

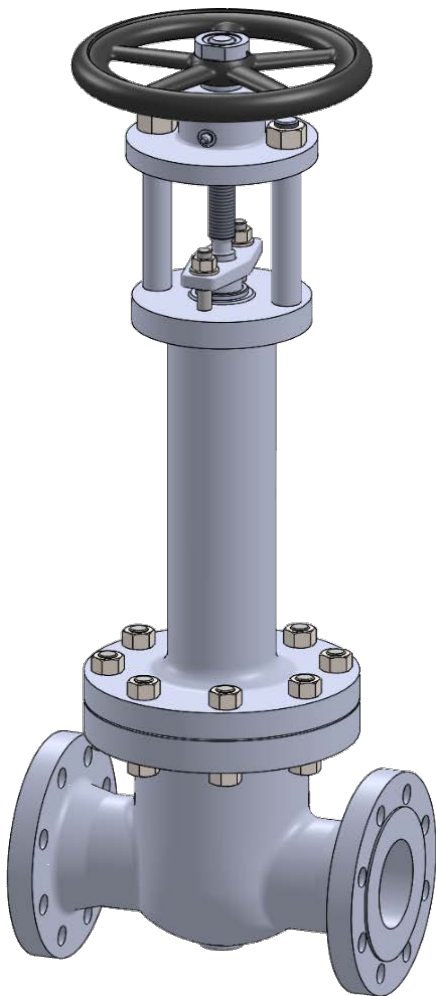


PHÖNIX

STRACK

DAUME
REGELARMATUREN

SIP Solent & Pratt
Phönix Ltd



Gate Valve

Type 834

PN 25

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Model 834

Superlong Protected Bellows

Applications & Design Features

Applications

Model 834 is designed for critical service applications involving lethal, toxic, corrosive, inflammable, volatile, radiating, or expensive fluids. Common applications are refineries as well as chemical plants to eliminate constant emissions monitoring involved with conventional packed gland valves.

The most common applications are:

- Benzene
- Ammonia
- Ethylene
- Dry Chlorine (Cl₂)
- Fuel / petrol
- heat transfer fluid application (steam, hot oil, 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 valve monitoring and re-adjustment of the packing is eliminated. In the unlikely event of a bellows failure the backup packing guarantees safe valve performance until the next scheduled shutdown.

Design Features

Bellows and Packing

- bellows protected in extended bonnet against direct impingement from product flow
- multiple walls and hydroformed bellows
- large sizes with multiple stage, telescopic bellows assembly for long cycle life

Stem

- non-rotating stem prevents bellows torsion
- back seat for added safety
- guided stem on top and bottom

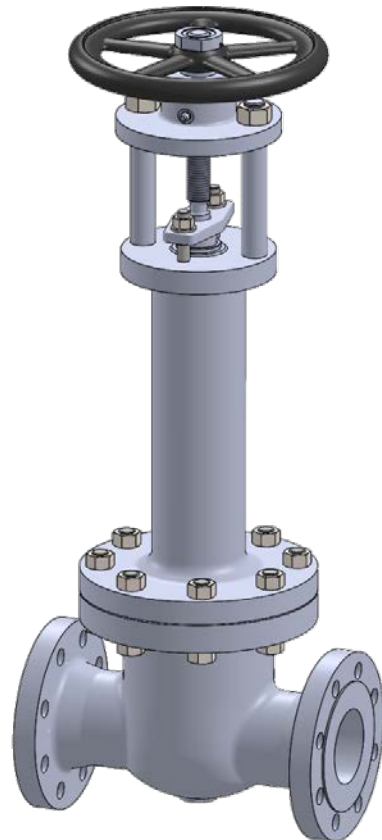
Body and Bonnet

- full-port bodies
- bolted body-bonnet joint for ease of maintenance and quick servicablilty, seal welded design optional
- body bonnet joint gasket is fully confined to prevent gasket flow or blowout

Seats

- solid hardfacings for outstanding corrosion and wear resistance
- flexible, solid, or split wedge design
- replaceable wedge for inexpensive maintenance

= zero emissions, zero seat leakage, low maintenance



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Standard Materials of Construction

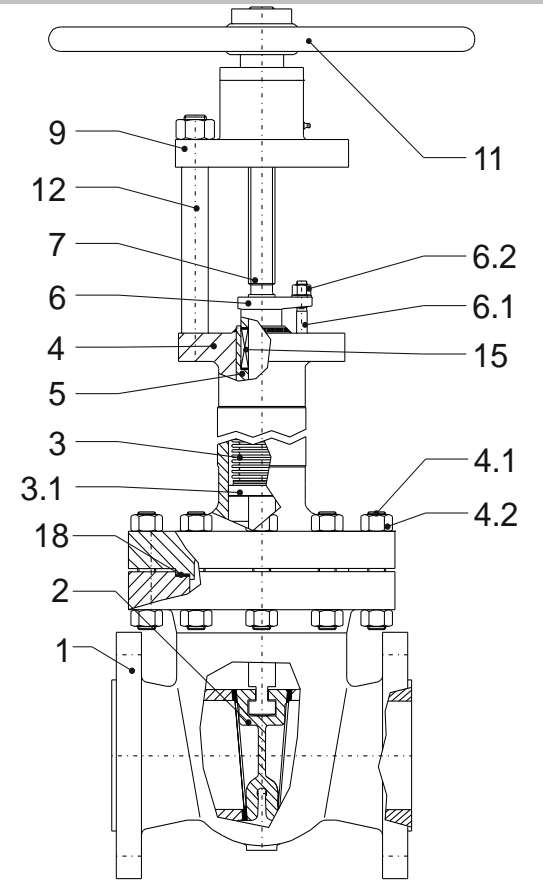
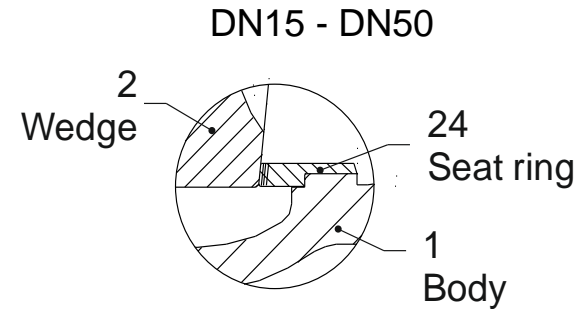
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Options

Other materials per customer requirements are available!

Notes

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



Materials

Item	Part Name	Carbon steel Model 834C up to 450°C	low temp. Carbon steel Model 834T -50°C up to 300°C	Stainless steel Model 834V -200°C up to 400°C
1	Body	1.0460 / 1.0619	1.0566 / 1.6220 / 1.1138	1.4404 / 1.4408
	Seat overlay	1.4370** (≈ 200HRB)	1.4370** (≈ 200HRB)	like body** (≈ 200HRB)
2	Disc	1.4027	1.4408	1.4408
	Overlay	1.0619 with overlay	1.6220	
		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 / 1.1138	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
9	Bridge	1.0460	1.0460	1.0460
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
24	Seat	1.4571	1.4571	1.4571
	Overlay	**	**	**

* 220°C Packing of pure graphite

** Stellite or Antinit Dur 300 on request, Stellite 6 (42HRC) or Stellite 21 (32HRC)



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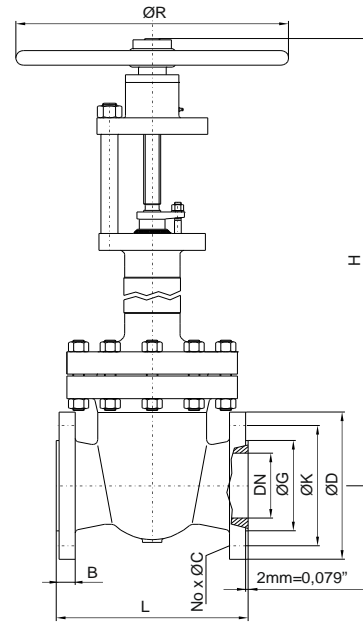
PN25 Sizes DN15 - DN800

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	L	Lift	closed		Flange facing type B1					Weight	Kv [m³/h]	
				H	ØR	ØG	ØK	No x ØC	ØD	B		cv [USGal/min]	cv [USGal/min]
15	[mm]	130	25	360	150	45	65	4 x 14	95	16	7 kg	18	
	[in]	5.12	0.98	14.17	5.91	1.77	2.56	4 x 0.55	3.74	0.63	15.4 lbs	20.93	
20	[mm]	150	25	360	150	58	75	4 x 14	105	18	7 kg	32	
	[in]	5.91	0.98	14.17	5.91	2.28	2.95	4 x 0.55	4.13	0.71	15.4 lbs	37	
25	[mm]	160	27	360	150	68	85	4 x 14	115	18	8 kg	50	
	[in]	6.30	1.06	14.17	5.91	2.68	3.35	4 x 0.55	4.53	0.71	17.6 lbs	58	
40	[mm]	240	54	615	200	88	110	4 x 18	150	18	16 kg	127	
	[in]	9.45	2.13	24.21	7.87	3.46	4.33	4 x 0.71	5.91	0.71	35 lbs	148	
50	[mm]	250	54	615	200	102	125	4 x 18	165	20	20 kg	199	
	[in]	9.84	2.13	24.21	7.87	4.02	4.92	4 x 0.71	6.50	0.79	44 lbs	231	
80	[mm]	280	93	790	250	138	160	8 x 18	200	24	39 kg	511	
	[in]	11.02	3.66	31.10	9.84	5.43	6.30	8 x 0.71	7.87	0.94	86 lbs	594	
100	[mm]	300	120	1000	315	162	190	8 x 22	235	24	58 kg	799	
	[in]	11.81	4.72	39.37	12.40	6.38	7.48	8 x 0.87	9.25	0.94	128 lbs	929	
150	[mm]	350	168	1235	400	218	250	8 x 26	300	28	96 kg	1799	
	[in]	13.78	6.61	48.62	15.75	8.58	9.84	8 x 1.02	11.81	1.10	212 lbs	2092	
200	[mm]	400	230	1600	400	278	310	12 x 26	360	30	150 kg	3200	
	[in]	15.75	9.06	62.99	15.75	10.94	12.20	12 x 1.02	14.17	1.18	331 lbs	3721	
250	[mm]	450	276	2094	500	335	370	12 x 30	425	32	230 kg	5000	
	[in]	17.72	10.87	82.44	19.69	13.19	14.57	12 x 1.18	16.73	1.26	507 lbs	5814	
300	[mm]	500	330	2100	630	395	430	16 x 30	485	34	330 kg	7200	
	[in]	19.69	12.99	82.68	24.80	15.55	16.93	16 x 1.18	19.09	1.34	728 lbs	8372	
350	[mm]	550	390	2450	630	450	490	16 x 33	555	38	410 kg	9800	
	[in]	21.65	15.35	96.46	24.80	17.72	19.29	16 x 1.30	21.85	1.50	904 lbs	11395	
400	[mm]	600	444	2700	720	505	550	16 x 36	620	40	580 kg	12800	
	[in]	23.62	17.48	106.30	28.35	19.88	21.65	16 x 1.42	24.41	1.57	1279 lbs	14884	
450	[mm]	650	506	2850	720	555	600	20 x 36	670	46	720 kg	16200	
	[in]	25.59	19.92	112.20	28.35	21.85	23.62	20 x 1.42	26.38	1.81	1587 lbs	18837	
500	[mm]	700	556	3000	720	615	660	20 x 36	730	48	870 kg	20000	
	[in]	27.56	21.89	118.11	28.35	24.21	25.98	20 x 1.42	28.74	1.89	1918 lbs	23256	
600	[mm]	800	650	4500	Gear	720	770	20 x 39	845	58	1600 kg	28800	
	[in]	31.50	25.59	177.17		28.35	30.31	20 x 1.54	33.27	2.28	3527 lbs	33488	
700	[mm]	900	750	5000	Gear	820	875	24 x 42	960	46	1900 kg	39200	
	[in]	35.43	29.53	196.85		32.28	34.45	24 x 1.65	37.80	1.81	4189 lbs	45581	
800	[mm]	1000	900	5200	Gear	930	990	24 x 48	1085	50	2200 kg	51200	
	[in]	39.37	35.43	204.72		36.61	38.98	24 x 1.89	42.72	1.97	4850 lbs	59535	



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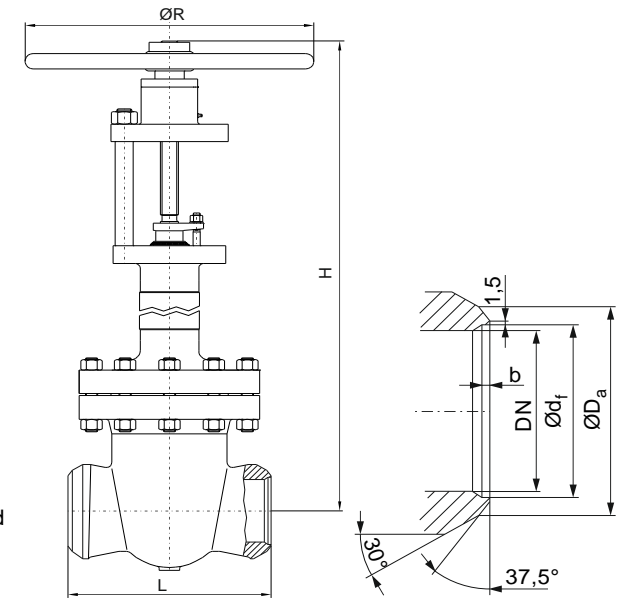
PN25 Sizes DN15 - DN800

Options

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- 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	L	Lift	closed		Butt Weld Ends					Weight	Kv [m³/h]	
				H	ØR	ØD _a	Ød _i	b	for pipe	cv [USGal/min]		cv [USGal/min]	
15	[mm]	130	25	360	150	22	17	3	Ø21.3 x 2.0	6 kg	18		
	[in]	5.12	0.98	14.17	5.91	0.87	0.67	0.12	Ø0.84 x 0.08	13.2 lbs	20.93		
20	[mm]	150	25	360	150	28	22	4	Ø26.9 x 2.3	5 kg	32		
	[in]	5.91	0.98	14.17	5.91	1.10	0.87	0.16	Ø1.06 x 0.09	11 lbs	37		
25	[mm]	160	27	360	150	35	28.5	4	Ø33.7 x 2.6	6 kg	50		
	[in]	6.30	1.06	14.17	5.91	1.38	1.12	0.16	Ø1.33 x 0.10	13.2 lbs	58		
40	[mm]	240	54	615	200	50	43	4	Ø48.3 x 2.6	13 kg	127		
	[in]	9.45	2.13	24.21	7.87	1.97	1.69	0.16	Ø1.90 x 0.10	29 lbs	148		
50	[mm]	250	54	615	200	62	53.5	5	Ø60.3 x 3.2	15 kg	199		
	[in]	9.84	2.13	24.21	7.87	2.44	2.11	0.20	Ø2.37 x 0.13	33 lbs	231		
80	[mm]	280	93	790	250	91	80.5	6	Ø88.9 x 4.0	32 kg	511		
	[in]	11.02	3.66	31.10	9.84	3.58	3.17	0.24	Ø3.50 x 0.16	71 lbs	594		
100	[mm]	300	120	1000	315	117	104.3	8	Ø114.3 x 5.0	48 kg	799		
	[in]	11.81	4.72	39.37	12.40	4.61	4.11	0.31	Ø4.50 x 0.20	106 lbs	929		
150	[mm]	350	168	1235	400	172	157	9	Ø168.3 x 5.6	79 kg	1799		
	[in]	13.78	6.61	48.62	15.75	6.77	6.18	0.35	Ø6.63 x 0.22	174 lbs	2092		
200	[mm]	400	230	1600	400	223	204.5	11	Ø219.1 x 7.1	126 kg	3200		
	[in]	15.75	9.06	62.99	15.75	8.78	8.05	0.43	Ø8.63 x 0.28	278 lbs	3721		
250	[mm]	450	276	2094	500	278	257	12	Ø273.0 x 8.0	197 kg	5000		
	[in]	17.72	10.87	82.44	19.69	10.94	10.12	0.47	Ø10.75 x 0.31	434 lbs	5814		
300	[mm]	500	330	2100	630	329	307.9	12	Ø323.9 x 8.0	288 kg	7200		
	[in]	19.69	12.99	82.68	24.80	12.95	12.12	0.47	Ø12.75 x 0.31	635 lbs	8372		
350	[mm]	550	390	2450	630	362	338	14	Ø355.6 x 8.8	349 kg	9800		
	[in]	21.65	15.35	96.46	24.80	14.25	13.31	0.55	Ø14.00 x 0.35	769 lbs	11395		
400	[mm]	600	444	2700	720	413	384.4	17	Ø406.4 x 11.0	502 kg	12800		
	[in]	23.62	17.48	106.30	28.35	16.26	15.13	0.67	Ø16.00 x 0.43	1107 lbs	14884		
450	[mm]	650	506	2850	720	464	*	*	*	624 kg	16200		
	[in]	25.59	19.92	112.20	28.35	18.27	*	*	*	1376 lbs	18837		
500	[mm]	700	556	3000	720	516	479.6	22	Ø508.0 x 14.2	754 kg	20000		
	[in]	27.56	21.89	118.11	28.35	20.31	18.88	0.87	Ø20.00 x 0.56	1662 lbs	23256		
600	[mm]	800	650	4500	Gear	619	*	*	*	1423 kg	28800		
	[in]	31.50	25.59	177.17		24.37	*	*	*	3137 lbs	33488		
700	[mm]	900	750	5000	Gear	721	*	*	*	1729 kg	39200		
	[in]	35.43	29.53	196.85		28.39	*	*	*	3812 lbs	45581		
800	[mm]	1000	900	5200	Gear	825	*	*	*	1970 kg	51200		
	[in]	39.37	35.43	204.72		32.48	*	*	*	4343 lbs	59535		

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