Bellows seal globe valve Flange
PN16 PN40 DN15-DN400
Body : 1.0619N / 1.4408
Maintenance-free
Design acc. : AD 2000 A4.ATEX 2014/34/EU,EN 13709
Face to face : EN558-1 G1
Flange end : EN1092-1
Test acc. : EN12266-1
Temperature range :
-29℃~ +450℃(1.0619N)
-196℃~ +400℃(1.4408)
Witzenmann Bellows
circle 10 000

FIG. 112 i - g

gekammerter Faltenbalg
Protected Bellows

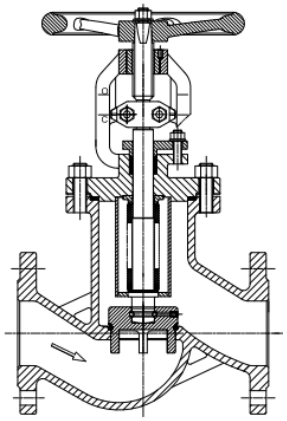

Fig.112i-g

Key features
Bellows seal globe valves designed for various applications with inflammable, explosive, volatile, toxic or aggressive characteristics to provide the highest fugitive emission protection.

Full safety sealing system with multiple-walled bellows, gland packing, metal back seat, and position indicator.

Two-part rising stem design separates the upper and lower stem from each other which prevents bellows from torsion.

Typical applications
Bellows seal globe valves provide the highest fugitive emission protection for use in chemical processing, including Phosgene and Fertilizer applications.

For various media with inflammable, explosive, volatile, toxic or aggressive characteristics, whose emission into the atmosphere must be prevented.

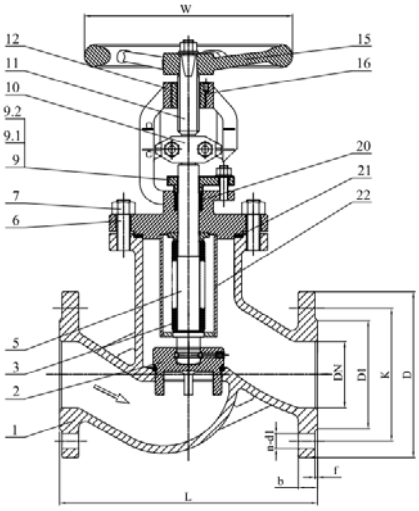

FIG.	Pressure	Material	Range
133.112i-g	PN16	1.0619N	DN15-DN125
135.112i-g	PN40	1.0619N	DN15-DN125
153.112i-g	PN16	1.4408	DN15-DN125
155.112i-g	PN40	1.4408	DN15-DN125
533.112i-g	PN16	2.4610	DN15-DN125
535.112i-g	PN40	2.4610	DN15-DN125

Design acc. :AD 2000 A4,
ATEX 2014/34/EU,
EN 13709
Face to face : EN558-1 Ser.1
Flange end : EN1092-1
Test acc. : EN12266-1
Temperature range :
-29℃~ +450℃(1.0619N)
-196℃~ +400℃(1.4408)

Material List

NO.	Part	Material		
		FIG.153.112i-g / 155.112i-g	FIG.133.112i-g / 135.112i-g	Fig.533.112i-g/535.112i-g
1	Body	1.4408/1.4409	1.0619N	2.4610
1.1	Body seal	1.4408/stellite 21	1.4370/1.4551/1.4009	2.4610
2	Disk	1.4401	1.4021 QT	2.4610
2.1	Disk seal	Stellite 21/stellite 6	1.4021 QT	2.4610 / Stellite 21
3	Bellows	1.4571	1.4571	2.4610
5	Low stem	1.4401	1.4401	2.4610
6	Bolts	A4-70 / A2-70	1.7225(GC)	A4-70 / A2-70
7	Nuts	A4-70 / A4-80 / A2-70	1.1181(YK)	A4-70 / A4-80 / A2-70
9	Packing gland	1.4408	1.0619N	1.4408
9.1	Gland bolt	A4-70 / A2-70	1.7225(GC)	A4-70 / A2-70
9.2	Gland nut	A4-70 / A4-80 / A2-70	1.1181(YK)	A4-70 / A4-80 / A2-70
10	Connecting block	1.4308	1.4308	1.4308
11	Up stem	1.4057	1.4057	1.4057
12	Bonnet	1.4408/1.4409	1.0619N	2.4610
15	Handwheel	GGG40.3	GGG40.3	GGG 40.3
16	Stem nut	1.4021 / D2 / Copper alloy	GGG 40.3 / Copper alloy	1.4021 / D2 / Copper alloy
20	Packing	Graphite / PTFE	Graphite	Graphite
21	Body seal	Graphite +1.4401 / PTFE	Graphite +1.4301	Graphite +2.4610
22	Protecting cover	1.4401	1.4021	2.4610

Dimension List

PN	DN	L	D	D1	K	b	f	w	n	d1	H	Hub	Kv(m*3/h)	W.T.(kg)
16	65	290	185	122	145	18	3	220	8	18	313	15	72.0	23
	80	310	200	138	160	20	3	250	8	18	370	25	111.2	32.5
	100	350	220	158	180	20	3	250	8	18	390	25	170	42
	125	400	250	188	210	22	3	350	8	18	435	30	262	62.5
16/40	15	130	95	45	65	16	2	120	4	14	228	6	4.0	5.4
	20	150	105	58	75	18	2	120	4	14	233	6	6.9	6.1
	25	160	115	68	85	18	2	140	4	14	238	8	10.8	7.8
	32	180	140	78	100	18	2	140	4	18	250	8	16.5	10.0
	40	200	150	88	110	18	3	160	4	18	285	15	28.0	13.0
	50	230	165	102	125	20	3	160	4	18	293	15	43.0	16.5
40	65	290	185	122	145	22	3	220	8	18	313	15	72.0	28.0
	80	310	200	138	160	24	3	250	8	18	370	25	111.2	32.0
	100	350	235	162	190	24	3	250	8	22	390	25	170	56.3
	125	400	270	188	220	26	3	350	8	26	435	34	262	75.0

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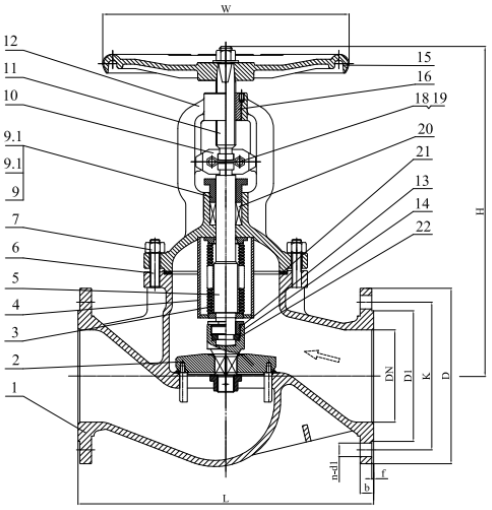

FIG.	Pressure	Material	Range
133.112i-g	PN16	1.0619N	DN150-DN400
135.112i-g	PN40	1.0619N	DN150-DN400
153.112i-g	PN16	1.4408	DN150-DN400
155.112i-g	PN40	1.4408	DN150-DN400
533.112i-g	PN16	2.4610	DN150-DN400
535.112i-g	PN40	2.4610	DN150-DN400

Design acc. : AD 2000 A4,
ATEX 2014/34/EU,EN 13709
Face to face : EN558-1 Ser.1
Flange end : EN1092-1
Test acc. : EN12266-1
Temperature range :
-29℃~ +450℃(1.0619N)
-196℃~ +400℃(1.4408)

Material List

NO.	Part	Material		
		FIG.153.112i-g/ 155.112i-g	FIG.133.112i -g/ 135.112i-g	FIG.533.112i-g / 535.112i-g
1	Body	1.4408/1.4409	1.0619N	2.4610
1.1	Body seal	1.4408/stellite 21	1.4370/1.4551/1.4009	2.4610
2	Disk	1.4401	1.0460	2.4610
2.1	Disk seal	Stellite 21/stellite 6	Stellite 6	2.4610 / Stellite21
3	Bellows	1.4571	1.4571	2.4610
4	Protecting cover	1.4401	1.4021	2.4610
5	Low stem	1.4401	1.4401	2.4610
6	Bolts	A4-70 / A2-70	1.7225(GC)	A4-70 / A2-70
7	Nuts	A4-70 / A4-80 / A2-70	1.1181(YK)	A4-70 / A4-80 / A2-70
9	Packing gland	1.4408	1.0619N	1.4408
9.1	Gland bolt	A4-70 / A2-70	1.7225(GC)	A4-70 / A2-70
9.2	Gland nut	A4-70 / A4-80 / A2-70	1.1181(YK)	A4-70 / A4-80 / A2-70
10	Connecting block	1.4308	1.4308	1.4308
11	Up stem	1.4057	1.4057	1.4057
12	Bonnet	1.4408/1.4409	1.0619N	2.4610
13	Disc screw	1.4401	1.4006	2.4610
14	Secondary disc/Secondary seat	1.4401 stellite 21/1.4401	1.4021 QT/1.4009	2.4610
15	Handwheel	GGG40.3	GGG40.3	GGG 40.3
16	Stem nut	1.4021 / D2 / Copper alloy	GGG40.3 / Copper alloy	1.4021 / D2 / Copper alloy
18	Nut	A2-70	35	A2-70
19	Bolts	A2-70	35	A2-70
20	Packing	Graphite / PTFE	Graphite	Graphite
21	Body seal	Graphite +1.4401 / PTFE	Graphite +1.4301	Graphite+2.4610
22	Folio ring	1.4401	1.4006	2.4610

Dimension List

PN	DN	L	D	D1	K	b	f	w	n	d1	H	Hub	Kv(m*3/h)	W.T.(kg)
16	150	480	285	212	240	22	3	400	8	22	470	40	372	89.5
	200	600	340	268	295	24	3	460	12	22	560	51	680	193.5
	250	730	405	320	355	26	3	600	12	26	1116	65	1013	245
	300	850.	460	378	410	28	4	800	12	26	1176	80	1446	410
	350	980	520	438	470	30	4	-	16	26	-	-	-	-
	400	1100	580	490	525	32	4	-	16	30	-	-	-	-
40	150	480	300	218	250	28	3	400	8	26	470	40	372	106.0
	200	600	375	285	320	34	3	460	12	30	560	51	680	232.0
	250	730	450	345	385	38	3	600	12	33	1116	65	1013	294
	300	850	515	410	450	42	4	800	16	33	1176	80	1446	580

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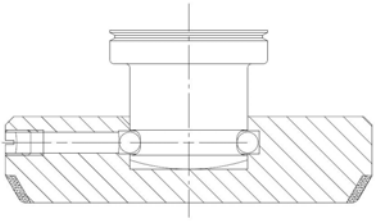
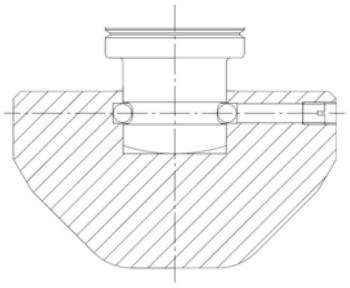
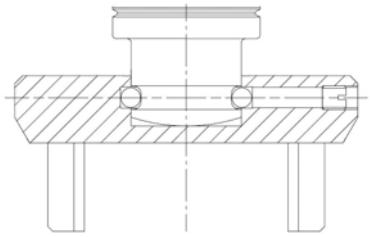
Available



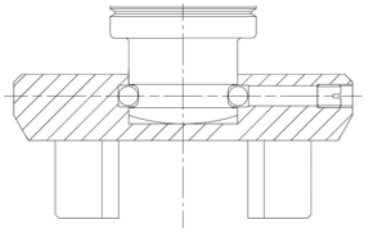
Isolation plug with marginal seat



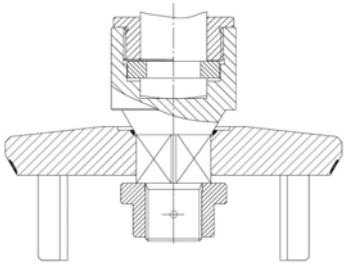
Regulating plug with marginal seat



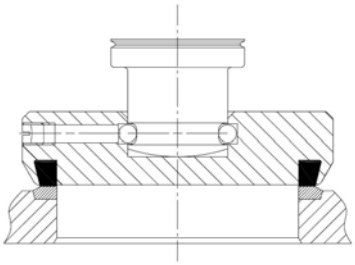
V-port plug with marginal seat



V-port regulating plug with marginal seat

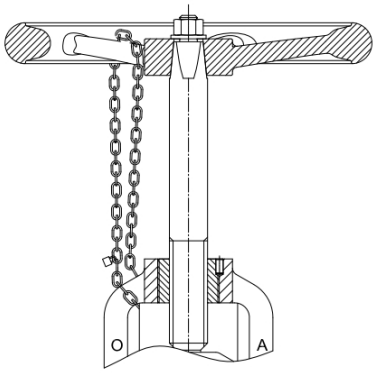


Balancing plug

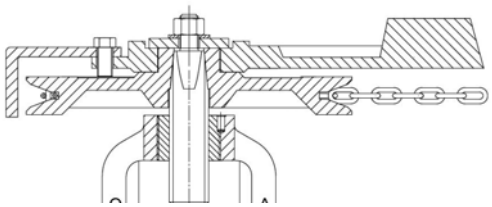


Plug with soft seat

Max.Operating temperature 200℃ at PTFE



Extended stem and Locking device



Chain wheel

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Date：06 Mar., 2026

Pressure-temperature limit rating table

Body Material	Nominal Pressure(PN)	Temperature(℃)	Pressure(barg)
1.0619N	16	-60	13.1
		-10.1	13.1
		-10	16
		150	14
		200	13.3
		250	12.1
		300	11
		350	10.2
		400	9.5
1.0619N	25	-60	19.5
		-10.1	19.5
		-10	25
		150	22
		200	20.8
		250	19
		300	17.2
		350	16
		400	14.8
1.0619N	40	-60	31
		-10.1	31
		-10	40
		150	35.2
		200	33.3
		250	30.4
		300	27.6
		350	25.7
		400	23.8
1.4408	16	-60	12.5
		-10.1	12.5
		-10	16
		150	14.5
		200	13.4
		250	12.7
		300	11.8
		350	11.4
		400	10.9

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1.4408	25	-60	19.5
		-10.1	19.5
		-10	25
		150	22.7
		200	21
		250	19.8
		300	18.5
		350	17.8
		400	17.1
1.4408	40	-60	31.5
		-10.1	31.5
		-10	40
		150	36.3
		200	33.7
		250	31.8
		300	29.7
		350	28.5
		400	27.4
2.4610	16	-60	11.5
		-10.1	44.5
		-10	16
		150	14
		200	12
		250	9.6
		300	8.2
		350	6.7
		400	5.2
2.4610	40	-60	28
		-10.1	28
		-10	40
		150	34
		200	30
		250	28
		300	26
		350	25
		400	22

Maximum allowable pressure difference according to EN 13709: DN15 bis DN100=40 bar, DN125=33bar, DN150=21bar, DN200=14bar, DN250=9bar, DN300=6bar, DN350=4.5bar, DN400=3.5bar

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