

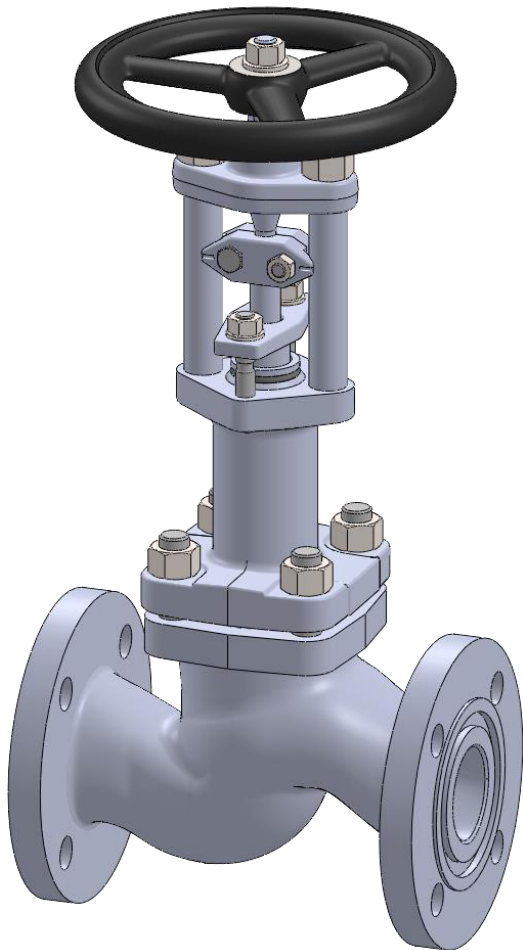


PHÖNIX

STRACK

DAUME
REGELARMATUREN

SIP Solent & Pratt
Phönix Ltd



Globe Valve

Type 350

Class 900

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Model 350

Straight Way / Protected Bellows

Applications & Design Features

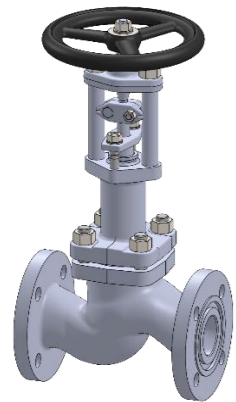
Applications

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.

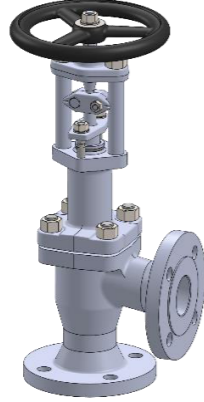
High vacuum resistant design 10⁻³ to 10⁻⁸ mbar, helium leakage test is possible if required
the most common applications are

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

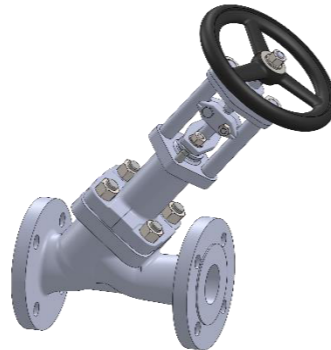
The unique valve design guarantees reliable and excellent protection against leaks or fugitive emissions. The stem seal requires virtually no maintenance due to leak free weld connections of the bellows with bonnet and stem. Constant packing monitoring and re-packing is eliminated. In the unlikely event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

Model 350

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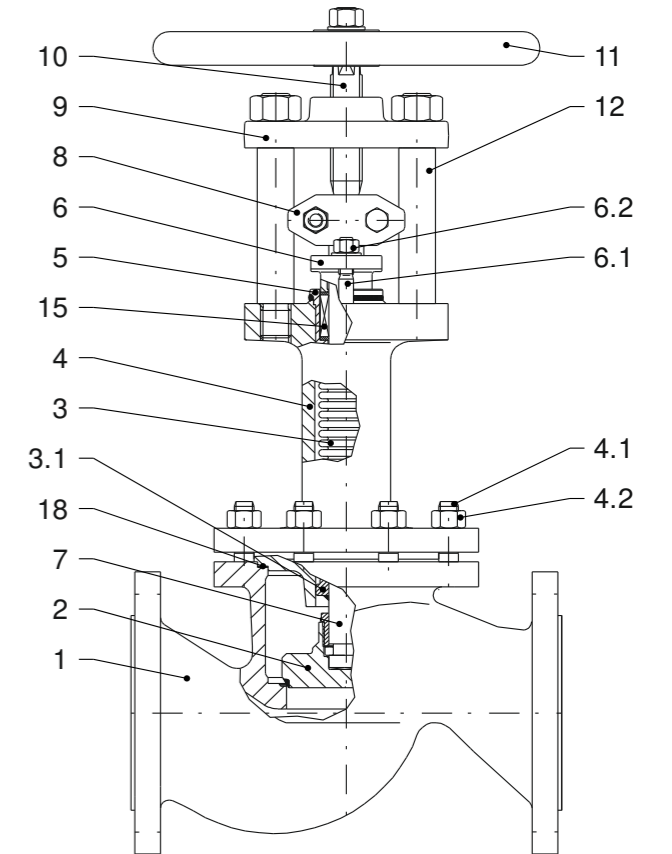
Standard Materials of Construction

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 842°F	low temp. Carbon steel Model 350T -58°F UP TO 572°F	Stainless steel Model 350V -328°F UP TO 752°F
1	Body Seat overlay	A105 / A216 WCB ER307 (≈ 200HRB)	A350 LF2 / A352 LCC ER307 (≈ 200HRB)	A182 F316L / A351 CF8M like body (≈ 200HRB)
2	Disc Overlay	AISI 420 hardened / A105 ER410 (≈ 300HRB)	A479 GR.316TI / A350 LF2 STELLITE 6 (≈ 42HRC)	A479 GR.316TI Stellite 6 (≈ 42HRC)
3	Bellows	A240 GR.316TI	A240 GR.316TI	A240 GR.316TI
3.1	Guide ring	A479 GR.316TI	A479 GR.316TI	A479 GR.316TI
4	Bonnet	A105 / A216 WCB	A350 LF2 / A352 LCC	A182 F316L / A351 CF8M
4.1	Stud bolt	A193 GR.B7	A193 GR.B8M	A193 GR.B8M
4.2	Hex. nut	A194 - 7L	A194 GR.8M	A194 GR.8M
5	Stuffing box body	A479 GR.316TI	A479 Gr. 316TI	A479 Gr. 316TI
6	Gland follower	A216 WCB	A352 LC3	A351 CF8M
6.1	Stud bolt	Carbon steel	A193 GR.B8M	A193 GR.B8M
6.2	Hex. nut	Carbon steel	A194 GR.8M	A194 GR.8M
7	Lower stem	A479 GR.316TI	A479 GR.316TI	A479 GR.316TI
8	Coupling	A351 CF8M	A351 CF8M	A351 CF8M
9	Bridge	A105, QPQ-nitrided	A105, QPQ-nitrided	A105, QPQ-nitrided
10	Upper stem	AISI 431	AISI 431	AISI 431
11	Handwheel	CAST IRON	CAST IRON	Cast iron
12	Pillar	C35	AISI 431	AISI 431
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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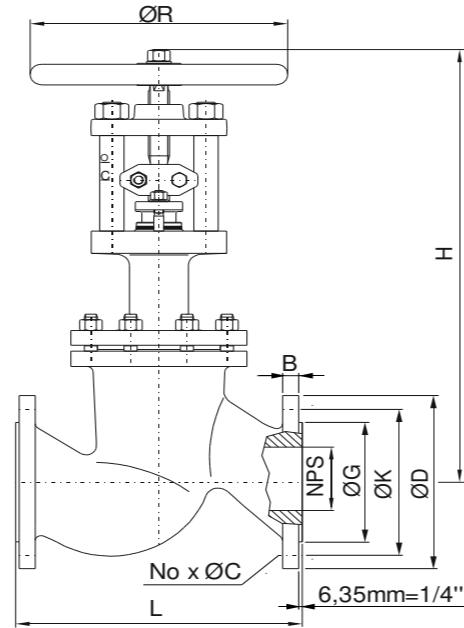
Class 900 Sizes 1/2" - 8"

Options

- Other customer specific designs on request

Notes

- Designed in acc. with asme b 16.34
- Marking acc. to MSS SP-25, ISO 5209 (EN19, AD-A4, CE)
- Standard tests acc. to API 598, ISO 5208
- Preservation acc. to manufacturer standard
- Connections: Flanges acc. to ASME B16.5
Butt Weld Ends acc. to ASME B16.25
Socket Weld Ends acc. to ASME B16.11
- F-T-F Dimensions: Flanges acc. to ASME B16.10
Butt Weld Ends acc. to ASME B16.10
Socket Weld Ends acc. to manufacturer standard



Dimensions & Weights & Flow Coefficients

NPS	Unit	Globe L	H	ØR	ØG	ØK	No x ØC	ØD	B	Weight	Kv [m³/h]	cv [USGal/min]
1/2"	[mm] [in]	ON REQUEST										
3/4"	[mm] [in]	229 9.02	345 13.58	150 5.91	43 1.69	89 3.50	4 x 22 4 x 0.87	130 5.12	25.4 1.00	14 kg 31 lbs	7 8.14	
1"	[mm] [in]	254 10.00	365 14.37	150 5.91	51 2.01	102 4.02	4 x 25 4 x 0.98	149 5.87	28.4 1.12	16 kg 35 lbs	9.5 11.05	
1 1/4"	[mm] [in]	ON REQUEST										
1 1/2"	[mm] [in]	305 12.01	430 16.93	200 7.87	73 2.87	124 4.88	4 x 28 4 x 1.10	178 7.01	31.8 1.25	27 kg 60 lbs	27 31	
2"	[mm] [in]	368 14.49	465 18.31	200 7.87	92 3.62	165 6.50	8 x 25 8 x 0.98	216 8.50	38.1 1.50	31 kg 68 lbs	40 47	
2 1/2"	[mm] [in]	419 16.50	650 25.59	315 12.40	105 4.13	191 7.52	8 x 28 8 x 1.10	244 9.61	41.1 1.62	45 kg 99 lbs	78 91	
3"	[mm] [in]	381 15.00	700 27.56	315 12.40	127 5.00	191 7.52	8 x 25 8 x 0.98	241 9.49	38.1 1.50	65 kg 143 lbs	113 131	
4"	[mm] [in]	457 17.99	720 28.35	400 15.75	157 6.18	235 9.25	8 x 32 8 x 1.26	292 11.50	44.5 1.75	110 kg 243 lbs	179 208	
5"	[mm] [in]	ON REQUEST										
6" *	[mm] [in]	610 24.02	870 34.25	400 15.75	216 8.50	318 12.52	12 x 32 12 x 1.26	381 15.00	55.6 2.19	200 kg 441 lbs	405 471	
8" *	[mm] [in]	737 29.02	1080 42.52	500 19.69	270 10.63	394 15.51	12 x 38 12 x 1.50	470 18.50	63.5 2.50	315 kg 694 lbs	693 806	

* Nominal Sizes with Equilibrating Disc



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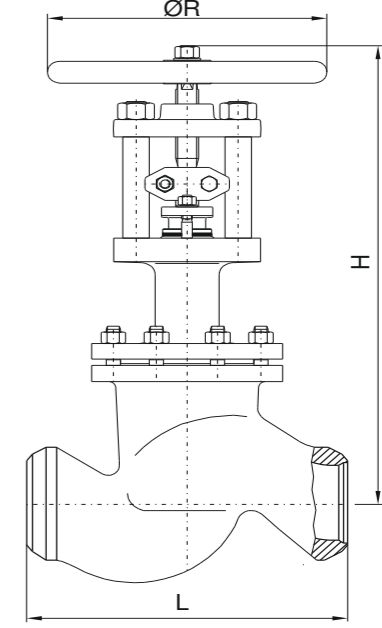
Class 900 Sizes 1/2" - 8"

Options

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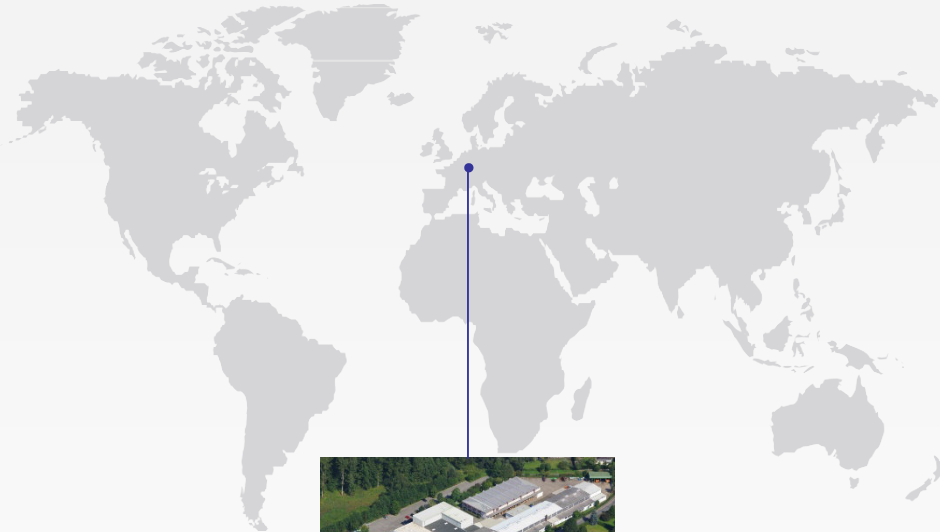


Dimensions & Weights & Flow Coefficients

NPS	Unit	Globe L	H	ØR	ØD _a	Ød _f	Butt Weld Ends Schedule	for pipe	Weight	Kv [m³/h]	cv [USGal/min]	
1/2"	[mm] [in]	ON REQUEST										
3/4"	[mm] [in]	150 5.91	345 13.58	150 5.91	27 1.06	21 0.83	40	Ø26.7 x 2.9 Ø1.05 x 0.11	8 kg 17.6 lbs	7 8.14		
1"	[mm] [in]	160 6.30	365 14.37	150 5.91	34 1.34	27 1.06	40	Ø33.4 x 3.4 Ø1.31 x 0.13	8 kg 17.6 lbs	9.5 11.05		
1 1/4"	[mm] [in]	ON REQUEST										
1 1/2"	[mm] [in]	200 7.87	430 16.93	200 7.87	48.5 1.91	41 1.61	40	Ø48.3 x 3.7 Ø1.90 x 0.15	15 kg 33 lbs	27 31		
2"	[mm] [in]	230 9.06	465 18.31	200 7.87	60.5 2.38	52.5 2.07	40	Ø60.3 x 3.9 Ø2.37 x 0.15	17 kg 37 lbs	40 47		
2 1/2"	[mm] [in]	419 16.50	650 25.59	315 12.40	73 2.87	63 2.48	40	Ø73 x 5.2 Ø2.87 x 0.20	18 kg 40 lbs	78 91		
3"	[mm] [in]	381 15.00	700 27.56	315 12.40	89 3.50	78 3.07	40	Ø88.9 x 5.5 Ø3.50 x 0.22	42 kg 93 lbs	113 131		
4"	[mm] [in]	457 17.99	720 28.35	400 15.75	114 4.49	102 4.02	40	Ø114.3 x 6.0 Ø4.50 x 0.24	72 kg 159 lbs	179 208		
5"	[mm] [in]	ON REQUEST										
6" *	[mm] [in]	610 24.02	870 34.25	400 15.75	168 6.61	154 6.06	40	Ø168.3 x 7.1 Ø6.63 x 0.28	124 kg 273 lbs	405 471		
8" *	[mm] [in]	737 29.02	1080 42.52	500 19.69	219 8.62	203 7.99	40	Ø219.1 x 8.2 Ø8.63 x 0.32	188 kg 414 lbs	693 806		

* Nominal Sizes with Equilibrating Disc

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