

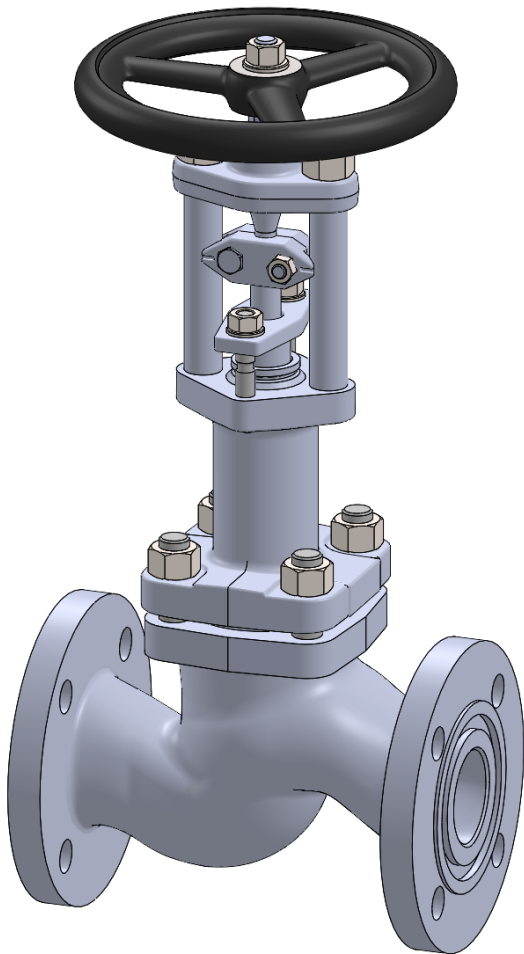


PHÖNIX

STRACK

DAUME
REGELARMATUREN

SIP Solent & Pratt
Phoenix Ltd



Globe Valve

Type 350

PN 320

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Model 350

Straight Way / Protected Bellows

Applications & Design Features

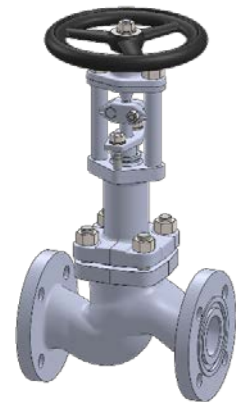
Applications

Model 350 is designed for critical service applications involving lethal, toxic, corrosive, inflammable, volatile, radiating, or expensive fluids. A Fire-Safe approved design per DIN EN 10497 is available for applications that have to comply with fire security standards.

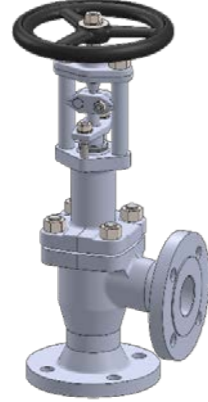
High vacuum resistant design 10⁻³ to 10⁻⁸ mbar, helium leakage test is possible if required
the most common applications are

- Dry Chlorine (Cl₂)
- Anhydrous Hydrogen Chloride (HCl)
- Vinyl Chloride Monomer (VCM)
- Ethylene Dichloride (EDC)
- Anhydrous Hydrofluoric Acid (HF)
- Isocyanates (MDI, TDI, HDI, etc.)
- heat transfer fluid application (steam, hot oil, molten Sodium, etc.) and
- fluids of similar nature.

The unique valve design guarantees reliable and excellent protection against leaks or fugitive emissions. The stem seal requires virtually no maintenance due to leak free weld connections of the bellows with bonnet and stem. Constant packing monitoring and re-packing is eliminated. In the unlikely event of a bellows failure the backup packing guarantees safe valve performance until the next scheduled shutdown.



Straight



Angle



Y-Pattern

Design Features

Bellows and Packing

- bellows protected in extended bonnet against direct impingement from product flow
- multiple walls and hydroformed bellows
- up to 50.000 bellows operations guaranteed

Stem

- two-piece stem protects the bellows against torque stress
- design eliminates stem bearings along with their maintenance needs
- guided stem on top and bottom
- one-piece stem design upon request

Body and Bonnet

- bodies are forgings or castings with larger than required wall thickness and integral flanges
- extended bonnet provides for good thermal insulation
- body bonnet joint gasket is fully confined to prevent gasket flow or blowout

Seats

- solid hardfacings for outstanding corrosion and wear resistance
- knife edge metal-to-metal seat for bubble-tight shutoff
- replaceable disc for inexpensive maintenance

= zero emissions, zero seat leakage, low maintenance

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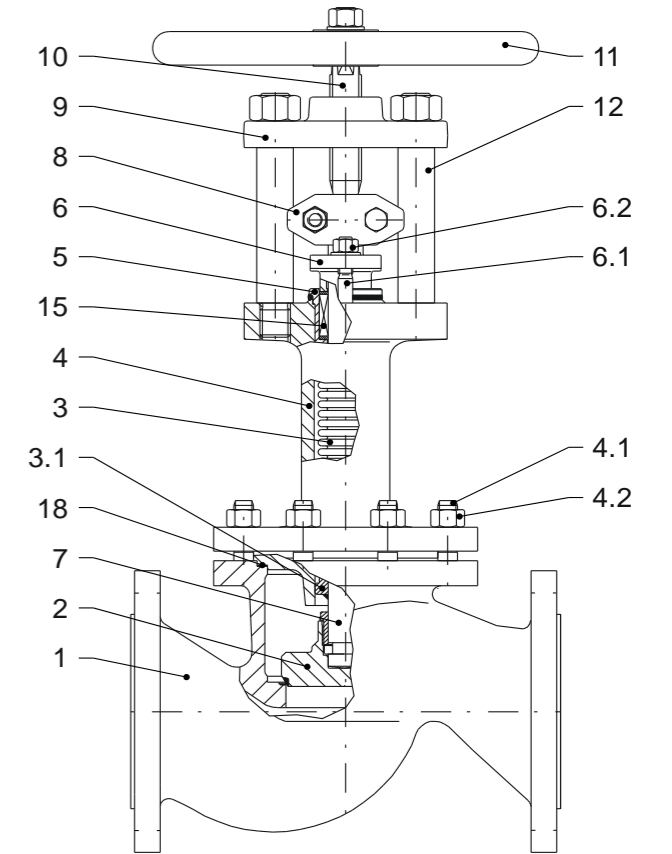
Standard Materials of Construction

Options

Other materials per customer requirements are available!

Notes

Phoenix reserves the right to change product design and specification without notice!



Materials

| Item | Part Name | Carbon steel Model 350C up to 450°C | low temp. Carbon steel Model 350T -50°C up to 300°C | Stainless steel Model 350V -200°C up to 400°C |
|------|-------------------|---|---|---|
| 1 | Body | 1.0460 / 1.0619 | 1.0566 / 1.6220 | 1.4404 / 1.4408 |
| | Seat overlay | 1.4370 (≈ 200HRB) | 1.4370 (≈ 200HRB) | like body (≈ 200HRB) |
| 2 | Disc | 1.4021 hardened / 1.0460 | 1.4571 / 1.0566 | 1.4571 |
| | Overlay | 1.4009 (≈ 300HRB) | Stellite 6 (≈ 42HRC) | Stellite 6 (≈ 42HRC) |
| 3 | Bellows | 1.4571 | 1.4571 | 1.4571 |
| 3.1 | Guide ring | 1.4571 | 1.4571 | 1.4571 |
| 4 | Bonnet | 1.0460 / 1.0619 | 1.0566 / 1.6220 | 1.4404 / 1.4408 |
| 4.1 | Stud bolt | 1.7709 | A4-70 | A4-70 |
| 4.2 | Hex. nut | 1.7218 | A4-70 | A4-70 |
| 5 | Stuffing box body | 1.4571 | 1.4571 | 1.4571 |
| 6 | Gland follower | 1.0619 | 1.5638 | 1.4408 |
| 6.1 | Stud bolt | Steel 5.6 | A4-70 | A4-70 |
| 6.2 | Hex. nut | Steel 5 | A4-70 | A4-70 |
| 7 | Lower stem | 1.4571 | 1.4571 | 1.4571 |
| 8 | Coupling | 1.4408 | 1.4408 | 1.4408 |
| 9 | Bridge | 1.0460, QPQ-nitrided | 1.0460, QPQ-nitrided | 1.0460, QPQ-nitrided |
| 10 | Upper stem | 1.4057 | 1.4057 | 1.4057 |
| 11 | Handwheel | Cast iron | Cast iron | Cast iron |
| 12 | Pillar | 1.0501 | 1.4057 | 1.4057 |
| 15 | Packing | Graphite | PTFE-silk * | Graphite |
| 18 | Gasket | Grooved SS / graphite | Grooved SS / graphite | Grooved SS / graphite |

* ≥ 220°C Packing of pure graphite



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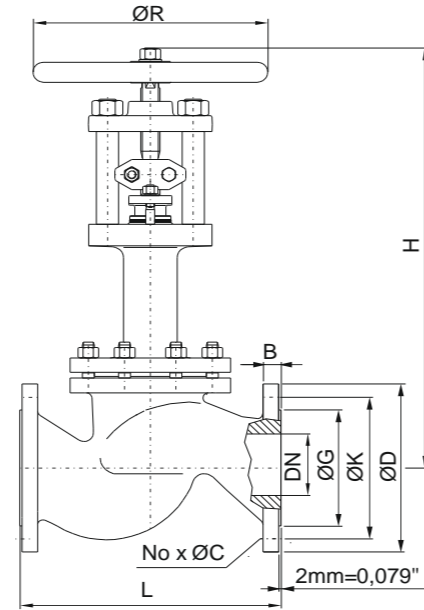
PN320 Sizes DN15 - DN100

Options

- Other customer specific designs on request

Notes

- Design acc. PED 2014/68/EU and harmonized standards
- Marking acc. to EN 19, AD-A4, PED 2014/68/EU, CE
- Standard tests acc. to DIN EN 12266, ISO 5208
- Preservation acc. to manufacturer standard
- Connections:
 - Flanges acc. to DIN EN 1092-1
 - Butt Weld Ends acc. to DIN EN 12627
 - Socket Weld Ends acc. to DIN EN 12760
- F-T-F Dimensions:
 - Flanges acc. to DIN EN 558-1
 - Butt Weld Ends acc. to DIN EN 12982
 - Socket Weld Ends acc. to manufacturer standard



Dimensions & Weights & Flow Coefficients

| DN | Unit | Globe | | Flange facing type B1 | | | | | | Kv [m³/h] | |
|------|------|-------|-------|-----------------------|------|-------|----------|-------|------|-----------|----------------|
| | | L | H | ØR | ØG | ØK | No x ØC | ØD | B | Weight | cv [USGal/min] |
| 15 | [mm] | 230 | 440 | 315 | 45 | 90 | 4 x 18 | 130 | 26 | 32 kg | 3.4 |
| | [in] | 9.06 | 17.32 | 12.40 | 1.77 | 3.54 | 4 x 0.71 | 5.12 | 1.02 | 71 lbs | 3.95 |
| 25 | [mm] | 260 | 450 | 315 | 68 | 115 | 4 x 22 | 160 | 34 | 36 kg | 9.5 |
| | [in] | 10.24 | 17.72 | 12.40 | 2.68 | 4.53 | 4 x 0.87 | 6.30 | 1.34 | 79 lbs | 11.05 |
| 40 | [mm] | 300 | 550 | 400 | 88 | 145 | 4 x 26 | 195 | 38 | 46 kg | 27 |
| | [in] | 11.81 | 21.65 | 15.75 | 3.46 | 5.71 | 4 x 1.02 | 7.68 | 1.50 | 101 lbs | 31 |
| 50 | [mm] | 350 | 600 | 400 | 102 | 160 | 8 x 26 | 210 | 42 | 51 kg | 40 |
| | [in] | 13.78 | 23.62 | 15.75 | 4.02 | 6.30 | 8 x 1.02 | 8.27 | 1.65 | 112 lbs | 47 |
| 80* | [mm] | 450 | 980 | 400 | 138 | 220 | 8 x 30 | 275 | 55 | 87 kg | 113 |
| | [in] | 17.72 | 38.58 | 15.75 | 5.43 | 8.66 | 8 x 1.18 | 10.83 | 2.17 | 192 lbs | 131 |
| 100* | [mm] | 520 | 1100 | 500 | 162 | 265 | 8 x 36 | 335 | 65 | 137 kg | 179 |
| | [in] | 20.47 | 43.31 | 19.69 | 6.38 | 10.43 | 8 x 1.42 | 13.19 | 2.56 | 302 lbs | 208 |

* Nominal Sizes with Equilibrating Disc



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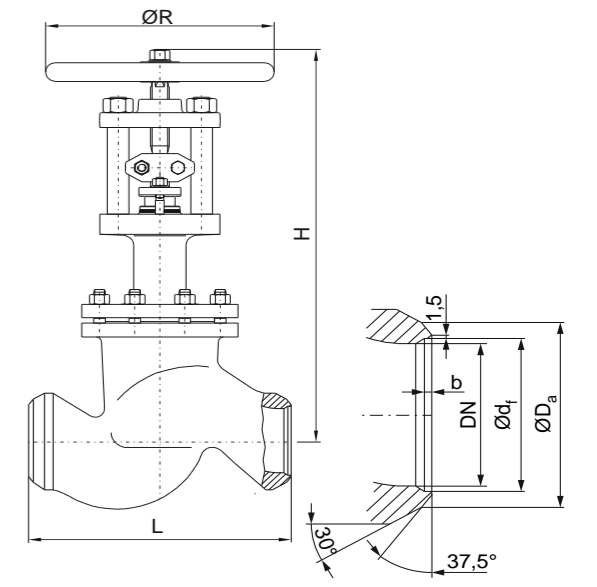
PN320 Sizes DN15 - DN100

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- Connections:
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 - Butt Weld Ends acc. to DIN EN 12627
 - Socket Weld Ends acc. to DIN EN 12760
- F-T-F Dimensions:
 - Flanges acc. to DIN EN 558-1
 - Butt Weld Ends acc. to DIN EN 12982
 - Socket Weld Ends acc. to manufacturer standard

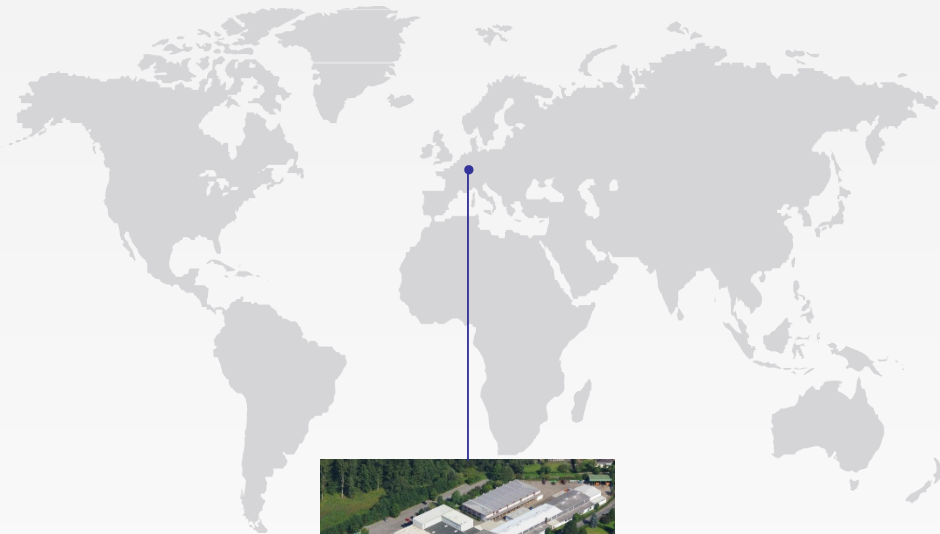


Dimensions & Weights & Flow Coefficients

| DN | Unit | Globe | | Butt Weld Ends | | | | Weight | Kv [m³/h] | |
|------|------|-------|---|----------------|-----------------|-----------------|---|--------|-----------|----------------|
| | | L | H | ØR | ØD _a | Ød _i | b | | for pipe | cv [USGal/min] |
| 15 | [mm] | | | | | | | | | |
| | [in] | | | | | | | | | |
| 25 | [mm] | | | | | | | | | |
| | [in] | | | | | | | | | |
| 40 | [mm] | | | | | | | | | |
| | [in] | | | | | | | | | |
| 50 | [mm] | | | | | | | | | |
| | [in] | | | | | | | | | |
| 80* | [mm] | | | | | | | | | |
| | [in] | | | | | | | | | |
| 100* | [mm] | | | | | | | | | |
| | [in] | | | | | | | | | |

* Nominal Sizes with Equilibrating Disc

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