

## BALL VALVE - type B10L IN STAINLESS STEEL

PN10-PN40  
DN20-DN500



### FEATURES

Valve body in stainless steel. Simple body with clamped design up to DN200. Flanged, 2-piece body from DN125 up to DN500.

The seat in Stainless Steel or RPTFE. Stem packing with packbox in graphite or PTFE. Double stem bearings

### APPLICATION

A control, on/off-valve with a very wide application area. Especially usable with big flows and relation with corrosive media and solid particles.

Water, gas, oil, slurry, steam, chemicals and most media in mass & paper process.

Used in energy facilities, mass- & paper industries, chemical industry, other process industries, etc

#### Technical data

Dimensions	DN20 to DN500
Material	Stainless steel, stainless steel ar Duplex
Pressure class	PN16 to PN40
Temperature range	-20 to max 300grdC
Connection	Flanged, clamped
Face-to-face	Internal standard
Control & pressure test	acc. to EN 12266-1
Leakage class	Soft-sealing ISO 5208-D Metal seat 10x ISO 5208-D
Seat	Soft-sealing PTFE Hard-sealing cobalt control

#### Standard

Material	A 351 CF8, CF8M
Face-to-face	acc. to internal standard
Flanged ends	EN 1092-1
Certification	EN 19
Pressure test	EN 12266-1
CE-certified	acc. to PED97/23, Category 3

Table 1 - Pressure/temperature range for materials in groups 2C1 and 2C2, acc. to EN 12516-1

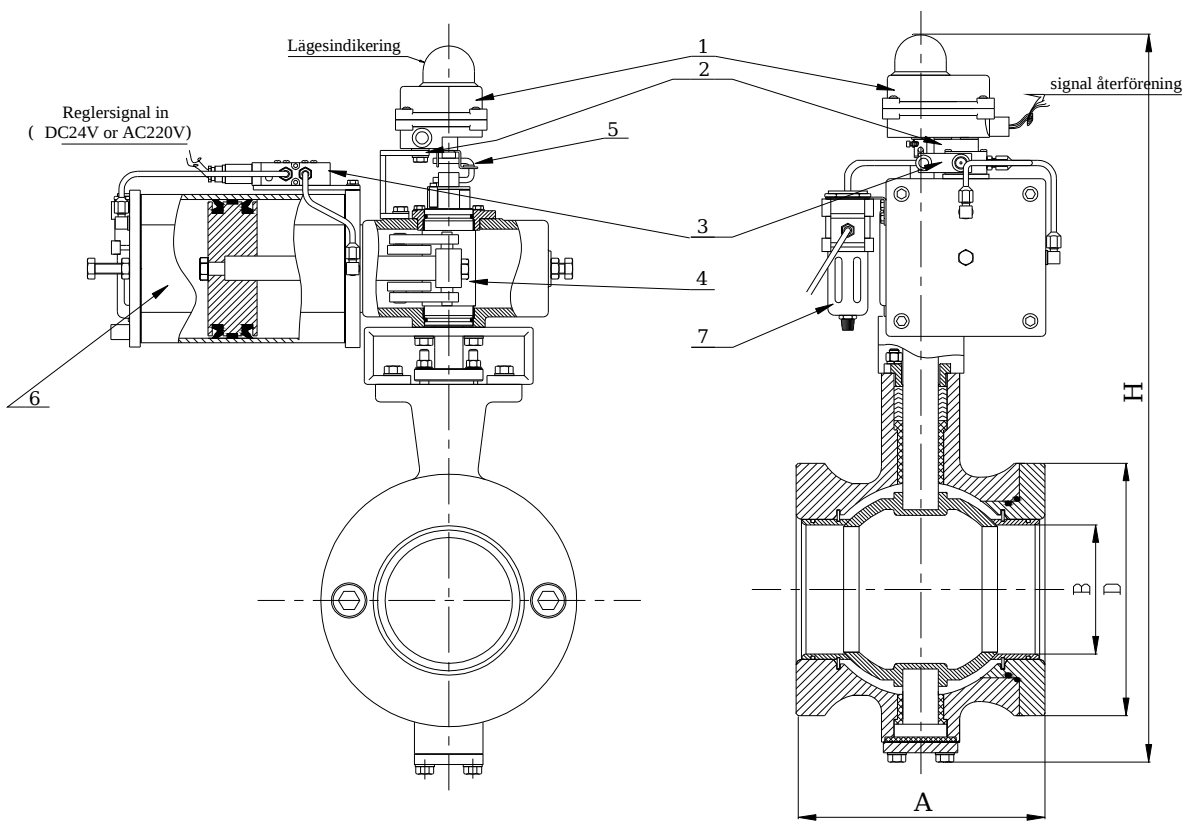
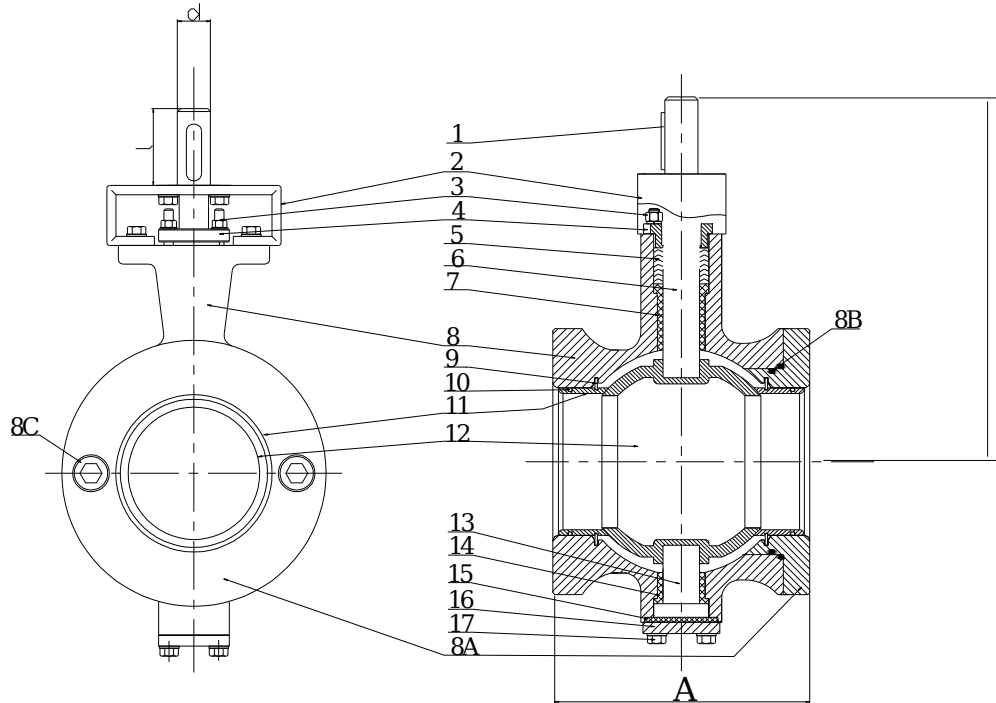
Material body	PN	RT	50	100	150	200	250	300	350	400
Stainless steel	16	15.7	15.1	12.9	11.7	10.9	10.3	9.7	9.3	9.0
CF8	25	24.5	23.6	20.2	18.3	17.0	16.0	15.1	14.6	14.1
Group 2C1	40.0	39.2	37.8	32.3	29.3	27.2	25.6	24.2	23.3	22.3
Stainless steel	16.0	15.7	15.2	13.3	12.2	11.3	10.5	10.0	9.6	9.3
CF8M	25.0	24.5	23.7	20.8	19.0	17.6	16.5	15.6	15.0	14.5
Group 2C2	40.0	39.2	38.0	33.3	30.4	28.2	26.3	25.0	24.0	23.2

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CLAMPED DESIGN DN20-DN250



# BALL VALVE - type B10L IN STAINLESS STEEL

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DN20-DN500



Between flanges DN20-DN100

Table 2 - Material specification, between flanges DN20-DN100

Pos	Part	Stainless steel		Stainless steel	
		CF8, material group 2C1		CF8M, material group 2C2	
		soft-sealing	hard-sealing	soft-sealing	hard-sealing
1	Key	SS 304		SS 304	
2	Actuator console	Shaped plate		Shaped plate	
3	Nut	SS 304		SS 316	
4	Gland	SS 304		SS 316	
5	Stem packing	PTFE		PTFE	
6	Stem	SS 316		SS 316	
7	Stem bearing	PTFE+SS		PTFE+SS	
8	Body	CF8 (2C1)		CF8M (2C2)	
8A	Body ring	CF8 (2C1)		CF8M (2C2)	
8C	O-ring	PTFE		PTFE	
8C	Screw	SS304 (2C1)		Ss304 (2C2)	
9	Lock ring	SS 304		SS 316	
10	O-ring	PTFE		PTFE	
11	Seat	PTFE	SS, Stellite	PTFE	SS, Stellite
12	Ball	SS 316	SS+Hard-chromed	SS 316L	SS+Hard-chromed
13	Lower stem	SS 316		SS 316	
14	Stem bearing	PTFE+SS		PTFE+SS	
15	Packing	PTFE		PTFE	
16	Bonnet	SS 304		SS 304	

Table 3 - Between flanges with pneumatic actuator, PN16-PN40

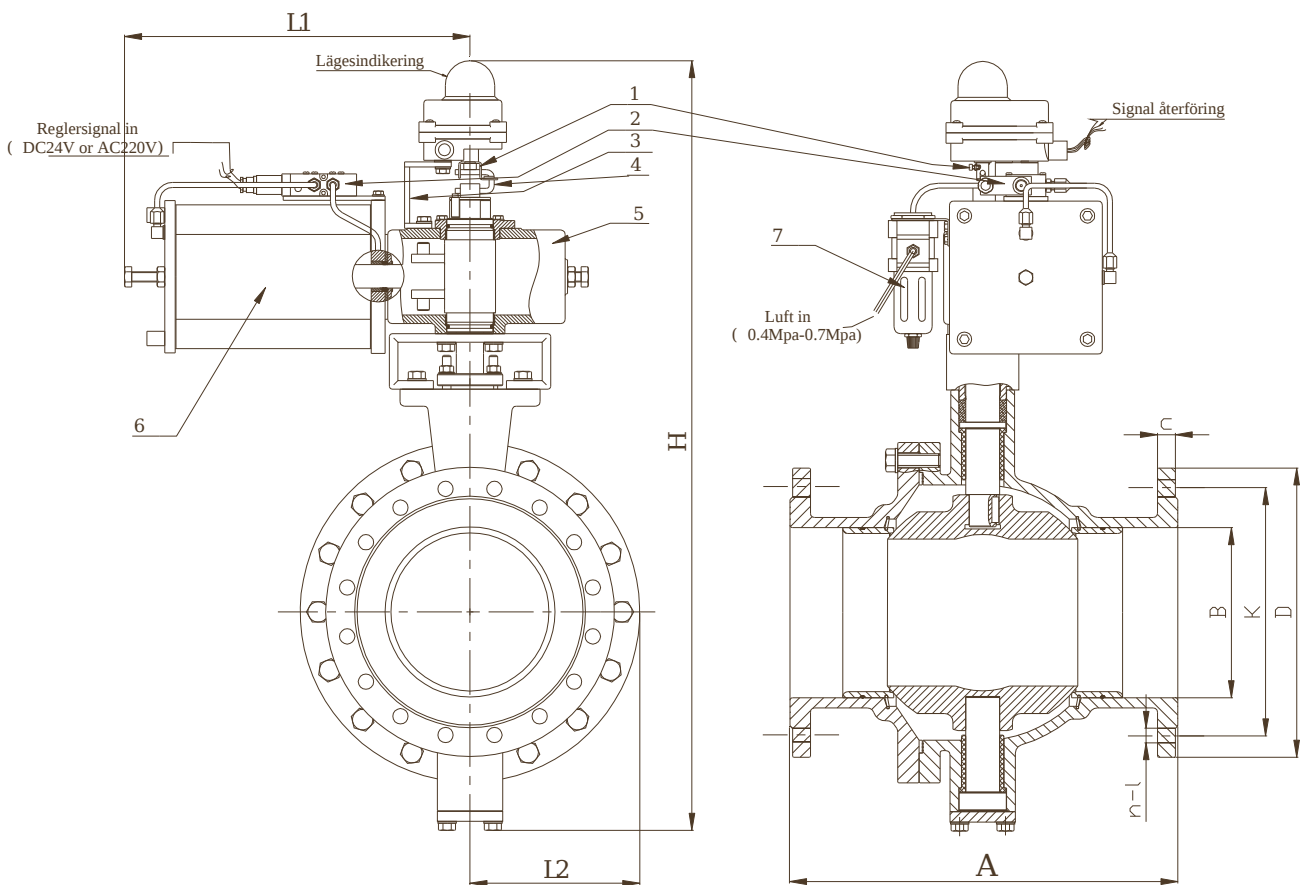
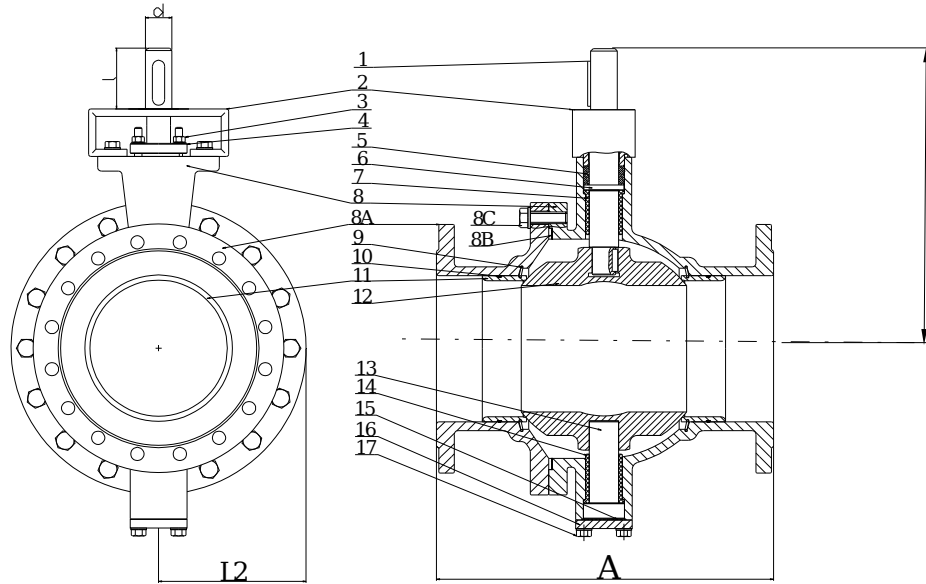
DN	A mm	B mm	D mm	L mm	H mm	l mm	d mm	Kv	Weight* kg
20	56	16	60	360	410	30	16	38	10
25	60	21	70	360	415	30	16	60	13
32	70	27	82	435	465	35	16	70	15
40	80	35	92	435	470	35	16	80	21
50	90	42	106	435	510	30	20	90	24
65	116	56	127	435	520	32	20	116	25
80	140	70	142	470	570	32	20	140	32
100	150	88	167	470	590	32	24	150	38

BALL VALVE - type B10L  
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DN20-DN500



FLANGED DESIGN DN125 - DN500



# BALL VALVE - type B10L IN STAINLESS STEEL

PN10-PN40  
DN20-DN500



Table 4 - Material specification, flanged-end design DN125-DN500

Pos	Part	Stainless steel CF8, material group 2C1		Stainless steel CF8M, material group 2C2	
		soft-sealing	hard-sealing	soft-sealing	hard-sealing
1	Key	SS 304		SS 304	
2	Actuator console	Shaped plate		Shaped plate	
3	Nut	SS 304		SS 316	
4	Gland	SS 304		SS 316	
5	Stem packing	PTFE		PTFE	
6	Stem	SS 316		SS 316	
7	Stem bearing	PTFE+SS		PTFE+SS	
8	Body	CF8 (2C1)		CF8M (2C2)	
8A	Body ringl	CF8 (2C1)		CF8M (2C2)	
8B	O-ring	PTFE		PTFE	
8C	Bolt	SS 304		SS 304	
9	Lock ring	SS 304		SS 316	
10	O-ring	PTFE		PTFE	
11	Seat	PTFE	SS, Stellite	PTFE	SS, Stellite
12	Ball	SS 316	Hard-chromed	SS 316L	Hard-chromed
13	Lower stem	SS 316		SS 316	
14	Stem bearing	PTFE+SS		PTFE+SS	
15	Packing	PTFE		PTFE	
16	Bonnet	SS 304		SS 304	
17	Bolt	SS 304		SS 304	

Table 5 - Dimensions and weights. Flanged design PN16

DN	A	L <sub>1</sub>	L <sub>2</sub>	H*	I	d	D	C	K	n-l	MxL	Kv	Weight*
	mm	mm	mm	mm	mm	mm	mm	mm	mm	st-mm		m <sup>3</sup> /h	kg
125	240	380	130	660	42	24	250	22	210	8-18	M16x70	1400	59
150	296	380	152	710	42	28	285	22	240	8-22	M20x80	2200	72
200	364	450	190	830	45	32	340	24	295	12-22	M20x80	3500	137
250	400	515	230	940	65	40	405	26	355	12-26	M24x90	5000	185
300	500	515	271	1130	70	40	460	28	410	12-26	M24x90	7600	266
350	604	580	310	1180	75	55	520	30	470	16-26	M24x100	12500	395
400	610	650	368	1390	80	60	580	32	525	16-30	M27x110	17500	575
450	660	650	390	1430	75	70	640	35	585	20-30	M27x120	21650	810
500	700	650	430	1510	105	70	715	38	650	20-33	M30x130	25800	1080

\* including pneumatic actuator

Table 6 - Dimensions and weights. Flanged design PN25

DN	A	L <sub>1</sub>	L <sub>2</sub>	H*	I	d	D	C	K	n-l	MxL	Kv	Weight*
	mm	mm	mm	mm	mm	mm	mm	mm	mm	st-mm		m <sup>3</sup> /h	kg
200	502	450	190	830	45	32	360	30	310	12-26	M24x100	3500	152
250	568	515	230	940	65	40	425	32	370	12-30	M27x100	5000	275
300	648	515	271	1130	70	40	485	34	430	16-30	M27x120	7600	328
350	762	580	310	1180	75	55	555	38	490	16-33	M30x130	12500	485
400	838	650	368	1390	80	60	620	40	550	16-36	M33x130	17500	656
450	914	650	390	1430	75	70	670	46	600	20-36	M33x140	21650	930
500	991	650	430	1510	105	70	730	48	660	20-36	M33x150	25800	1230

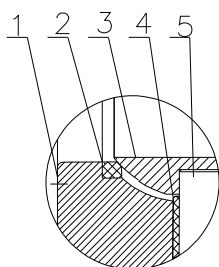
\* including pneumatic actuator

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DN20-DN500



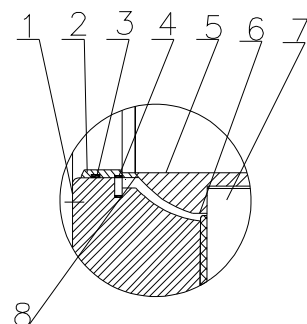
## SOFT-SEALING SEAT



1. Body
2. Seat ring
3. Ball
4. Stem bearings
5. Stem

Standard features of the valve include a hard-chromed and polished ball. The seat construction is self-adjusting.

## HARD-SEALING SEAT



1. Body
2. Seat ring
3. O-ring
4. Lock ring
5. Ball
6. Stem bearings
7. Stem
8. Coating

Standard features of the valve include a hard-chromed and polished ball. The seat construction is self-adjusting. For high temperatures, a coating of stellite or another high-temperature alloy is recommended.

Table 7 - Flow characteristics.  $K_v$  as a function of opening degree

Open % DN	10	20	30	40	50	60	70	80	90	100
20	1	2	3	3	5	8	12	17	22	38
25	2	4	5	6	9	14	22	32	42	72
32	3	6	8	10	14	22	34	48	64	110
40	4	9	12	15	21	34	53	75	99	170
50	7	14	19	24	34	54	84	119	157	270
65	10	20	28	37	51	81	125	179	235	406
80	13	25	35	45	64	102	158	224	296	510
100	24	47	65	85	118	188	291	414	545	940
125	35	70	98	125	175	280	434	615	812	1400
150	55	110	154	198	275	440	682	968	1275	2200
200	88	175	245	315	438	700	1085	1540	2030	3500
250	125	250	350	450	625	1000	1550	2200	2900	5000
300	190	380	532	684	950	1520	2355	3344	4408	7600
350	313	625	875	1125	1563	2500	3875	5500	7250	12500
400	438	875	1225	1575	2188	3500	5425	7700	10150	17500
450	541	1083	1515	1949	2705	4330	6712	9525	12557	21650
500	645	1290	1805	2322	3225	5100	7998	11352	14954	25800

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Table 8 - Torque. Soft-sealing seat - when choosing actuator, use factor 1,25. With steam use factor 1,5

dP (bar)	DN	20	25	32	40	50	65	80	100	125	150	200	250	300	350	400	500
5	open	11	12	14	15	17	21	39	47	68	105	230	281	493	791	1071	1340
	Closed	9	11	12	14	15	18	36	42	60	98	221	272	476	774	1054	1320
10	open	12	14	15	17	23	30	48	63	105	150	255	468	706	1241	2117	2646
	Closed	11	12	14	15	20	27	45	57	98	143	242	357	680	1224	2091	2614
15	open	14	15	20	23	30	45	69	90	143	195	366	595	952	816	2380	2975
	Closed	12	14	18	21	29	42	60	83	140	183	357	578	935	1649	2346	2933
20	open	15	17	21	27	30	53	75	105	165	225	459	-	-	-	-	-
	Closed	14	15	20	24	27	45	68	93	150	210	442	-	-	-	-	-
25	open	17	18	24	30	41	60	90	123	198	278	553	-	-	-	-	-
	Closed	15	17	21	27	33	53	83	113	183	263	536	-	-	-	-	-
30	open	18	21	27	33	45	68	105	143	233	323	570	-	-	-	-	-
	Closed	17	18	24	30	38	60	98	135	225	308	553	-	-	-	-	-

Table 9 - Torque. Metal-sealing seat - when choosing actuator, use factor 1,25. With steam use factor 1,5.

dP (bar)	DN	20	25	32	40	50	65	80	100	125	150	200	250	300	350	400	500
5	open	9	11	12	14	15	18	36	42	62	98	213	270	476	782	1054	1290
	Closed	8	9	11	12	14	15	33	36	57	90	204	255	459	765	1020	1245
10	open	11	12	14	15	20	27	45	57	98	135	238	442	680	1224	2091	2550
	Closed	9	11	12	14	18	26	44	54	90	131	230	434	663	1200	2040	2490
15	open	12	14	18	21	27	38	60	83	60	180	357	578	935	1632	2346	2865
	Closed	11	12	15	17	23	33	54	72	120	167	332	545	918	1661	2295	2800
20	open	14	15	18	23	30	45	68	98	158	213	442	-	-	-	-	-
	Closed	12	14	17	20	27	41	63	89	147	203	425	-	-	-	-	-
25	open	15	17	21	26	35	54	83	114	188	258	536	-	-	-	-	-
	Closed	14	15	18	21	32	51	75	104	176	248	510	-	-	-	-	-
30	open	17	18	24	30	39	60	98	128	218	308	553	-	-	-	-	-
	Closed	15	17	20	23	36	54	89	117	206	293	536	-	-	-	-	-

16	Flanged	B10L741F016Y*	B10L7R1F016Y*	B10L841F016Y*	B10L8R1F016Y*
	Clamped	B10L741W016Y*	B10L7R1W016Y*	B10L841W016Y*	B10L8R1W016Y*
25	Flanged	B10L741F025Y*	B10L7R1F025Y*	B10L841F025Y*	B10L8R1F025Y*
	Clamped	B10L741W025Y*	B10L7R1W025Y*	B10L841W025Y*	B10L8R1W025Y*
40	Clamped	B10L741W040Y*	B10L7R1W040Y*	B10L841W040Y*	B10L8R1W040Y*

\*Y=, F for bare stem with ISO-flanges, S for single-function pneum. Actuator, D for double-function pneum. actuator

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