

Technical Manual

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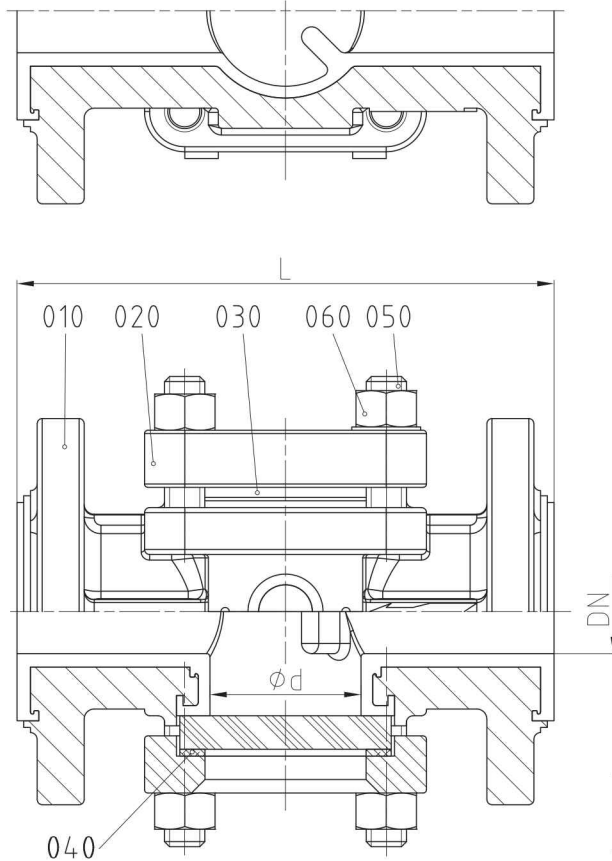
Register 10 CONTENTS - ASG

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Technische Daten ASG (DIN)



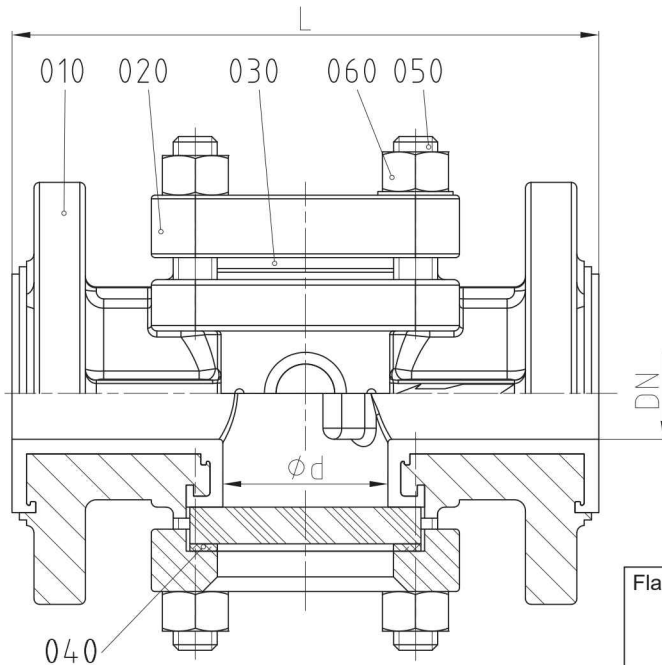
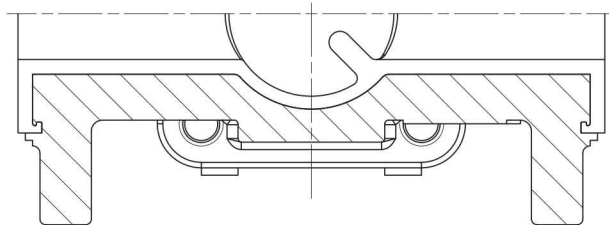
Attention!
 Thermal Shock Resistance of Borosilicate-Glass is according to DIN 7080 t= max. 80°C (176°F). Everything else according to **atomac** Pressure / Temperature Diagram.

Face-to-Face Dimensions DIN EN 558 (Basic series 1)
 Flange Connections DIN EN 1092-2 PN 16

| DN / DIN | | L | Ød | weight | |
|------------|------|--------|------|--------|-------|
| 025 | mm | 160 | 45 | kg | 5,2 |
| | inch | 6,3 | 1,77 | lbs | 11,4 |
| 040 | mm | 200 | 58 | kg | 9,1 |
| | inch | 7,87 | 2,28 | lbs | 20,0 |
| 050 | mm | 230 | 77 | kg | 13,0 |
| | inch | 9,06 | 3,03 | lbs | 28,7 |
| 065 | mm | 290 | 77 | kg | 15,0 |
| | inch | 11,42 | 3,03 | lbs | 33,0 |
| 080 | mm | 310 | 100 | kg | 19,8 |
| | inch | 12,2 | 3,94 | lbs | 43,6 |
| 100 | mm | 350 | 125 | kg | 28,1 |
| | inch | 13,78 | 4,92 | lbs | 61,9 |
| 150 | mm | 480 | 175 | kg | 61,0 |
| | inch | 18,9 | 6,89 | lbs | 134,4 |
| 200 | mm | 457° | 208 | kg | 96,3 |
| | inch | 17,99° | 8,19 | lbs | 212,2 |
| 250 | mm | 534° | 208 | kg | 125,7 |
| | inch | 21° | 8,19 | lbs | 277,0 |

◦ Face-to-Face Dimensions acc. to ANSI B 16.10

Technische Daten ASG (ANSI)



Attention!
 Thermal Shock Resistance of Borosilicate-Glass is according to DIN 7080 t= max. 80°C (176°F). Everything else according to **atomac** Pressure / Temperature Diagram.

Flange Connections ANSI B 16.5 Cass 150,
 Min. Flange thickness acc.
 to ASME B 16.5 Cass 150,
 Table 9 (Flanged Fittings)

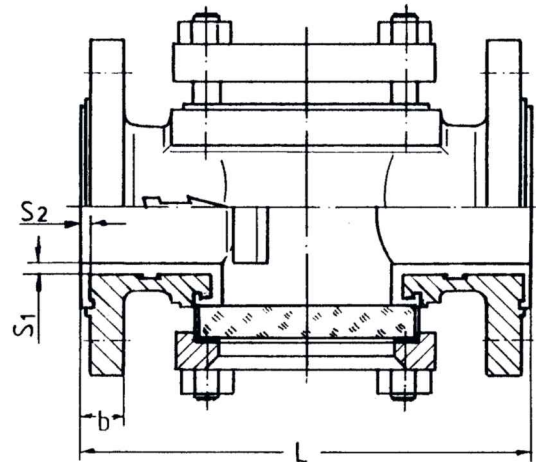
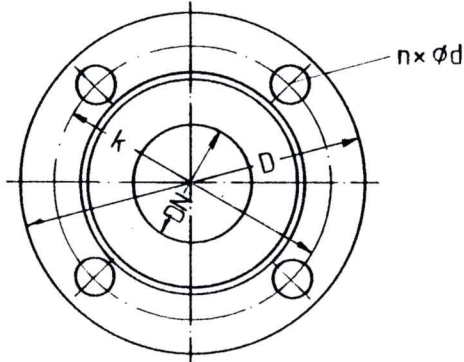
| DN / ANSI | | L | Ød | weight | |
|-----------|------|-------|------|--------|-------|
| 1" | inch | 6 | 1,77 | lbs | 9,9 |
| | mm | 152,4 | 45 | kg | 4,5 |
| 1½" | inch | 7 | 2,28 | lbs | 15,2 |
| | mm | 178 | 58 | kg | 6,9 |
| 2" | inch | 8 | 3,03 | lbs | 23,2 |
| | mm | 203 | 77 | kg | 10,5 |
| 3" | inch | 9,5 | 3,94 | lbs | 39,6 |
| | mm | 241 | 100 | kg | 18,0 |
| 4" | inch | 11,5 | 4,92 | lbs | 62,1 |
| | mm | 292 | 125 | kg | 28,2 |
| 6" | inch | 18,9 | 6,89 | lbs | 134,4 |
| | mm | 480 | 175 | kg | 61,0 |
| 8" | inch | 17,99 | 8,19 | lbs | 202,8 |
| | mm | 457 | 208 | kg | 92,0 |
| 10" | inch | 21,02 | 8,19 | lbs | 264,5 |
| | mm | 534 | 208 | kg | 120,0 |

Material specification ASG

| No. | Designation | Pieces | Material | Material-No. / DIN | ASTM / AISI |
|------------|-------------|--------|-------------------------------|------------------------------------|-------------|
| 010 | body piece | 1 | ductile iron / PFA | EN-JS1049 (GGG-40.3) / DIN EN 1563 | A 395 |
| | | | ductile iron / PFA conductive | EN-JS1049 (GGG-40.3) / DIN EN 1563 | A 395 |
| 020 | flange | 1 | ductile iron / PFA | EN-JS1049 (GGG-40.3) / DIN EN 1563 | A 395 |
| | | | ductile iron / PFA conductive | EN-JS1049 (GGG-40.3) / DIN EN 1563 | A 395 |
| 030 | glass | 2 | borosilicate-glass | DIN 7080 | |
| 040 | flat gasket | 2 | UNITEC 300 green | DIN 3535-6 | |
| 050 | stud bolt | 1 set | stainless steel | 1.4301-K70 / DIN EN 10088-3 | A 193 B8 |
| 060 | hexagon nut | 1 set | stainless steel | 1.4301-K70 / DIN EN 10088-3 | A 194 8 |

Valves with conductive lining only contain components with conductive materials

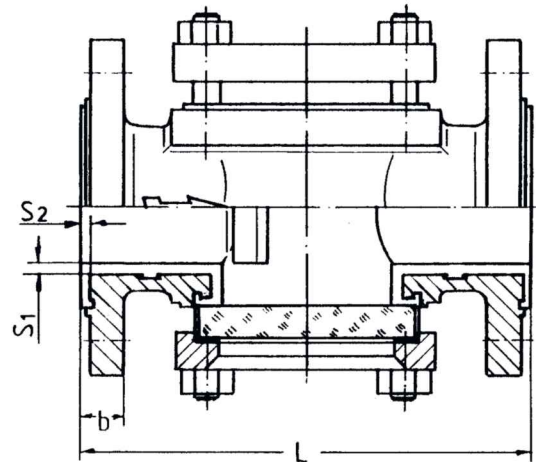
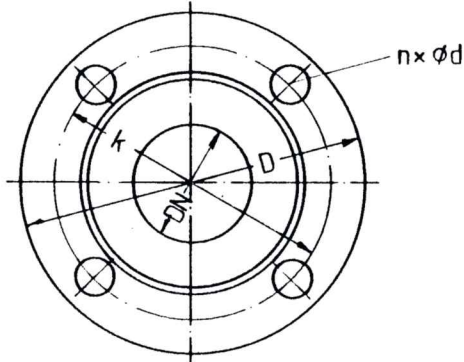
Dimensions ASG (DIN)



| DN / DIN | | L | b | D | k | nxØd | S1 | S2 |
|-------------|------|-------|------|-------|-------|---------|------|------|
| 025 | mm | 160 | 20 | 115 | 85 | 4x14 | 4 | 4 |
| | inch | 6,3 | 0,79 | 4,53 | 3,35 | 4x0,55 | 0,16 | 0,16 |
| 040 | mm | 200 | 22 | 150 | 110 | 4x18 | 4 | 4 |
| | inch | 7,87 | 0,85 | 5,91 | 4,33 | 4x0,71 | 0,16 | 0,16 |
| 050 | mm | 230 | 23 | 165 | 125 | 4x18 | 4 | 4 |
| | inch | 9,06 | 0,91 | 6,5 | 4,92 | 4x0,71 | 0,16 | 0,16 |
| 065 | mm | 290 | 23,5 | 185 | 145 | 4x18 | 4 | 4 |
| | inch | 11,42 | 0,93 | 7,28 | 5,71 | 4x0,71 | 0,16 | 0,16 |
| 080 | mm | 310 | 25 | 200 | 160 | 8x18 | 5 | 4 |
| | inch | 12,2 | 0,98 | 7,87 | 6,3 | 8x0,71 | 0,2 | 0,16 |
| 100 | mm | 350 | 25 | 220 | 180 | 8x18 | 5 | 4 |
| | inch | 13,78 | 0,98 | 8,66 | 7,09 | 8x0,71 | 0,2 | 0,16 |
| 150 | mm | 480 | 29 | 285 | 240 | 8x22 | 5,5 | 4 |
| | inch | 18,9 | 1,14 | 11,22 | 9,45 | 8x0,87 | 0,22 | 0,16 |
| 200° | mm | 457 | 34 | 343 | 297 | 12x23 | 6 | 4 |
| | inch | 17,99 | 1,34 | 13,5 | 11,69 | 12x0,91 | 0,24 | 0,16 |
| 250° | mm | 534 | 36 | 458,8 | 350 | 12x23 | 6 | 4 |
| | inch | 21 | 1,42 | 18,06 | 13,78 | 12x0,91 | 0,24 | 0,16 |

° Baulänge nach ANSI B 16.10

Dimensions ASG (ANSI)



| DN / ANSI | | L | b | D | k | n x Ød | S1 | S2 |
|-----------|------|-------|------|-------|-------|---------|------|------|
| 1" | inch | 6 | 0,63 | 4,25 | 3,12 | 4x0,63 | 0,16 | 0,16 |
| | mm | 152,4 | 16 | 107,9 | 79,2 | 4x16 | 4 | 4 |
| 1½" | inch | 7 | 0,85 | 5 | 3,88 | 4x0,63 | 0,16 | 0,16 |
| | mm | 178 | 21,5 | 127 | 98,5 | 4x16 | 4 | 4 |
| 2" | inch | 8 | 0,87 | 6 | 4,74 | 4x0,75 | 0,16 | 0,16 |
| | mm | 203 | 22 | 152,4 | 120,5 | 4x19 | 4 | 4 |
| 3" | inch | 9,5 | 0,95 | 7,5 | 6 | 4x0,75 | 0,2 | 0,16 |
| | mm | 241 | 24 | 190,5 | 152,5 | 4x19 | 5 | 4 |
| 4" | inch | 11,5 | 1,08 | 9 | 7,5 | 8x0,75 | 0,2 | 0,16 |
| | mm | 292 | 27,5 | 228,6 | 190,5 | 8x19 | 5 | 4 |
| 6" | inch | 18,9 | 1,14 | 11,22 | 9,45 | 8x0,87 | 0,22 | 0,16 |
| | mm | 480 | 29 | 285 | 240 | 8x22 | 5,5 | 4 |
| 8" | inch | 17,99 | 1,34 | 13,5 | 11,69 | 8x0,91 | 0,24 | 0,2 |
| | mm | 457 | 34 | 343 | 297 | 8x23 | 6 | 5 |
| 10" | inch | 21 | 1,42 | 16 | 14,25 | 12x1 | 0,24 | 0,16 |
| | mm | 534 | 36 | 406,5 | 362 | 12x25,5 | 6 | 4 |

Spare Parts (item n°) - ASG

| DIN | ANSI | Glass Set | Flat gaskets Set |
|-----|------|-----------|------------------|
| 025 | 1" | 0009537 | 0005257 |
| 040 | 1½" | 0009538 | 0005258 |
| 050 | 2" | 0009539 | 0005259 |
| 065 | -- | 0009539 | 0005259 |
| 080 | 3" | 0009540 | 0009546 |
| 100 | 4" | 0009541 | 0009184 |
| 150 | 6" | 0009542 | 0009548 |
| 200 | 8" | 0033640 | 0033641 |
| 250 | 10" | 0033640 | 0033641 |

ASSEMBLY INSTRUCTIONS ASG

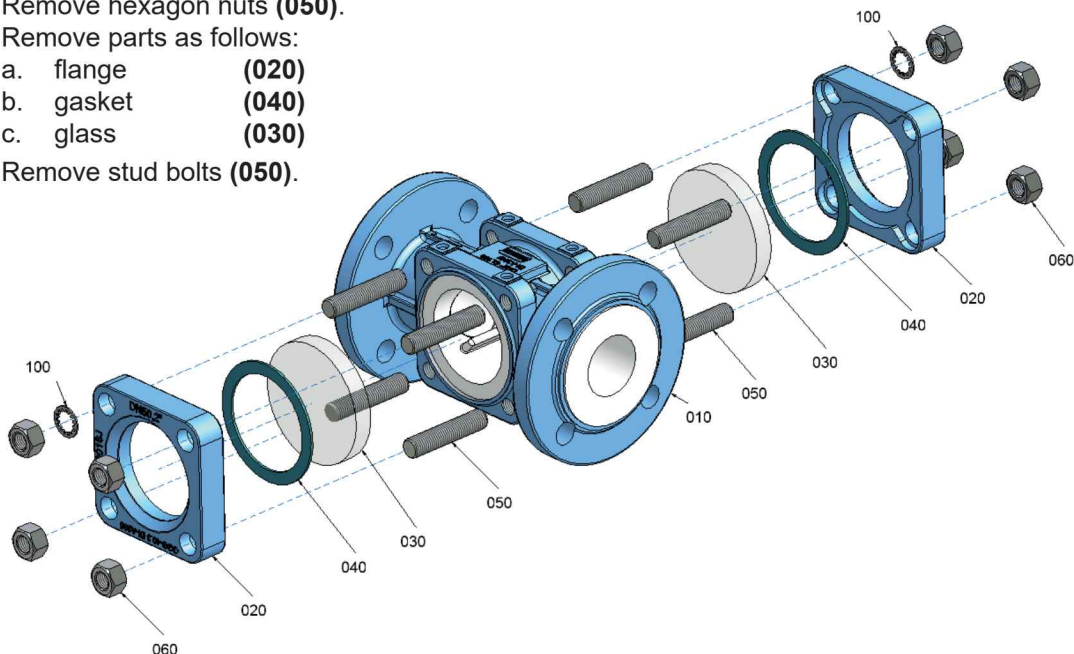
The general installation and maintenance instructions must be observed.

1. When assembling ASG, special care must be taken that sealing surfaces are absolutely clean and free from any damage.
2. Screw in stud bolts (050).
3. Insert glass (030).
4. Insert gasket (040).
5. Put on flange (020).
6. Tighten hexagon nuts (060) by criss-cross method acc. to recommended torques.

DISASSEMBLY INSTRUCTIONS ASG

For all jobs which are to be carried out on an installed valve, the works safety requirements and the general installation and maintenance instructions for flourcarbon resin lined atomac valves must be observed.

1. Prior to disassembly, the valve must be drained of all line media, acc. to the above-mentioned instructions. After having removed the flange connection, put valve on workbench with a soft cover (rubber mat).
2. Remove hexagon nuts (050).
3. Remove parts as follows:
 - a. flange (020)
 - b. gasket (040)
 - c. glass (030)
4. Remove stud bolts (050).



Technical Manual

ASG - recommended tightening torques*

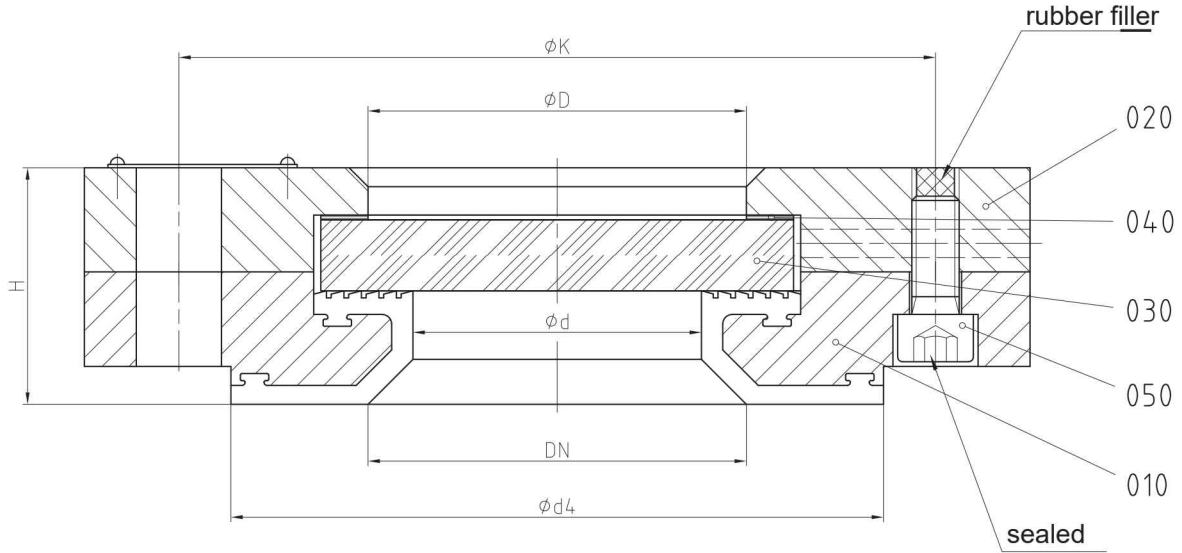
| DN | tie rods (050/060) | | connection flange | |
|-----|-----------------------|----------|-------------------|----------|
| | Nm | lbf · in | Nm | lbf · in |
| 025 | 14 | 124 | 25 | 221 |
| 1" | 15 | 133 | 15 | 133 |
| 040 | 22 | 195 | 50 | 442 |
| 1½" | 24 | 212 | 26 | 230 |
| 050 | 40 | 195 | 65 | 575 |
| 2" | 42 | 372 | 60 | 531 |
| 065 | 40 | 354 | 90 | 796 |
| 080 | 55 | 487 | 55 | 487 |
| 3" | 59,5 | 527 | 100 | 885 |
| 100 | 47 | 416 | 64 | 566 |
| 4" | 50 | 442 | 76 | 672 |
| 150 | 51 | 451 | 130 | 1151 |
| 6" | 53 | 470 | 129 | 1142 |
| 200 | 116 | 1027 | 190 | 1682 |
| 8" | 123 | 1089 | 193 | 1708 |
| 250 | 116 | 1027 | 175 | 1549 |
| 10" | 123 | 1089 | 152 | 1345 |

** maximum value
 When bolting together dissimilar materials, always tighten to the lowest recommended torque of the components in the joint. Using higher torques may cause excessive deformation of the „softer“ material in the joint

ASG - K_v Data and C_v Data (DIN EN 60534-2-3)

| DIN | ANSI | K _v m³/h | C _v gal/min |
|-----|------|------------------------|---------------------------|
| 025 | 1" | 27,3 | 31,7 |
| 040 | 1 ½" | 82,5 | 95,9 |
| 050 | 2" | 125,8 | 146,2 |
| 065 | - | 215,4 | 250,4 |
| 080 | 3" | 330,5 | 384,1 |
| 100 | 4" | 515,1 | 598,7 |
| 150 | 6" | 1224,7 | 1423,5 |
| 200 | 8" | at time not available | |
| 250 | 10" | | |

Technical Data ASG/B

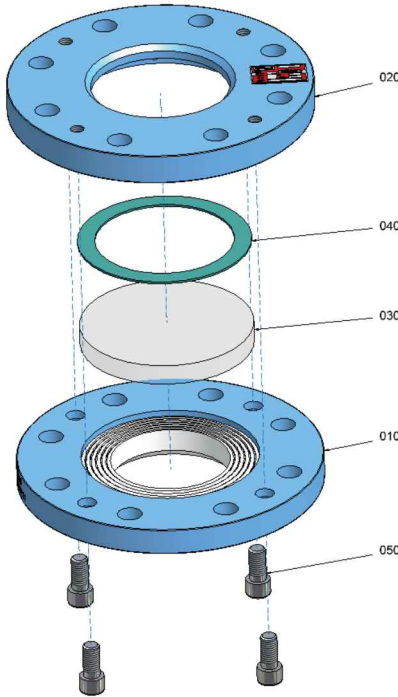


„DBGM“

Max. allowed overpressure 145 psi DIN 28121
 Flange Connections DIN EN 1092-2 PN 10

| DN / DIN | | H | ØD | Ød | Ød4 | ØK | weight | |
|----------|------|------|------|------|-------|-------|--------|------|
| 080 | mm | 50 | 80 | 61 | 138 | 160 | kg | 8,2 |
| | inch | 1,97 | 3,15 | 2,4 | 5,43 | 6,3 | lbs | 18,1 |
| 100 | mm | 50 | 100 | 86 | 158 | 180 | kg | 11,0 |
| | inch | 1,97 | 3,94 | 3,39 | 6,22 | 7,09 | lbs | 24,3 |
| 125 | mm | 58 | 125 | 110 | 188 | 210 | kg | 15,7 |
| | inch | 2,28 | 4,92 | 4,33 | 7,4 | 8,27 | lbs | 34,7 |
| 150 | mm | 58 | 125 | 110 | 212 | 240 | kg | 19,0 |
| | inch | 2,28 | 4,92 | 4,33 | 8,35 | 9,45 | lbs | 41,9 |
| 200 | mm | 58 | 150 | 135 | 268 | 295 | kg | 33,0 |
| | inch | 2,28 | 5,91 | 5,31 | 10,55 | 11,61 | lbs | 72,8 |

Material specification ASG/B



| No. | Designation | Pieces | Material | Material-No. / DIN | ASTM / AISI |
|-----|-----------------------|--------|--------------------|-----------------------|-------------|
| 010 | basic flange | 1 | steel / PFA | 1.0038 DIN EN 10025-2 | A 283-78 |
| 020 | counter flange | 1 | steel | 1.0038 DIN EN 10025-2 | A 283-78 |
| 030 | glass | 1 | borosilicate-glass | DIN 7080 | |
| 040 | flat gasket | 1 | UNITEC 300 green | DIN 3535-6 | |
| 050 | hexagonal socket head | 4 | steel | 8.8 / DIN EN ISO 4762 | |

ASG/B - recommended tightening torques

| DN | Nm |
|-----|-----|
| 80 | 55 |
| 100 | 67 |
| 125 | 90 |
| 150 | 130 |
| 200 | 190 |