

Check Valves

Type 05414 - Check Valve



Cryogenic-Check Valves, PN50 (DN150=PN40)

Stainless steel body and cap
with spring, opening pressure ca. 0.1 bar
"cleaned and degreased for oxygen service"

Part No. 05414.X.000*

* Butt weld connection for stainless steel pipes acc. to ISO 1127 or ASTM A312

Part No. 05414.X.0004

Socket weld connection for stainless steel pipes acc. to ISO 1127 or ASTM A312

Available options - on request only:

- Welded stainless steel stubs acc. to ISO 1127 or ASTM A312 - length FF + 200mm
- Further pipe wall thicknesses

Check valves provide reliable backflow functionality when properly sized. Based on experience, the minimum operating range of the valve should be 50% for gases and 40% for liquids in relation to the total capacity of the valve. Lower flow rates can lead to unstable performance, excessive noise, and even component failure.

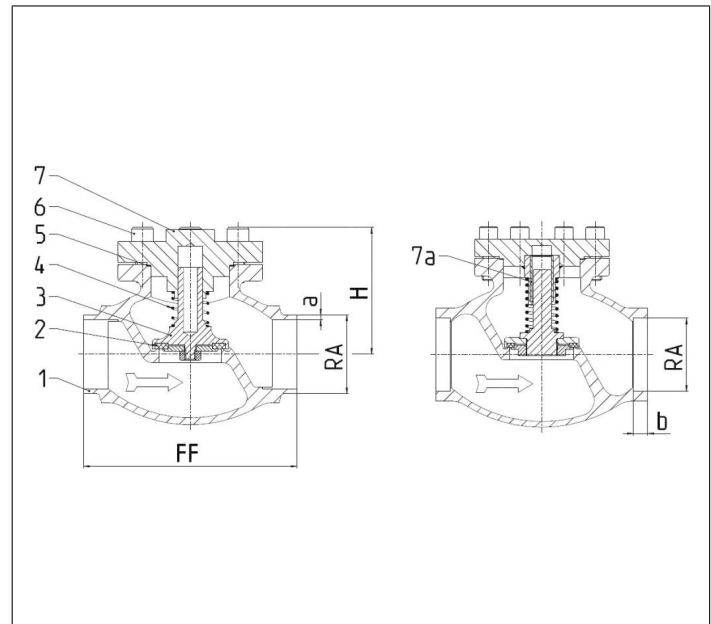
Applications:

Approved for air gases, vapours and cryogenic liquefied gases incl. LNG.

Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)



| Materials | DIN EN | ASTM |
|-------------------------|----------------------------|-------------------|
| 1 Body | 1.4308 | A 351 CF8 |
| 2 Valve seal up to DN50 | PTFE / Carbon filled (25%) | |
| 2a Valve seal from DN65 | PTFE | |
| 3 Disc | 1.4301 | A 276 Grade 304 |
| 4 Spring | 1.4571 | A 313 Grade 316Ti |
| 5 Bonnet gasket | PTFE | |
| 6 Bolts | 1.4301/A2 | A 194 B8 |
| 7 Cap | 1.4301 | A 276 Grade 304 |
| 7a Bush from DN65 | PTFE | |



| Type 05414 - Standard design | Technical data | | | | | | | | | | | | | | |
|-------------------------------|-------------------|-------------------------------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|--|
| Nominal size | DN | 10 | 15 | 15 | 20 | 25 | 32 | 40 | 40 | 50 | 65 | 80 | 100 | 150 | |
| Dimension code | .X. | 1012 | 1517 | 1521 | 2026 | 2533 | 3238 | 4042 | 4048 | 5060 | 657x | 8088 | 0114 | 0168 | |
| Face-to-face dimension | FF | 70 | 85 | 85 | 100 | 115 | 115 | 130 | 130 | 155 | 205 | 245 | 280 | 400 | |
| Height | H | 71 | 71 | 71 | 72 | 75 | 87 | 95 | 95 | 95 | 125 | 150 | 185 | 215 | |
| Outside pipe-Ø ISO 1127 | RA | 12.0 | 17.2 | 21.3 | 26.9 | 33.7 | 38.0 | 42.4 | 48.3 | 60.3 | 76.1 | 88.9 | 114.3 | 168.3 | |
| Wall thickness pipe ISO 1127 | a | 1.0 | 1.6 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.9 | 3.2 | 6.0 | 7.1 | |
| Outside pipe-Ø ASTM A312 | RA | 13.72 | 17.15 | 21.34 | 26.67 | 33.40 | - | 42.16 | 48.26 | 60.33 | 73.03 | 88.90 | 114.3 | 168.3 | |
| Wall thickness pipe ASTM A312 | a | dimensions acc. to S10 or S40 | | | | | | | | | | | | | |
| Socket depth | b | 6 | 10 | 10 | 13 | 13 | - | 13 | 13 | 16 | 16 | 16 | 20 | 20 | |
| Weight | ca. kg | 0.7 | 0.95 | 1.0 | 1.3 | 1.6 | 2.4 | 3.9 | 3.9 | 5.7 | 9.6 | 14.6 | 20.0 | 51.0 | |
| Kvs-Value | m ³ /h | 1.6 | 3.8 | 4.3 | 6.7 | 11.5 | 14.0 | 20.6 | 22.6 | 37.1 | 71.1 | 104.0 | 170.0 | 350.0 | |
| Cv-Value | gal/min | 1.9 | 4.4 | 5.0 | 7.8 | 13.4 | 16.2 | 23.9 | 26.3 | 43.2 | 82.9 | 121.3 | 198.3 | 408.4 | |

Dimensions in mm. Leakage rates will be provided on request