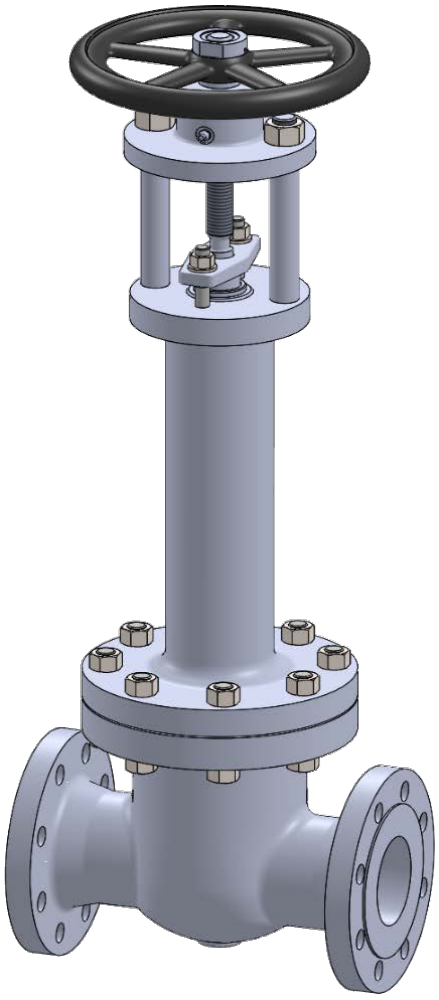
PHÖNIX STRACK DAUME REGELARMATUREN S+P Solent & Pratt Phönix Ltd



Gate Valve

Type 834

PN 40

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PHÖNIX VALVE GROUP

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

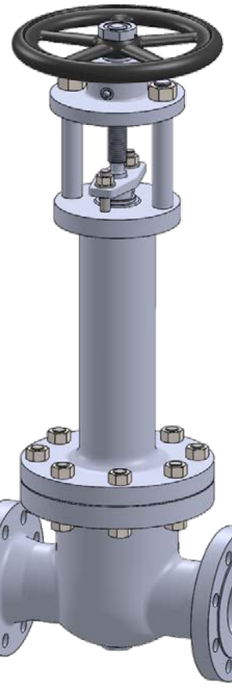
Body and Bonnet

- 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
- fexible, solid, or split wedge design
- replaceable wedge for inexpensive maintenance

= zero emissions, zero seat leakage, low maintenance



Model 834

Superlong Protected Bellows

Standard Materials of Construction

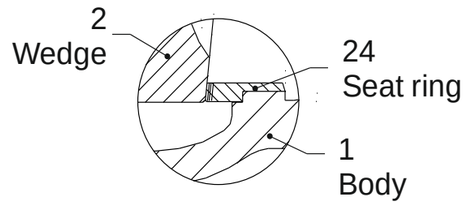
834 / D ...

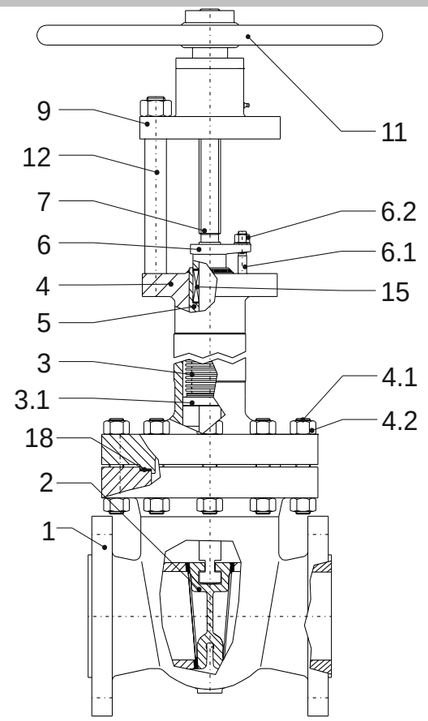
Options

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 1.0619 with overlay	1.4408 1.6220	1.4408
	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 / 1.1138	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

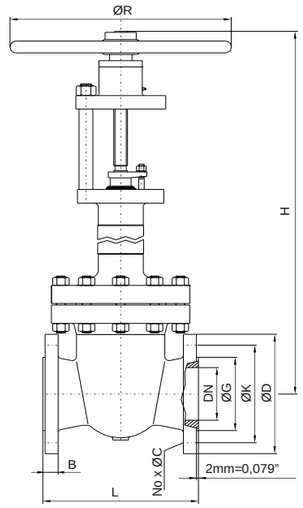
* * Stellite or Antinit Dur 300 on request, Stellite 6 (42HRC) or Stellite 21 (32HRC)

Gate Valve *Bellows Sealed*

Model 834

Superlong Protected Bellows

PN40 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 H	ØR	Flage facing type B1 ØG	ØK	No x ØC	ØD	B	Weight	Kv [m³/h] cv *[USGal/min]*
15	[mm]	130	25	360	150	45	65	4 x 14	95	16	8 kg	18
	[in]	*5.12*	*0.98*	*14.17*	*5.91*	*1.77*	*2.56*	*4 x 0.55*	*3.74*	*0.63*	*17.6 lbs*	*20.93*
20	[mm]	150	25	360	150	58	75	4 x 14	105	18	8 kg	32
	[in]	*5.91*	*0.98*	*14.17*	*5.91*	*2.28*	*2.95*	*4 x 0.55*	*4.13*	*0.71*	*17.6 lbs*	*37*
25	[mm]	160	27	360	150	68	85	4 x 14	115	18	9 kg	50
	[in]	*6.30*	*1.06*	*14.17*	*5.91*	*2.68*	*3.35*	*4 x 0.55*	*4.53*	*0.71*	*19.8 lbs*	*58*
40	[mm]	240	54	615	200	88	110	4 x 18	150	18	17 kg	127
	[in]	*9.45*	*2.13*	*24.21*	*7.87*	*3.46*	*4.33*	*4 x 0.71*	*5.91*	*0.71*	*37 lbs*	*148*
50	[mm]	250	54	615	200	102	125	4 x 18	165	20	21 kg	199
	[in]	*9.84*	*2.13*	*24.21*	*7.87*	*4.02*	*4.92*	*4 x 0.71*	*6.50*	*0.79*	*46 lbs*	*231*
80	[mm]	310	93	790	250	138	160	8 x 18	200	24	58 kg	511
	[in]	*12.20*	*3.66*	*31.10*	*9.84*	*5.43*	*6.30*	*8 x 0.71*	*7.87*	*0.94*	*128 lbs*	*594*
100	[mm]	350	120	1000	315	162	190	8 x 22	235	24	86 kg	799
	[in]	*13.78*	*4.72*	*39.37*	*12.40*	*6.38*	*7.48*	*8 x 0.87*	*9.25*	*0.94*	*190 lbs*	*929*
150	[mm]	450	168	1235	400	218	250	8 x 26	300	28	164 kg	1799
	[in]	*17.72*	*6.61*	*48.62*	*15.75*	*8.58*	*9.84*	*8 x 1.02*	*11.81*	*1.10*	*362 lbs*	*2092*
200	[mm]	550	230	1600	400	285	320	12 x 30	375	34	250 kg	3200
	[in]	*21.65*	*9.06*	*62.99*	*15.75*	*11.22*	*12.60*	*12 x 1.18*	*14.76*	*1.34*	*551 lbs*	*3721*
250	[mm]	650	276	2094	500	345	385	12 x 33	450	38	360 kg	5000
	[in]	*25.59*	*10.87*	*82.44*	*19.69*	*13.58*	*15.16*	*12 x 1.30*	*17.72*	*1.50*	*794 lbs*	*5814*
300	[mm]	750	330	2100	630	410	450	16 x 33	515	42	550 kg	7200
	[in]	*29.53*	*12.99*	*82.68*	*24.80*	*16.14*	*17.72*	*16 x 1.30*	*20.28*	*1.65*	*1213 lbs*	*8372*
350	[mm]	850	390	2450	630	465	510	16 x 36	580	46	750 kg	9800
	[in]	*33.46*	*15.35*	*96.46*	*24.80*	*18.31*	*20.08*	*16 x 1.42*	*22.83*	*1.81*	*1653 lbs*	*11395*
400	[mm]	950	444	2700	720	535	585	16 x 39	660	50	1045 kg	12800
	[in]	*37.40*	*17.48*	*106.30*	*28.35*	*21.06*	*23.03*	*16 x 1.54*	*25.98*	*1.97*	*2304 lbs*	*14884*
450	[mm]	1050	506	2850	720	560	610	20 x 39	685	57	1360 kg	16200
	[in]	*41.34*	*19.92*	*112.20*	*28.35*	*22.05*	*24.02*	*20 x 1.54*	*26.97*	*2.24*	*2998 lbs*	*18837*
500	[mm]	1150	556	3000	720	615	670	20 x 42	755	57	1610 kg	20000
	[in]	*45.28*	*21.89*	*118.11*	*28.35*	*24.21*	*26.38*	*20 x 1.65*	*29.72*	*2.24*	*3549 lbs*	*23256*
600	[mm]	1350	650	4500	Gear	735	795	20 x 48	890	72	2500 kg	28800
	[in]	*53.15*	*25.59*	*177.17*		*28.94*	*31.30*	*20 x 1.89*	*35.04*	*2.83*	*5512 lbs*	*33488*
700	[mm]	1550	750	5000	Gear	*	900	24 x 48	995	*	3200 kg	39200
	[in]	*61.02*	*29.53*	*196.85*			*35.43*	*24 x 1.89*	*39.17*		*7055 lbs*	*45581*
800	[mm]	1750	900	5200	Gear	*	1030	24 x 56	1140	*	4000 kg	51200
	[in]	*68.90*	*35.43*	*204.72*			*40.55*	*24 x 2.20*	*44.88*		*8818 lbs*	*59535*

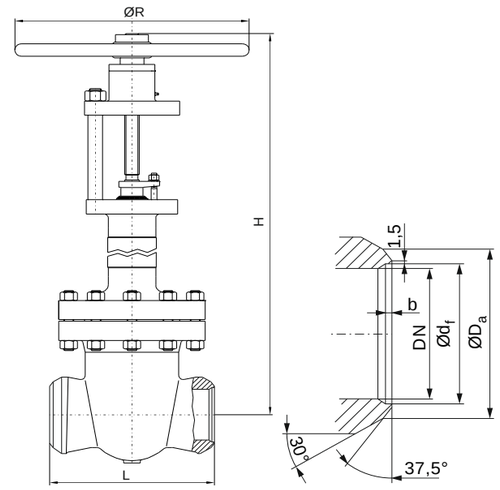
***** per customer requirements

Gate Valve *Bellows Sealed*

Model 834

Superlong Protected Bellows

PN40 Sizes DN15 - DN800



Options

- Other customer specific designs on request

Notes

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- 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 H	ØR	Butt Weld Ends ØD$_a$	Ød$_f$	b	for pipe	Weight	Kv [m³/h] cv *[USGal/min]*
15	[mm]	130	25	360	150	22	17	3	Ø21.3 x 2.0	7 kg	18
	[in]	*5.12*	*0.98*	*14.17*	*5.91*	*0.87*	*0.67*	*0.12*	*Ø0.84 x 0.08*	*15.4 lbs*	*20.93*
20	[mm]	150	25	360	150	28	22	4	Ø26.9 x 2.3	6 kg	32
	[in]	*5.91*	*0.98*	*14.17*	*5.91*	*1.10*	*0.87*	*0.16*	*Ø1.06 x 0.09*	*13.2 lbs*	*37*
25	[mm]	160	27	360	150	35	28.5	4	Ø33.7 x 2.6	7 kg	50
	[in]	*6.30*	*1.06*	*14.17*	*5.91*	*1.38*	*1.12*	*0.16*	*Ø1.33 x 0.10*	*15.4 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	16 kg	199
	[in]	*9.84*	*2.13*	*24.21*	*7.87*	*2.44*	*2.11*	*0.20*	*Ø2.37 x 0.13*	*35 lbs*	*231*
80	[mm]	310	93	790	250	91	80.5	6	Ø88.9 x 4.0	51 kg	511
	[in]	*12.20*	*3.66*	*31.10*	*9.84*	*3.58*	*3.17*	*0.24*	*Ø3.50 x 0.16*	*112 lbs*	*594*
100	[mm]	350	120	1000	315	117	104.3	8	Ø114.3 x 5.0	76 kg	799
	[in]	*13.78*	*4.72*	*39.37*	*12.40*	*4.61*	*4.11*	*0.31*	*Ø4.50 x 0.20*	*168 lbs*	*929*
150	[mm]	450	168	1235	400	172	157	9	Ø168.3 x 5.6	147 kg	1799
	[in]	*17.72*	*6.61*	*48.62*	*15.75*	*6.77*	*6.18*	*0.35*	*Ø6.63 x 0.22*	*324 lbs*	*2092*
200	[mm]	550	230	1600	400	223	204.5	11	Ø219.1 x 7.1	221 kg	3200
	[in]	*21.65*	*9.06*	*62.99*	*15.75*	*8.78*	*8.05*	*0.43*	*Ø8.63 x 0.28*	*487 lbs*	*3721*
250	[mm]	650	276	2094	500	278	257	12	Ø273.0 x 8.0	313 kg	5000
	[in]	*25.59*	*10.87*	*82.44*	*19.69*	*10.94*	*10.12*	*0.47*	*Ø10.75 x 0.31*	*690 lbs*	*5814*
300	[mm]	750	330	2100	630	329	307.9	12	Ø323.9 x 8.0	487 kg	7200
	[in]	*29.53*	*12.99*	*82.68*	*24.80*	*12.95*	*12.12*	*0.47*	*Ø12.75 x 0.31*	*1074 lbs*	*8372*
350	[mm]	850	390	2450	630	362	338	14	Ø355.6 x 8.8	665 kg	9800
	[in]	*33.46*	*15.35*	*96.46*	*24.80*	*14.25*	*13.31*	*0.55*	*Ø14.00 x 0.35*	*1466 lbs*	*11395*
400	[mm]	950	444	2700	720	413	384.4	17	Ø406.4 x 11.0	926 kg	12800
	[in]	*37.40*	*17.48*	*106.30*	*28.35*	*16.26*	*15.13*	*0.67*	*Ø16.00 x 0.43*	*2041 lbs*	*14884*
450	[mm]	1050	506	2850	720	464	*	*	*	1231 kg	16200
	[in]	*41.34*	*19.92*	*112.20*	*28.35*	*18.27*				*2714 lbs*	*18837*
500	[mm]	1150	556	3000	720	516	479.6	22	Ø508.0 x 14.2	1453 kg	20000
	[in]	*45.28*	*21.89*	*118.11*	*28.35*	*20.31*	*18.88*	*0.87*	*Ø20.00 x 0.56*	*3203 lbs*	*23256*
600	[mm]	1350	650	4500	Gear	619	*	*	*	2234 kg	28800
	[in]	*53.15*	*25.59*	*177.17*		*24.37*				*4925 lbs*	*33488*
700	[mm]	1550	750	5000	Gear	721	*	*	*	3002 kg	39200
	[in]	*61.02*	*29.53*	*196.85*		*28.39*				*6618 lbs*	*45581*
800	[mm]	1750	900	5200	Gear	825	*	*	*	3732 kg	51200
	[in]	*68.90*	*35.43*	*204.72*		*32.48*				*8228 lbs*	*59535*

***** per customer requirements

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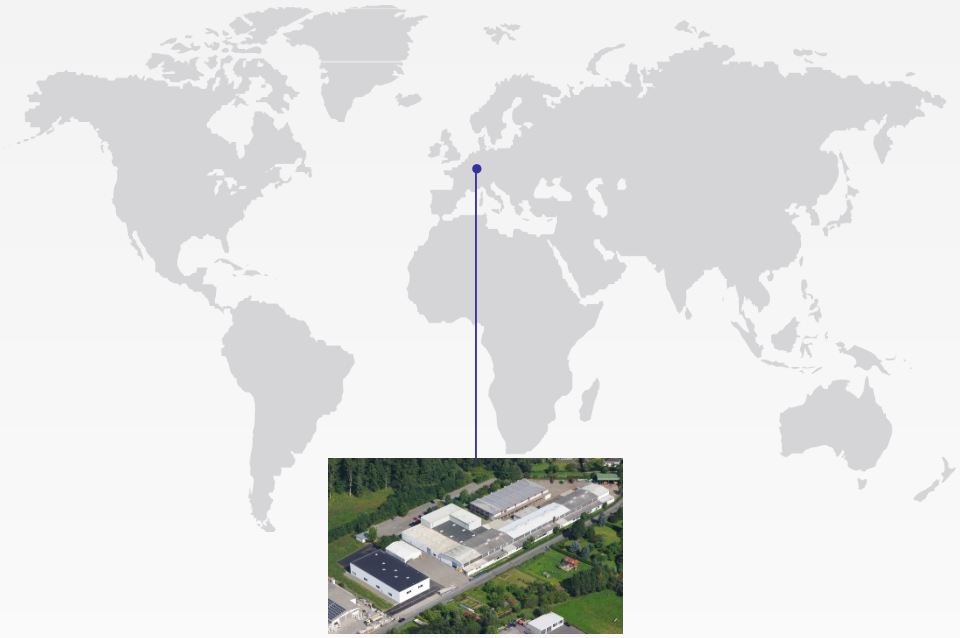

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