Datasheet
Butterfly valve for marine cargo systems
MTVC/MTVCL

Si-206 EN

Edition: 2026-01

- Advanced triple eccentric design
- Designed for manual and remote operated applications
- Designed for applications up to 150 °C (302 °F)
- Tightness class in accordance with EN 60534-4 Class V, as standard
- Y-seat made of stainless steel

Option

- PTFE-seat

Type MTVC:	**Wafer design**
Type MTVCL:	**Lugged design**
Nominal pressure:	**PN 10-25, Class 150**
Nominal size:	**DN 80-350, NPS 3-14**

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Product Information

Somas butterfly valves type MTVC and MTVCL in this datasheet are intended for manual and remote operations. The valves are intended for marine cargo systems.

The butterfly valve type MTVC is wafer type for mounting between flanges. The valve can also be available in lugged design (MTVCL).

The valves are of advanced triple eccentric design. This means that Somas butterfly valves have a curved sealing-area. Through a specific shape of the shaft a Y-seat made out of stainless steel can be used, which means excellent tightness is offered (A ”standard” triple eccentric design is based on a disc-shape based on a cone, the disc sealing area becomes straight).

The Y-seat remains unaffected by high flow velocities and temperature. A good valve function is achieved even on difficult applications.

The valves are delivered ready for installation and operation.

Manually operated valves are delivered with a lever (lever is only sold for valves with soft seats and for the size of DN 80 - 125) or gear unit.

Remotely operated valves are delivered with hydraulic actuators.

Option

PTFE - seat

- Offers higher tightness class
- Less resistant to wearing

Tightness class

The valves tightness varies in relation to the selected material of 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

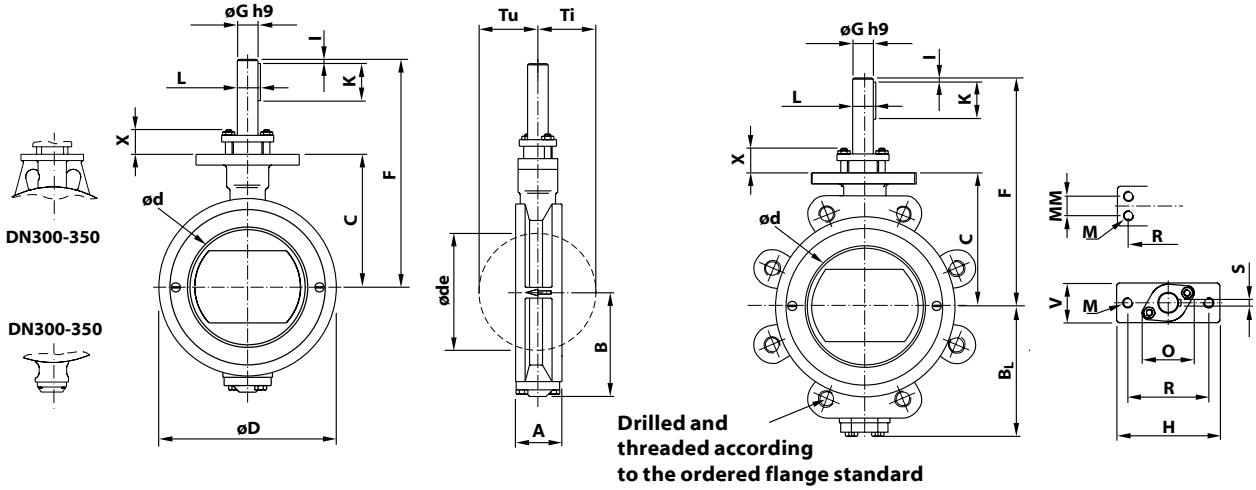
Necessary torque

Below results applicable at 20 °C

Valve	Shaft (mm)	Closing torque (Nm) Min. req		Max
DN	dia.	Δp≤10(bar)	Δp>10(bar)	allowed
80	20	100	120	150
100	20	120	165	220
125	20	165	180	220
150	25	200	250	300
200	25	250	290	350
250	30	400	500	600
300	35	500	620	750
350	40	800	1000	1200

Wafer design MTVC

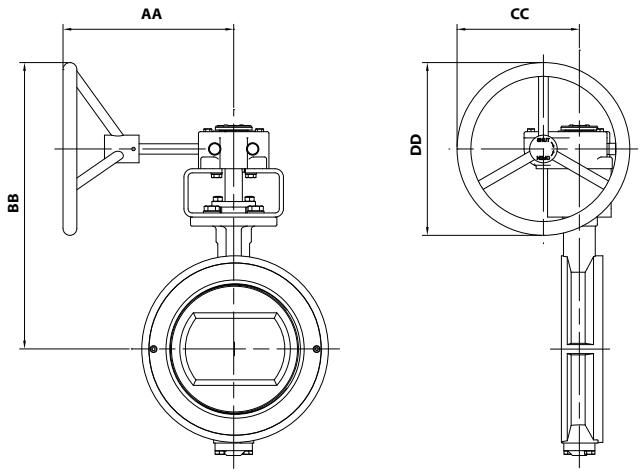
Lugged design MTVCL



Butterfly valve type MTVC/MTVCL

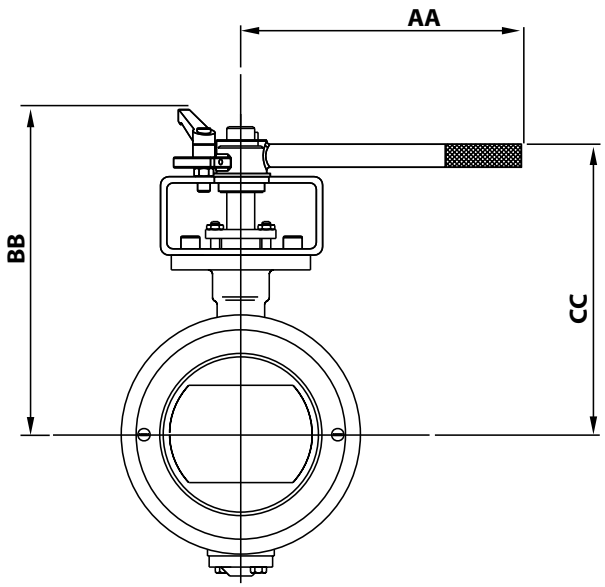
DN	PN	A	B	B_L	C	ød	øde	øD	F	øG	H	I	K	L	M	MM	O	R	S	V	X	Tu	Ti	Weight (kg) MTVC	Weight (kg) MTVCL
80	PN10-25/Cl150	46	86	86	111	70	60	133	226	20	125	5	45	22,5	M12	–	61	98	6	40	30	41	38	5	10
100	PN10-25/Cl150	52	99	129	128	90	86	160	243	20	125	5	45	22,5	M12	–	61	98	6	44	30	52	48	6	11,5
125	PN10-25/Cl150	56	113	137	146	116	110	188	261	20	125	5	45	22,5	M12	–	61	98	6	48	30	64	60	9	15,5
150	PN10-25/Cl150	56	130	158	161	140	138	215	276	25	125	5	45	28	M12	–	66	98	8	48	30	77	73	11	18,5
200	PN16-25	60	154	191	191	187	186	270	306	25	125	5	45	28	M12	-	66	98	8	48	30	100	96	17	31
	PN10/Cl150	60	154	154	191	187	186	270	306	25	125	5	45	28	M12	-	66	98	8	48	30	100	96	17	21
250	PN10-25/Cl150	68	188	226	225	236	235	324	360	30	150	5	60	33	M12	24	72	123	8	50	40	124	120	26	45
300	PN10-20/Cl150	78	261	261	265	285	285	374	400	35	150	3	50	38	M12	24	75	123	10	60	40	149	145	39	70
350	PN10-25/Cl150	78	287	287	294	331	330	432	449	40	150	3	70	43	M12	40	95	123	12	70	50	172	167	54	100

A = face to face dimensions according to SS-EN 558 serie 20
øde = necassary free diameter for the disc during movement
Unit of measurement = mm



DN	PN	Butterfly valve type MTVC/MTVCL with gear unit for on-deck application Type	AA	BB	CC	øDD	Weight (kg) MTVC	MTVCL
80	PN10-25/Cl150	AB215W	247	342	177	200	13	18
100	PN10-25/Cl150	AB215W	247	357	177	200	14	20
125	PN10-25/Cl150	AB215W	247	372	177	200	17	24
150	PN10-25/Cl150	AB215W	247	386	177	200	19	26
200	PN16-25	AB215W	247	414	177	200	25	40
	PN10/Cl150	AB215W	247	414	177	200	25	40
250	PN10-25/Cl150	AB550W	284	487	221	300	39	58
300	PN10-20/Cl150	AB550W	284	526	221	300	52	83
350	PN10-25/Cl150	AB550W	284	589	221	300	65	112

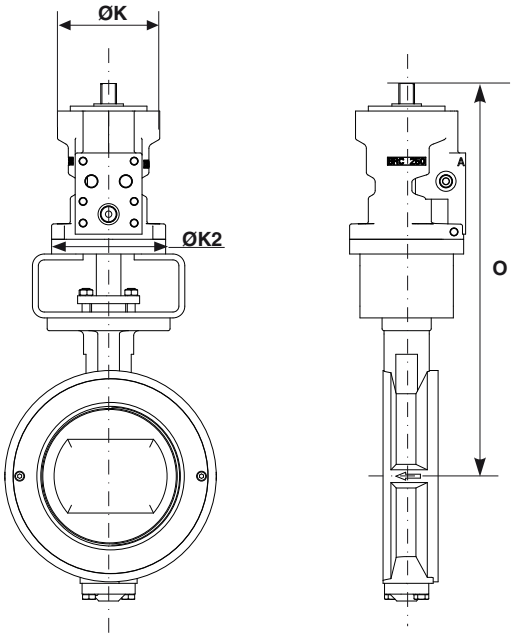
Unit of measurement = mm



Butterfly valve type MTVC/MTVCL with hand lever*					Weight (kg)	
DN	**Type**	**AA**	**BB**	**CC**	**MTVC**	**MTVCL**
80	HSR20	355	236	206	8	13
100	HSR20	355	251	223	9	14,5
125	HSR20	355	271	241	12	18,5

Unit of measurement = mm

* Hand lever type HSR is only sold together with Somas butterfly valves with soft seats and for the valve size of DN 80 - 125.

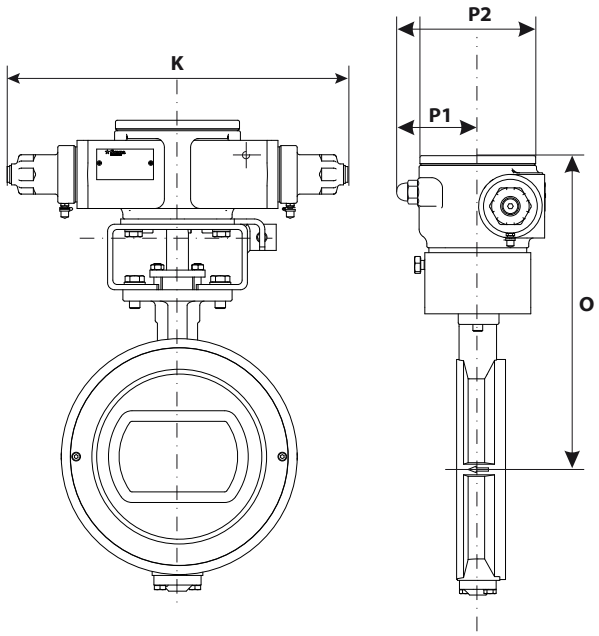


Butterfly valve, type MTVC/MTVCL with actuator type DAMCOS

DN	PN	Type	ØK	O	ØK2	Weight (kg) MTVC	Weight (kg) MTVCL	Weight (kg) DAMCOS MTVC	Weight (kg) DAMCOS MTVCL
80	PN10-25/Cl150	BRC250	104	351	118	5	10	15	20
100	PN10-25/Cl150	BRC250	104	368	118	6	11,5	16	21,5
125	PN10-25/Cl150	BRC250	104	386	118	9	15,5	19	25,5
150	PN10-25/Cl150	BRC250	104	401	118	11	18,5	21	28,5
200	PN10-25/Cl150	BRC500	126	450	132	17	31	32	46
250	PN10-25/Cl150	BRC500	126	504	132	26	45	41	60
300	PN10-20/Cl150	BRC1000	145	566	160	39	70	61	92
350	PN10-25/Cl150	BRC1000	145	615	160	53	100	81	128

NOTE! Required inlet pressure 135 bar

Unit of measurement = mm



Butterfly valve, type MTVC/MTVCL with actuator type Skarpenord

DN	PN	Type	K	O	P1	P2	Weight (kg) MTVC	Weight (kg) MTVCL	Weight (kg) Skarpenord MTVC	Weight (kg) Skarpenord MTVCL
80	PN10-25/Cl150	RA2-07	326	291	82	150	5	10	15	20
100	PN10-25/Cl150	RA2-07	326	308	82	150	6	11,5	16	21,5
125	PN10-25/Cl150	RA2-07	326	326	82	150	9	15,5	20	25,5
150	PN10-25/Cl150	RA2-10	378	353	102	184	11	18,5	26	33,5
200	PN10-25/Cl150	RA2-10	378	383	102	184	17	31	32	36
250	PN10-25/Cl150	RA2-12	435	437	105	202	26	45	50	69
300	PN10-20/Cl150	RA2-12	435	467	105	202	39	70	63	94
350	PN10-25/Cl150	RA2-14	542	536	121	240	53	100	94	141

NOTE! Required inlet pressure 130 bar
Unit of measurement = mm

Gaskets according to ASME B 16.21 RF

NPS (in)	Valve DN	Max. Inside. dia. di (mm)	Outside dia. dy (mm) Class 150
3	**80**	89	136
4	**100**	114	174
5	**125**	141	196
6	**150**	168	222
8	**200**	219	279
10	**250**	273	340
12	**300**	324	410
14	**350**	356	451

Gaskets according to EN 1514-1

NPS (in)	Valve DN	Max. Inside. dia. di (mm)	Outside dia. dy (mm) PN 10	PN 16	PN 25
3	**80**	89	142	142	142
4	**100**	115	162	162	168
5	**125**	141	192	192	194
6	**150**	169	218	218	224
8	**200**	220	273	273	284
10	**250**	273	328	329	340
12	**300**	324	378	384	400
14	**350**	356	438	444	457

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

Recomendation: Use nominal diameter as inside diameter.

Flange standard

Somas butterfly valve type MTV in this data sheet is of wafer type for mounting between flanges PN10-25/Class 150.
The valve can also be delivered in lugged design.

The valve can be drilled for mounting between flanges according to ASME B16.5:2003. When ordering, please state the pressure rating of the counter flanges. See valve specification system, code 13.

Seat design

The valves with a nominal size between DN80-350 have a metal seat according to code D (Y-seat).

PTFE-seats are available as an option to metal seats.

Ordering

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

Acctuators, gears and accessories

The valves can be fitted with gear units,, levers or hydraulic actuators in accordance with the selection tables in this data sheet.

The gear material and painting is customized for on-deck applications (BSK-99 Corrosion Class C5 M). See also data sheet Ti-918 for painting procedure for on-deck applications.

The valves will be delivered as tested units ready for installation.

Additional information

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

Valve specification system

MTVC - A 5 - A A D - A 1 2 - DN... - D... - B... - PN...
1 2 3 4 5 6 7 8 9 10 11 12 13

1 Valve type
Wafer design
MTVC
Lugged design
MTVCL

2 Valve body design
A = Wafer design
F = Lugged design

3 Nominal pressure
5 = PN25
4 = PN20/Class 150

4 Material – valve body
A = CF8M/1.4408

5 Material – disc
A = CF8M/1.4408

6 Material – seat
A = PTFE (10% carbon
Percentage by weight)
D = 1.4462 alt 1.4470 (Y-seat)

7 Material – shaft
A = 1.4460

8 Bearing – valve body/shaft
1 = Without bearing
7 = Alloy 625

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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