

SBV/SBV-R SERIES

BALL VALVE

The ball valve of series SBV/SBV-R is applicable for commercial air conditioner, freezing or deep-freezing equipment or other refrigeration circuits in order to open and to shut off inner flow path by operating the valve stem. It can also be used as service valve for vacuum pumping and refrigerant injection etc. All the Ball Valves listed in this datasheet can be installed in system using flammable refrigerants HFO (categories A2* and A2L*), and Hydrocarbons HC (category A3*).



FEATURES

- STRAIGHTWAY TYPE, FULL PORT, LOW PRESSURE DROPS, COST-EFFECTIVE
- VALVE BODY AND VALVE SEAT WITH WELDED STRUCTURE, WITH HIGH PRODUCT RELIABILITY
- ROTATE 1/4 CIRCLES FROM FULL-OPEN TO FULL-CLOSE, EASY TO OPERATE
- BIDIRECTIONAL FLOW
- ROTATION STOP ON REQUEST FOR FULL-OPEN AND FULL-CLOSE OF THE VALVE
- SPECIAL SEALING MATERIALS TO PREVENT INTERNAL LEAKAGE
- CERTIFIED ACCORDING PED CAT.II BY TUV RHEINLAND

GENERAL SPECIFICATIONS

- Applicable for all common HCFC, HFC and HFO refrigerants such as: R22, R134a, R404A, R407A/C/F, R410A, R507A, R448A, R449A, R450A, R452A, R513A, R32, R1234yf, R1234ze, R454A/B/C, R455A, R290, R1270, R600a
- Medium temperature TS min./max.:
-40°C / +120°C
- Max. operating pressure PS: 4,5 (45bar) or 4,9 MPa (49 bar) depending by the model
- Installation position: liquid, suction and discharge line in all directions
- PED declaration
- Certifications: UL/CSA available only for models with size until SBV07. For bigger sizes on request

Note: *according ANSI-ASHRAE 34-2016 and EN-378-1 ANNE EN 378-1:2016 Annex E

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GENERAL CHARACTERISTICS

| Without Access Fitting | | Connections Ø d ODF | | Kv | Wrench Size Cap | PS | PED Category [Fluid Group 1] | PED Category [Fluid Group 2] | With Access Fitting | |
|------------------------|-----------------|---------------------------|------|--------|-----------------------|-------|---------------------------------------|---------------------------------------|------------------------|-----------------|
| Model | Part Number* | [inch] | [mm] | [m³/h] | [mm] | [bar] | | | Model | Part Number* |
| SBV02-020 | 10150092002 | - | 6 | 1,9 | 19 | 45 | Art. 4.3 | Art. 4.3 | SBV02-320 | 10150094702 |
| SBV02-019 | 10150091902 | 1/4 | - | 1,9 | 19 | 45 | Art. 4.3 | Art. 4.3 | SBV02-319 | 10150094602 |
| SBV03-019 | 10150091802 | 3/8 | - | 5,5 | 19 | 45 | Art. 4.3 | Art. 4.3 | SBV03-319 | 10150094802 |
| SBV03-020 | 10150092102 | - | 10 | 5,5 | 19 | 45 | Art. 4.3 | Art. 4.3 | SBV03-320 | 10150094902 |
| SBV04-020 | 10150092202 | - | 12 | 10,2 | 19 | 45 | Art. 4.3 | Art. 4.3 | SBV04-320 | 10150095102 |
| SBV04-019 | 10150090502 | 1/2 | - | 10,2 | 19 | 45 | Art. 4.3 | Art. 4.3 | SBV04-319 | 10150095002 |
| SBV(M) -A5YHSY-2-S | 10150057602 | - | 15 | 13,2 | 14 | 45 | Art. 4.3 | Art. 4.3 | SBV(M) -JA5YHSY-2-S | 10150057702 |
| SBV(M) -A5YHSY-1-S | 10150053302 | 5/8 | 16 | 13,8 | 14 | 45 | Art. 4.3 | Art. 4.3 | SBV(M) -JA5YHSY-1-S | 10150053402 |
| SBV(M) -A6YHSY-2-S | 10150054602 | - | 18 | 19,5 | 17 | 45 | Art. 4.3 | Art. 4.3 | SBV(M) -JA6YHSY-2-S | 10150054502 |
| SBV(M) -A6YHSY-1-S | 10150054302 | 3/4 | - | 19,5 | 17 | 45 | Art. 4.3 | Art. 4.3 | SBV(M) -JA6YHSY-1-S | 10150054202 |
| SBV(M) -A7YHSY-1-S | 10150053502 | 7/8 | 22 | 28,0 | 17 | 45 | Art. 4.3 | Art. 4.3 | SBV(M) -JA7YHSY-1-S | 10150053602 |
| SBV09-120R | 10150103602 | - | 28 | 51,5 | 17 | 49 | Cat. 2 | Art. 4.3 | SBV09-420R | 10150103702 |
| SBV09-119R | 10150097102 | 1 1/8 | - | 51,5 | 17 | 49 | Cat. 2 | Art. 4.3 | SBV09-419R | 10150106502 |
| SBV11-119R | 10150103802 | 1 3/8 | 35 | 80,0 | 17 | 49 | Cat. 2 | Cat. 1 | SBV11-419R | 10150103902 |
| SBV13-119R | 10150104402 | 1 5/8 | - | 120 | 17 | 49 | Cat. 2 | Cat. 1 | SBV13-419R | 10150106702 |
| SBV13-120R | 10150106602 | - | 42 | 120 | 17 | 49 | Cat. 2 | Cat. 1 | SBV13-420R | 10150106802 |
| SBV17-119R | 10150104502 | 2 1/8 | 54 | 225 | 19 | 49 | Cat. 2 | Cat. 1 | SBV17-419R | 10150106902 |
| SBV19-120R | 10150107002 | - | 64 | 225 | 19 | 49 | Cat. 2 | Cat. 1 | SBV19-420R | 10150107102 |
| SBV21-119R | 10150107202 | 2 5/8 | - | 305 | 19 | 49 | Cat. 2 | Cat. 1 | SBV21-419R | 10150107302 |

Note:

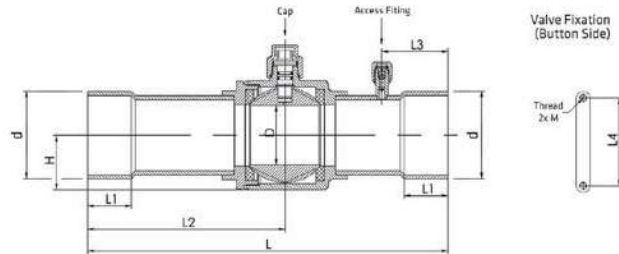
- SBV-R model with connection size 3-1/8" (80mm) available on request*
- SBV-R model with connection size 3-5/8" (92mm) available on request*

* Size actually not covered by PED cat.II certification

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DIMENSIONS & WEIGHT



| Part Number | | L | L1 | L2 | L3 ¹⁾ | L4 | D | H | M | Weight |
|------------------------|---------------------|------|------|------|------------------|------|------|------|----------|--------|
| Without access fitting | With Access Fitting | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [kg] |
| SBV02-020 | SBV02-320 | 132 | 10 | 68 | 31 | 16 | 10 | 14 | M4 x 0,7 | 0,2 |
| SBV02-019 | SBV02-319 | 132 | 10 | 68 | 31 | 16 | 10 | 14 | M4 x 0,7 | 0,2 |
| SBV03-019 | SBV03-319 | 132 | 10 | 68 | 31 | 16 | 10 | 14 | M4 x 0,7 | 0,2 |
| SBV03-020 | SBV03-320 | 132 | 10 | 68 | 31 | 16 | 10 | 14 | M4 x 0,7 | 0,2 |
| SBV04-020 | SBV04-320 | 160 | 10 | 85 | 42,5 | 16 | 10 | 14 | M4 x 0,7 | 0,21 |
| SBV04-019 | SBV04-319 | 160 | 10 | 85 | 42,5 | 16 | 10 | 14 | M4 x 0,7 | 0,21 |
| SBV(M)-A5YHSY-2-SA | SBV(M)-JA5YHSY-2-SA | 160 | 13 | 85 | 31 | 22 | 14 | 16 | M4 x 0,7 | 0,3 |
| SBV(M)-A5YHSY-1-SA | SBV(M)-JA5YHSY-1-SA | 160 | 13 | 85 | 31 | 22 | 14 | 16 | M4 x 0,7 | 0,3 |
| SBV(M)-A6YHSY-2-SA | SBV(M)-JA6YHSY-2-SA | 185 | 16 | 99 | 37 | 30 | 19 | 20 | M4 x 0,7 | 0,51 |
| SBV(M)-A6YHSY-1-SA | SBV(M)-JA6YHSY-1-SA | 185 | 16 | 99 | 37 | 30 | 19 | 20 | M4 x 0,7 | 0,51 |
| SBV(M)-A7YHSY-1-SA | SBV(M)-JA7YHSY-1-SA | 185 | 17 | 99 | 37 | 30 | 19 | 20 | M4 x 0,7 | 0,52 |
| SBV09-120R | SBV09-420R | 208 | 21 | 112 | 44 | 38 | 25 | 25 | M4 x 0,7 | 0,73 |
| SBV09-119R | SBV09-419R | 208 | 21 | 112 | 44 | 38 | 25 | 25 | M4 x 0,7 | 0,73 |
| SBV11-119R | SBV11-419R | 251 | 25 | 136 | 44 | 48 | 32 | 31 | M6 x 1,0 | 1,42 |
| SBV13-119R | SBV13-419R | 281 | 28 | 151 | 56 | 55 | 38 | 35 | M6 x 1,0 | 1,9 |
| SBV13-120R | SBV13-420R | 281 | 28 | 151 | 56 | 55 | 38 | 35 | M6 x 1,0 | 1,9 |
| SBV17-119R | SBV17-419R | 305 | 34 | 167 | 56 | 74 | 50 | 46 | M6 x 1,0 | 3,74 |
| SBV19-120R | SBV19-420R | 305 | 34 | 167 | 70 | 74 | 50 | 46 | M6 x 1,0 | 3,79 |
| SBV21-119R | SBV21-419R | 305 | 37 | 167 | 56 | 74 | 60 | 56 | M6 x 1,0 | 6,08 |

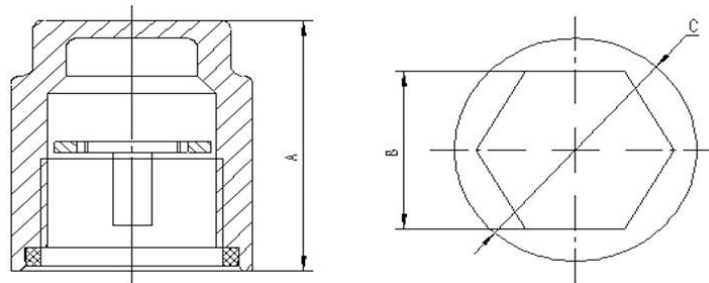
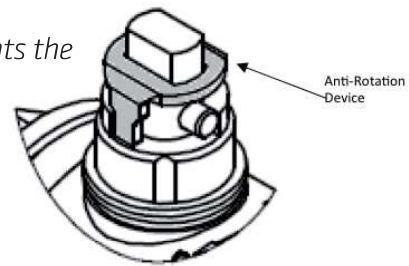
Note: 1) Applicable to versions with access fitting

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ACCESSORIES

The steel ring placed on the stem under the cover cap prevents the accidental rotation of the ball during the system operation



Anti-Rotation Device

| Model | Part Number* | Applicable for SBV models with: | | Cap Nut | Dimensions mm | | |
|-------|--------------|---------------------------------|---------------------|----------|---------------|-----|------|
| | | Inch connections: | Metric connections: | | A | B | C |
| SK01 | 10150061902 | 1" 1/8 - 1" 3/8 | 28mm - 35mm | M18X1-6H | 27,0 | H17 | Ø 24 |
| SK02 | 10150062002 | 1" 5/8 | 42mm | M22X1-6H | 27,5 | H17 | Ø 26 |
| SK03 | 10150062102 | 2" 1/8 - 2" 5/8 | 54mm - 64mm | M22X1-6H | 27,5 | H19 | Ø 28 |
| SK04 | 10150062202 | 3" 1/8 - 3" 5/8 | 80mm - 92mm | M26X1-6H | 29,5 | H24 | Ø 32 |
| SK05 | 10150062302 | 4" 1/8 - 4" 1/4 | 105mm - 108mm | M32X1-6H | 32,0 | H29 | Ø 38 |

Note: 1) Steel Anti-Rotation ring and Brass Cover Cap are in the extent of delivery

* Available also as industrial package.