

# Datasheet

## Ball segment valve

### KVTF-C/KVXF-C

# Si-112 EN

Edition: 2024-05

- Control- and shut-off valve
- High capacity
- One-piece shaft gives a torque transmission free of backlash
- Excellent tightness irrespective of differential pressure
- Easy maintenance

#### Option

- KVMF-ball segment with V-port for high fibre concentrations
- LN (Low Noise Trim)  
Ball segment with low noise trim for high  $\Delta P$



**Type KVTF-C/KVXF-C**

**Nominal pressure**

**Nominal size**

**Flanged design**

**PN 25/Class 150**

**DN 80 - 400 NPS 3 - 16**



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## Product Information

The Somas KVTF-C is a flanged ball segment valve with centrally mounted shaft and KVXF-C is a flanged ball segment valve with eccentrically mounted shaft.

The valve body is in one piece.

Face to face dim. in accordance with EN558:2008-series 36 and ANSI/ISA-75.08.02-2003. Somas unique shaft device is designed for torque transmission and gives backlash-free operation with accurate control.

The spring loaded seat is available in three different materials (PTFE, PTFE 53 and HiCo).

The valves can be used for control, as well as for shut-off applications on practically every type of media within a wide temperature range. Choose KVTF-C for liquids, media containing impurities etc. For dry and clean media choose KVXF-C. In the KVXF-C valve the ball segment is eccentrically mounted and rotates out from the seat when the valve is opened. This reduces the wear on seat and segment.

Low noise trim is available as an option. The designation "LN" indicates that the ball segment is equipped with a network of bars that are used to split up the pressure drop across the valve. This results in less pressure recovery, thereby reducing the noise and potential damage due to cavitation.

Note! Capacity factors will be reduced for valves with LN-trim.

Ball segment with V-port is available for use at high fiber concentrations. The V-port design prevents dewatering at small opening angles.

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



- **KVMF-ball segment with V-port for high fibre concentrations**



- **LN (Low Noise Trim) Ball segment with low noise trim for high  $\Delta P$**



### Tightness class

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

Standard leakage class	Optional leakage class
<b>EN 60534-4</b>	<b>EN 60534-4</b>
PTFE - Class V	PTFE - Class VI
PTFE 53/PEEK - Class V	HiCo - Class V
HiCo - Class IV-S1	
	<b>EN 12266-1</b>
	PTFE - Rate C
	PTFE - Rate D
	PTFE 53/PEEK - Rate D
	HiCo - Rate E
	HiCo - Rate F

### Factor FLP

	Opening angle								
	10°	20°	30°	40°	50°	60°	70°	80°	90°
<b>FLP1</b>	0.85	0.82	0.78	0.75	0.70	0.66	0.60	0.55	0.50
<b>FLP2</b>	0.85	0.82	0.78	0.73	0.68	0.62	0.56	0.50	0.45
<b>FLP3</b>	0.85	0.82	0.78	0.73	0.67	0.61	0.54	0.49	0.43

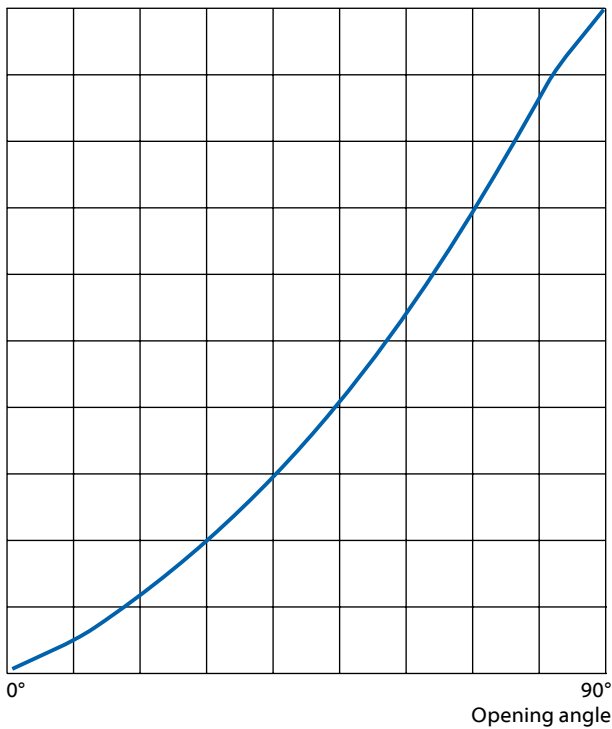
FLP1 = One dimension bigger pipe size  
 FLP2 = Two dimensions bigger pipe size  
 FLP3 = Three dimensions bigger pipe size

### Liquid pressure recovery factor FL

Factor	Opening angle								
	10°	20°	30°	40°	50°	60°	70°	80°	90°
<b>FL</b>	0.85	0.82	0.80	0.77	0.74	0.71	0.67	0.64	0.60

### Flow characteristics

100% Flow



### Pipe geometry factor Fp KVTF-C/KVXF-C

Valve DN	Pipe DN	Opening angle								
		10°	20°	30°	40°	50°	60°	70°	80°	90°
<b>80</b>	100				0.98	0.97	0.95	0.93	0.80	0.76
	150	1.00	0.99	0.98	0.94	0.90	0.85	0.78	0.70	0.65
	200				0.93	0.87	0.80	0.73	0.64	0.59
<b>100</b>	150				0.97	0.94	0.90	0.86	0.80	0.76
	200	1.00	0.99	0.97	0.94	0.90	0.84	0.78	0.70	0.65
	250				0.93	0.88	0.82	0.75	0.66	0.61
<b>150</b>	200				0.99	0.97	0.96	0.93	0.90	0.87
	250	1.00	1.00	0.99	0.97	0.95	0.91	0.87	0.81	0.77
	300				0.96	0.93	0.88	0.83	0.76	0.72
<b>200</b>	250				0.99	0.98	0.97	0.96	0.93	0.91
	300	1.00	1.00	0.99	0.98	0.96	0.94	0.91	0.86	0.82
	350				0.97	0.95	0.91	0.87	0.81	0.77
<b>250</b>	300				0.99	0.99	0.98	0.97	0.95	0.94
	350	1.00	1.00	0.99	0.99	0.97	0.95	0.93	0.89	0.87
	400				0.98	0.96	0.93	0.90	0.85	0.81
<b>300</b>	350				0.99	0.97	0.94	0.93	0.89	0.86
	400	1.00	1.00	0.99	0.98	0.96	0.92	0.90	0.83	0.79
	450				0.98	0.96	0.90	0.87	0.79	0.73
<b>350</b>	400				0.99	0.98	0.95	0.93	0.89	0.83
	450	1.00	1.00	0.99	0.99	0.97	0.92	0.89	0.85	0.81
	500				0.98	0.95	0.90	0.85	0.80	0.75
<b>400</b>	450				0.99	0.98	0.95	0.94	0.92	0.90
	500	1.00	1.00	0.99	0.99	0.97	0.92	0.90	0.86	0.83
	600				0.79	0.95	0.88	0.84	0.78	0.74

### Pressure and temperature rating

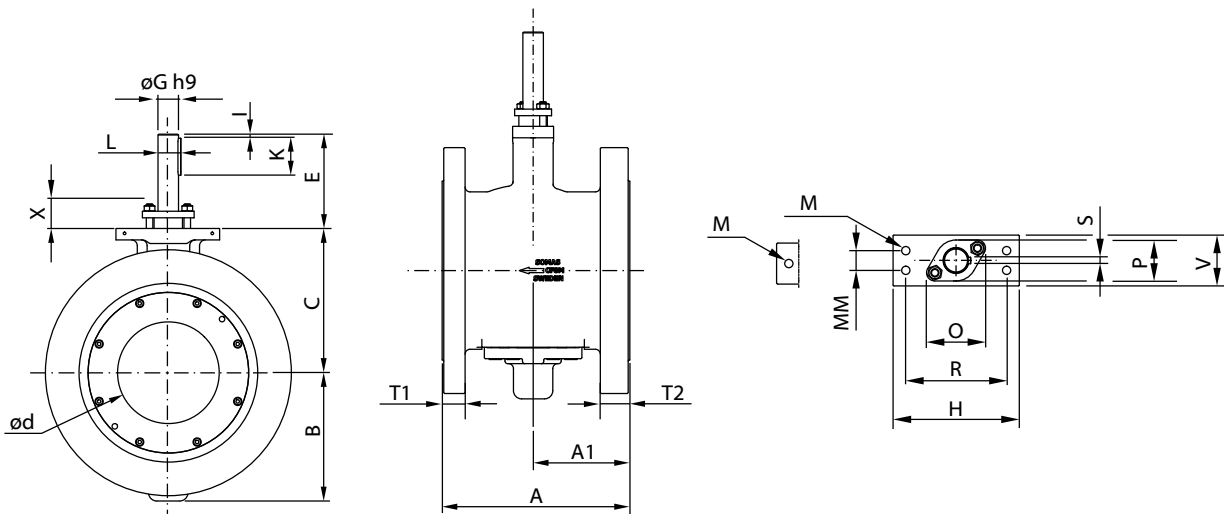
According to the material in the seat.

	Seat Code	Max. working pressure (bar/psi) at temperature (°C/°F)											
		0 °C	32 °F	150 °C	300 °F	170 °C	340 °F	200 °C	400 °F	350 °C	660 °F	> 350 °C	> 660 °F
<b>PN25</b>	A (PTFE)	25 bar	363 psi	22,7 bar	329 psi	22 bar	319 psi	-	-	-	-	-	-
	B (PTFE53)	25 bar	363 psi	22,7 bar	329 psi	22 bar	319 psi	12,6 bar	183 psi	-	-	-	Contact Somas
	T (HiCo)	25 bar	363 psi	22,7 bar	329 psi	22 bar	319 psi	21 bar	305 psi	10,65 bar	154 psi	-	Contact Somas

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



## Flanged design



Ball segment valve type KVTF-C/KVXF-C (valve body in one piece)

DN	A	A1	B	C	$\phi d$	E	$\phi G$	H	I	K	L	M	MM	O	O1	P	R	S	T1	T2	V	X	Weight
80	165	82	105	115	75	115	20	125	5	45	22.5	M12	-	61	-	42	98	6	24	27	48	30	18
100	194	94	122	140	92	115	20	125	5	45	22.5	M12	-	61	-	42	98	6	25	29	48	30	25
150	229	118	157	176	124	115	25	125	5	45	28	M12	-	66	-	47	98	8	28	36	50	30	51
200	243	124	186	202	156	135	30	155	5	60	33	M12	24	77	-	50	123	8	29	36	62	35	75
250	297	153	228	242	189	135	35	155	5	50	38	M12	24	75	-	55	123	10	32	38	65	40	109
300	338	176	281	297	232	155	40	170	5	50	43	M12	40	94	-	75	123	12	34	45	85	50	161
350	400	207	340	353	282	200	50	180	5	80	54	M16	55	105	-	85	136	14	38	49	95	50	244
400	400	237	385	393	326	210	60	225	5	90	64	M20	70	115	-	105	150	18	45	55.5	128	60	340

Sizes and measurements in millimeters (mm). Weights in kilograms (kg). Face to face dimensions according to EN 558 series 36.

Ball segment valve type KVTF-C/KVXF-C (valve body in one piece)

NPS	A	A1	B	C	$\phi d$	E	$\phi G$	H	I	K	L	M	MM	O	O1	P	R	S	T1	T2	V	X	Weight
3	6.50	3.23	4.13	4.53	2.95	4.53	0.79	4.92	0.20	1.77	0.89	M12	-	2.40	-	1.65	3.86	0.24	1.06	0.94	1.89	1.18	40
4	7.64	3.70	4.80	5.51	3.62	4.53	0.79	4.92	0.20	1.77	0.89	M12	-	2.40	-	1.65	3.86	0.24	1.14	0.98	1.89	1.18	55
6	9.02	4.65	6.18	6.93	4.88	4.53	0.98	4.92	0.20	1.77	0.89	M12	-	2.60	-	1.85	3.86	0.31	1.42	1.10	1.97	1.18	112
8	9.57	4.88	7.32	7.95	6.18	5.31	1.18	6.10	0.20	2.36	1.30	M12	0.94	3.03	-	1.97	4.84	0.31	1.42	1.14	2.44	1.38	165
10	11.69	6.02	8.98	9.53	7.48	5.31	1.38	6.10	0.20	1.97	1.30	M12	0.94	3.35	-	2.17	4.84	0.39	1.50	1.26	2.44	1.97	240
12	13.31	6.91	11.06	11.69	9.13	6.10	1.57	6.69	0.20	1.97	1.69	M12	1.57	3.70	-	1.85	4.84	0.47	1.75	1.34	3.35	1.97	355
14	15.75	8.13	13.39	13.90	11.10	7.87	1.97	7.09	0.20	3.15	2.11	M16	2.17	4.13	-	3.35	5.35	0.55	1.91	1.50	3.74	1.97	538
16	15.75	9.33	15.16	15.47	12.83	8.27	2.36	8.86	0.20	3.54	2.52	M20	2.76	4.53	-	4.13	5.91	0.71	2.19	1.77	5.04	2.36	750

Sizes and measurements in inches (in). Weights in pounds (lb).

## Flange standard

Somas ball segment valves type KVTF-C and KVXF-C are flanged and can be drilled according to PN10/16/20/25 and Cl 150 ASME B16.5:2003. When ordering, please state the pressure rating of the counter flanges.

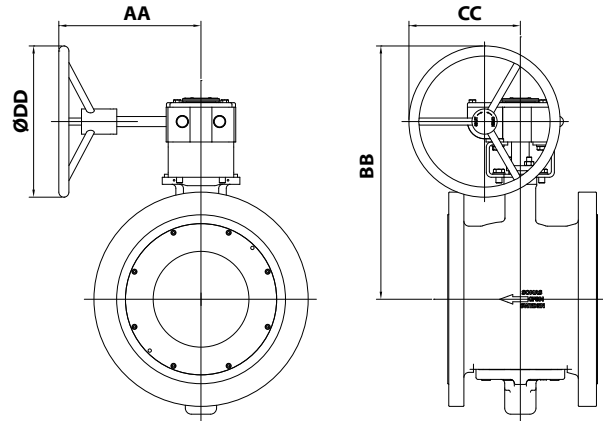
See the valve specification system, code 13.

## Face to face dimension

Flanged type of valves according to EN 558, Series 36 or ANSI/ISA-75.08.02-2003. For details see the various tables.



### Flanged design



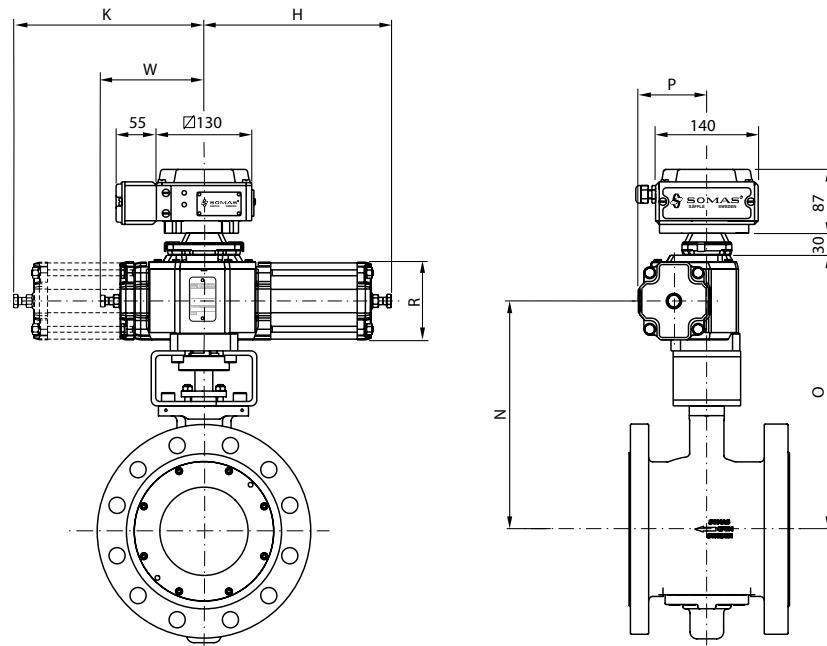
Ball segment valve type KVTF-C/KVXF-C with hand gear						
DN	Type	AA	BB	CC	øDD	Weight
80	AB215N	217	319	217	200	27
100	AB215N	217	344	217	200	34
150	AB215N	217	380	217	200	60
200	AB215N	217	406	217	300	80
250	AB550N	282	503	221	300	124
300	AB550N	282	568	221	300	176
350	AB880N	275	670	261	350	266
400	AB2000N	318	794	303	500	371

Sizes and measurements in millimeters (mm).  
Weights in kilograms (kg).

Ball segment valve type KVTF-C/KVXF-C with hand gear						
NPS	Type	AA	BB	CC	øDD	Weight
3	AB215N	7.48	14.96	7.48	10.04	56
4	AB215N	7.48	14.96	7.48	10.04	72
6	AB215N	7.48	16.34	7.48	10.04	129
8	AB215N	8.98	18.70	9.06	12.01	192
10	AB550N	8.98	20.28	9.06	12.01	267
12	AB550N	8.98	21.85	9.06	12.01	381
14	AB880N	9.84	27.56	10.43	13.78	584
16	AB2000N	15.16	31.30	10.43	18.11	815

Sizes and measurements in inches (in). Weights in pounds (lb).

### Flanged design





**Ball segment valve type KVTF-C/KVXF-C with actuator type A-DA**

DN	Type	H	K	N	O	P	R	W	Weight
80	A13-DA	250	-	240	288	83	106	90	25
80	A21-DA	255	-	258	320	94	106	140	28
80	A22-DA	255	260	283	320	94	106	-	29
100	A13-DA	250	-	265	313	83	106	90	32
100	A21-DA	255	-	283	345	94	106	140	35
100	A22-DA	255	260	283	345	94	106	-	36
150	A21-DA	255	-	319	381	94	106	140	61
150	A22-DA	255	260	319	381	94	106	-	62
150	A23-DA	305	-	319	381	117	152	140	64
200	A22-DA	255	260	350	412	117	106	-	87
200	A23-DA	305	-	350	412	117	152	140	89
200	A24-DA	305	310	350	412	117	152	-	93
200	A31-DA	380	-	390	477	144	152	215	101
250	A31-DA	380	-	430	517	144	152	215	135
250	A32-DA	380	395	430	517	144	152	-	141
300	A31-DA	380	-	505	542	144	152	215	188
300	A32-DA	380	395	505	542	144	152	-	194
350	A32-DA	380	395	581	668	144	152	-	280
350	A41-DA	550	-	626	752	211	228	315	321
400	A32-DA	380	395	621	708	144	152	-	376
400	A34-DA	470	485	621	708	183	228	-	400
400	A41-DA	550	-	666	792	211	228	315	417
400	A42-DA	545	560	666	792	211	228	-	432

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

**Sizes and measurements in millimeters (mm).  
 Weights in kilograms (kg).**

**Ball segment valve type KVTF-C/KVXF-C with actuator type A-SC/SO**

DN	Type	H	K	N	O	P	R	W	Weight
80	A23-SX	415	-	258	320	117	152	140	35
100	A23-SX	415	-	283	345	117	152	140	42
150	A24-SX	415	420	319	381	117	152	-	78
200	A24-SX	415	420	350	412	117	152	-	102
200	A33-SX	660	-	390	477	183	228	215	134
250	A33-SX	660	-	430	517	183	228	215	168
300	A33-SX	660	-	505	592	183	228	215	221
300	A34-SX	665	680	505	592	183	228	-	249
350	A34-SX	665	680	581	668	183	228	-	335
350	A43-SX	920	-	626	752	279	354	315	407
400	A43-SX	920	-	666	792	279	354	315	503
400	A44-SX	925	935	666	792	279	354	-	557

X = SC – Spring to close  
 X = SO – Spring to open

**Sizes and measurements in millimeters (mm).  
 Weights in kilograms (kg).**

**Ball segment valve type KVTF-C/KVXF-C with actuator type A-DA**

NPS	Type	H	K	N	O	P	R	W	Weight
3	A13-DA	9.84	-	9.45	11.34	3.27	4.17	3.54	55
3	A21-DA	10,04	-	10,16	12,6	3,7	4,17	5,51	62
3	A22-DA	10,04	10,24	11,14	12,6	3,7	4,17	-	64
4	A13-DA	9,84	-	10,43	12,32	3,27	4,17	3,54	71
4	A21-DA	10,04	-	11,14	13,58	3,7	4,17	5,51	77
4	A22-DA	10,04	10,24	11,14	13,58	3,7	4,17	-	79
6	A21-DA	10,04	-	12,56	15	3,7	4,17	5,51	134
6	A22-DA	10,04	10,24	12,56	15	3,7	4,17	-	137
6	A23-DA	12,01	-	12,56	15	4,61	5,98	5,51	141
8	A22-DA	10,04	10,24	13,78	16,22	4,61	4,17	-	192
8	A23-DA	12,01	-	13,78	16,22	4,61	5,98	5,51	196
8	A24-DA	12,01	12,2	13,78	16,22	4,61	5,98	-	205
8	A31-DA	14,96	-	15,35	18,78	5,67	5,98	8,46	223
10	A31-DA	14,96	-	16,93	20,35	5,67	5,98	8,46	298
10	A32-DA	14,96	15,55	16,93	20,35	5,67	5,98	-	311
12	A31-DA	14,96	-	19,88	21,34	5,67	5,98	8,46	414
12	A32-DA	14,96	15,55	19,88	21,34	5,67	5,98	-	428
14	A32-DA	14,96	15,55	22,87	26,3	5,67	5,98	-	617
14	A41-DA	21,65	-	24,65	29,61	8,31	8,98	12,4	708
16	A32-DA	14,96	15,55	24,45	27,87	5,67	5,98	-	829
16	A34-DA	18,5	19,09	24,45	27,87	7,2	8,98	-	882
16	A41-DA	21,65	-	26,22	31,18	8,31	8,98	12,4	919
16	A42-DA	21,46	22,05	26,22	31,18	8,31	8,98	-	952

For units with the positioner type SP405, add 4.4 lb  
 For units with the positioner type SPE405, add 6.6 lb

**Sizes and measurements in inches (in). Weights in pounds (lb).**

**Ball segment valve type KVTF-C/KVXF-C with actuator type A-SC/SO**

NPS	Type	H	K	N	O	P	R	W	Weight
3	A23-SX	16.34	-	10.16	12.6	4.61	5.98	5.51	77
4	A23-SX	16.34	-	11.14	13.58	4.61	5.98	5.51	93
6	A24-SX	16.34	16.54	12.56	15	4.61	5.98	-	172
8	A24-SX	16.34	16.54	13.78	16.22	4.61	5.98	-	225
8	A33-SX	25.98	-	15.35	18.78	7.2	8.98	8.46	295
10	A33-SX	25.98	-	16.93	20.35	7.2	8.98	8.46	370
12	A33-SX	25.98	-	19.88	23.31	7.2	8.98	8.46	487
12	A34-SX	26.18	26.77	19.88	23.31	7.2	8.98	-	549
14	A34-SX	26.18	26.77	22.87	26.3	7.2	8.98	-	739
14	A43-SX	36.22	-	24.65	29.61	10.98	13.94	12.4	897
16	A43-SX	36.22	-	26.22	31.18	10.98	13.94	12.4	1109
16	A44-SX	36.42	36.81	26.22	31.18	10.98	13.94	-	1228

X = SC – Spring to close  
 X = SO – Spring to open

**Sizes and measurements in inches (in). Weights in pounds (lb).**



### Capacity factor Kv and Resistance factor $\zeta$ for ball segment valve type KVTF-C/KVXF-C

DN	Opening angle									
	10°	20°	30°	40°	50°	60°	70°	80°	90°	$\zeta$ 90°
80	15	39	67	102	138	184	231	295	340	0.57
100	23	58	101	154	208	276	348	444	510	0.62
150	43	109	189	288	390	519	652	817	925	0.44
200	66	167	288	439	594	790	994	1268	1450	0.45
250	97	246	425	647	877	1165	1466	1871	2150	0.42
300	151	380	660	1004	1360	1807	2275	2902	3340	0.40
350	214	538	935	1423	1928	2561	3221	4112	4730	0.38
400	300	761	1322	2007	2724	3617	4552	5806	6675	0.38

Relation between Kv and Cv:  $Cv = 1,156 \times Kv$

Sizes in millimeters (mm).

### Capacity factor Cv and Resistance factor $\zeta$ for ball segment valve type KVTF-C/KVXF-C

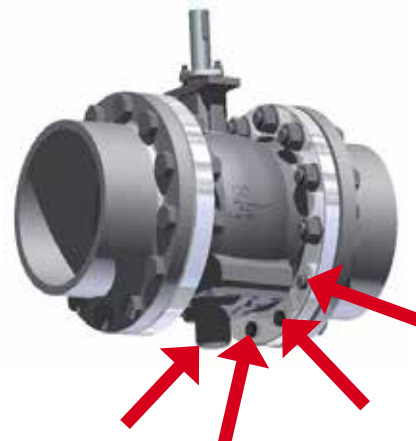
NPS	Opening angle									
	10°	20°	30°	40°	50°	60°	70°	80°	90°	$\zeta$ 90°
3	17	45	78	119	160	214	269	343	395	0.57
4	27	67	117	179	242	321	405	516	593	0.62
6	50	127	220	335	453	603	758	950	1076	0.44
8	77	194	335	510	691	919	1156	1474	1686	0.45
10	113	286	494	752	1019	1354	1705	2175	2500	0.42
12	176	442	768	1168	1582	2101	2645	3375	3884	0.40
14	248	626	1088	1655	2242	2978	3746	4781	5500	0.38
16	349	885	1537	2334	3168	4206	5294	6751	7762	0.38

Relation between Kv and Cv:  $Kv = 0.86 \times Cv$

Sizes in inches (in).

Valve	Flange	Number of bolts/holes	PN10				PN16				PN25				ASME 150			
			Inlet		Outlet		Inlet		Outlet		Inlet		Outlet		Inlet		Outlet	
			Total	Threaded	Total	Threaded	Total	Threaded	Total	Threaded	Total	Threaded	Total	Threaded	Total	Threaded	Total	Threaded
DN	80	8	2 X M16	8	2 X M16	8	2 X M16	8	2 X M16	8	2 X M16	8	2 X M16	4	2 X 5/8"	4	2 X 5/8"	
	100	8	2 X M16	8	2 X M16	8	2 X M16	8	2 X M16	8	2 X M20	8	2 X M20	8	2 X 5/8"	8	2 X 5/8"	
	150	8	2 X M20	8	2 X M20	8	2 X M20	8	2 X M20	8	2 X M24	8	2 X M24	8	2 X 3/4"	8	2 X 3/4"	
	200	8	2 X M20	8	2 X M20	12	4 X M20	12	4 X M20	12	4 X M24	12	4 X M24	8	2 X 3/4"	8	2 X 3/4"	
	250	12	4 X M20	12	4 X M20	12	4 X M24	12	4 X M24	12	4 X M27	12	4 X M27	12	4 X 7/8"	12	4 X 7/8"	
	300	12	4 X M20	12	4 X M20	12	4 X M24	12	4 X M24	16	4 X M27	16	4 X M27	12	4 X 7/8"	12	4 X 7/8"	
	350			16	4 X M20	16	4 X M24	16	4 X M24	16	4 X M30	16	4 X M30	12	4 X 1"	12	4 X 1"	
400			16	16 X M24	16	4 X M27	16	16 X M27	16	4 X M33	16	16 X M33	16	4 X 1"	16	16 X 1"		

The KVTF-C valve has some of the holes in the flanges threaded. For valves Size DN80 to DN350 2 alternatively 4 of the holes at the bottom of the valve is threaded. On the DN400 the inlet flange have the 4 holes at the bottom and all the holes of the outlet flange is threaded. The table above describes for each valve size and for each flange rating the number of threaded holes and the thread.







## Torque KVTF-C

Valve DN	Shaft dia. (mm)	Necessary closing torque		Max torque shaft (Nm)
		$\Delta p > 10$ (bar) (Nm)	$\Delta p \leq 10$ (bar) (Nm)	
80	20	120	110	200
100	20	150	112	200
150	25	250	157	370
200	30	400	295	640
250	35	600	449	1000
300	40	800	600	1500
350	50	1400	1050	2800
400	60	2000	1500	5000

Sizes and measurements in millimeters (mm).

## Torque KVTF-C

Valve NPS	Shaft dia. (in)	Necessary closing torque		Max torque shaft (lbf-in)
		$\Delta p > 145$ (psi) (lbf-in)	$\Delta p \leq 145$ (psi) (lbf-in)	
3	0.8	1062	974	1770
4	0.8	1328	1062	1770
6	1.0	2213	1637	3275
8	1.2	3540	2611	5664
10	1.4	5310	3974	8851
12	1.6	7081	5310	13276
14	2.0	12391	9293	24782
20	2.4	17701	13276	44254

Sizes and measurements in inches (in).  
Torque in pounds (lbf-in).

## Actuator selection table air supply 5.5 bar

Valve DN	Shaft (mm) dia.	Double acting 5,5 (bar) supply air		Condition $\Delta p \leq 10$ (bar)	Single acting 5,5 (bar) supply air		Condition $\Delta p \leq 10$ (bar)
		$\Delta p > 10$ (bar)	$\Delta p \leq 10$ (bar)		$\Delta p > 10$ (bar)	$\Delta p \leq 10$ (bar)	
80	20	A21-DA	A13-DA		A23-SC/SO	A23-SC/SO	
100	20	A21-DA	A13-DA	No HiCo	A23-SC/SO	A23-SC/SO	
150	25	A22-DA	A21-DA	No HiCo	A24-SC/SO	A24-SC/SO	
200	30	A31-DA	A22-DA		A33-SC/SO	A24-SC/SO	No HiCo
250	35	A31-DA	A31-DA		A33-SC/SO	A33-SC/SO	
300	40	A32-DA	A31-DA		A34-SC/SO	A33-SC/SO	
350	50	A41-DA	A32-DA		A43-SC/SO	A34-SC/SO	
400	60	A41-DA	A41-DA		A43-SC/SO	A43-SC/SO	

No HiCo = "No HiCo seats" Valves with HiCo seats should not use PN10 actuators. PTFE/PTFE53 is OK

## Actuator selection table air supply 4.0 bar

Valve DN	Shaft (mm) dia.	Double acting 4,0 (bar) supply air		Condition $\Delta p \leq 10$ (bar)	Single acting 4,0 (bar) supply air		Condition $\Delta p \leq 10$ (bar)
		$\Delta p > 10$ (bar)	$\Delta p \leq 10$ (bar)		$\Delta p > 10$ (bar)	$\Delta p \leq 10$ (bar)	
80	20	A22-DA	A21-DA		A23-SC/SOL	A23-SC/SOL	
100	20	A22-DA	A21-DA	No HiCo	A23-SC/SOL	A23-SC/SOL	
150	25	A23-DA	A22-DA		A24-SC/SOL	A24-SC/SOL	
200	30	A24-DA	A23-DA	No HiCo	A33-SC/SOL	A24-SC/SOL	No HiCo
250	35	A32-DA	A31-DA	No HiCo	A33-SC/SOL	A33-SC/SOL	
300	40	A32-DA	A32-DA		A34-SC/SOL	A33-SC/SOL	
350	50	A41-DA	A32-DA		A43-SC/SOL	A34-SC/SOL	
400	60	A42-DA	A41-DA		A44-SC/SOL	A43-SC/SOL	

No HiCo = "No HiCo seats" Valves with HiCo seats should not use PN10 actuators. PTFE/PTFE53 is OK

SC/SCL = Spring to close at air failure

SO/SOL = Spring to open at air failure

## Selection table

### Manual override

Valve DN	Shaft (øG) dia. (mm)	Gear unit
80	20	AB215N
100	20	AB215N
150	25	AB215N
200	30	AB215N
250	35	AB550N
300	40	AB550N
350	50	AB880N
400	60	AB2000N



### 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](http://www.somas.se).

### Actuators and accessories

The valves can be fitted with gear units, on/off or control actuators in accordance with the selection table in this data sheet. The valves will be delivered as tested units ready for installation.

In the documents library on [www.somas.se](http://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.

### Option

Within the process industry and the energy sector there are a number of applications where process data in combination with standard control valves will end up with problems such as high noise level and erosion. These problems are mostly related to cavitation and high flow velocities inside the valve.

Note! By using a standard ball segment valve and add a noise reduction trim many of the above mentioned problems can be solved.

See datasheet Si-108 for more theoretical information.

For controlling suspensions with high fibre concentrations it can be advantageous to use valves with a V-port to reduce the risk of de-watering at small opening angles.

Capacity factors and remaining factors for valves with LN-trim and valves with V-port are available in the valve sizing program SOMSIZE.



## Valve specification system

### Ordering

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

**KVTF - C 5 - A J B - B 1 1 - DN... - D... - B... - PN...**

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

#### 1 Type of valve

*Flanged design*

KVTF (centrically mounted segment)  
 KVXF (eccentrically mounted segment)  
 KVTF LN (cent. mounted segment, Low Noise)  
 KVXF LN (eccentr. mounted segment, Low Noise)  
 KVMF (ball segment with V-port)

#### 5 Material – ball segment

J = 1.4460 alt. SS2324-12  
 K = 1.4460 alt. SS2324-12  
     hard chromed  
 L = 1.4460 alt. SS2324-12, HiCo Gr  
     21-coated  
 S = CK-3MCuN alt. 1.4547  
 U = Titan Gr C-2 / Gr 2  
 V = CW6M (High Nickel Alloy)  
 Y = 1.4462 alt. 1.4470,  
     hard chromed

#### 8 Bearings – valve body/shaft

1 = Without bearing  
 4 = PTFE (Rulon)  
 6 = N06625 (High Nickel Alloy)  
 7 = 1.4462

#### 2 Valve body design

C = Flanged design  
 (body in one piece short face to face)

#### 6 Material – seat

A = PTFE (10 % carbon, percentage  
     by weight)  
 B = PTFE 53 (50% PTFE + 50%  
     1.4435 powder  
     (percentage by weight)  
 T = HiCo Gr 6 alt. 1.4404,  
     HiCo Gr 6 alt. Gr 21 coated

#### 9 Stuffing box

1 = Graphite  
 2 = PTFE

#### 3 Nominal pressure

5 = PN 25

#### 4 Material – valve body

A = CF8M /1.4408  
 E = CK-3MCuN  
 H = 1.4470  
 S = Titan Gr C-2  
 T = CW6M (High Nickel Alloy)

#### 7 Material – shaft

A = 1.4460/SS 2324-12  
 B = 1.4460/SS 2324-12,  
     hard chromed  
 J = CK-3MCuN/1.4547  
 T = Titan Gr2 alt. Gr 3  
 U = CW6M (High Nickel Alloy)  
 Y = 1.4462 alt. 1.4470, hardchromed

#### 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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