

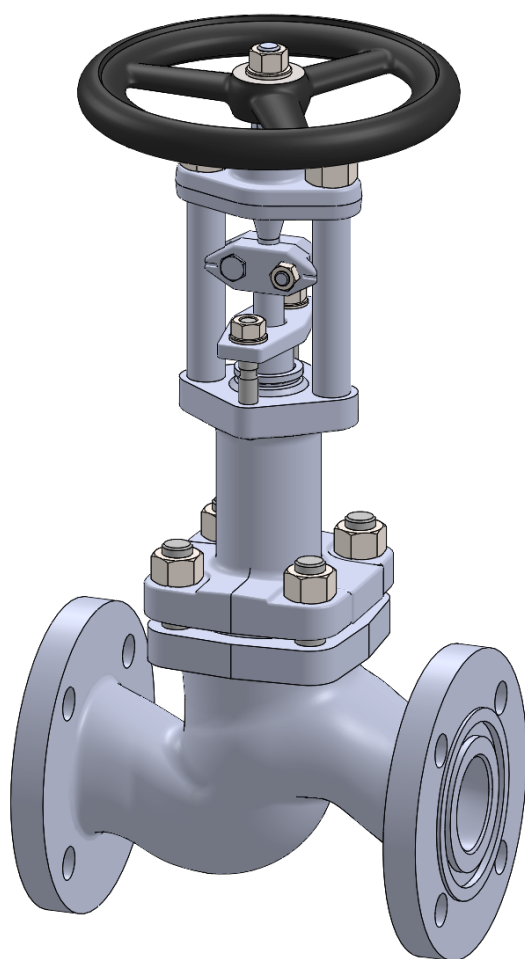


PHÖNIX

STRACK

DAUME
REGELARMATUREN

SIP Solent & Pratt
Phönix Ltd



Globe Valve Type 350 PN 63

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Model 350

Straight Way / Protected Bellows

Applications & Design Features

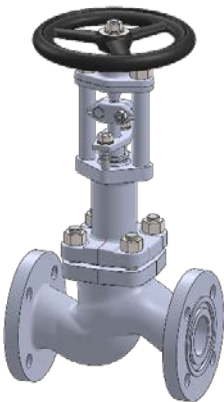
Applications

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.

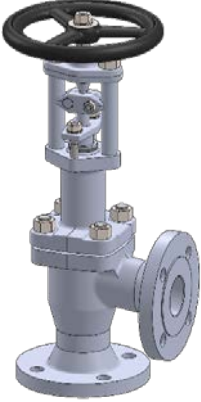
High vacuum resistant design 10-3 to 10-8 mbar, helium leakage test is possible if required
the most common applications are

- 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



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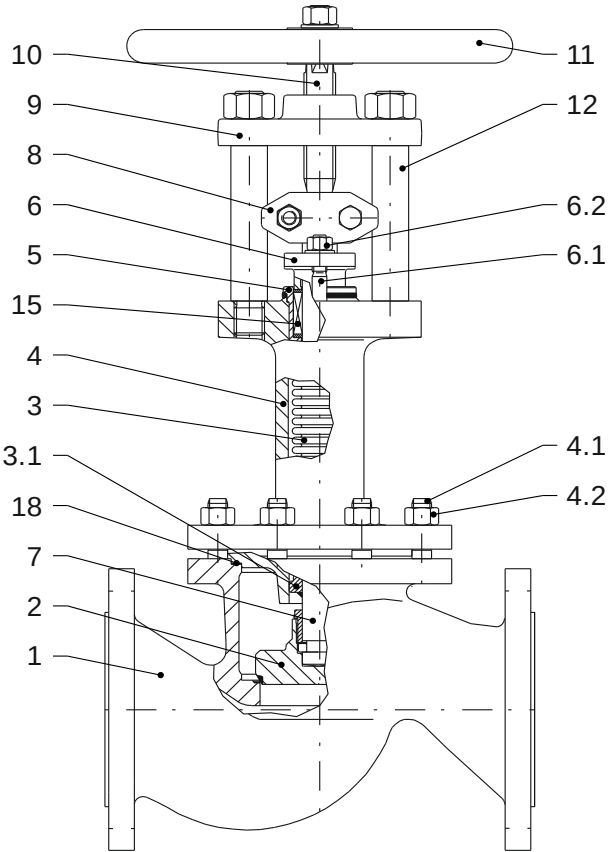
Standard Materials of Construction

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	low temp. Carbon steel	Stainless steel
		Model 350C up to 450°C	Model 350T -50°C up to 300°C	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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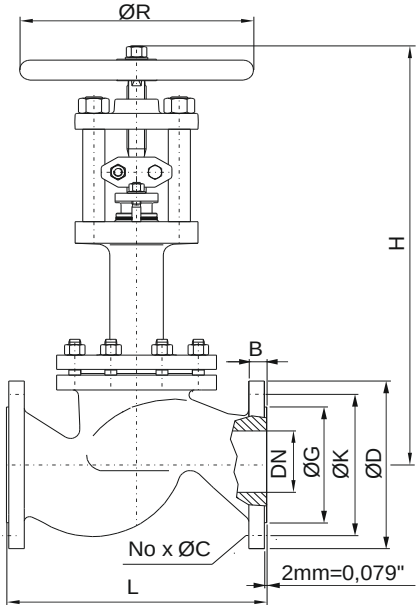
PN63 Sizes DN15 - DN400

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		ØR	Flange facing type B1				Weight	Kv [m³/h]	
		L	H		ØG	ØK	No x ØC	ØD		cv [USGal/min]	
15	[mm]	210	360	150	45	75	4 x 14	105	11 kg	3.4	
	[in]	8.27	14.17	5.91	1.77	2.95	4 x 0.55	4.13	24 lbs	3.95	
20	[mm]	230	345	150	58	90	4 x 18	130	13 kg	7	
	[in]	9.06	13.58	5.91	2.28	3.54	4 x 0.71	5.12	29 lbs	8.14	
25	[mm]	230	365	150	68	100	4 x 18	140	15 kg	9.5	
	[in]	9.06	14.37	5.91	2.68	3.94	4 x 0.71	5.51	33 lbs	11.05	
32	[mm]	260	430	200	78	110	4 x 22	155	23 kg	18	
	[in]	10.24	16.93	7.87	3.07	4.33	4 x 0.87	6.10	51 lbs	20.93	
40	[mm]	260	430	200	88	125	4 x 22	170	26 kg	27	
	[in]	10.24	16.93	7.87	3.46	4.92	4 x 0.87	6.69	57 lbs	31	
50	[mm]	300	465	200	102	135	4 x 22	180	30 kg	40	
	[in]	11.81	18.31	7.87	4.02	5.31	4 x 0.87	7.09	66 lbs	47	
65	[mm]	340	650	315	122	160	8 x 22	205	45 kg	78	
	[in]	13.39	25.59	12.40	4.80	6.30	8 x 0.87	8.07	99 lbs	91	
80	[mm]	380	700	315	138	170	8 x 22	215	65 kg	113	
	[in]	14.96	27.56	12.40	5.43	6.69	8 x 0.87	8.46	143 lbs	131	
100*	[mm]	430	720	400	162	200	8 x 26	250	110 kg	179	
	[in]	16.93	28.35	15.75	6.38	7.87	8 x 1.02	9.84	243 lbs	208	
125*	[mm]	500	850	400	188	240	8 x 30	295	170 kg	256	
	[in]	19.69	33.46	15.75	7.40	9.45	8 x 1.18	11.61	375 lbs	298	
150*	[mm]	550	870	400	218	280	8 x 33	345	200 kg	405	
	[in]	21.65	34.25	15.75	8.58	11.02	8 x 1.30	13.58	441 lbs	471	
200*	[mm]	650	1080	500	285	345	12 x 36	415	304 kg	693	
	[in]	25.59	42.52	19.69	11.22	13.58	12 x 1.42	16.34	670 lbs	806	
250*	[mm]	775	1160	500	345	400	12 x 36	470	488 kg	1047	
	[in]	30.51	45.67	19.69	13.58	15.75	12 x 1.42	18.50	1076 lbs	1217	
300*	[mm]	ON REQUEST									
350*	[mm]	ON REQUEST									
400*	[mm]	1150	1700	720	535	585	16 x 42	670	1100 kg	2024	
	[in]	45.28	66.93	28.35	21.06	23.03	16 x 1.65	26.38	2425 lbs	2353	

* Nominal Sizes with Equilibrating Disc



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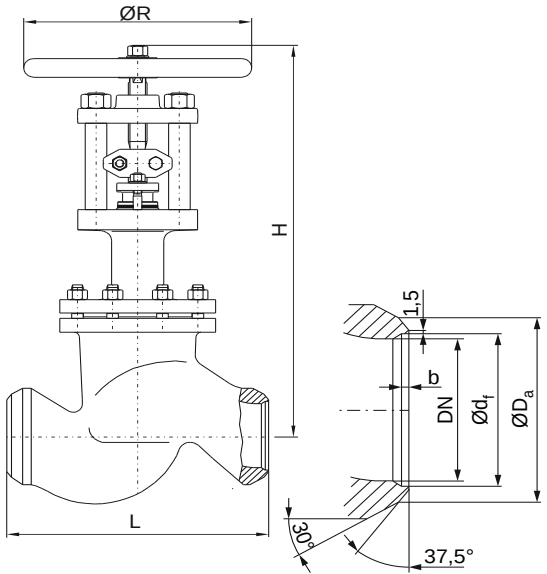
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Socket Weld Ends acc. to manufacturer standard



Dimensions & Weights & Flow Coefficients

DN	Unit	Globe		ØR	Butt Weld Ends			Weight	Kv [m³/h]	
		L	H		ØD _a	Ød _f	b		for pipe	cv [USGal/min]
15	[mm]	130	360	150	22	17	3	8.5 kg	Ø21.3 x 2.0	3.4
	[in]	5.12	14.17	5.91	0.87	0.67	0.12	18.7 lbs	Ø0.84 x 0.08	3.95
20	[mm]	ON REQUEST								
25	[mm]	160	365	150	35	28.5	4	11 kg	Ø33.7 x 2.6	9.5
	[in]	6.30	14.37	5.91	1.38	1.12	0.16	24 lbs	Ø1.33 x 0.10	11.05
32	[mm]	180	430	200	44	ON REQUEST			18 kg	18
	[in]	7.09	16.93	7.87	1.73				40 lbs	20.93
40	[mm]	200**	430	200	50	43	4	19 kg	Ø48.3 x 2.6	27
	[in]	7.87	16.93	7.87	1.97	1.69	0.16	42 lbs	Ø1.90 x 0.10	31
50	[mm]	230**	465	200	62	53.5	5	22 kg	Ø60.3 x 3.2	40
	[in]	9.06	18.31	7.87	2.44	2.11	0.20	49 lbs	Ø2.37 x 0.13	47
65	[mm]	340	650	315	77	68.5	6	36 kg	Ø76.1 x 3.6	78
	[in]	13.39	25.59	12.40	3.03	2.70	0.24	79 lbs	Ø3.00 x 0.14	91
80	[mm]	380	700	315	91	80.5	6	55 kg	Ø88.9 x 4.0	113
	[in]	14.96	27.56	12.40	3.58	3.17	0.24	121 lbs	Ø3.50 x 0.16	131
100*	[mm]	430	720	400	117	104.3	8	95 kg	Ø114.3 x 5.0	179
	[in]	16.93	28.35	15.75	4.61	4.11	0.31	209 lbs	Ø4.50 x 0.20	208
125*	[mm]	500	850	400	144	130.5	7	147 kg	Ø139.7 x 4.5	256
	[in]	19.69	33.46	15.75	5.67	5.14	0.28	324 lbs	Ø5.50 x 0.18	298
150*	[mm]	550	870	400	172	157	9	166 kg	Ø168.3 x 5.6	405
	[in]	21.65	34.25	15.75	6.77	6.18	0.35	366 lbs	Ø6.63 x 0.22	471
200*	[mm]	650	1080	500	223	204.5	11	253 kg	Ø219.1 x 7.1	693
	[in]	25.59	42.52	19.69	8.78	8.05	0.43	558 lbs	Ø8.63 x 0.28	806
250*	[mm]	775	1160	500	278	255	14	422 kg	Ø273.0 x 8.8	1047
	[in]	30.51	45.67	19.69	10.94	10.04	0.55	930 lbs	Ø10.75 x 0.35	1217
300*	[mm]	ON REQUEST								
350*	[mm]	ON REQUEST								
400*	[mm]	1150	1700	720	413	378	22	950 kg	Ø406.4 x 14.2	2024
	[in]	45.28	66.93	28.35	16.26	14.88	0.87	2094 lbs	Ø16.00 x 0.56	2353

* Nominal Sizes with Equilibrating Disc

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