP and SIP
- Design means flow direction can be reversed

Hygienic Processing Components.....



Type BBS-05
Quick Connect



Type BBS-07
Block Flange



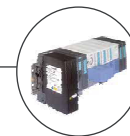
Type BBS-03F
Flow Indicator



Type 2103
Diaphragm Valve



Type 8221
Conductivity



Type 8650
Process Automation

The advanced design of this ball check valve is ideal for applications involving fluids and steam. The unique design allow choice of the flow direction thus significantly enhancing installation cost and simplicity. Meets the new standards and challenges of the Biotechnology and Pharmaceutical industry and can be mounted in horizontal applications whilst complying with drain ability needs.

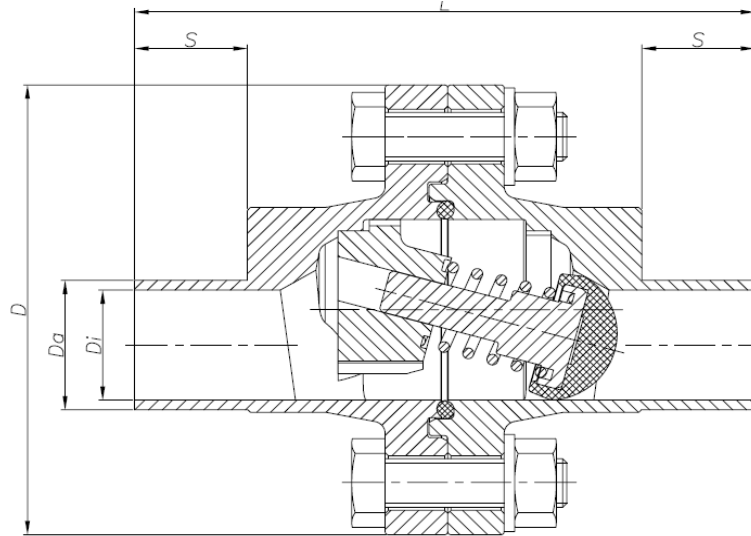
Typical applications in:

Biotechnology
 Pharmaceutical
 Chemical
 Dairy and Food
 Beverage
 Cosmetic

The standard version has an opening pressure of 0.2 Bar but lower pressures can be realized with alternative spring selection.

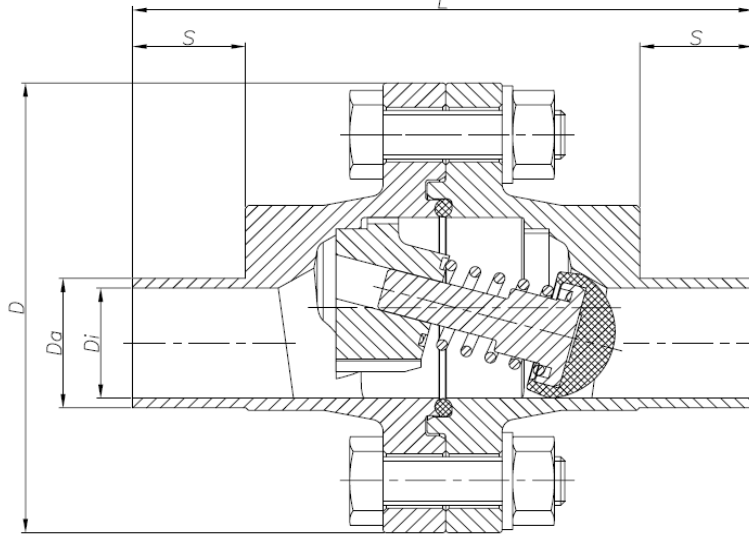
| Technical Overview | |
|---------------------------|----------------------------------------------------------------------------------------------------------------|
| Available Sizes/Standards | ISO DN08 to DN100 BS-OD DN1/4" to DN 6" SMS DN06 to DN80 DIN DN08 to DN100 Larger sizes on request |
| Body Material | Stainless Steel 316L 1.4435 BN2 Special Materials E.g. Hastelloy on request |
| Ball | 1.4435 BN2 Stainless Steel with PTFE cover |
| Sealing Material | EPDM, PTFE or Silicone |
| Process Temperature | -60 to +200 °C |
| Ambient Temperature | -20 to +80 °C |
| Media | Gases or Liquids |
| Media Pressure | -1 to + 16 Bar (working pressure -1 to + 8 Bar) |
| Certification Available | Material 3.1, FDA, USP VI |

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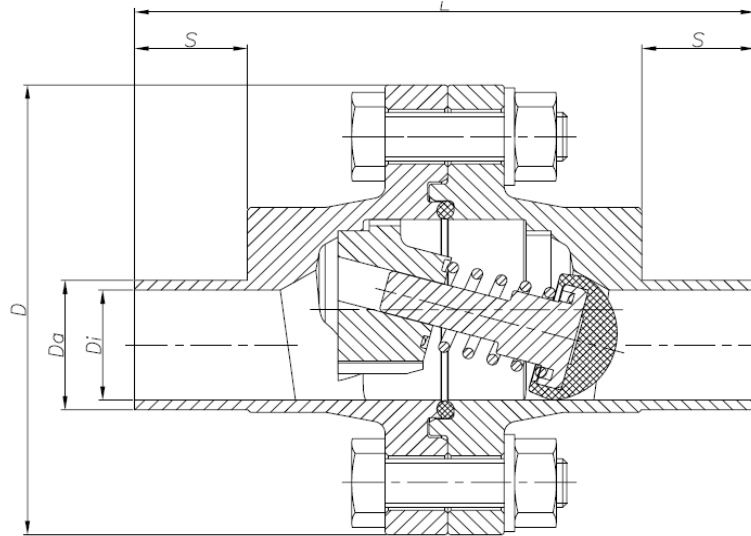
TIS BBS-10 Ball Check Eccentric V00.2010 EN

| ISO Dimensions of Eccentric Ball Check Valve / Weld End Connection | | | | | | | |
|--------------------------------------------------------------------|--------|--------|--------|--------|-------|-----------------------------------------|-----------------------------------------|
| Size | D mm | Da mm | Di mm | L mm | S mm | BBS Item Key (Item No. EPDM) | BBS Item Key (Item No. PTFE) |
| DN 08 | 74.00 | 13.50 | 10.30 | 117.00 | 18.00 | BBS-10-RU.W08.FEX.35.0 (On Request) | BBS-10-RU.W08.FEX.35.3 (On Request) |
| DN 10 | 74.00 | 17.20 | 14.00 | 117.00 | 18.00 | BBS-10-RU.W10.FEX.35.0 (On Request) | BBS-10-RU.W10.FEX.35.3 (On Request) |
| DN 15 | 74.00 | 21.30 | 18.10 | 117.00 | 18.00 | BBS-10-RU.W15.FEX.35.0 (On Request) | BBS-10-RU.W15.FEX.35.3 (On Request) |
| DN 20 | 88.00 | 26.90 | 23.70 | 146.00 | 25.00 | BBS-10-RU.W20.FEX.35.0 (On Request) | BBS-10-RU.W20.FEX.35.3 (On Request) |
| DN 25 | 88.00 | 33.70 | 29.70 | 127.00 | 25.00 | BBS-10-RU.W25.FEX.35.0 (On Request) | BBS-10-RU.W25.FEX.35.3 (736422) |
| DN 32 | 125.00 | 42.40 | 38.40 | 187.00 | 25.00 | BBS-10-RU.W32.FEX.35.0 (On Request) | BBS-10-RU.W32.FEX.35.3 (On Request) |
| DN 40 | 137.00 | 48.30 | 44.30 | 210.00 | 25.00 | BBS-10-RU.W40.FEX.35.0 (On Request) | BBS-10-RU.W40.FEX.35.3 (736458) |
| DN 50 | 168.00 | 60.30 | 56.30 | 205.00 | 25.00 | BBS-10-RU.W50.FEX.35.0 (On Request) | BBS-10-RU.W50.FEX.35.3 (On Request) |
| DN 65 | 168.00 | 76.10 | 72.10 | 199.00 | 25.00 | BBS-10-RU.W65.FEX.35.0 (On Request) | BBS-10-RU.W65.FEX.35.3 (On Request) |
| DN 80 | 194.00 | 88.90 | 84.30 | 216.00 | 25.00 | BBS-10-RU.W80.FEX.35.0 (On Request) | BBS-10-RU.W80.FEX.35.3 (On Request) |
| DN 100 | 194.00 | 114.30 | 109.70 | 216.00 | 25.00 | BBS-10-RU.W100.FEX.35.0 (On Request) | BBS-10-RU.W100.FEX.35.3 (On Request) |



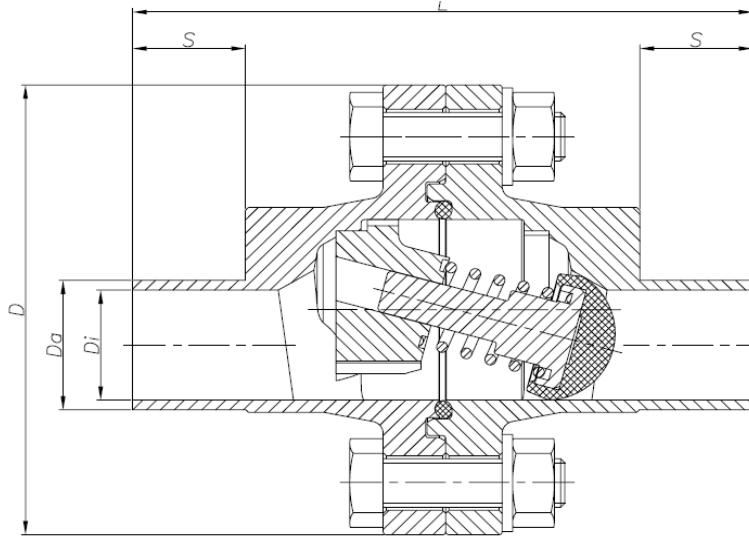
TIS BBS-10 Ball Check Eccentric V00.2010 EN

| BS-OD Dimensions of Eccentric Ball Check Valve / Weld End Connection | | | | | | | |
|----------------------------------------------------------------------|--------|--------|--------|--------|-------|----------------------------------------|----------------------------------------|
| Size | D mm | Da mm | Di mm | L mm | S mm | BBS Item Key (Item No. EPDM) | BBS Item Key (Item No. PTFE) |
| DN 1/4" | 74.00 | 6.35 | 4.57 | 117.00 | 18.00 | BBS-10-RU.Y02.FEX.35.0 (On Request) | BBS-10-RU.Y02.FEX.35.3 (On Request) |
| DN 3/8" | 74.00 | 9.53 | 7.75 | 117.00 | 18.00 | BBS-10-RU.Y03.FEX.35.0 (On Request) | BBS-10-RU.Y03.FEX.35.3 (On Request) |
| DN 1/2" | 74.00 | 12.70 | 9.40 | 117.00 | 18.00 | BBS-10-RU.Y05.FEX.35.0 (On Request) | BBS-10-RU.Y05.FEX.35.3 (On Request) |
| DN 3/4" | 74.00 | 19.05 | 15.75 | 99.00 | 18.00 | BBS-10-RU.Y07.FEX.35.0 (On Request) | BBS-10-RU.Y07.FEX.35.3 (On Request) |
| DN 1" | 88.00 | 25.40 | 22.10 | 142.00 | 20.00 | BBS-10-RU.Y10.FEX.35.0 (On Request) | BBS-10-RU.Y10.FEX.35.3 (On Request) |
| DN 1.1/2" | 125.00 | 38.10 | 34.80 | 187.00 | 25.00 | BBS-10-RU.Y15.FEX.35.0 (On Request) | BBS-10-RU.Y15.FEX.35.3 (On Request) |
| DN 2" | 137.00 | 50.80 | 47.50 | 188.00 | 25.00 | BBS-10-RU.Y20.FEX.35.0 (On Request) | BBS-10-RU.Y20.FEX.35.3 (On Request) |
| DN 2.1/2" | 168.00 | 63.50 | 60.20 | 200.00 | 25.00 | BBS-10-RU.Y25.FEX.35.0 (On Request) | BBS-10-RU.Y25.FEX.35.3 (On Request) |
| DN 3" | 168.00 | 76.20 | 72.90 | 199.00 | 25.00 | BBS-10-RU.Y30.FEX.35.0 (On Request) | BBS-10-RU.Y30.FEX.35.3 (On Request) |
| DN 4" | 260.00 | 101.60 | 97.38 | 246.00 | 30.00 | BBS-10-RU.Y40.FEX.35.0 (On Request) | BBS-10-RU.Y40.FEX.35.3 (On Request) |
| DN 6" | 260.00 | 152.40 | 149.98 | 288.00 | 40.00 | BBS-10-RU.Y60.FEX.35.0 (On Request) | BBS-10-RU.Y60.FEX.35.3 (On Request) |



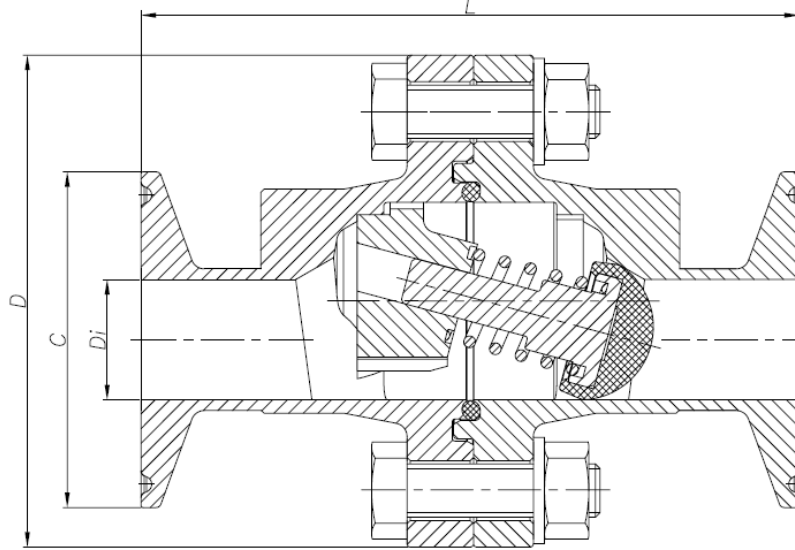
TIS BBS-10 Ball Check Eccentric V00.2010 EN

| SMS Dimensions of Eccentric Ball Check Valve / Weld End Connection | | | | | | | |
|--------------------------------------------------------------------|--------|-------|-------|--------|-------|----------------------------------------|----------------------------------------|
| Size | D mm | Da mm | Di mm | L mm | S mm | BBS Item Key (Item No. EPDM) | BBS Item Key (Item No. PTFE) |
| DN 06 | 74.00 | 8.00 | 6.00 | 117.00 | 18.00 | BBS-10-RU.J06.FEX.35.0 (On Request) | BBS-10-RU.J06.FEX.35.3 (On Request) |
| DN 08 | 74.00 | 10.00 | 8.00 | 117.00 | 18.00 | BBS-10-RU.J08.FEX.35.0 (On Request) | BBS-10-RU.J08.FEX.35.3 (On Request) |
| DN 10 | 74.00 | 12.00 | 10.00 | 117.00 | 18.00 | BBS-10-RU.J10.FEX.35.0 (On Request) | BBS-10-RU.J10.FEX.35.3 (On Request) |
| DN 15 | 74.00 | 18.00 | 16.00 | 117.00 | 18.00 | BBS-10-RU.J15.FEX.35.0 (On Request) | BBS-10-RU.J15.FEX.35.3 (On Request) |
| DN 20 | 88.00 | 22.00 | 20.00 | 150.00 | 25.00 | BBS-10-RU.J20.FEX.35.0 (On Request) | BBS-10-RU.J20.FEX.35.3 (On Request) |
| DN 25 | 88.00 | 25.00 | 22.60 | 150.00 | 25.00 | BBS-10-RU.J25.FEX.35.0 (On Request) | BBS-10-RU.J25.FEX.35.3 (On Request) |
| DN 32 | 125.00 | 35.00 | 32.60 | 187.00 | 25.00 | BBS-10-RU.J32.FEX.35.0 (On Request) | BBS-10-RU.J32.FEX.35.3 (On Request) |
| DN 40 | 125.00 | 38.00 | 35.60 | 187.00 | 25.00 | BBS-10-RU.J40.FEX.35.0 (On Request) | BBS-10-RU.J40.FEX.35.3 (On Request) |
| DN 50 | 137.00 | 51.00 | 48.60 | 180.00 | 25.00 | BBS-10-RU.J50.FEX.35.0 (On Request) | BBS-10-RU.J50.FEX.35.3 (On Request) |
| DN 65 | 168.00 | 63.50 | 60.30 | 199.00 | 25.00 | BBS-10-RU.J65.FEX.35.0 (On Request) | BBS-10-RU.J65.FEX.35.3 (On Request) |
| DN 80 | 168.00 | 76.10 | 72.90 | 199.00 | 25.00 | BBS-10-RU.J80.FEX.35.0 (On Request) | BBS-10-RU.J80.FEX.35.3 (On Request) |



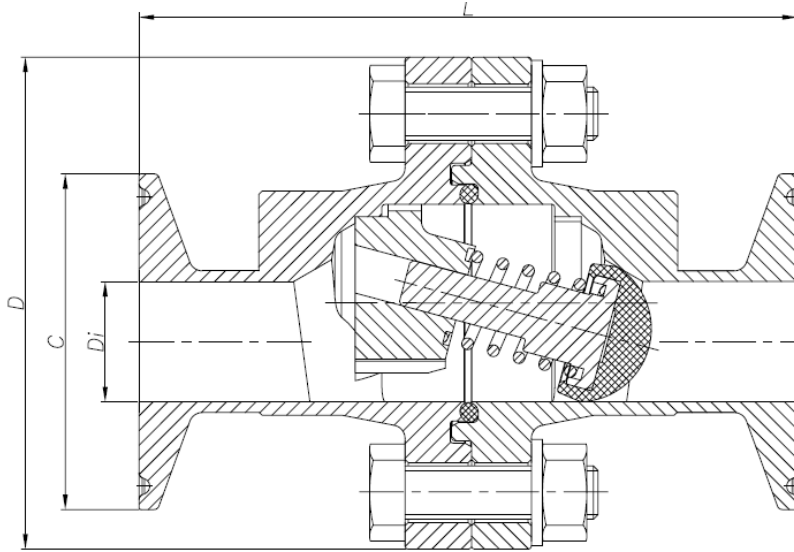
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| DIN Dimensions of Eccentric Ball Check Valve / Weld End Connection | | | | | | | |
|--------------------------------------------------------------------|--------|--------|--------|--------|-------|-----------------------------------------|-----------------------------------------|
| Size | D mm | Da mm | Di mm | L mm | S mm | BBS Item Key (Item No. EPDM) | BBS Item Key (Item No. PTFE) |
| DN 08 | 74.00 | 10.00 | 8.00 | 117.00 | 18.00 | BBS-10-RU.V08.FEX.35.0 (On Request) | BBS-10-RU.V08.FEX.35.3 (On Request) |
| DN 10 | 74.00 | 12.00 | 10.00 | 117.00 | 18.00 | BBS-10-RU.V10.FEX.35.0 (On Request) | BBS-10-RU.V10.FEX.35.3 (On Request) |
| DN 15 | 74.00 | 19.00 | 16.00 | 117.00 | 18.00 | BBS-10-RU.V15.FEX.35.0 (On Request) | BBS-10-RU.V15.FEX.35.3 (On Request) |
| DN 20 | 88.00 | 23.00 | 20.00 | 150.00 | 25.00 | BBS-10-RU.V20.FEX.35.0 (On Request) | BBS-10-RU.V20.FEX.35.3 (On Request) |
| DN 25 | 88.00 | 29.00 | 26.00 | 142.00 | 25.00 | BBS-10-RU.V25.FEX.35.0 (On Request) | BBS-10-RU.V25.FEX.35.3 (On Request) |
| DN 32 | 125.00 | 35.00 | 32.00 | 187.00 | 25.00 | BBS-10-RU.V32.FEX.35.0 (On Request) | BBS-10-RU.V32.FEX.35.3 (On Request) |
| DN 40 | 125.00 | 41.00 | 38.00 | 187.00 | 25.00 | BBS-10-RU.V40.FEX.35.0 (On Request) | BBS-10-RU.V40.FEX.35.3 (On Request) |
| DN 50 | 137.00 | 53.00 | 50.00 | 180.00 | 25.00 | BBS-10-RU.V50.FEX.35.0 (On Request) | BBS-10-RU.V50.FEX.35.3 (On Request) |
| DN 65 | 168.00 | 70.00 | 66.00 | 168.00 | 25.00 | BBS-10-RU.V65.FEX.35.0 (On Request) | BBS-10-RU.V65.FEX.35.3 (On Request) |
| DN 80 | 194.00 | 85.00 | 81.00 | 216.00 | 25.00 | BBS-10-RU.V80.FEX.35.0 (On Request) | BBS-10-RU.V80.FEX.35.3 (On Request) |
| DN 100 | 260.00 | 104.00 | 100.00 | 246.00 | 30.00 | BBS-10-RU.V100.FEX.35.0 (On Request) | BBS-10-RU.V100.FEX.35.3 (On Request) |



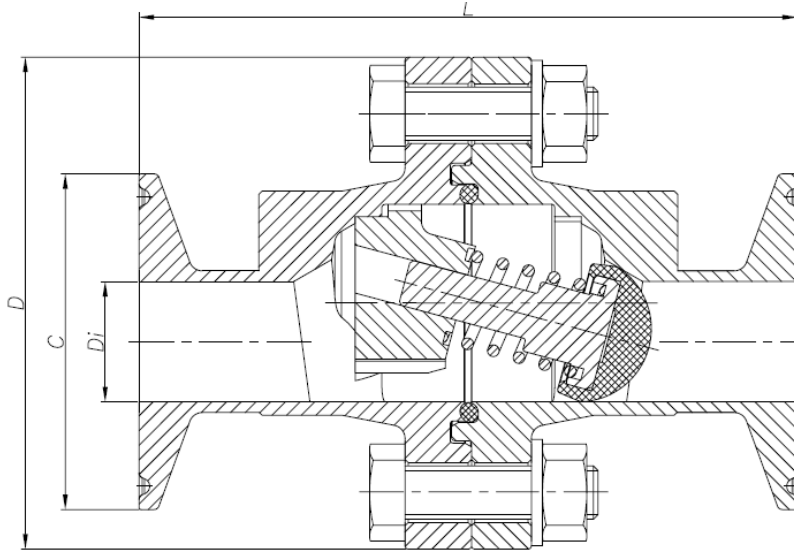
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| ISO Dimensions of Eccentric Ball Check Valve / Clamp Connection | | | | | | |
|-----------------------------------------------------------------|--------|--------|--------|--------|-----------------------------------------|-----------------------------------------|
| Size | D mm | C mm | Di mm | L mm | BBS Item Key (Item No. EPDM) | BBS Item Key (Item No. PTFE) |
| DN 08 | 74.00 | 25.00 | 10.30 | 117.00 | BBS-10-RH.W08.FEX.35.0 (On Request) | BBS-10-RH.W08.FEX.35.3 (On Request) |
| DN 10 | 74.00 | 25.00 | 14.00 | 117.00 | BBS-10-RH.W10.FEX.35.0 (On Request) | BBS-10-RH.W10.FEX.35.3 (On Request) |
| DN 15 | 74.00 | 50.50 | 18.10 | 117.00 | BBS-10-RH.W15.FEX.35.0 (On Request) | BBS-10-RH.W15.FEX.35.3 (On Request) |
| DN 20 | 88.00 | 50.50 | 23.70 | 146.00 | BBS-10-RH.W20.FEX.35.0 (On Request) | BBS-10-RH.W20.FEX.35.3 (On Request) |
| DN 25 | 88.00 | 50.50 | 29.70 | 127.00 | BBS-10-RH.W25.FEX.35.0 (On Request) | BBS-10-RH.W25.FEX.35.3 (On Request) |
| DN 32 | 125.00 | 64.00 | 38.40 | 187.00 | BBS-10-RH.W32.FEX.35.0 (On Request) | BBS-10-RH.W32.FEX.35.3 (On Request) |
| DN 40 | 137.00 | 64.00 | 44.30 | 210.00 | BBS-10-RH.W40.FEX.35.0 (On Request) | BBS-10-RH.W40.FEX.35.3 (On Request) |
| DN 50 | 168.00 | 77.50 | 56.30 | 205.00 | BBS-10-RH.W50.FEX.35.0 (On Request) | BBS-10-RH.W50.FEX.35.3 (On Request) |
| DN 65 | 168.00 | 91.00 | 72.10 | 199.00 | BBS-10-RH.W65.FEX.35.0 (On Request) | BBS-10-RH.W65.FEX.35.3 (On Request) |
| DN 80 | 194.00 | 106.00 | 84.30 | 216.00 | BBS-10-RH.W80.FEX.35.0 (On Request) | BBS-10-RH.W80.FEX.35.3 (On Request) |
| DN 100 | 194.00 | 130.00 | 109.70 | 216.00 | BBS-10-RH.W100.FEX.35.0 (On Request) | BBS-10-RH.W100.FEX.35.3 (On Request) |



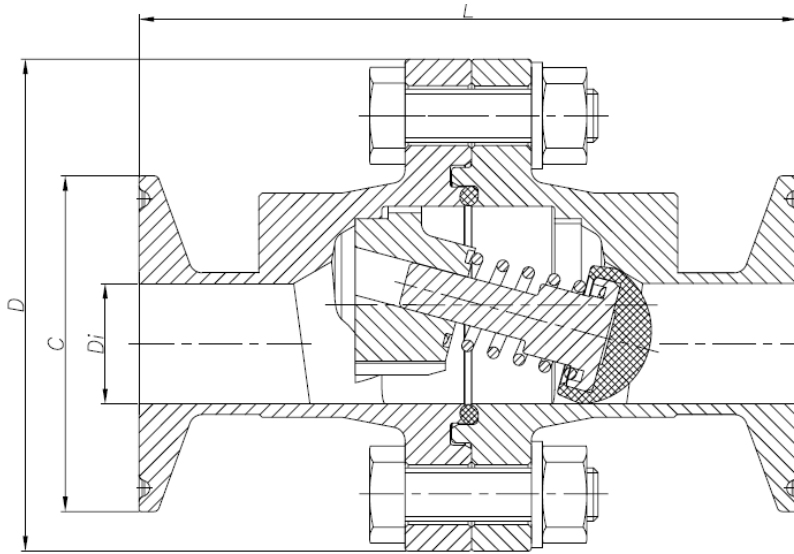
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| BS-OD Dimensions of Eccentric Ball Check Valve / Clamp Connection | | | | | | |
|-------------------------------------------------------------------|--------|--------|-------|--------|----------------------------------------|----------------------------------------|
| Size | D mm | C mm | Di mm | L mm | BBS Item Key (Item No. EPDM) | BBS Item Key (Item No. PTFE) |
| DN 1/4" | 74.00 | 25.00 | 4.57 | 117.00 | BBS-10-RH.Y02.FEX.35.0 (On Request) | BBS-10-RH.Y02.FEX.35.3 (On Request) |
| DN 3/8" | 74.00 | 25.00 | 7.75 | 117.00 | BBS-10-RH.Y03.FEX.35.0 (On Request) | BBS-10-RH.Y03.FEX.35.3 (On Request) |
| DN 1/2" | 74.00 | 25.00 | 9.40 | 117.00 | BBS-10-RH.Y05.FEX.35.0 (On Request) | BBS-10-RH.Y05.FEX.35.3 (On Request) |
| DN 3/4" | 74.00 | 25.00 | 15.75 | 99.00 | BBS-10-RH.Y07.FEX.35.0 (On Request) | BBS-10-RH.Y07.FEX.35.3 (On Request) |
| DN 1" | 88.00 | 50.50 | 22.10 | 142.00 | BBS-10-RH.Y10.FEX.35.0 (On Request) | BBS-10-RH.Y10.FEX.35.3 (On Request) |
| DN 1.1/2" | 125.00 | 50.50 | 34.80 | 187.00 | BBS-10-RH.Y15.FEX.35.0 (On Request) | BBS-10-RH.Y15.FEX.35.3 (On Request) |
| DN 2" | 137.00 | 64.00 | 47.50 | 188.00 | BBS-10-RH.Y20.FEX.35.0 (On Request) | BBS-10-RH.Y20.FEX.35.3 (On Request) |
| DN 2.1/2" | 168.00 | 77.50 | 60.20 | 200.00 | BBS-10-RH.Y25.FEX.35.0 (On Request) | BBS-10-RH.Y25.FEX.35.3 (On Request) |
| DN 3" | 168.00 | 91.00 | 72.90 | 199.00 | BBS-10-RH.Y30.FEX.35.0 (On Request) | BBS-10-RH.Y30.FEX.35.3 (On Request) |
| DN 4" | 260.00 | 119.00 | 97.38 | 246.00 | BBS-10-RH.Y40.FEX.35.0 (On Request) | BBS-10-RH.Y40.FEX.35.3 (On Request) |



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|-----------------------------------------------------------------|--------|--------|-------|--------|----------------------------------------|----------------------------------------|
| Size | D mm | C mm | Di mm | L mm | BBS Item Key (Item No. EPDM) | BBS Item Key (Item No. PTFE) |
| DN 06 | 74.00 | 25.00 | 6.00 | 117.00 | BBS-10-RH.J06.FEX.35.0 (On Request) | BBS-10-RH.J06.FEX.35.3 (On Request) |
| DN 08 | 74.00 | 25.00 | 8.00 | 117.00 | BBS-10-RH.J08.FEX.35.0 (On Request) | BBS-10-RH.J08.FEX.35.3 (On Request) |
| DN 10 | 74.00 | 25.00 | 10.00 | 117.00 | BBS-10-RH.J10.FEX.35.0 (On Request) | BBS-10-RH.J10.FEX.35.3 (On Request) |
| DN 15 | 74.00 | 25.00 | 16.00 | 117.00 | BBS-10-RH.J15.FEX.35.0 (On Request) | BBS-10-RH.J15.FEX.35.3 (On Request) |
| DN 20 | 88.00 | 50.50 | 20.00 | 150.00 | BBS-10-RH.J20.FEX.35.0 (On Request) | BBS-10-RH.J20.FEX.35.3 (On Request) |
| DN 25 | 88.00 | 50.50 | 22.60 | 150.00 | BBS-10-RU.J25.FEX.35.0 (On Request) | BBS-10-RH.J25.FEX.35.3 (On Request) |
| DN 32 | 125.00 | 64.00 | 32.60 | 187.00 | BBS-10-RH.J32.FEX.35.0 (On Request) | BBS-10-RH.J32.FEX.35.3 (On Request) |
| DN 40 | 125.00 | 64.00 | 35.60 | 187.00 | BBS-10-RH.J40.FEX.35.0 (On Request) | BBS-10-RH.J40.FEX.35.3 (On Request) |
| DN 50 | 137.00 | 77.50 | 48.60 | 180.00 | BBS-10-RH.J50.FEX.35.0 (On Request) | BBS-10-RH.J50.FEX.35.3 (On Request) |
| DN 65 | 168.00 | 91.00 | 60.30 | 199.00 | BBS-10-RH.J65.FEX.35.0 (On Request) | BBS-10-RH.J65.FEX.35.3 (On Request) |
| DN 80 | 168.00 | 106.00 | 72.90 | 199.00 | BBS-10-RH.J80.FEX.35.0 (On Request) | BBS-10-RH.J80.FEX.35.3 (On Request) |



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| DIN Dimensions of Eccentric Ball Check Valve / Weld End Connection | | | | | | |
|--------------------------------------------------------------------|--------|--------|--------|--------|-----------------------------------------|-----------------------------------------|
| Size | D mm | C mm | Di mm | L mm | BBS Item Key (Item No. EPDM) | BBS Item Key (Item No. PTFE) |
| DN 08 | 74.00 | 25.00 | 8.00 | 117.00 | BBS-10-RH.V08.FEX.35.0 (On Request) | BBS-10-RH.V08.FEX.35.3 (On Request) |
| DN 10 | 74.00 | 34.00 | 10.00 | 117.00 | BBS-10-RH.V10.FEX.35.0 (On Request) | BBS-10-RH.V10.FEX.35.3 (On Request) |
| DN 15 | 74.00 | 34.00 | 16.00 | 117.00 | BBS-10-RH.V15.FEX.35.0 (On Request) | BBS-10-RH.V15.FEX.35.3 (On Request) |
| DN 20 | 88.00 | 34.00 | 20.00 | 150.00 | BBS-10-RH.V20.FEX.35.0 (On Request) | BBS-10-RH.V20.FEX.35.3 (On Request) |
| DN 25 | 88.00 | 50.50 | 26.00 | 142.00 | BBS-10-RH.V25.FEX.35.0 (On Request) | BBS-10-RH.V25.FEX.35.3 (On Request) |
| DN 32 | 125.00 | 64.00 | 32.00 | 187.00 | BBS-10-RH.V32.FEX.35.0 (On Request) | BBS-10-RH.V32.FEX.35.3 (On Request) |
| DN 40 | 125.00 | 64.00 | 38.00 | 187.00 | BBS-10-RH.V40.FEX.35.0 (On Request) | BBS-10-RH.V40.FEX.35.3 (On Request) |
| DN 50 | 137.00 | 77.50 | 50.00 | 180.00 | BBS-10-RH.V50.FEX.35.0 (On Request) | BBS-10-RH.V50.FEX.35.3 (On Request) |
| DN 65 | 168.00 | 91.00 | 66.00 | 168.00 | BBS-10-RH.V65.FEX.35.0 (On Request) | BBS-10-RH.V65.FEX.35.3 (On Request) |
| DN 80 | 194.00 | 106.00 | 81.00 | 216.00 | BBS-10-RH.V80.FEX.35.0 (On Request) | BBS-10-RH.V80.FEX.35.3 (On Request) |
| DN 100 | 260.00 | 130.00 | 100.00 | 246.00 | BBS-10-RH.V100.FEX.35.0 (On Request) | BBS-10-RH.V100.FEX.35.3 (On Request) |