

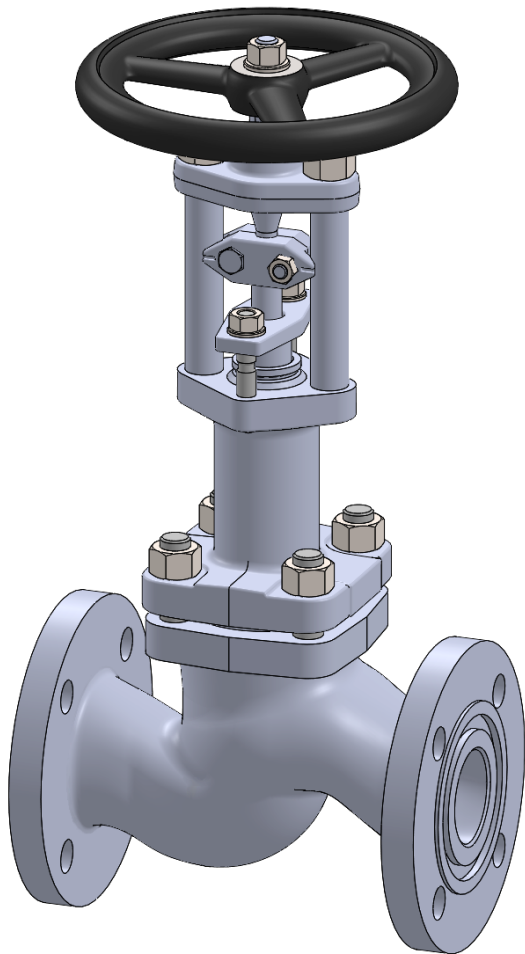


PHÖNIX

STRACK

DAUME
REGELARMATUREN

SIP Solent & Pratt
Phönix Ltd



Globe Valve

Type 350

PN 16

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Model 350

Straight Way / Protected Bellows

Applications & Design Features

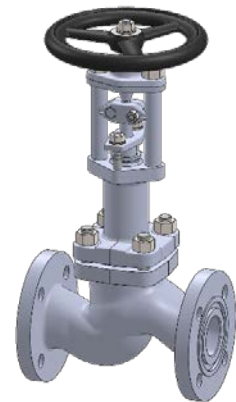
Applications

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.

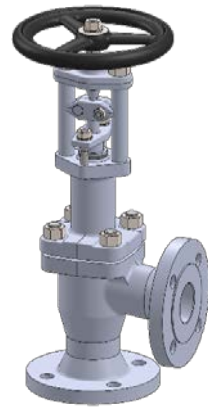
High vacuum resistant design 10⁻³ to 10⁻⁸ mbar, helium leakage test is possible if required
the most common applications are

- 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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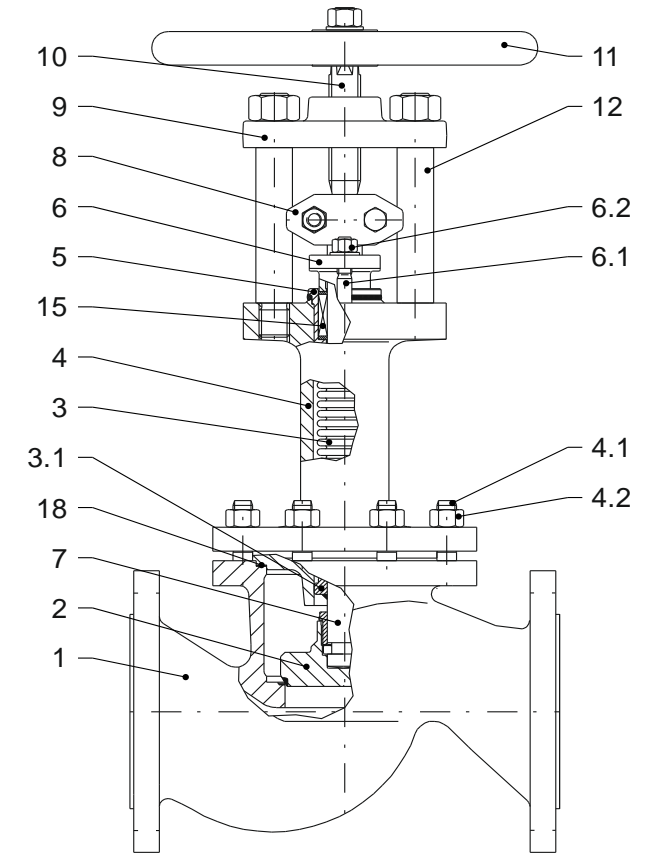
Standard Materials of Construction

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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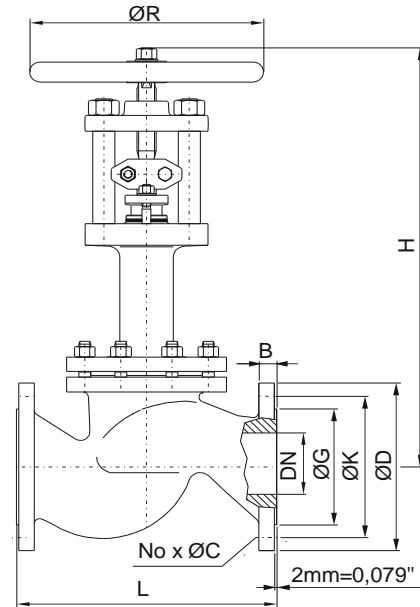
PN16 Sizes DN15 - DN500

Options

- Other customer specific designs on request

Notes

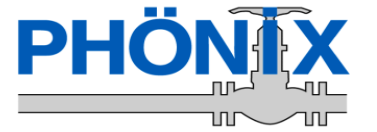
- Design acc. PED 2014/68/EU and harmonized standards
- Marking acc. to EN 19, AD-A4, PED 2014/68/EU, CE
- Standard tests acc. to DIN EN 12266, ISO 5208
- Preservation acc. to manufacturer standard
- Connections: Flanges acc. to DIN EN 1092-1
Butt Weld Ends acc. to DIN EN 12627
Socket Weld Ends acc. 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]	130	380	150	45	65	4 x 14	95	16	6.5 kg	3.4
	[in]	5.12	14.96	5.91	1.77	2.56	4 x 0.55	3.74	0.63	14.3 lbs	3.95
20	[mm]	150	380	150	58	75	4 x 14	105	18	7 kg	7
	[in]	5.91	14.96	5.91	2.28	2.95	4 x 0.55	4.13	0.71	15.4 lbs	8.14
25	[mm]	160	380	150	68	85	4 x 14	115	18	8 kg	9.5
	[in]	6.30	14.96	5.91	2.68	3.35	4 x 0.55	4.53	0.71	17.6 lbs	11.05
32	[mm]	180	405	200	78	100	4 x 18	140	18	14 kg	18
	[in]	7.09	15.94	7.87	3.07	3.94	4 x 0.71	5.51	0.71	31 lbs	20.93
40	[mm]	200	420	200	88	110	4 x 18	150	18	16 kg	27
	[in]	7.87	16.54	7.87	3.46	4.33	4 x 0.71	5.91	0.71	35 lbs	31
50	[mm]	230	440	200	102	125	4 x 18	165	18	19 kg	40
	[in]	9.06	17.32	7.87	4.02	4.92	4 x 0.71	6.50	0.71	42 lbs	47
65	[mm]	290	425	200	122	145	8 x 18	185	18	29 kg	78
	[in]	11.42	16.73	7.87	4.80	5.71	8 x 0.71	7.28	0.71	64 lbs	91
80	[mm]	310	520	250	138	160	8 x 18	200	20	38 kg	113
	[in]	12.20	20.47	9.84	5.43	6.30	8 x 0.71	7.87	0.79	84 lbs	131
100	[mm]	350	625	315	158	180	8 x 18	220	20	60 kg	179
	[in]	13.78	24.61	12.40	6.22	7.09	8 x 0.71	8.66	0.79	132 lbs	208
125*	[mm]	400	625	315	188	210	8 x 18	250	22	95 kg	256
	[in]	15.75	24.61	12.40	7.40	8.27	8 x 0.71	9.84	0.87	209 lbs	298
150*	[mm]	480	840	400	212	240	8 x 22	285	22	125 kg	405
	[in]	18.90	33.07	15.75	8.35	9.45	8 x 0.87	11.22	0.87	276 lbs	471
200*	[mm]	600	930	500	268	295	12 x 22	340	24	190 kg	693
	[in]	23.62	36.61	19.69	10.55	11.61	12 x 0.87	13.39	0.94	419 lbs	806
250*	[mm]	730	1020	500	320	355	12 x 26	405	26	305 kg	1047
	[in]	28.74	40.16	19.69	12.60	13.98	12 x 1.02	15.94	1.02	672 lbs	1217
300*	[mm]	850	1125	630	378	410	12 x 26	460	28	425 kg	1460
	[in]	33.46	44.29	24.80	14.88	16.14	12 x 1.02	18.11	1.10	937 lbs	1698
350*	[mm]	980	1395	720	438	470	16 x 26	520	30	540 kg	1780
	[in]	38.58	54.92	28.35	17.24	18.50	16 x 1.02	20.47	1.18	1190 lbs	2070
400*	[mm]	1100	1400	720	490	525	16 x 30	580	32	831 kg	2024
	[in]	43.31	55.12	28.35	19.29	20.67	16 x 1.18	22.83	1.26	1832 lbs	2353
500*	[mm]	1300	1500	720	610	650	20 x 33	715	44	1300 kg	3100
	[in]	51.18	59.06	28.35	24.02	25.59	20 x 1.30	28.15	1.73	2866 lbs	3605

* Nominal Sizes with Equilibrating Disc



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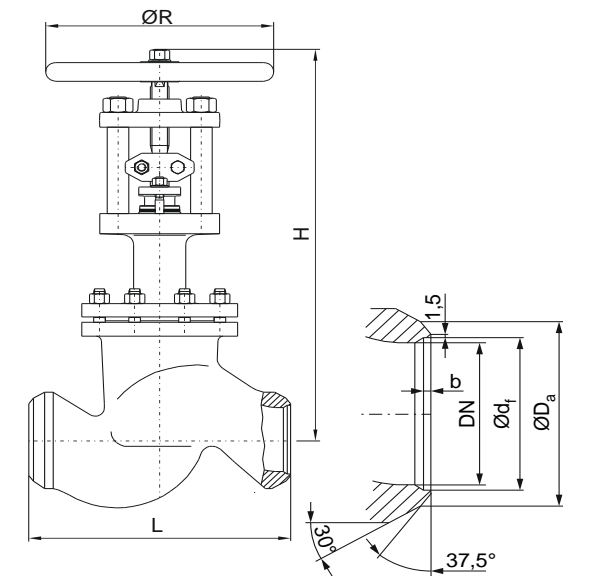
PN16 Sizes DN15 - DN500

Options

- Other customer specific designs on request

Notes

- Design acc. PED 2014/68/EU and harmonized standards
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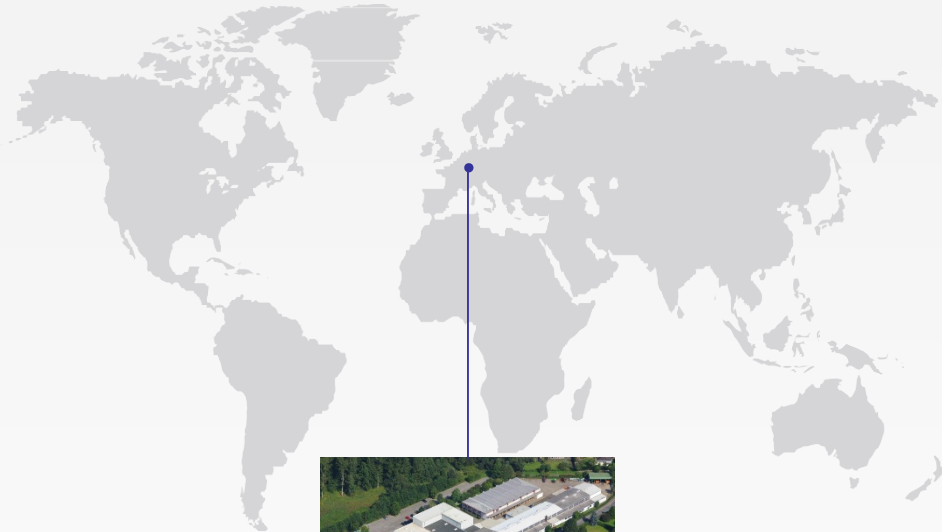


Dimensions & Weights & Flow Coefficients

DN	Unit	Globe		Butt Weld Ends					Weight	Kv [m³/h]
		L	H	ØR	ØD _a	Ød _f	b	for pipe		
15	[mm]	130	380	150	22	17	3	Ø21.3 x 2.0	5.1 kg	3.4
	[in]	5.12	14.96	5.91	0.87	0.67	0.12	Ø0.84 x 0.08	11.2 lbs	3.95
20	[mm]	150	380	150	28	22	4	Ø26.9 x 2.3	6.1 kg	7
	[in]	5.91	14.96	5.91	1.10	0.87	0.16	Ø1.06 x 0.09	13.4 lbs	8.14
25	[mm]	160	380	150	35	28.5	4	Ø33.7 x 2.6	5.7 kg	9.5
	[in]	6.30	14.96	5.91	1.38	1.12	0.16	Ø1.33 x 0.10	12.6 lbs	11.05
32	[mm]	180	405	200	44	ON REQUEST			10.6 kg	18
	[in]	7.09	15.94	7.87	1.73				23 lbs	20.93
40	[mm]	200	420	200	50	43	4	Ø48.3 x 2.6	12.2 kg	27
	[in]	7.87	16.54	7.87	1.97	1.69	0.16	Ø1.90 x 0.10	27 lbs	31
50	[mm]	230	440	200	62	53.5	5	Ø60.3 x 3.2	14 kg	40
	[in]	9.06	17.32	7.87	2.44	2.11	0.20	Ø2.37 x 0.13	31 lbs	47
65	[mm]	290	425	200	77	68.5	6	Ø76.1 x 3.6	23 kg	78
	[in]	11.42	16.73	7.87	3.03	2.70	0.24	Ø3.00 x 0.14	51 lbs	91
80	[mm]	310	520	250	91	80.5	6	Ø88.9 x 4.0	31 kg	113
	[in]	12.20	20.47	9.84	3.58	3.17	0.24	Ø3.50 x 0.16	68 lbs	131
100	[mm]	350	625	315	117	104.3	8	Ø114.3 x 5.0	50 kg	179
	[in]	13.78	24.61	12.40	4.61	4.11	0.31	Ø4.50 x 0.20	110 lbs	208
125*	[mm]	400	625	315	144	130.5	7	Ø139.7 x 4.5	83 kg	256
	[in]	15.75	24.61	12.40	5.67	5.14	0.28	Ø5.50 x 0.18	183 lbs	298
150*	[mm]	480	840	400	172	157	9	Ø168.3 x 5.6	108 kg	405
	[in]	18.90	33.07	15.75	6.77	6.18	0.35	Ø6.63 x 0.22	238 lbs	471
200*	[mm]	600	930	500	223	204.5	11	Ø219.1 x 7.1	160 kg	693
	[in]	23.62	36.61	19.69	8.78	8.05	0.43	Ø8.63 x 0.28	353 lbs	806
250*	[mm]	730	1020	500	278	257	12	Ø273.0 x 8.0	258 kg	1047
	[in]	28.74	40.16	19.69	10.94	10.12	0.47	Ø10.75 x 0.31	569 lbs	1217
300*	[mm]	850	1125	630	329	307.9	12	Ø323.9 x 8.0	362 kg	1460
	[in]	33.46	44.29	24.80	12.95	12.12	0.47	Ø12.75 x 0.31	798 lbs	1698
350*	[mm]	980	1395	720	362	338	14	Ø355.6 x 8.8	455 kg	1780
	[in]	38.58	54.92	28.35	14.25	13.31	0.55	Ø14.00 x 0.35	1003 lbs	2070
400*	[mm]	1100	1400	720	413	384.4	17	Ø406.4 x 11.0	712 kg	2024
	[in]	43.31	55.12	28.35	16.26	15.13	0.67	Ø16.00 x 0.43	1570 lbs	2353
500*	[mm]	1300	1500	720	516	479.6	22	Ø508.0 x 14.2	1157 kg	3100
	[in]	51.18	59.06	28.35	20.31	18.88	0.87	Ø20.00 x 0.56	2551 lbs	3605

* Nominal Sizes with Equilibrating Disc

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PAW SARL

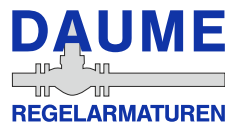
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