Datasheet
Butterfly valve
VSS/VSSL

Si-203 EN

Edition: 2023-01

- Advanced triple eccentric design
- Designed for control and shut-off applications
- Designed for applications up to 350° C (662 °F)
- Tightness class in accordance with EN 60534-4 Class V as standard
- Solid seat made of stainless steel
- Wafer design (Mounted between flanges) alt. lugged design

Options

- Fire safe
- PTFE-seat
- High temperature applications up to 550° C (1022 °F)



Type VSS:	**Wafer design**
Type VSSL:	**Lugged design**
Nominal pressure:	**PN 10-25**
Nominal size:	**DN 80 - 1200**

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Product Information

Somas butterfly valves, type VSS is used as a control, on/off and shut-off valve. The VSS valve is designed to handle a wide range of liquids, gases and steam within a broad temperature range.

The valves have an advanced triple eccentric design including a unique shape of the disc allows the use of a solid stainless steel seat. The solid seat remains unaffected by high flow velocities and temperatures. A good valve function is achieved even on difficult applications.

The seat is replaceable in alternative materials.

The VSS valve can be mounted between flanges and is also supplied in lugged design.

The Somas valves are delivered ready for installation and operation. The valve assemblies are delivered factory tested as complete units with actuators, positioners and accessories.

Option

- **PTFE-seat**
- **High temperature applications up to 550° C (1022 °F)**
- **”Fire safe” (see datasheet Si-202 EN)**

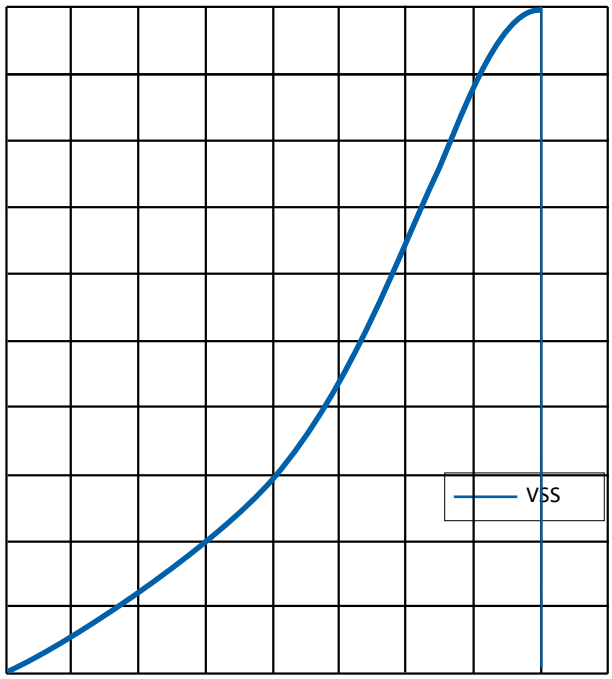
Tightness class

The tightness class is related to the chosen material in the seat ring.

Standard leakage class	Optional leakage class
EN 60534-4	**EN 60534-4**
PTFE - Class V	PTFE - Class VI (≤DN400)
Metal - Class V	
	EN 12266-1
	PTFE - Rate B
	PTFE - Rate C
	Metal - Rate D

Flow characteristics

Flow
100% Flow



Valve opening

Liquid pressure recovery factor F_L

Factor	Opening angle 10°	20°	30°	40°	50°	60°	70°	80°	90°
F_L	0.88	0.86	0.82	0.80	0.74	0.68	0.61	0.60	0.59

Factor F_L is valid for all sizes

Factor F_{LP}

Factor	Opening angle 10°	20°	30°	40°	50°	60°	70°	80°	90°
F_{LP}	0.88	0.86	0.82	0.80	0.74	0.68	0.61	0.60	0.59

Factor F_{LP} is valid for all sizes

Pipe geometry factor F_P

Valve DN	Pipe DN	Opening angle 10°	20°	30°	40°	50°	60°	70°	80°	90°
	100				0.99	0.99	0.96	0.93	0.91	0.93
80	150	1.0	1.0	0.99	0.98	0.97	0.92	0.86	0.83	0.86
	200				0.97	0.94	0.88	0.81	0.77	0.81
	150				0.98	0.97	0.93	0.88	0.84	0.88
100	200	1.0	1.0	0.99	0.97	0.94	0.87	0.80	0.76	0.80
	250				0.96	0.93	0.85	0.77	0.72	0.77
	150				0.98	0.95	0.91	0.91	0.88	0.91
125	200	1.0	1.0	0.99	0.95	0.89	0.83	0.83	0.79	0.83
	250				0.93	0.86	0.78	0.78	0.74	0.78
	200				0.98	0.95	0.91	0.91	0.88	0.91
150	250	1.0	1.0	0.99	0.95	0.89	0.83	0.83	0.79	0.83
	300				0.93	0.86	0.78	0.78	0.74	0.78
	250				0.99	0.98	0.96	0.93	0.91	0.93
200	300	1.0	1.0	0.99	0.98	0.96	0.92	0.86	0.83	0.86
	350				0.97	0.94	0.88	0.81	0.77	0.81
	300				0.99	0.99	0.97	0.95	0.93	0.95
250	350	1.0	1.0	0.99	0.99	0.97	0.93	0.88	0.85	0.88
	400				0.98	0.95	0.90	0.83	0.8	0.83
	350				0.99	0.99	0.98	0.96	0.95	0.96
300	400	1.0	1.0	0.99	0.99	0.98	0.94	0.90	0.87	0.90
	500				0.98	0.96	0.91	0.85	0.82	0.85
	400				0.99	0.99	0.97	0.95	0.93	0.95
350	450	1.0	1.0	0.99	0.99	0.98	0.94	0.90	0.87	0.90
	500				0.98	0.96	0.91	0.85	0.82	0.85
	450				0.99	0.99	0.99	0.97	0.97	0.97
400	500	1.0	1.0	0.99	0.99	0.98	0.96	0.93	0.91	0.93
	600				0.98	0.96	0.91	0.85	0.82	0.85
	500				0.99	0.99	0.99	0.98	0.97	0.98
450	600	1.0	1.0	0.99	0.99	0.97	0.94	0.90	0.87	0.90
	700				0.98	0.95	0.90	0.84	0.80	0.84
	600				0.99	0.99	0.99	0.98	0.98	0.98
500	700	1.0	1.0	0.99	0.98	0.97	0.93	0.88	0.85	0.88
	800				0.98	0.95	0.89	0.83	0.79	0.83
	700				0.99	0.99	0.98	0.96	0.95	0.96
600	800	1.0	1.0	0.99	0.99	0.97	0.94	0.90	0.87	0.90
	900				0.98	0.96	0.91	0.85	0.81	0.85
	800				0.99	0.99	0.98	0.97	0.96	0.96
700	900	1.0	1.0	0.99	0.99	0.98	0.95	0.91	0.89	0.91
	1000				0.98	0.96	0.92	0.87	0.83	0.87
	800				0.99	0.99	0.98	0.97	0.96	0.96
750	900	1.0	1.0	0.99	0.99	0.98	0.95	0.91	0.89	0.91
	1000				0.98	0.96	0.92	0.87	0.83	0.87
	900				0.99	0.99	0.98	0.97	0.96	0.97
800	1000	1.0	1.0	0.99	0.99	0.98	0.94	0.93	0.90	0.93
	1200				0.98	0.96	0.91	0.85	0.81	0.84
	1000				0.99	0.99	0.98	0.97	0.96	0.97
900	1200	1.0	1.0	0.99	0.99	0.98	0.95	0.91	0.87	0.91
	1400				0.98	0.96	0.91	0.84	0.80	0.84
	1200				0.99	0.99	0.97	0.95	0.93	0.95
1000	1400	1.0	1.0	0.99	0.98	0.97	0.93	0.88	0.85	0.88
	1600				0.98	0.95	0.89	0.83	0.79	0.83
	1400				0.99	0.99	0.98	0.96	0.95	0.96
1200	1600	1.0	1.0	0.99	0.98	0.98	0.95	0.91	0.88	0.91
	1800				0.98	0.96	0.91	0.85	0.82	0.85

Capacity factor Kv and Resistance factor ζ

DN	Opening angle 10°	20°	30°	40°	50°	60°	70°	80°	90°	ζ 90°
80	14	31	48	73	108	165	203	235	205	1,18
100	21	45	70	107	158	240	324	375	326	1,13
125	35	75	116	177	262	400	520	605	523	1,06
150	50	108	168	256	379	580	780	905	784	0,98
200	89	193	299	457	675	1030	1390	1610	1397	0,99
250	142	307	476	727	1076	1650	2211	2555	2222	0,95
300	207	446	692	1058	1566	2400	3219	3720	3235	0,93
350	279	602	934	1427	2111	3230	4341	5020	4362	0,95
400	371	800	1242	1898	2809	4300	5775	6675	5805	0,91
450	482	1039	1618	2472	3661	5630	7555	8732	7594	0,90
500	584	1258	1951	2981	4413	6760	9071	10485	9117	0,90
600	853	1839	2851	4357	6448	9880	13256	15325	13223	0,76
700	1157	2494	3867	5909	8746	13400	17981	20780	18071	0,77
750	1157	2494	3867	5909	8746	13400	17981	20780	18071	0,77
800	1525	3289	5100	7793	11534	17670	23711	27405	23830	0,76
900	1945	4190	6495	9925	14690	22500	30195	34900	30345	0,80
1000	2395	5160	8005	12230	18100	26500	37205	43000	37390	0,81
1200	3450	7440	11540	18050	26095	37940	53645	62000	53910	0,81

Relation between Kv and Cv: Kv = 0,86 x Cv

Pressure and temperature rating

Use shaft material according to material code A for temperatures up to 150° C.
Use shaft material according to material code B for acids and hot gases above 150° C.

Pressure temperature relations from EN1092-1:2007. Max working pressure in bar (g) for Stainless Steel 1.4408 or CF8M

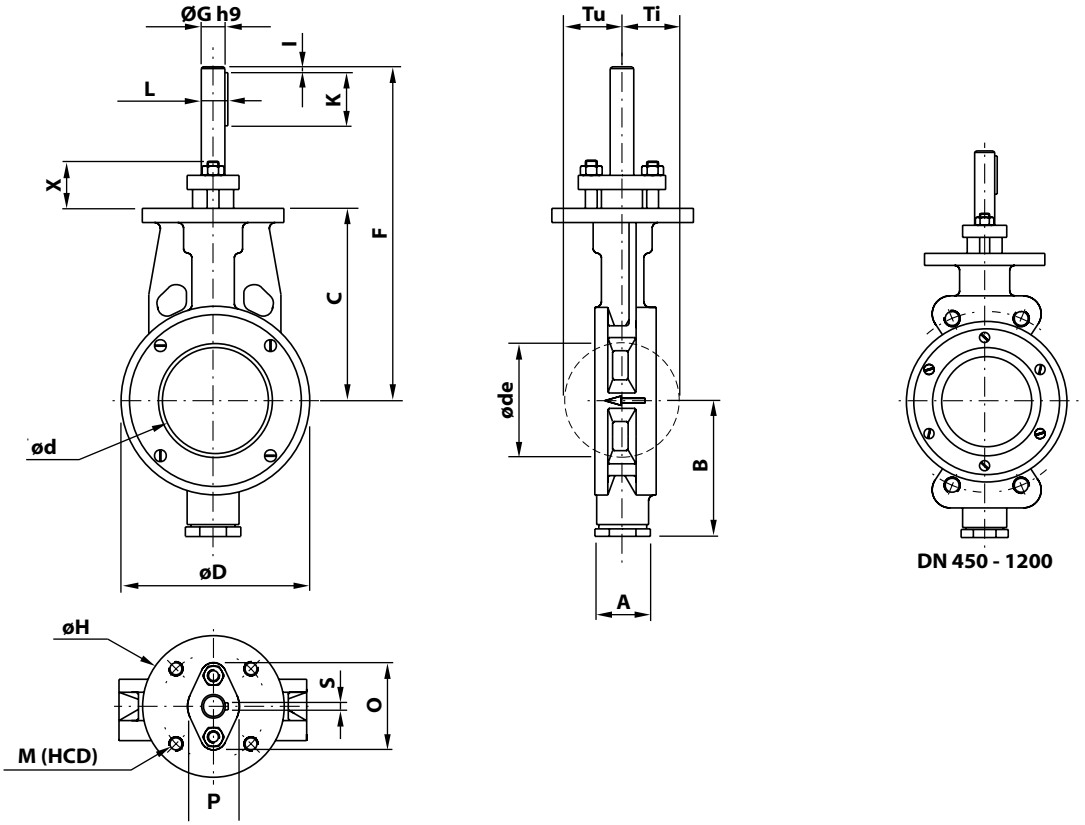
Pressure class	Working temperature 0 °C	100 °C	150 °C	200 °C	250 °C	300 °C	350 °C	400 °C	450 °C	500 °C	550 °C
PN6	6	6	5.4	5	4.8	4.4	4.3	4.1	4	4	3.9
PN10	10	10	9	8.4	7.9	7.4	7.1	6.8	6.7	6.6	6.5
PN16	16	16	14.5	13.4	12.7	11.8	11.4	10.9	10.7	10.5	10.4
PN25	25	25	22.7	21	19.8	18.5	17.8	17.1	16.8	16.5	16.3

Minimum working temperature -60°. If lower temperatures are needed contact Somas.

Max. allowable pressure drops/torque figures

Maximum allowable pressure drops are valid at 20° C (see below).

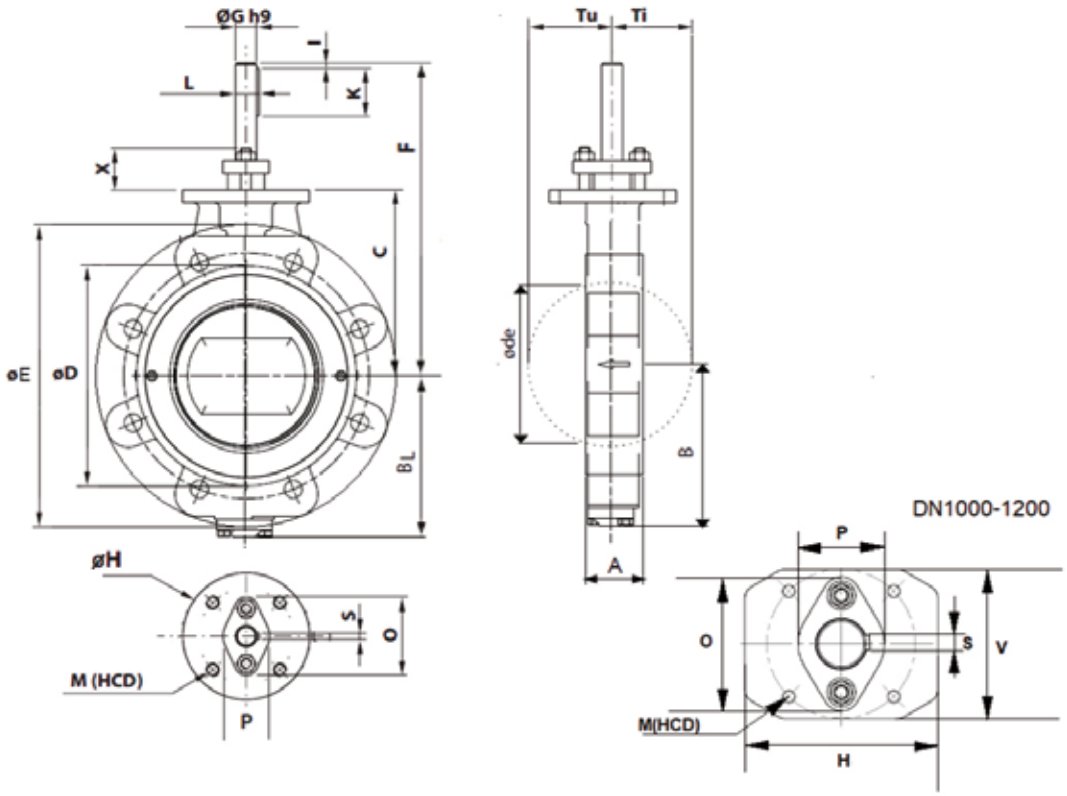
Valve DN	PN	Max. pressure drop. bar at opening angle 0°	60°	80°	Torque min. at ΔP bar	Nm	Torque min. at ΔP bar	Nm	Torque max. shaft Nm
80	25	25	13	4.4	≤ 10	100	> 10	120	150
100	25	25	13	4.4	≤ 10	120	> 10	165	220
125	25	25	15	5.8	≤ 10	165	> 10	180	220
150	25	25	9	2.7	≤ 10	200	> 10	250	300
200	25	25	4.3	1.1	≤ 10	250	> 10	290	350
250	25	25	3.6	1.05	≤ 10	400	> 10	500	600
300	25	20	3.6	0.93	≤ 10	500	> 10	620	750
350	25	20	3.6	1.09	≤ 8	800	> 8	1000	1200
400	25	20	4.7	1.43	≤ 8	1000	> 8	1350	1600
450	25	16	3.4	0.95	≤ 7	1350	> 7	1900	2250
500	25	15	4.4	1.19	≤ 6	1900	> 6	2700	3250
600	25	10	3.9	1.13	≤ 5	2400	> 5	2900	3500
700	25	8	2.7	0.75	≤ 4	3200	> 4	4200	5000
750	25	8	2.7	0.75	≤ 4	3200	> 4	4200	5000
800	25	8	2.6	0.75	≤ 4	4000	> 4	5000	6000
900	10	7	2.4	0.65	≤ 3	4800	> 3	5800	6900
1000	10	6	2.2	0.55	≤ 3	6000	> 3	7500	9000
1200	6-10	4.5	1.8	0.45	≤ 3	7500	> 3	9000	10800



Butterfly valve type VSS

DN	A	B	C	ød	øde	øD	F	øG	øH	I	K	L	M	(HCD)	O	P	S	X	Tu	Ti	Weight
80	48	120	150	70	60	133	270	20	120	5	45	22.5	M12	90	69	40	6	40	41	37	7
100	52	120	163	90	86	160	283	20	120	5	45	22.5	M12	90	69	40	6	40	52	48	9
125	56	135	175	116	110	190	295	20	120	5	45	22.5	M12	90	69	40	6	40	64	60	11
150	56	155	195	140	138	215	315	25	120	5	45	28	M12	90	69	45	8	40	77	73	14
200	60	180	235	187	186	270	355	25	120	5	45	28	M12	90	69	45	8	40	100	96	19
250	68	205	275	236	235	324	410	30	150	5	60	33	M12	120	80	50	8	50	124	120	30
300	78	240	290	285	285	375	425	35	150	5	50	38	M12	120	85	55	10	50	149	145	43
350	78	320	315	331	330	435	450	40	150	5	70	43	M12	120	108	70	12	50	172	167	56
400	102	360	340	382	380	490	540	50	150	10	80	53.5	M12	120	124	82	14	50	199	194	85
450	114	385	370	429	425	535	570	50	150	10	80	53.5	M12	120	124	82	14	50	223	217	109
500	127	415	400	479	475	590	610	60	200	10	90	64	M16	160	147	96	18	60	249	242	150
600	154	475	450	579	575	695	675	70	200	10	110	74.5	M16	160	162	112	20	60	300	292	221
700	165	530	515	674	675	800	730	70	200	10	110	74.5	M16	160	162	112	20	60	343	343	300
750	165	565	540	674	675	860	765	70	200	10	110	74.5	M16	160	162	112	20	60	343	343	360
800	190	600	580	774	775	910	825	80	200	10	120	85	M16	160	183	120	22	76	393	393	420
900	203	640	645	900	875	1010	890	80	200	10	120	85	M20	160	183	120	22	76	449	449	530
1000	216	705	730	975	975	1110	975	80	250	10	120	85	M20	205	200	200	22	85	498	488	710
1200	254	810	786	1175	1175	1300	1031	100	250	10	125	106	M20	205	200	200	28	85	598	588	1140

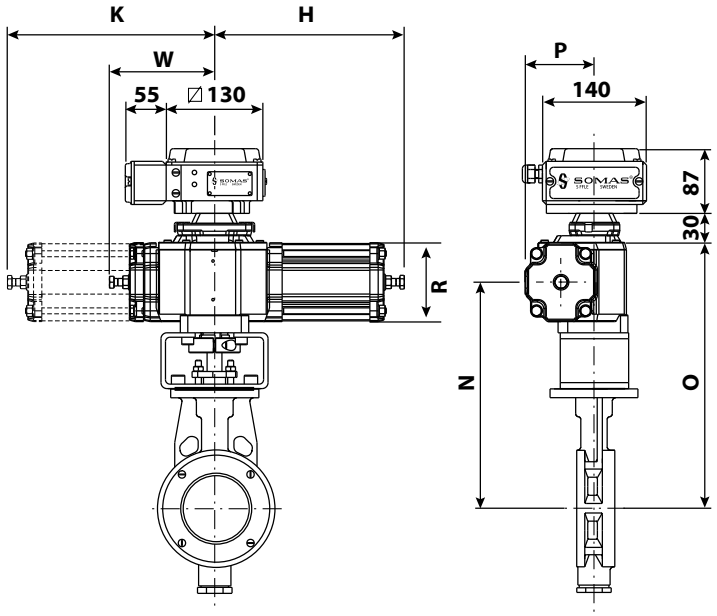
A = Face to face dimension according to EN 558 series 20 (valid for DN 100 - 1200).
øde = Necessary free diameter for the disc under movement.



Butterfly valve type VSSL

DN	A	B	C	ød	øde	øD	øE	F	øG	øH	H	V	I	K	L	M	(HCD)	O	P	S	X	Tu	Ti	Weight
80	48	148	150	70	60	133	204	270	20	120	-	-	5	45	22.5	M12	90	64	40	6	40	41	37	10.5
100	52	144	163	90	86	160	226	283	20	120	-	-	5	45	22.5	M12	90	64	40	6	40	52	48	12.5
125	56	163	175	116	110	190	260	295	20	120	-	-	5	45	22.5	M12	90	64	40	6	40	64	60	16.0
150	56	182	195	140	138	215	294	315	25	120	-	-	5	45	28	M12	90	69	45	8	40	77	73	19.0
200	60	217	235	187	186	270	337	355	25	120	-	-	5	45	28	M12	90	69	45	8	40	100	96	25.0
250	68	262	275	236	235	324	422	410	30	150	-	-	5	60	33	M12	120	80	50	8	50	124	120	46.0
300	78	280	290	285	285	375	485	425	35	150	-	-	5	50	38	M12	120	85	55	10	50	149	145	56.0
350 *)	78	320	315	331	330	432	524	450	40	150	-	-	5	70	43	M12	120	108	70	12	50	172	167	68.0
400	102	360	340	382	380	485	608	550	50	150	-	-	10	80	53.5	M12	120	124	82	14	50	199	194	129
450	114	385	370	429	425	535	670	580	50	150	-	-	10	80	53.5	M12	120	124	92	14	60	223	217	207
500	127	415	400	479	475	590	718	610	60	200	-	-	10	90	64	M16	160	147	96	18	60	249	242	198
600	154	475	450	579	575	695	826	675	70	200	-	-	10	110	74.5	M16	160	162	112	20	60	300	292	264
700	165	530	515	674	675	800	944	740	70	200	-	-	10	110	74.5	M16	160	162	112	20	60	343	343	440
750	165	560	515	674	675	860	990	740	70	200	-	-	10	110	74.5	M16	160	162	112	20	60	343	343	690
800	190	600	580	774	775	910	1080	825	80	200	-	-	10	120	85	M16	160	183	120	22	76	393	393	643
900	203	640	645	874	875	1010	1168	890	80	200	-	-	10	120	85	M20	160	183	120	22	76	449	449	962
1000	216	710	730	973	975	1110	1290	975	80	-	300	220	10	120	85	M20	205	200	200	22	85	488	488	1001
1200	254	810	786	1175	1175	1300	1485	1031	100	-	300	240	10	125	106	M20	205	200	200	28	85	598	588	1650

*) Only Cl. 150



Butterfly valve type VSS with actuator type A-DA

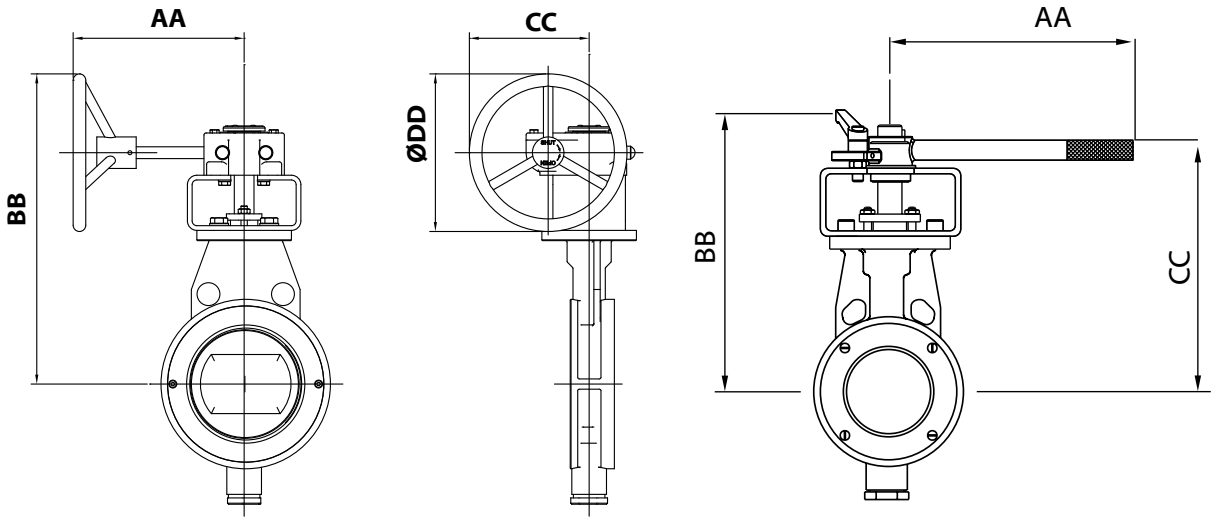
DN	Type	H	K	N	O	P	R	W	Weight
80	**A13**	250	–	275	325	83	106	90	13
80	**A21**	255	–	295	360	94	106	140	17
100	**A21**	255	–	305	370	94	106	140	19
100	**A22**	255	260	305	370	94	106	–	20
125	**A22**	255	260	320	385	94	106	–	22
150	**A22**	255	260	340	410	94	106	–	25
200	**A22**	255	260	380	445	94	106	–	30
250	**A31**	380	–	470	560	144	152	215	55
300	**A31**	380	–	485	575	144	152	215	68
300	**A32**	380	395	485	575	144	152	–	74
350	**A32**	380	395	525	600	144	152	–	87
400	**A32**	380	395	570	655	144	152	–	116
400	**A33**	470	–	570	655	185	230	215	123
450	**A34**	470	485	600	685	185	230	–	165
450	**A41**	550	–	645	770	210	230	315	185
500	**A41**	550	–	675	800	210	230	315	230
500	**A42**	545	560	675	800	210	230	–	245
600	**A41**	550	–	725	850	210	230	315	300
600	**A42**	545	560	725	850	210	230	–	315
700	**A42**	545	560	790	915	210	230	–	390
750	**A42**	545	560	810	940	210	230	–	455
800	**A42**	545	560	810	1000	280	355	–	515
800	**A43**	680	–	875	1000	280	355	370	570
900	**A51**	745	–	965	1150	315	355	370	735
1000	**A51**	745	–	1050	1235	315	355	370	920
1000	**A52**	745	760	1050	1235	315	355	–	955
1200	**A51**	745	–	1120	1305	315	355	370	1350
1200	**A52**	745	760	1120	1305	315	355	–	1385

For units with the positioner type SP405, add 2 kg
For units with the positioner type SPE405, add 3 kg

Actuator type A-SC/SO

DN	Type	H	K	N	O	P	R	W	Weight
80	**A23–X**	415	–	295	360	117	152	140	24
100	**A24–X**	415	420	305	370	117	152	–	25
125	**A24–X**	415	420	320	385	117	152	–	38
150	**A24–X**	415	420	340	405	117	152	–	41
200	**A24–X**	415	420	380	445	117	152	–	46
250	**A33–X**	660	–	470	560	185	230	215	88
300	**A33–X**	660	–	485	575	185	230	215	101
350	**A34–X**	665	680	525	610	185	230	–	145
400	**A43–X**	920	–	615	740	280	355	315	250
450	**A43–X**	920	–	645	770	280	355	315	275
500	**A44–X**	925	935	675	600	280	355	–	370
600	**A44–X**	925	935	725	850	280	355	–	440
700	**A44–SO**	925	935	790	915	280	355	–	515

X = SC – Spring to close
X = SO – Spring to open
For units with the positioner type SP405, add 2 kg
For units with the positioner type SPE405, add 3 kg



Butterfly valve type VSS with gear unit

DN	Type	AA	BB	CC	øDD	Weight
80	**AB215N**	247	374	247	200	15
100	**AB215N**	247	387	247	200	17
125	**AB215N**	247	400	247	200	19
150	**AB215N**	247	420	247	200	22
200	**AB215N**	247	460	247	200	27
250	**AB550N**	282	506	221	300	43
300	**AB550N**	282	546	221	300	56
350	**AB550N**	282	586	221	300	69
400	**AB880N**	275	677	261	350	106
450	**AB880N**	275	707	261	350	130
500	**AB2000N**	318	810	303	500	184
600	**AB2000N**	318	860	303	500	283
700	**AB2000N**	318	920	303	600	344
750	**AB2000N**	318	950	303	600	404
800	**AB1950N/PR4**	400	1065	430	600	466
900	**AB1950N/PR4**	400	1130	430	600	596
1000	**AB3000N/PR4**	410	1242	440	600	786
1200	**AB3000N/PR4**	410	1312	440	600	1216

Butterfly valve type VSS with hand lever

DN	Type	AA	BB	CC	Weight
80	**HSR20**	355	427	392	15
100	**HSR20**	355	440	405	17
125	**HSR20**	355	452	417	19

Selection table

Valve DN	Shaft dia. (mm)	Pneumatic actuators: Double acting 5.5 bar	Double acting 4 bar	Spring return: Spring to close 5.5 bar	Spring to close 4 bar	Spring to open 5.5 bar	Spring to open 4 bar	Manual override: Hand lever	Gear unit
80	20	A13	A21	A23-SC	A23-SC	A23-SO	A23-SOL	HSR020	AB215N
100	20	A21	A22	A24-SC	A24-SC	A24-SO	A24-SOL	HSR020	AB215N
125	20	A22	A22	A24-SC	A24-SC	A24-SO	A24-SOL	HSR020	AB215N
150	25	A22	A22	A24-SC	A24-SC	A24-SO	A24-SOL	–	AB215N
200	25	A22	A22	A24-SC	A24-SC	A24-SO	A24-SOL	–	AB215N
250	30	A31	A31	A33-SC	A33-SC	A33-SO	A33-SOL	–	AB550N
300	35	A31	A32	A33-SC	A33-SC	A33-SO	A33-SOL	–	AB550N
350	40	A32	A32	A34-SC	A34-SC	A34-SO	A34-SOL	–	AB550N
400	50	A32	A33	A43-SC	A43-SC	A43-SO	A43-SOL	–	AB880N
450	50	A41	A34	A43-SC	A43-SC	A43-SO	A43-SOL	–	AB880N
500	60	A41	A42	A44-SC	A44-SC	A44-SO	A44-SOL	–	AB2000N
600	70	A41	A42	A44-SC	A44-SC	A44-SO	A44-SOL	–	AB2000N
700	70	A42	A42	–	–	A44-SO	–	–	AB2000N
750	70	A42	A42	–	–	–	–	–	AB2000N
800	80	A42	A43	–	–	–	–	–	AB1950N/PR4
900	80	A51	A51	–	–	–	–	–	AB1950N/PR4
1000	80	A51	A52	–	–	–	–	–	AB3000N/PR4
1200	100	A51	A52	–	–	–	–	–	AB3000N/PR4

Flange standard

Somas butterfly valve type VSS in this data sheet is of wafer type for mounting between flanges PN 10-25.

The valve can also be delivered in lugged design.

The valve can also be drilled for mounting between flanges according to ASME.

When ordering, please always state the pressure rating of the counter flanges. See the valve specification system code 13.

Seat design

Valves with metal seat (type Y) according to code D. Valves for Fire Safe have a metal seat (3 pcs) according to code C.

PTFE and HiNi seat is available as an option. Also check the valve specification system (code 6) to find further seat alternatives.

Further technical information

Technical data for the materials used in the Somas valves, flange standard, steam data, etc. can be found in documents library on www.somas.se.

See also data sheet Si-205, that shows butterfly valve type MTV (DN 80–500). For valves with pressure class PN 50, see data sheet Si-204.

Actuators and accessories

The valves can be fitted with Somas manual, on/off or control actuators in accordance with the selection table. The valves will then be delivered as tested units ready for installation, valves with hand levers are only leakage tested without hand levers installed.

In the documents library on www.somas.se there is also information about positioners, limit switches and solenoid valves.

We can also fit other types of actuators and accessories in accordance with your specification.

Supplemental information

Note: Use gaskets with the correct inside diameter to ensure that pressure is applied on the cover plate.

For mounting between flanges according to PN 10-25, the inside gasket diameter should not exceed the dimensions specified in the standard EN 1514-1.

Gaskets according to EN 1514-1

Valve	Max. Inside dia.	Outside dia. (dy) (mm)		
DN	di (mm)	PN 10	PN 16	PN 25
80	89	142	142	142
100	115	162	162	168
125	141	192	192	194
150	169	218	218	224
200	220	273	273	284
250	273	328	329	340
300	324	378	384	400
350	356	438	444	457
400	407	489	495	514
450	458	539	555	564
500	508	594	617	624
600	610	695	734	731
700	712	810	804	833
800	813	917	911	942
900	915	1017	1011	1042
1000	1016	1124	1128	1154
1200	1220	1341	1342	1364

For mounting between flanges according to Class 150 dimensions according to the standard ASME B 16.21 RF are valid where the following dimensions refer to the gasket.

Gaskets according to ASME B 16.21 RF

Valve	Max. Inside dia.	Outside dia. (dy) (mm)
DN	di (mm)	Class 150
80	89	136
100	114	174
125	141	196
150	168	222
200	219	279
250	273	340
300	324	410
350	356	451
400	406	515
450	457	550
500	508	606
600	610	720
750	762	857

Temperature range

Seat	Max. temp.
A = PTFE (10 % carbon)	170° C
C = 1.4462 (metal seat, 3 pcs.)	350° C[1] 550° C[2]
D = 1.4470 (metal seat type Y)	350° C[1] 550° C[2]
E = 1.4547	400° C
P = PTFE (fibreglass 15 %)	170° C
N = 1.4835, Y-seat	550° C

Shaft	Max. temp.
A = 1.4460	150° C
B = 1.4460, hard chromed	350° C[1] 550° C[2]
C = 1.4460, HiCo coated	350° C[1] 550° C[2]
F = 1.4435	150° C
G = 1.4435 (316L), hard chromed	550° C
H = 1.4429	550° C
J = 1.4547	400° C
K = 1.4539	350° C[1]
T = Titanium	150° C

Valve body	Max. temp.
A = 2343-12	550° C
CF8M	500° C
E = CK-3MCuN	400° C

[1] Check with Somas for temperatures between 350 and 550° C. At higher pressures for example steam turbine applications.
[2] At lower pressures for example exhaust applications.

Variants

The standard VSS valve is designed to be mounted between flanges, but is also available in lugged design.

Ordering

State desired valve according to the valve specification system below as well as type of actuator, positioner and accessories.

Valve specification system

VSS - A 5 - A A D - A 1 1 - DN... - D... - B... - PN...

1 2 3 4 5 6 7 8 9 10 11 12 13

1 Type of valve
VSS
VSSL

2 Valve body design
A = Wafer design according to EN 558-1, Series 20
F = Lugged design

3 Nominal pressure
2 = PN 10
5 = PN 25

4 Material – valve body
A = CF8M / 1.4408
E = CK-3MCuN
H = 1.4470
Z = 1.4469

5 Material – disc
A = CF8M/1.4408 alt. 1.4401
B = CF8M/1.4408 alt. 1.4401, hard chromed
C = CF8M/1.4408 alt. 1.4401, HiCo Gr 21 coated
H = 1.4462 alt. 1.4470
N = 1.4469 alt. 1.4410
S = CK-3MCuN alt. 1.4547

6 Material – seat
A = PTFE (10 % carbon, percentage by weight)
C = 1.4462 alt. 1.4470, (metal seat, 3 pcs.)
D = 1.4462 alt. 1.4470, (metal seat, type Y)
E = 1.4547
L = N10276 (High Nickel Alloy)
N = 1.4835, (seat, type Y)
P = PTFE, glass fiber filled 15 %
T = 1.4835, HiCo Gr 6 coated

7 Material – shaft
A = 1.4460 alt. SS 2324-12
B = 1.4460 alt. SS 2324-12, hard chromed
C = 1.4460 alt. SS 2324-12, HiCo Gr 6 coated
J = CK3MCuN / 1.4547
S = 1.4469 alt. 1.4410
Z = 1.4462 alt. 1.4470

8 Bearing – valve body/shaft
1 = Without bearing
3 = HiCo Gr 6
6 = N06625 (High Nickel Alloy)
7 = 1.4462

9 Stuffing box
1 = Graphite
2 = PTFE

10 Valve size, DN

11 Shaft diameter

12 Actuator mounting flange drilling

13 Drilling, counter flanges, PN/Class

Other materials are available on request.
Contact Somas for further information.

Somas reserves the right to make improvements without prior notice.

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