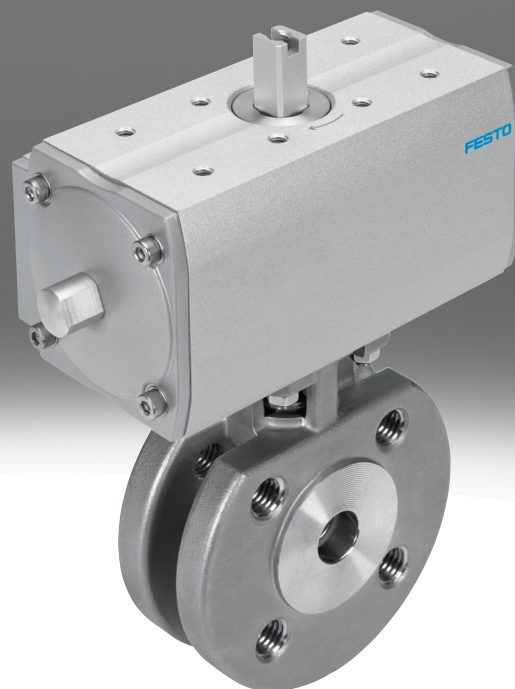


Ball valve actuator unit VZBC

FESTO



Characteristics

At a glance

- Electric or pneumatic actuation
- Flange hole pattern according to ISO 5211
- Connection pattern to NAMUR VDI/VDE 3845
- Corrosion-resistant and acid-resistant versions
- Versions with ATEX certification
- Combination of a pneumatic quarter-turn actuator and a ball valve
- The flow is fully opened or closed in both directions
- Sensor boxes or limit switches for sensing the end positions can be mounted directly on the actuator unit

Design type

- 2-way ball valve actuator units made of stainless steel or brass with pipe thread or with weld ends
- 2-way ball valve actuator units made of stainless steel in compact design

Type code

| | | | |
|------------|---|--|--|
| 001 | Series | | |
| VZBC | Ball valve | | |
| 002 | Nominal diameter DN | | |
| 15 | 15 mm | | |
| 20 | 20 mm | | |
| 25 | 25 mm | | |
| 32 | 32 mm | | |
| 40 | 40 mm | | |
| 50 | 50 mm | | |
| 65 | 65 mm | | |
| 80 | 80 mm | | |
| 100 | 100 mm | | |
| 003 | Process valve connection type 1 | | |
| F | Pipe fitting to DIN 2633/DIN 2501 | | |
| 004 | Process valve connection type 2 | | |
| F | Pipe fitting to DIN 2633/DIN 2501 | | |
| 005 | Nominal pressure [bar] | | |
| 16 | 16 | | |
| 40 | 40 | | |
| 006 | Valve function | | |
| 22 | 2/2-way | | |
| 007 | Flanged connection | | |
| F0304 | Hole pattern 03 and 04 | | |
| F0405 | Hole pattern 04 and 05 | | |
| F0507 | Hole pattern 05 and 07 | | |
| F07 | Hole pattern 07 | | |
| F0710 | Hole pattern 07 and 10 | | |
| 008 | Housing material | | |
| V4 | Stainless steel (chrome-nickel-molybdenum, austenitic/1.4401, 1.4404 (AISI 316L), 1.4408) | | |
| 009 | Shut-off element material | | |
| V4 | Stainless steel (chrome-nickel-molybdenum, austenitic/1.4401, 1.4404 (AISI 316L), 1.4408) | | |
| 010 | Sealant | | |
| T | PTFE | | |
| 011 | Drive | | |
| PP | DAPS, double-acting | | |
| PS | DAPS, single-acting | | |
| 012 | Torque [Nm] | | |
| 15 | 15 | | |
| 30 | 30 | | |
| 53 | 53 | | |
| 60 | 60 | | |
| 90 | 90 | | |
| 106 | 106 | | |
| 180 | 180 | | |
| 240 | 240 | | |
| 013 | Swivel direction | | |
| R | Right | | |
| 014 | Nominal swivel angle [°] | | |
| 90 | 90 | | |
| 015 | Spring ID | | |
| | None | | |
| 4 | 4 | | |
| 016 | End-position adjustment | | |
| C | Closed | | |

Datasheet

General technical data, 2-way

| | | | | | | | | | |
|------------------------------|-------------------------------------|------------------------|------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------|
| Nominal size DN | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 |
| Type of mounting | In-line installation | | | | | | | | |
| Mounting position | optional | | | | | | | | |
| Design | 2-way ball valve, Semi-rotary drive | | | | | | | | |
| Type of actuation | Pneumatic | | | | | | | | |
| Switching position indicator | Slot direction = flow direction | | | | | | | | |
| Nominal pressure PN | 40 | | | | | | 16 | | |
| Flow rate Kv | 19.4 m ³ /h | 45.6 m ³ /h | 71.5 m ³ /h | 105 m ³ /h | 170 m ³ /h | 275 m ³ /h | 507 m ³ /h | 905 m ³ /h | 1,414 m ³ /h |

Operating and environmental conditions, 2-way

| | |
|--|--|
| Operating medium | Compressed air to ISO 8573-1:2010 [7:4:4] |
| Operating pressure | 6 ... 8.4 bar |
| Ambient temperature | -10 ... 80°C |
| Media temperature ¹⁾ | -10 ... 200°C |
| Medium | Compressed air to ISO 8573-1:2010 [:-:-], Inert gases, Water – no water vapour, Neutral fluids |
| Note on operating and pilot medium | Lubricated operation possible (in which case lubricated operation will always be required) |
| Corrosion resistance class CRC ²⁾ | 3 - high corrosion stress |

1) As a function of operating pressure

2) Corrosion resistance class CRC 3 to Festo standard FN 940070 High corrosion stress. Outdoor exposure under moderate corrosive conditions. External visible parts with primarily functional surface requirements that are in direct contact with a normal industrial atmosphere.

ATEX, 2-way

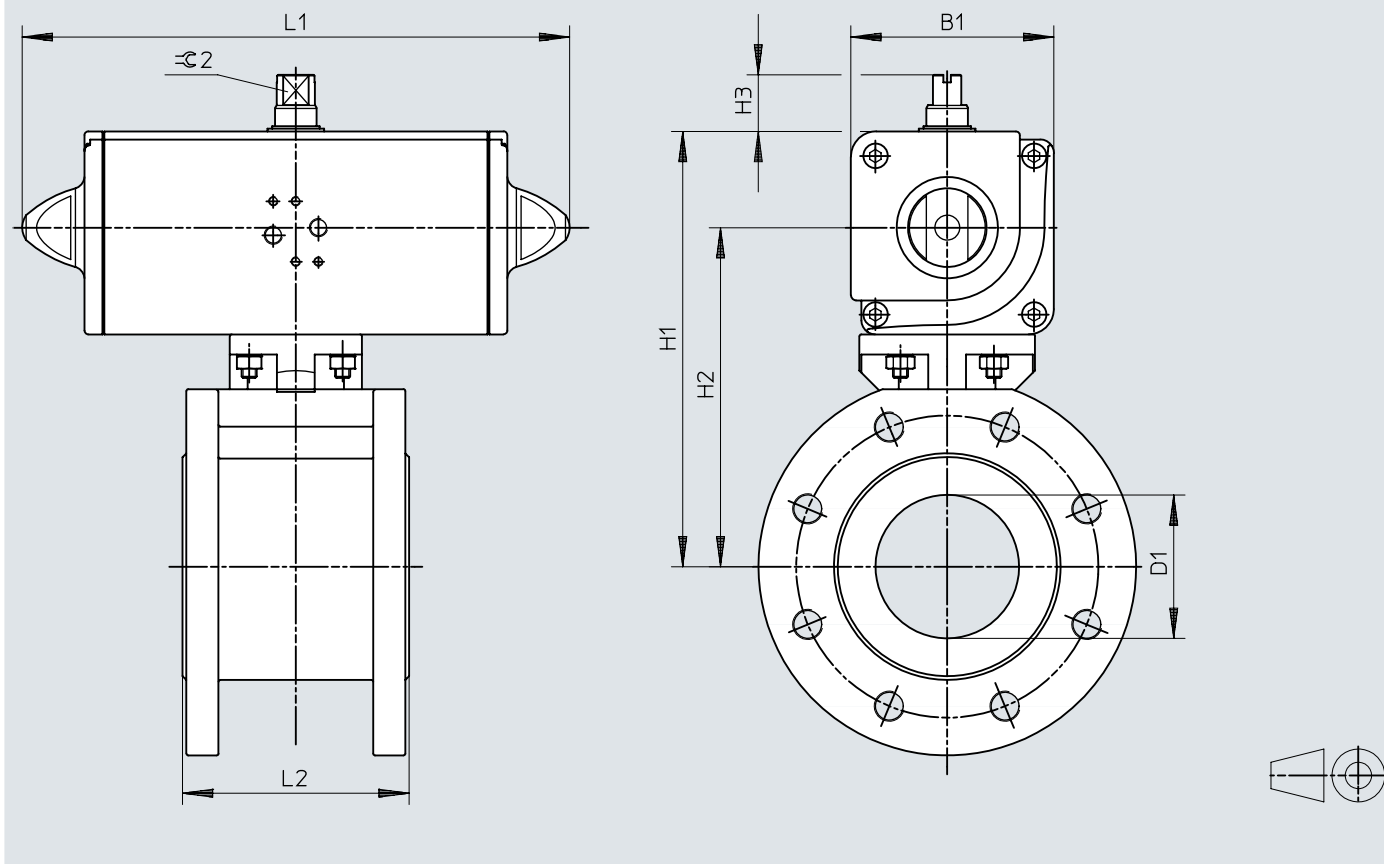
| | |
|-----------------------------------|--------------------|
| Max. surface temperature assembly | TX |
| explosion group assembly | IIC, IIIC |
| Explosion ambient temperature | -10°C ≤ Ta ≤ +60°C |

Materials, 2-way

| | |
|-------------------------|----------------------------|
| Material housing | High-alloy stainless steel |
| Material number housing | 1.4408 |
| Material ball | High-alloy stainless steel |
| Material shaft | High-alloy stainless steel |
| Material number shaft | 1.4401 |
| Material seals | PTFE, PTFE reinforced |
| Note on materials | RoHS-compliant |

Dimensions

Dimensions – 2-way, stainless steel, DAPS, double-acting

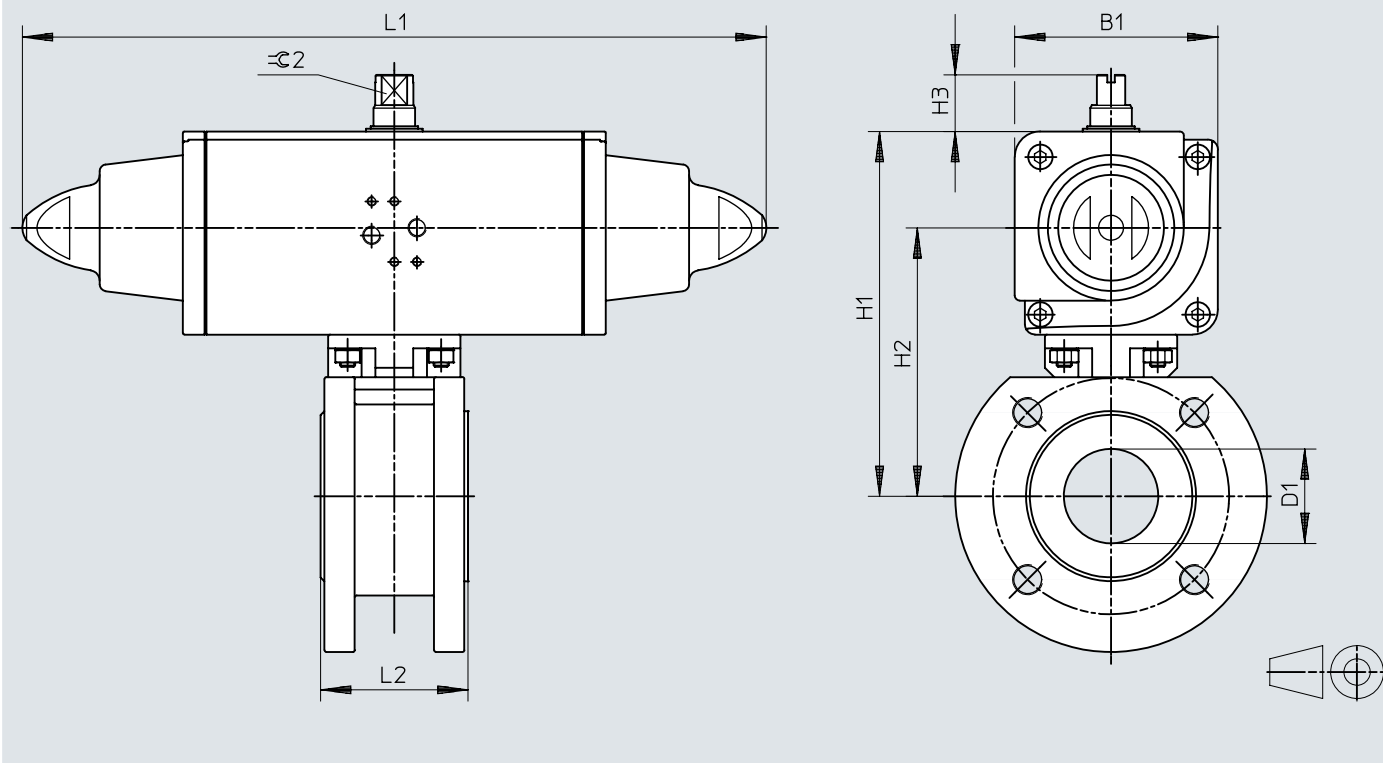
Download CAD data www.festo.com

| | B1 | D1 ø | H1 | H2 | H3 | L1 | L2 | ± 0.2 |
|--|-------|---------|-------|-------|----|-------|------|-----------|
| VZBC-15-FF-40-22-F0304-V4V4T-PP15-R-90-C | 52,2 | 15 | 112,2 | 88 | 20 | 159 | 40 | 8 |
| VZBC-20-FF-40-22-F0304-V4V4T-PP30-R-90-C | 59,2 | 20 | 123,5 | 95,8 | 20 | 174 | 44 | 9 |
| VZBC-25-FF-40-22-F0405-V4V4T-PP30-R-90-C | 59,2 | 25 | 123,8 | 96,1 | 20 | 174 | 53 | 9 |
| VZBC-32-FF-40-22-F0405-V4V4T-PP60-R-90-C | 70,4 | 32 | 139,4 | 106,7 | 20 | 198 | 58,4 | 10 |
| VZBC-40-FF-40-22-F0507-V4V4T-PP60-R-90-C | 70,4 | 38 | 146,7 | 114 | 20 | 198 | 62 | 10 |
| VZBC-50-FF-40-22-F0507-V4V4T-PP106-R-90-C | 83,3 | 50 | 168,8 | 130,3 | 20 | 237,1 | 78 | 12 |
| VZBC-65-FF-16-22-F07-V4V4T-PP180-R-90-C | 107,5 | 64 | 212,5 | 161,5 | 30 | 289,9 | 100 | 15 |
| VZBC-80-FF-16-22-F07-V4V4T-PP180-R-90-C | 107,5 | 76 | 229,5 | 178,5 | 30 | 289,9 | 120 | 15 |
| VZBC-100-FF-16-22-F0710-V4V4T-PP240-R-90-C | 111,1 | 96 | 243,1 | 192,1 | 30 | 313,6 | 152 | 15 |

Dimensions

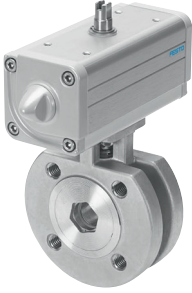
Dimensions – 2-way, stainless steel, DAPS, single-acting

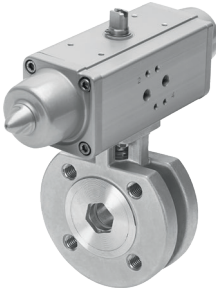
Download CAD data www.festo.com



| | B1 | D1 ∅ | H1 | H2 | H3 | L1 | L2 | ≈ 2 |
|--|-------|---------|-------|-------|----|-------|------|-------------|
| VZBC-15-FF-40-22-F0304-V4V4T-PS15-R-90-4-C | 59,2 | 15 | 119,2 | 91,5 | 20 | 233,3 | 40 | 9 |
| VZBC-20-FF-40-22-F0304-V4V4T-PS30-R-90-4-C | 70,4 | 20 | 134,7 | 102 | 20 | 259 | 44 | 10 |
| VZBC-25-FF-40-22-F0405-V4V4T-PS30-R-90-4-C | 70,4 | 25 | 135 | 102,3 | 20 | 259 | 53 | 10 |
| VZBC-32-FF-40-22-F0405-V4V4T-PS53-R-90-4-C | 83,3 | 32 | 152,3 | 113,8 | 20 | 304,3 | 58,4 | 12 |
| VZBC-40-FF-40-22-F0507-V4V4T-PS53-R-90-4-C | 83,3 | 38 | 159,6 | 121,1 | 20 | 304,3 | 62 | 12 |
| VZBC-50-FF-40-22-F0507-V4V4T-PS90-R-90-4-C | 107,5 | 50 | 193 | 142 | 30 | 393,7 | 78 | 15 |
| VZBC-65-FF-16-22-F07-V4V4T-PS180-R-90-4-C | 118 | 64 | 223 | 167 | 30 | 474 | 100 | 19 |
| VZBC-80-FF-16-22-F07-V4V4T-PS180-R-90-4-C | 118 | 76 | 241 | 185 | 30 | 474 | 120 | 19 |
| VZBC-100-FF-16-22-F0710-V4V4T-PS240-R-90-4-C | 134,9 | 96 | 266,9 | 204,9 | 30 | 520,5 | 152 | 19 |

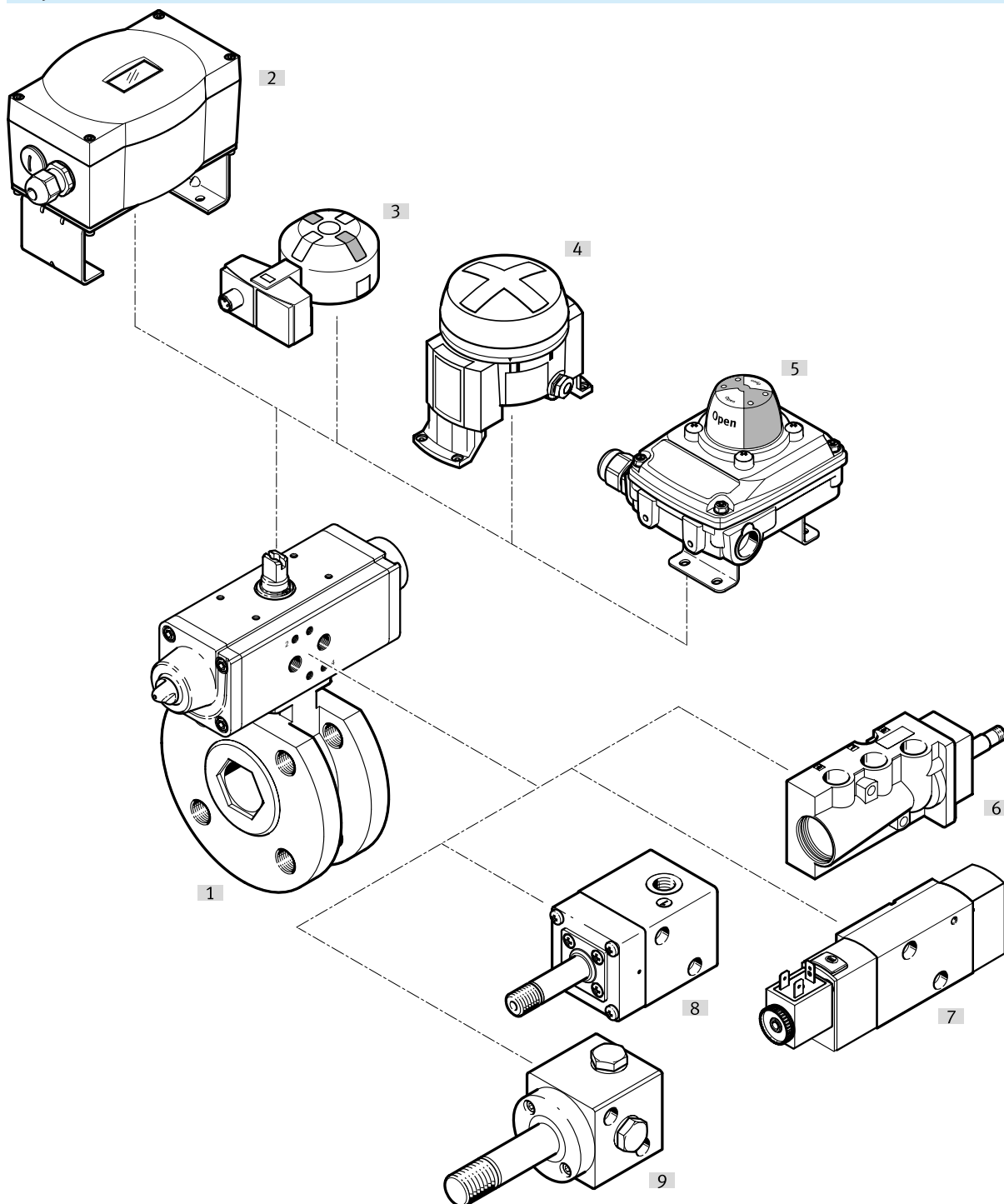
Ordering data

| DAPS double-acting | | | |
|---|-----------------|----------|--|
| | Nominal size DN | Part no. | Type |
|  | 15 | 1913365 | VZBC-15-FF-40-22-F0304-V4V4T-PP15-R-90-C |
| | 20 | 1913367 | VZBC-20-FF-40-22-F0304-V4V4T-PP30-R-90-C |
| | 25 | 1913368 | VZBC-25-FF-40-22-F0405-V4V4T-PP30-R-90-C |
| | 32 | 1913369 | VZBC-32-FF-40-22-F0405-V4V4T-PP60-R-90-C |
| | 40 | 1913370 | VZBC-40-FF-40-22-F0507-V4V4T-PP60-R-90-C |
| | 50 | 1913371 | VZBC-50-FF-40-22-F0507-V4V4T-PP106-R-90-C |
| | 65 | 1913372 | VZBC-65-FF-16-22-F07-V4V4T-PP180-R-90-C |
| | 80 | 1913373 | VZBC-80-FF-16-22-F07-V4V4T-PP180-R-90-C |
| | 100 | 1913374 | VZBC-100-FF-16-22-F0710-V4V4T-PP240-R-90-C |

| DAPS single-acting | | | |
|--|-----------------|----------|--|
| | Nominal size DN | Part no. | Type |
|  | 15 | 1915401 | VZBC-15-FF-40-22-F0304-V4V4T-PS15-R-90-4-C |
| | 20 | 1915402 | VZBC-20-FF-40-22-F0304-V4V4T-PS30-R-90-4-C |
| | 25 | 1915403 | VZBC-25-FF-40-22-F0405-V4V4T-PS30-R-90-4-C |
| | 32 | 1915404 | VZBC-32-FF-40-22-F0405-V4V4T-PS53-R-90-4-C |
| | 40 | 1915406 | VZBC-40-FF-40-22-F0507-V4V4T-PS53-R-90-4-C |
| | 50 | 1915407 | VZBC-50-FF-40-22-F0507-V4V4T-PS90-R-90-4-C |
| | 65 | 1915408 | VZBC-65-FF-16-22-F07-V4V4T-PS180-R-90-4-C |
| | 80 | 1915409 | VZBC-80-FF-16-22-F07-V4V4T-PS180-R-90-4-C |
| | 100 | 1915410 | VZBC-100-FF-16-22-F0710-V4V4T-PS240-R-90-4-C |

Peripherals

Peripherals overview



| Accessories | | → Link |
|-----------------------------------|--|----------------------|
| Type/order code | Description | |
| [1] Ball valve actuator unit VZBC | Combination of double-acting or single-acting quarter-turn actuator DAPS and 2-way ball valve, stainless steel, compact design | vzbc |
| [2] Positioner CMSX | For controlling the position of quarter-turn actuators in process automation systems | cmsx |
| [3] Sensor boxes SRBG | For electrical feedback and position monitoring of process valves actuated by quarter turn actuators | srbg |
| [4] Limit switch attachments DAPZ | Round design, variant AR, electrical sensing, inductive or inductive explosion-proof | dapz |
| [5] Sensor boxes SRBC | For electrical feedback and position monitoring of process valves actuated by quarter turn actuators | srbc |
| [6] Solenoid valve NVF3 | For F solenoid coil and explosion-proof F solenoid coil | nvf3 |
| [7] Solenoid valves VSNC | For single-acting and double-acting quarter turn actuators with a connection pattern to VDI/VDE 3845 | vsnc |
| [8] Solenoid valves VOFC | Solenoid valve with solenoid coil, NAMUR connection pattern | vofc |

Peripherals

| Accessories | | → Link |
|--------------------------|---|----------------------|
| Type/order code | Description | |
| [9] Solenoid valves VOFD | Solenoid valve with solenoid coil, NAMUR connection pattern | vofd |