chemvalve-schmid.com

ChemValve®
Valve Technology

ChemFlyer | CST

PTFE Lined Butterfly Valve

Installation and Operating Instructions

Company Overview

ChemValve-Schmid AG develops and manufactures high quality valves which are sold and distributed through a carefully developed network of long-standing partners in more than 50 countries all over the world.

We have been developing Check Valves and PTFE Lined Butterfly Valves in close cooperation with the most important European PTFE manufacturers since the 1980s. As a result, we have ove

30 years of expertise in valve production. Our private and therefore independent company has shown consistent and healthy growth since then.

„Innovative – proficient – reliable", that's our motto. Thanks to years of investment in state-of-the-art production technologies and highly qualified employees, we offer unprecedented product and service quality in this sector. We creatively develop on-time solutions that are focused on our customers' needs. Thanks to our process reliability, which covers the entire value chain through to warehousing and has evolved over many years, standard products are delivered within only a few days in line with customer-controlled assembly requirements. Existing products are continuously improved and new products are developed based on customer requirements.

We deliver what we promise. And we naturally assume full responsibility for our orders and obligations.

Give us a try!

Zertifiziertes Managementsystem SQS ISO 9001

CE 1250

To ensure that the valve functions correctly, it is important to follow these installation and operating instructions. Only qualified personnel who have been instructed in the installation, fitting, commissioning, operating and maintenance of the device are permitted to install the valve. ChemValve-Schmid AG assumes no liability for faults resulting from improper installation.

Warnings and Precautions

- During installation and maintenance work, suitable protective clothing, including gloves and protective goggles, must be worn.
- Prior to installation and maintenance work, the pipe must be depressurised and emptied. If the valve operates with dangerous flow media, the pipe has to be emptied completely and flushed with an appropriate cleaning fluid. Inappropriate cleaning products can harm the valve!
- If flange connections or locking screws are detached, hot water, steam, caustic fluids or toxic gases can be emitted. Severe scalding, burns and poisoning are possible!
- During operation the valve may become very hot or very cold. Installation and maintenance work should only be carried out if the valve's temperature is the same as the ambient temperature.
- Prior to dismounting the valve, preventative measures against the possible leakage of dangerous media should be made.
- When removing the valve from the pipeline, it is important to ensure that the valve disc and liner are not damaged. Damaged parts may only be replaced by genuine ChemValve-Schmid AG parts.
- Refer to the Maintenance Instructions for appropriate cleaning products

Personnel Requirements

The improper handling of butterfly valves can lead to injury and material damage! Only trained specialists with the requisite qualifications and experience may dismantle, assemble and test the valves.

Protective Equipment

To minimise the likelihood of injury, the wearing of personal protective equipment is required. Company guidelines must be strictly followed. Each worker is responsible for their own safety.

All workers must wear the following:

Protective work clothing is tight-fitting clothing with good tear resistance, tight arms and no protruding parts. Such clothing protects against abrasion, puncture wounds, corrosive substances and burns from hot surfaces, liquids and gases

Helmets protect against falling and flying objects, as well as liquids and gases

Safety shoes to protect against heavy objects, hot surfaces, corrosive liquids and gases and to minmise slips and falls on unstable surfaces

Safety Gloves to protect hands from abrasion, puncture wounds, corrosive substances and burns from hot surfaces, liquids and gases

Safety Glasses to protect the eyes from corrosive or liquids and gases

Further protective equipment, such as ear protection, should be worn, depending on the environment or company guidelines.

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Features

The **ChemFlyer | CST** is the world leading, customisable PTFE lined butterfly valve, manufactured in Switzerland to the highest standards to provide secure handling of aggressive media.

Unparalleled Sealing & Security

- Safer handling of corrosive media thanks to the unique sealing system
- The adaptive pressure package guarantees supreme tightness and constant contact pressure throughout the operational lifetime
- Especially designed for operation with highly aggressive substances such as chlorine, hydrogen fluoride & sulphuric acid
- Technologically advanced sealing system, constantly perfected over decades of product development

Modular & Distinctive

- The modular design is highly configurable and each valve is individually traceable through its unique serial number
- Adaptable to a multitude of requirements and applications thanks to its configurable, modular design
- Individual serial numbers allow complete traceability of all pressure-bearing parts

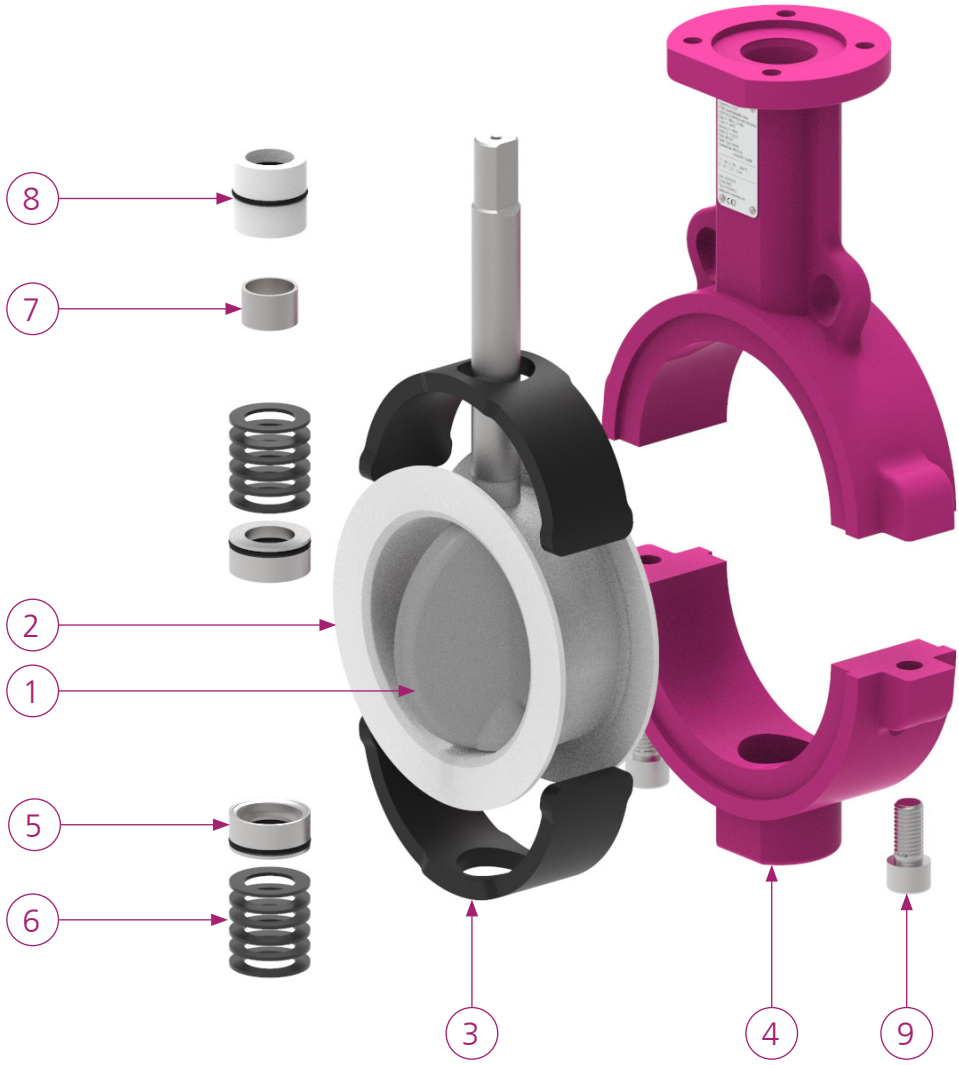
Low Abrasion Design

- Spherical design reduces friction and increases operational lifespan
- Following the natural movement of the valve disc, the curved liner reduces wear and tear
- The rounded, polished edges of the disc minimise torque and allow the use of smaller, more economical actuators
- The one-piece valve disc, precisely machined to fractions of a millimetre, protects the shaft from warping
- Precisely manufactued backups provide maximum sealing over an increased operational lifespan

Additional features

+ Optional modified PTFE significantly improves durability when dealing with permeable media and high temperatures
+ Guaranteed compatibility with all established actuator systems through a range of shaft mounting options
+ Actuation devices, including hand levers, manual gearboxes and motorised actuators, are available
+ 2-week standard delivery, driven by intelligent logistics and dedicated PTFE valve production facilities

Components



Item #	Description	Materials
1	Disc	PFA PFAc, Conductive PFA Stainless Steel, 1.4404 Duplex, 1.4462, 1.4469 Titanium Grade 2, 3.7035 Hastelloy C, 2.4602, 2.4819
2	Liner	PTFE Modified PTFE Modified PTFE Conductive UHMPE
3	Backup	VMQ EPDM FKM

Item #	Description	Materials
4	Body	Ductile Iron, 5.3103 Stainless Steel, 1.4404 Carbon Steel, S355J2 Duroplast, VE-CF
5	Pusher	1.4301 with FKM O-Ring
6	Belleville Springs	Carbon Steel
7	Shaft Bushing	PTFE Stainless Steel
8	Top Bushing	POM with FKM O-ring
9	Body Bolts	12.9 A4

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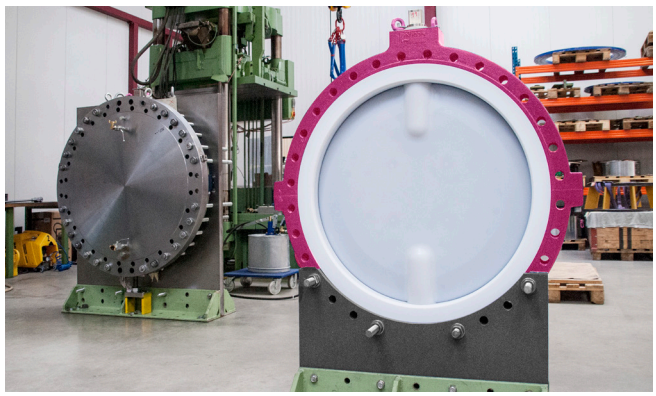
Specifications & Standards

Nominal Diameter	• DN 25–1200 • 1"–48"
Flange Connection	• EN 1092–1, PN 6–16 • ASME B16.5, Class 150 • JIS 10K
Top Flange	• ISO 5211
Maximum Working Pressure	• DN 25–450: 10 bar • DN 500–600: 6 bar • DN 700–1200: 3 bar • DN25–150: Up to 16 bar possible
Operating Temperature	• -60° C to 200° C
Face-to-Face Length	• EN 558, Series 20
Conformity	• PED 2014/68/EU • ATEX 2014/34/EU • Food (EC) Nr. 1935/2004, FDA • TA-Luft, ISO 15848-1
Factory Tests	• Porosity test: DIN EN 60243-1 • Pressure test: DIN EN 12266-1/P12 Leakage Rate A • Torque Test • Emissions test: TA-Luft (VDI 2440) & ISO 15848-1
Name Plate	• EN 19:2016



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Flow Rate

To calculate the flow rate of a given medium, the equivalent water flow rate **Kv** must first be calculated using the following formulas:

Liquids

$$Kv = Q\sqrt{\frac{\rho}{\Delta p}}$$

Gases

$$Kv = \frac{Q_n}{514}\sqrt{\frac{\rho_n \bullet T}{\Delta p \bullet p^2}}$$

Symbol	Unit	Description
Kv	m^3/h	Flow rate co-efficient
Q	m^3/h	Flow rate
Q_n	Nm^3/h	Flow rate
ρ	kg/dm^3	Density
ρ_n	kg/dm^3	Standard density
p^2	bar	Outlet pressure
Δp	bar	Pressure loss
T	K	Operating Temperature

Flow Rate/Kv-Value [m³/h]											
Opening Angle	DN [mm]										
	25	40	50	65	80	100	125	150	200	250	300
20°	0.001	1.4	2.1	4.4	8.1	17	28	39	85	119	181
30°	1.0	5.1	6.7	14	22	48	74	97	202	274	404
40°	3.0	11	14	27	41	91	145	194	415	527	771
50°	6.0	22	28	49	75	160	244	316	658	949	1 329
60°	10	38	46	80	123	259	392	503	1 036	1 484	2 179
70°	16	56	69	118	179	375	563	717	1 463	2 038	3 083
80°	21	75	92	158	240	502	754	958	1 956	2 727	4 124
90°	28	102	124	211	318	660	985	1 244	2 523	3 514	5 315

Flow Rate/Kv-Value [m³/h]												
Opening Angle	DN [mm]											
	350	400	450	500	600	700	750	800	900	1000	1050	1200
20°	277	393	528	647	843	1 050	1 181	1 353	1 861	2 131	2 398	3 131
30°	602	856	1 148	1 434	1 861	2 347	2 675	3 064	4 394	4 827	5 431	7 092
40°	1 139	1 650	2 173	2 418	3 473	4 324	4 864	5 570	7 621	8 777	9 874	12 894
50°	2 034	2 893	3 414	3 980	5 706	7 104	7 991	9 207	11 817	13 792	15 516	20 262
60°	3 335	4 628	5 742	6 490	9 427	11 737	13 203	15 120	19 791	23 195	26 095	34 077
70°	4 718	6 711	8 535	10 268	14 140	17 606	19 804	22 282	30 783	34 480	38 790	50 655
80°	6 312	8 979	12 043	14 983	19 349	24 246	27 274	31 433	44 252	50 152	56 422	73 680
90°	8 134	11 571	15 519	19 308	24 807	30 887	34 744	39 789	55 653	62 690	70 528	92 100

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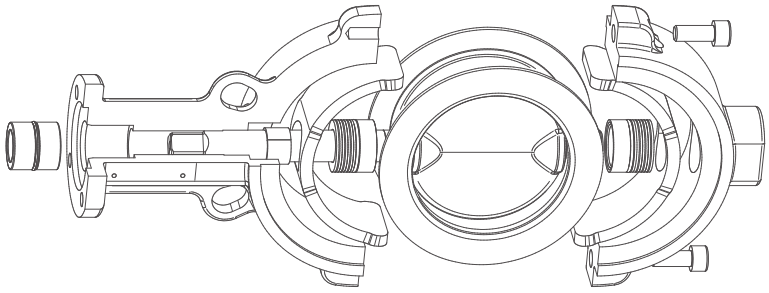
Order Code

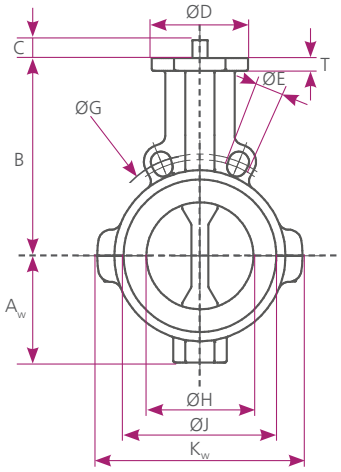


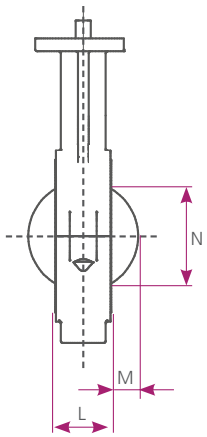
Order Code

Code Example: CSTPPSG100P4WD1

Disc		Liner		Backup		Body		Size	Stem End		Body Type		Flange		Actuation
Code	Material	Code	Material	Code	Material	Code	Material	[mm]	Code	Shape	Code	Type	Code	Pressure Class	Device
P	PFA	P	PTFE	S	VMQ (Silicone)	G	5.3103	025–1200	P4	Square Parallel	W	Wafer	D1	PN10	Bare Shaft
C	PFAc	T	mPTFE	V	FKM (Viton)	S	1.4404		P2	Double D	E	Lug	D2	PN16	Hand Lever
S	Stainless Steel	C	mPTFEc	E	EPDM	M	1.4404 Polished <0.8µm		D4	Square Diagonal			A1	ANSI150	Gearbox Premium
J	1.4404/ 1.4462 Polished <0.8µm	U	UHMPE	F	FKM Steam & FDA Compatible	E	1.4404 e-polished <0.4µm						J1	JIS 10K	Gearbox Standard
F	1.4462/ 1.4462 Polished <0.8µm			L	VMQ (Silicone) Low Temperature	N	1.4301								Single-acting Pneumatic Actuator
G	1.4404/ 1.4462 e-Polished <0.4µm					C	C-Steel								Double-acting Pneumatic Actuator
T	Titanium Grade 2					K	Duroplast								
H	Hastelloy C														
R	1.4539 Polished <0.8µm														
O	Hastelloy C Polished <0.8µm														

Dimensions | Wafer





DN [mm]	25	40	50	65	80	100	125	150	200	250	300	350
DN [Inch]	1"	1½"	2"	2½"	3"	4"	5"	6"	8"	10"	12"	14"
A_W	53	53	60	70	84	100	110	130	158	194	225	255
B	94	94	130	146	165	185	202	217	245	270	308	330
C_{P2}	19	19	19	19	19	25	25	30	n/a	n/a	n/a	n/a
$C^*_{D4/P4}$	17	17	17	17	17	17	17	22	26	30	30	28
ØD	65	65	90	90	90	90	90	90	125	125	125	150
T	10	10	12	12	12	12	12	12	16	16	16	16
$ØE_{DIN}$	4x14	4x18	4x18	12x18	8x18	8x18	8x18	8x22	8x22	12x22	12x22	16x22
$ØE_{ANSI}$	4x16	4x16	4x19	4x19	4x19	8x19	8x22	8x22	8x22	12x26	12x26	12x29
$ØG_{DIN}$	85	110	125	145	160	180	210	240	295	350	400	460
$ØG_{ANSI}$	79.4	98.4	120.7	139.7	152.4	190.5	215.9	241.3	298.4	362	431.8	476.3
ØH	37	46.4	50	62	75	100	125	141	195	244	295	335.6
ØJ	60	76	85	106	122	143	166	193	251	301	349	414
K_W	138	138	124	148	165	192	223	253	312	374	424	586
L	41*	33	43	46	46	52	56	56	60	68	78	92**
M	3	7	6	11	17	27	38	47	71	92	112	125
N	22	34	31	47	63	90	118	137	190	240	290	328
$kg_{1.4404}$	2.6	2.4	3	3.9	4.6	6.4	8.3	10.5	17	27	42	89
$kg_{5.3103}$	2.2	1.8	3	4.1	4.8	6.1	8.3	10.7	17.8	28	48	59

DN [mm]	400	450	500	600	700	750	800	900	1000	1050	1200
DN [Inch]	16"	18"	20"	24"	28"	30"	32"	36"	40"	42"	48"
A_L	290	314	342	401	577	603	637	684	732	757	905
B	365	400	435	510	582	608	637	684	732	757	905
C_{P2}	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
$C^*_{D4/P4}$	28	37	37	47	47	56	56	56	56	56	56
ØD	150	175	175	210	210	300	300	300	300	300	300
T	18	20	20	20	35	35	35	35	35	35	35
$ØE_{DIN}$	16x26	20x26	20x26	20x30	24x30	-	24x33	28x33	28x36	-	32x39
$ØE_{ANSI}$	16x29	16x32	20x32	20x35	28x35	28x35	28x42	32x42	36x42	36x42	44x42
$ØG_{DIN}$	515	565	620	725	840	-	950	1 050	1 160	-	1 380
$ØG_{ANSI}$	539.8	577.9	635	749.3	863.6	914.4	977.9	1 085.8	1 200.15	1 257.3	1 422.4
ØH	389.9	437.9	491.4	579.9	676.1	726	776.8	877.8	965.8	1016	1 169.3
ØJ	460	515	570	672	787	851	894	1 016	1 101	1 170	$1\,305_{DIN}$ $1\,345_{ANSI}$
K_L	650	700	745	870	1 000	1 050	1 130	1 245	1 410	1 410	$1\,530_{DIN}$ $1\,620_{ANSI}$
L	102	114	127	154	154**	154**	154**	154**	154**	154**	154**
M	146	164	184	215	264	289	314	364	408	433	508
N	378	424	477	561	665	717	768	868	957	1 010	1 160
$kg_{1.4404}$	115	152	177	284	434	486	626	725	951	985	1 212
$kg_{5.3103}$	90	110	141	231	-	545	465	-	-	-	-

*D4: DN25–150 only
**Not according to ISO 5752 or EN 558-1, Series 20
Please note: For DN 25–40 & 350–1200, a lug-style body, drilled through, is used

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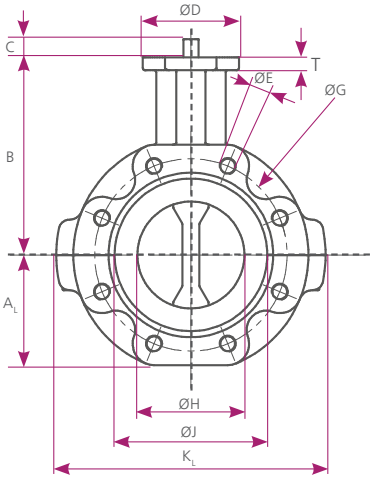
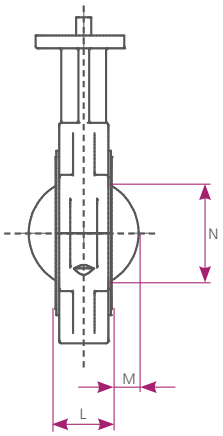
Dimensions | Lug





DN [mm]	25	40	50	65	80	100	125	150	200	250	300	350
DN [Inch]	1"	1½"	2"	2½"	3"	4"	5"	6"	8"	10"	12"	14"
A_L	53	53	60	81	88	103	117	128	160	194	228	255
B	94	94	130	146	165	185	202	217	245	270	308	330
C_{P2}	19	19	19	19	19	25	25	30	n/a	n/a	n/a	n/a
$C^*_{D4/P4}$	17	17	17	17	17	17	17	22	26	30	30	28
ØD	65	65	90	90	90	90	90	90	125	125	125	150
T	10	10	12	12	12	12	12	12	16	16	16	16
$ØE_{DIN}$	4x M12	4x M16	4x M16	4xM16 8xM16	8x M16	8x M16	8x M16	8x M20	8x M20	12x M20	12x M20	16x M20
$ØE_{ANSI}$	4x½"	4x½"	4x⅝"	4x⅝"	4x⅝"	4x⅝"	8x¾"	8x¾"	8x¾"	12x⅞"	12x⅞"	12x1"
$ØG_{DIN}$	85	110	125	145	160	180	210	240	295	350	400	460
$ØG_{ANSI}$	79.4	98.4	120.7	139.7	152.4	190.5	215.9	241.3	298.4	362	431.8	476.3
ØH	37	46.4	50	62	75	100.1	124.8	141.5	195.2	244.3	295.3	335.6
ØJ	60	76	85	106	122	143	166	193	251	301	349	414
K_L	138	138	156	203	218	252	286	310	376	450	520	586
L	41*	33	43	46	46	52	56	56	60	68	78	92**
M	3	7	6	11	17	27	38	47	71	92	112	125
N	22	34	31	47	63	90	118	137	190	240	290	328
$kg_{1.4404}$	2.6	2.5	4	6.6	7.5	10.2	13.6	15.6	25.4	39	62	90
$kg_{5.3103}$	2	3.1	5.7	7.1	8.7	12.7	16.8	19	29.4	46	69	95

DN [mm]	400	450	500	600	700	750	800	900	1000	1050	1200
DN [Inch]	16"	18"	20"	24"	28"	30"	32"	36"	40"	42"	48"
A_L	290	314	342	401	577	603	637	684	732	757	905
B	365	400	435	510	582	608	637	684	732	757	905
C_{P2}	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
$C^*_{D4/P4}$	28	37	37	47	47	56	56	56	56	56	56
ØD	150	175	175	210	210	300	300	300	300	300	300
T	18	20	20	20	35	35	35	35	35	35	35
$ØE_{DIN}$	16x M24	20x M24	20x M24	20x M27	24x M27	-	24x M30	28x M30	28x M33	-	32x M36
$ØE_{ANSI}$	16x 1"	16x 1⅛"	20x 1⅛"	20x 1¼"	28x 1¼"	28x 1¼"	28x 1½"	32x 1½"	36x 1½"	36x 1½"	44x 1½"
$ØG_{DIN}$	515	565	620	725	840	-	950	1 050	1 160	-	1 380
$ØG_{ANSI}$	539.8	577.9	635	749.3	863.6	914.4	977.9	1 085.8	1 200.15	1 257.3	1 422.4
ØH	389.9	437.9	491.4	579.9	676.1	726	776.8	877.8	965.8	1016	1 169.3
ØJ	460	515	570	672	787	851	894	1 016	1 101	1 170	$1\,305_{DIN}$ $1\,345_{ANSI}$
K_L	650	700	745	870	1 000	1 050	1 130	1 245	1 410	1 410	$1\,530_{DIN}$ $1\,620_{ANSI}$
L	102	114	127	154	154**	154**	154**	154**	154**	154**	154**
M	146	164	184	215	264	289	314	364	408	433	508
N	378	424	477	561	665	717	768	868	957	1 010	1 160
$kg_{1.4404}$	118	157	182	290	442	494	634	793	946	992	1 328
$kg_{5.3103}$	130	180	228	-	495	-	683	728	-	-	-

*D4: DN25–150 only

**Not according to ISO 5752 or EN 558-1, Series 20

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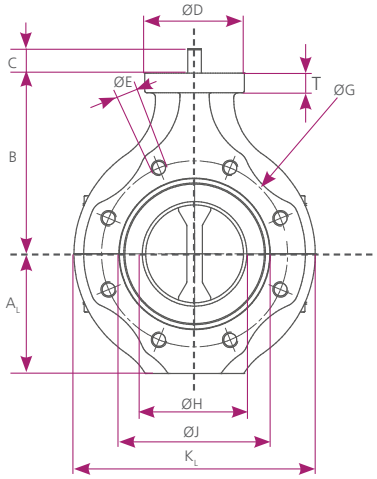
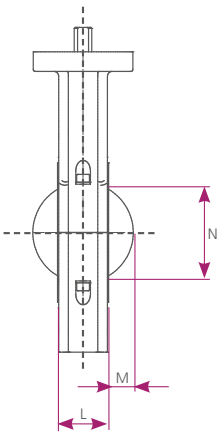
Dimensions | CST-K Duroplast





DN [mm]	50	65	80	100	150	200	250	300
DN [inch]	2"	2½"	3"	4"	6"	8"	10"	12"
A_L	80	85	108	123.5	151	182	225	262
B	130	146	165	185	217	245	270	308
C_{P2}	19	19	19	25	30	n/a	n/a	n/a
$C^*_{D4/P4}$	17	17	17	17	22	26	30	30
ØD	102	102	102	102	102	152	152	152
T	20	20	20	20	20	25	25	25
$ØE_{DIN}$	4x M16	-	8x M16	8x M16	8x M20	8x M20	12x M20	12x M20
$ØE_{ANSI}$	4x19	4x19	4x19	4x19	8x22	8x22	12x26	12x26
$ØG_{DIN}$	125	145	160	180	240	295	350	400
$ØG_{ANSI}$	120.7	139.7	152.4	190.5	241.3	298.4	362	431.8
ØH	60	60	80	100	150	199.5	249	300
ØJ	85	106	122	143	193	251	301	349
K_L	181	200	216	247	302	364	450	524
L	43	46	46	52	56	60	68	78
M	11	10	20	27	50	72	94	114
N	49	46	71	91	145	196	246	296
kg_L	1.8	2.1	2.5	3.6	6.8	10.8	19.4	31

*D4: DN50–150 only

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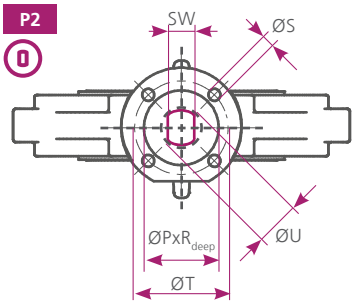
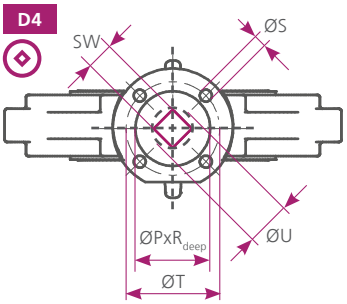
Dimensions | Top Flange

DN 25-150

P2

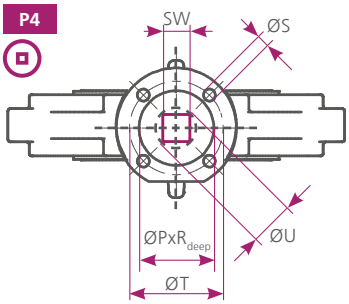


D4



DN 25-1200

P4



DN [mm]	25	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	750	800	900	1000	1050	1200
DN [inch]	1"	1½"	2"	2½"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"	28"	30"	32"	36"	40"	42"	48"
$SW_{P2/D4}$	9	9	11	11	11	14	14	17	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
SW_{P4}	9	9	11	11	11	14	14	17	19	22	22	27	27	36	36	46	46	55	55	55	55	55	55
ØU	13	13	14	14	14	18	18	22	24	28	28	35	35	47	47	58	60	72	72	72	72	72	72
ISO	F05	F05	F07	F07	F07	F07	F07	F07	F10	F10	F10	F12	F12	F14	F14	F16	F16	F16	F25	F25	F25	F25	F25
ØT	50	50	70	70	70	70	70	70	102	102	102	125	125	140	140	165	165	165	254	254	254	254	254
ØS	4x7	4x7	4x9	4x9	4x9	4x9	4x9	4x9	4x11	4x11	4x11	4x13	4x13	4x17	4x17	4x21	4x21	4x21	8x17	8x17	8x17	8x17	8x17
ØP x R_{DEEP}	36 x 3.5	36 x 3.5	56 x 3.5	56 x 3.5	56 x 3.5	56 x 3.5	56 x 3.5	56 x 3.5	71 x 3.5	71 x 3.5	71 x 3.5	87 x 3.5	87 x 3.5	102 x 4.5	102 x 4.5	132 x 5.5	132 x 5.5	132 x 5.5	202 x 5.5	202 x 5.5	202 x 5.5	202 x 5.5	202 X 5.5

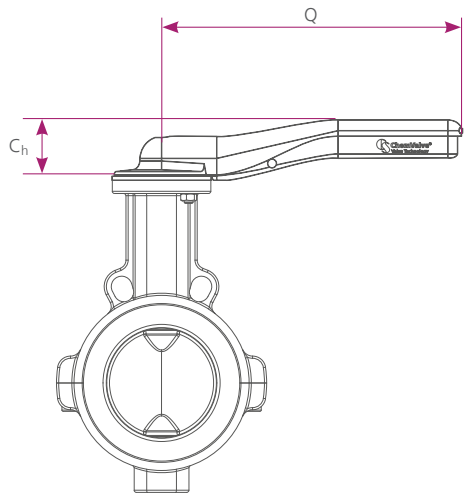
Torques

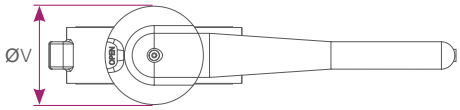
DN [mm]	Breakaway Torque [Nm]
25	22
40	22
50	26
65	36
80	46
100	60
125	80
150	110
200	167
250	278
300	333
350	450
400	500
450	600
500	650
600	890
700	1 500
750	2 000
800	2 300
900	2 700
1000	3 400
1050	3 600
1200	4 800

Max. Allowable Torque for Stem Connection [Nm]						
DN [mm]	P2			D4*/P4		
	Steel 1.4469/1.4462	Titanium Grd.2 3.7035	Hastelloy C 2.4602/2.4819	Steel 1.4469/1.4462	Titanium Grd.2 3.7035	Hastelloy C 2.4602/2.4819
25	112	74	73	48	32	31
40	112	74	73	48	32	31
50	159	105	103	89	59	57
65	159	105	103	89	59	57
80	159	105	103	89	59	57
100	335	222	216	183	121	118
125	335	222	216	183	121	118
150	608	402	393	327	216	211
200	-	-	-	456	302	295
250	-	-	-	664	469	457
300	-	-	-	664	469	457
350	-	-	-	1 227	866	845
400	-	-	-	1 227	866	845
450	-	-	-	2 909	2 053	2 004
500	-	-	-	2 909	2 053	2 004
600	-	-	-	6 069	4 283	4 181
700	-	-	-	6 069	4 283	4 181
750	-	-	-	10 374	7 321	7 147
800	-	-	-	10 374	7 321	7 147
900	-	-	-	10 374	7 321	7 147
1000	-	-	-	10 374	7 321	7 147
1050	-	-	-	10 374	7 321	7 147
1200	-	-	-	10 374	7 321	7 147

*D4: Nur DN25–150

Breakaway torques calculcated with 10% safety factor. These values have to be multiplied by 1.2 (Δp ≤ 0.5×PS) or 1.4 (Δp > 0.5×PS) for dry and unlubricated service.



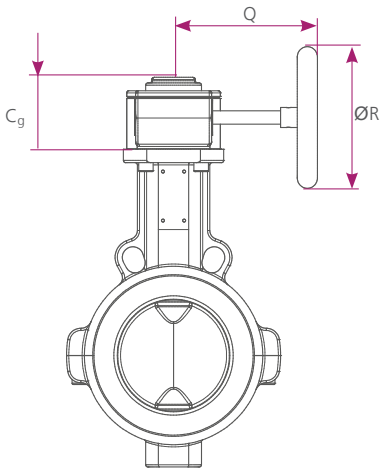


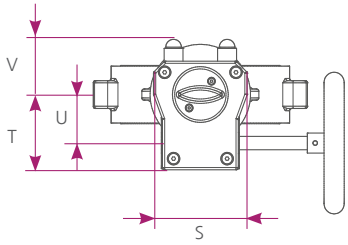
Handlever	
Part	**Material**
Grip	Stainless Steel
Ratchet Disc	Stainless Steel

DN [mm]	40	50	65	80	100	125	150	200	250	300
DN [inch]	1½"	2"	2½"	3"	4"	5"	6"	8"	10"	12"
C_h	46	55	55	55	55	55	55	55	55	55
Q	232.5	272.5	272.5	272.5	272.5	272.5	272.5	350	350	350
V	65	90	90	90	90	90	90	125	125	125
kg	1	1.5	1.5	1.5	1.5	1.5	1.5	2.7	2.7	2.7

ChemFlyer | CST

Actuation | Manual Gearbox | Premium





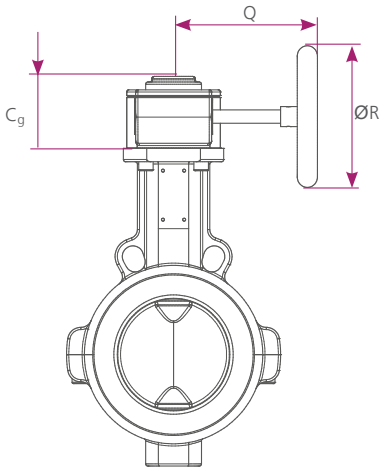
Configuration	
Valve Size	DN025–1200
Protection Rating	IP68
Stem Connection	P2/P4/D4

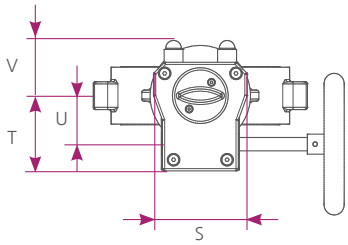
Materials	
Gearcase and Cover	Cast Iron
Quadrant	Ductile Iron
Worm	Carbon Steel
Input Shaft	Stainless Steel
Seals	Nitrile Rubber
Fasteners	Stainless Steel
Indicator	Powder-coated metal with O-ring
Handwheel | DN025–300	Cast Iron
Handwheel | DN350–1200	Carbon Steel

DN [mm]	25	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	750	800	900	1000	1050	1200
DN [Zoll]	1"	1½"	2"	2½"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"	28"	30"	32"	36"	40"	42"	48"
C_g	54.2	54.2	54.2	54.2	54.2	54.2	54.2	63	63	63	63	88	88	88	88	92.5	92.5	102	121	121	121	121	153
Q	115.5	115.5	115.5	115.5	115.5	115.5	115.5	175	175	186	186	297	297	297	297	385	385	426	468	468	468	468	468
ØR	100	100	100	100	100	100	100	100	125	200	200	400	400	400	400	600	600	700	600	600	600	600	600
S	80	80	80	80	80	80	80	102	102	102	102	135	135	135	135	200	200	220	285	285	285	285	293
T	66	66	66	66	66	66	66	79.5	79.5	79.5	79.5	105	105	105	105	126	126	148	151	151	151	151	195
U	42.5	42.5	42.5	42.5	42.5	42.5	42.5	52	52	52	52	71	71	71	71	86	86	104.5	53	53	53	53	140
V	58	58	58	58	58	58	58	48	48	48	48	69	69	69	69	100	100	110	142	142	142	142	142
kg	2.3	2.3	2.3	2.3	2.3	2.3	2.3	4.5	4.5	4.5	4.5	10	10	10	10	15.2	15.2	23.5	28.2	28.2	28.2	28.2	50.2

ChemFlyer | CST

Actuation | Manual Gearbox | Premium

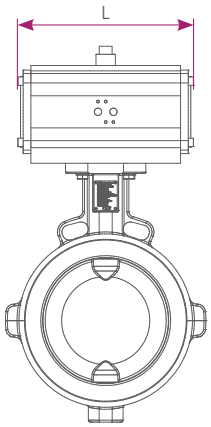


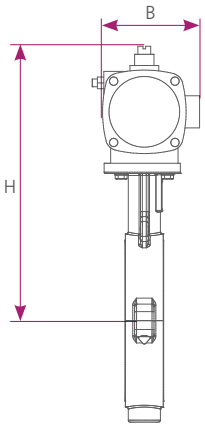


Configuration	
Valve Size	DN025–700
Protection Rating	IP67
Stem Connection	P4

Materials	
Gearcase and Cover	Cast Iron
Quadrant	Ductile Iron
Worm	Carbon Steel
Input Shaft	Carbon Steel
Seals	Nitrile Rubber
Fasteners	Zinc Plated Alloy Steel
Indicator	Stainless Steel
Handwheel | DN025–300	Cast Iron
Handwheel | DN350–700	Carbon Steel

DN [mm]	25	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700
DN [inch]	1"	1½"	2"	2½"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"	28"
C_g	40	40	40	40	40	40	40	44	50	54	54	60	60	71	71	86	86
Q	91	91	9	91	91	91	91	139	139	156	156	212	212	255	255	255	355
ØR	100	100	100	100	100	100	100	200	200	200	200	300	300	400	400	400	600
S	66	66	66	66	66	66	66	80	92	107	107	115	115	135	135	156	156
T	52	52	52	52	52	52	52	62	63	82	82	84	84	103	103	115	115
U	34	34	34	34	34	34	34	41	41	55	55	55	55	69	69	81	81
V	30	30	30	30	30	30	30	38	38	49	49	48	48	60	60	77	77
kg	1.3	1.3	1.3	1.3	1.3	1.3	1.3	2	2.4	3.9	3.9	4.7	4.7	6.9	6.9	10	10





Double-acting pneumatic actuator*						
DN [mm]	DN [inch]	Code	L [mm]	B [mm]	H [mm]	W [kg]
40	1½"	ADA40	158	91	209	2.1
50	2"	ADA80	177	111	267	3
65	2½"	ADA80	177	111	283	3
80	3"	ADA80	177	111	302	3
100	4"	ADA80	177	111	322	3
125	5"	ADA130	196	122	349	3.8
150	6"	ADA200	225	136	382	5.6
200	8"	ADA300	273	153	427	8.5
250	10"	ADA500	304	173	469	11.2
300	12"	ADA500	304	173	507	11.2
350	14"	ADA850	372	192	551	16.9
400	16"	ADA850	372	192	586	16.9
450	18"	ADA850	372	192	621	16.9
500	20"	ADA1200	439	213	684	25.8
600	24"	ADA2100	510	277	823	49.7
700	28"	ADA2100	510	277	895	49.7
750	30"	ADA4000	630	415	1042	129.4
800	32"	ADA4000	630	415	1071	129.4
900	36"	ADA4000	630	415	1118	129.4
1000	40"	ADA4000	630	415	1166	129.4
1050	42"	ADA4000	630	415	1191	129.4

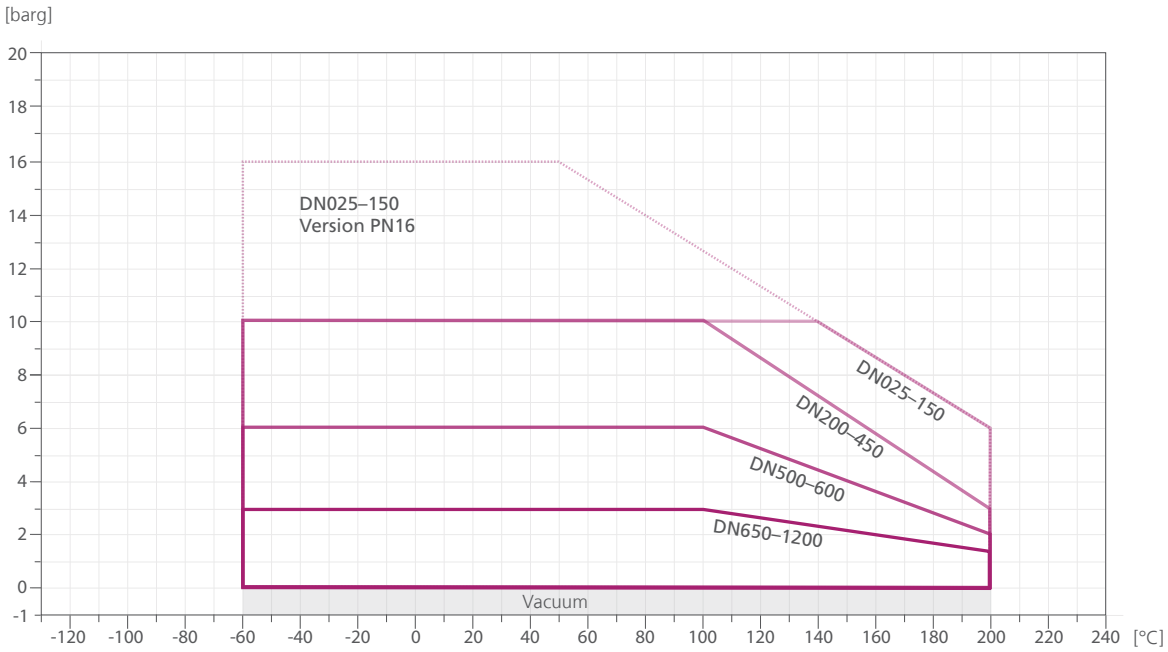
***Control Pressure 6.0 bar**

Single-acting pneumatic actuator*						
DN [mm]	DN [inch]	Code	L [mm]	B [mm]	H [mm]	W [kg]
40	1½"	ASR80S14A	217	111	231	3.7
50	2"	ASR130S14A	258	122	277	4.8
65	2½"	ASR130S14A	258	122	293	4.8
80	3"	ASR200S14A	299	136	330	7.3
100	4"	ASR200S14A	299	136	350	7.3
125	5"	ASR300S14A	349	153	384	10.8
150	6"	ASR500S14A	397	173	416	15.4
200	8"	ASR850S14A	473	192	466	22.2
250	10"	ASR1200S14A	560	213	519	34.3
300	12"	ASR1200S14A	560	213	557	34.3
350	14"	ASR1750S14A	601	243	610	46
400	16"	ASR1750S14A	601	243	645	46
450	18"	ASR2100S14A	702	277	713	68
500	20"	ASR2100S14A	702	277	748	68
600	24"	ASR2500S14A	738	356	893	99.9

***Control Pressure 6.0 bar**

ChemFlyer | CST

Pressure/Temperature Diagram



Disc	**P** PFA	DN250–900	PFA **P**
	C PFAc	DN250–900	PFAc **C**
	S Stainless Steel	1.4404/1.4469	Stainless Steel **S**
	J Stainless Steel Polished	1.4404/1.4462	Polished Stainless Steel **J**
	F Stainless Steel Polished	1.4462/1.4462	Polished Stainless Steel **T**
	G Stainless Steel E-polished	1.4404/1.4462	E-polished Stainless Steel **G**
	T Titanium	3.7035	Titanium **T**
	H Hastelloy	2.4602/2.4819	Hastelloy **H**
Liner	**P** PTFE		PTFE **P**
	T mPTFE		mPTFE **T**
	C mPTFEc		mPTFEc **C**
	U UHMPE		UHMPE **U**
Backup	**S** VMQ (Silicone)		(Silicone) VMQ **S**
	V FKM (Viton)		(Viton) FKM **V**
	E EPDM		EPDM **E**
	F FKM - Steam & FDA		Steam & FDA - FKM **F**
	L VMQ (Silicone) Low Temperature		Low Temperature (Silicone) VMQ **L**
Body	**G** Ductile Iron	5.3103 - EN-GJS-400-18-LT	Ductile Iron **G**
	S Stainless Steel	1.4404	Stainless Steel **S**
	M Stainless Steel Polished	1.4301	Polished Stainless Steel **M**
	E Stainless Steel E-polished	1.4401	E-polished Stainless Steel **E**
	N Stainless Steel	1.4301	Stainless Steel **N**
	C C-Steel	S355J2	C-Steel **C**
	K Duroplast		Duroplast **K**

1 Intended Use

The operation of the valve is the responsibility of the system operator. The ChemFlyer | CST may only be used within the pressure-temperature limits shown on page 19. The pressure, temperature and corrosion & media resistance of the valve must be checked for the specific operating conditions!

2 Storage and Transportation

The ChemFlyer | CST is delivered ready for use. It must be transported and stored in its original packaging and must be handled with care. The valve must always be protected from dust and moisture.

The ChemFlyer | CST is delivered with the valve disc in a slightly open position. The valve disc should not be moved until installation is complete.

3 Dismounting an existing valve

Warnings & Precautions

- During installation and maintenance work, suitable protective clothing, including gloves and protective goggles, must be worn.
- Prior to installation and maintenance work, the pipe must be depressurised and emptied. If the valve operates with dangerous flow media, the pipe has to be emptied completely and flushed with an appropriate cleaning fluid. Inappropriate cleaning products can harm the valve!
- If flange connections or locking screws are detached, hot water, steam, caustic fluids or toxic gases can be emitted. Severe scalding, burns and poisoning are possible!
- During operation the valve may become very hot or very cold. Installation and maintenance work should only be carried out if the valve's temperature is the same as the ambient temperature.
- Prior to dismounting the valve, preventative measures against the possible leakage of dangerous media should be made.
- When removing the valve from the pipeline, it is important to ensure that the valve disc and liner are not damaged. Damaged parts may only be replaced by genuine ChemValve-Schmid AG parts.

3.1 Procedure

Pipeline medium may remain in the dead space of the valve

1. Secure the valve against falling
2. Close the valve disc
3. Loosen and remove the flange screws
4. Spreads the flanges with an appropriate tool
5. Remove valve from the pipeline

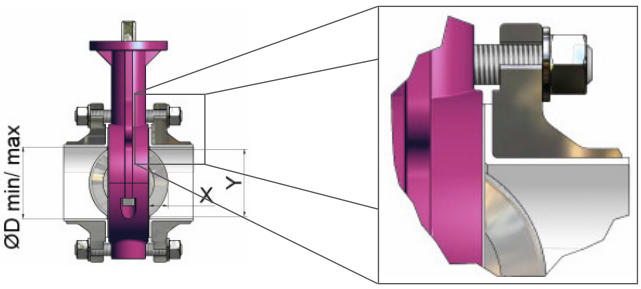
4 Preparing for Installation

Warnings & Precautions

- During installation and maintenance work, suitable protective clothing, including gloves and protective goggles, must be worn.

4.1 Flange and Pipe Connection

The inner diameter of the pipe must be at least as large as the relevant Y value in the below table, so that the valve disc has enough room to open. The ChemFlyer | CST is designed exclusively as a wafer or lug valve for use with weld neck flanges according to DIN EN 1092-1, Typ 11, PN 10–16 and ASME ANSI B16.5/B16.47 Class 150.



Pipe Diameters					
DN [mm]	DN [Inch]	X	Y	Dmin*	Dmax
25	1"	2.7	21.6	24.6	37
40	1½"	7	34	37	43.1
50	2"	6	31	34	54.5
65	2½"	11	48	51	70.3
80	3"	17	63	66	82.5
100	4"	27	90	93	107.1
125	5"	38	118	121	131.7
150	6"	47	137	140	159.3
200	8"	71	189	192	206.5
250	10"	92	239	242	260.4
300	12"	112	290	293	309.7
350	14"	125	328	331	341.4
400	16"	146	377	381	392.2
450	18"	164	417	421	442.8
500	20"	184	477	481	493.8
600	24"	215	560	564	595.8
700	28"	204	664	668	690
750	30"	289	716	721	736.6
800	30"	314	767	772	795
900	36"	360	861	865	894.0
1000	40"	408	958	563	982
1050	42"	433	1009	1014	1022.4
1200	48"	485	1153	1159	1182

*Between concentric flanges

4.2 Valve Orientation and Positioning

In horizontal pipes, the ChemFlyer | CST should be installed with the valve stem positioned horizontally. The lower edge of the disc should open in the flow direction. This helps to reduce the chance of pollutants building up around the stem seal.

4.3 Flange Seal

The ChemFlyer | CST requires no extra seals when mounted between flat-faced flanges. In case of installation between non-flat flanges (e.g. rubberised or enamel flanges), the use of a PTFE-coated seal is recommended.

5 Valve Installation

Warnings & Precautions

- During installation and maintenance work, suitable protective clothing, including gloves and protective goggles, must be worn.
- Prior to installation and maintenance work, the pipe must be depressurised and emptied. If the valve operates with dangerous flow media, the pipe has to be emptied completely and flushed with an appropriate cleaning fluid. Inappropriate cleaning products can harm the valve!
- Under no circumstances should the ChemFlyer | CST be installed between flanges which are not parallel. The axes of the pipes and valve must be aligned. Furthermore, it is absolutely prohibited to weld on the pipe while the valve is mounted between the flanges, as this would destroy the liner. Finally, when installed at the end of a piping system, it is mandatory to mount a blind flange to cap the piping system!

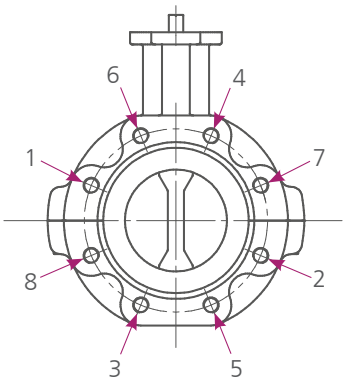
5.1 Procedure

1. Clean flange and sealing surfaces in order to protect the valve lining and ensure flange sealing performance.
2. Remove the protective cover from the butterfly valve.
3. While keeping the valve in a slightly open position (the entire disc must remain within the faces of the liner!), place it carefully between the two flanges.
4. Centre the valve with lubricated bolts or screws accordingly before hand-tightening.
5. Adjust the position of the valve, pipe and seal to ensure they are fully aligned.
6. Slowly open the valve to the fully-open position.
7. Tighten the screws and nuts according to the following recommended bolting pattern using the bolting torques shown in the following table. Using larger torques can damage the body and liner!

5.2 Bolting

Bolts must be tightened in a star pattern

1. Tighten each bolt to 10% of recommended torque
2. Tighten each bolt to 30% of recommended torque
3. Tighten each bolt to 60% of recommended torque
4. Tighten each bolt to 100% of recommended torque



Recommended Bolting Torques		
DN [mm]	DN [Inch]	Locked Torque [Nm]
25	1"	12
40	1½"	25
50	2"	35
65	2½"	40
80	3"	45
100	4"	50
125	5"	60
150	6"	70
200	8"	85
250	10"	95
300	12"	105
350	14"	145
400	16"	165
450	18"	185
500	20"	215
600	24"	230
700	28"	280
750	30"	300
800	30"	380
900	36"	460
1000	40"	460
1050	42"	500
1200	48"	405

5.3 Cleaning

After installation, the ChemFlyer | CST must be fully opened and the pipe flushed before closing the valve. Cleaning products and tools must be compatible with the valve. The use of incompatible products or tools can damage the valve.

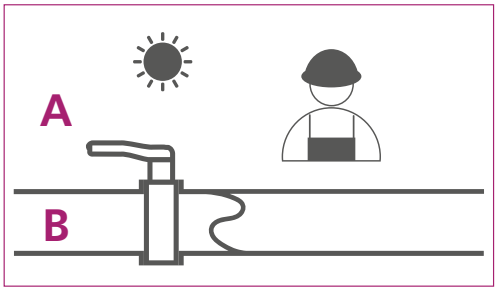
5.3 Function Test

Prior to active use in the piping system, the ChemFlyer | CST should be opened and closed several times to check its freedom of movement.

6 Potentially explosive atmospheres

The ChemFlyer | CST does not fall within the scope of the ATEX Directive 2014/34/EU, however the following ChemFlyer | CST models are available, which may be used in potentially explosive atmospheres according to the described conditions.

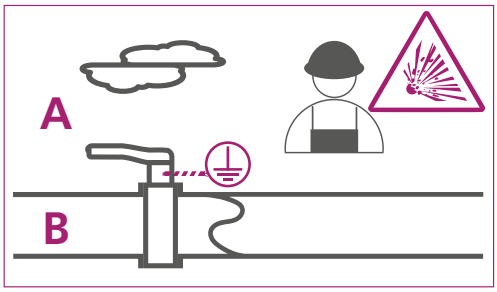
ChemFlyer | CST - Standard



Area A: No potentially explosive atmosphere
Area B: No potentially explosive atmosphere

No restriction on materials and no earthing required.

ChemFlyer | CST - Ex_{min}

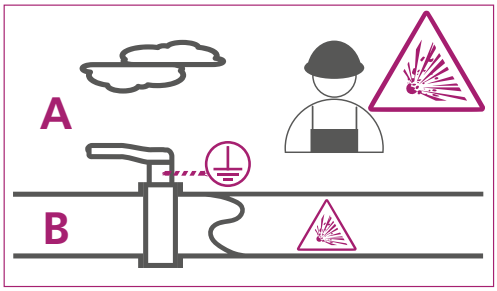


Area A: Potentially explosive atmosphere*
Area B: No potentially explosive atmosphere

An electrostatic charge may occur inside the pipeline, as the medium is not flammable. The disc and actuator (eg hand lever) are grounded to protect against external electrostatic charge.

Insulating materials on disc and liner may be used.

ChemFlyer | CST - Ex_{max}



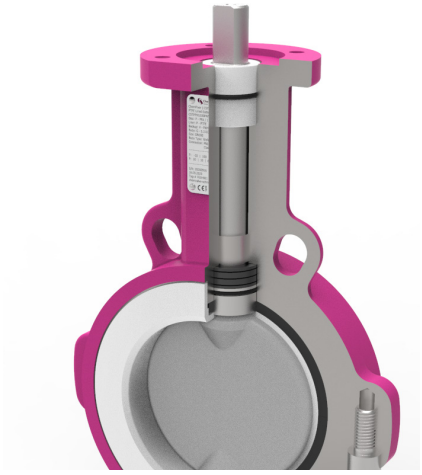
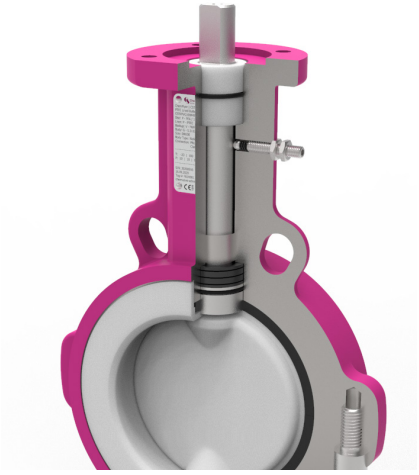
Area A: Potentially explosive atmosphere*
Area B: Potentially explosive atmosphere*

Only conductive materials may be used, in combination with a conductive assembly to discharge the disc and liner.

*Potentially explosive atmospheres may occur during maintenance or cleaning as well as during regular operation.

For further details see the enclosed manufacturer's declaration in the appendix.

Recognising ChemFlyer | CST Explosion Prevention Models

Standard	EX_{min}	EX_{max}
		
Earthing Bolt: No earthing bolt on the neck of the valve	**Earthing Bolt**: An earthing bolt on the neck of the valve allows for the connection of a ground cable	**Earthing Bolt**: An earthing bolt on the neck of the valve allows for the connection of a ground cable
Standard PTFE: The liner and disc will be made of white, non-conductive PFA/PTFE	**Standard PTFE**: The liner and disc are made of white, non-conductive PFA/PTFE	**Conductive PTFE**: The liner and disc are made of black, conductive PFA/PTFE

Explosion Prevention Installation Instructions

6.1 Procedure

1. Install the valve as per the instructions in section 5.
2. Connect a ground cable to the earthing point on the valve body.
3. Test the conductivity of the assembly to ensure correct installation.

Warnings & Precautions

- The ChemFlyer | CST butterfly valve may not bear the specific Ⓔx ATEX mark nor the EX mark in accordance with Directive 2014/34/EU!
- The assembly of the ChemFlyer | CST butterfly valve with a pneumatic or electric actuator does not create any additional potential sources of ignition!
- Upon delivery of the ChemFlyer | CST butterfly valve together with pneumatic and electric actuators, the manufacturer will provide the correspondent ATEX declarations of conformity.
- The requirements according to TRGS 727 chapter 8 regarding grounding and potential equalisation must be observed!
- The responsibility for the safe use and operation of the device in potentially explosive atmospheres lies with the operator, who must produce an explosion protection document in accordance with Directive 1999/92/EC. This declaration of conformity serves as a safety statement and the manufacturer recommends that this be listed in the annex to the explosion protection document.
- If accessories are provided by the customer (e.g. actuators, limit switches, etc.), the operator is responsible for ensuring that these accessories are appropriately compliant!
- The information relating to ATEX Directives 2014/34/EU and 1999/92/EC contained in this manual does not constitute legal advice and any responsibilities of the plant operator are solely theirs to understand and comply with.

7 Maintenance

Please see the ChemFlyer | CST Maintenance Instructions for details

8 Decommissioning

Warnings & Precautions

- During installation and maintenance work, suitable protective clothing, including gloves and protective goggles, must be worn.
- Prior to installation and maintenance work, the pipe must be depressurised and emptied. If the valve operates with dangerous flow media, the pipe has to be emptied completely and flushed with an appropriate cleaning fluid. Inappropriate cleaning products can harm the valve!
- If flange connections or locking screws are detached, hot water, steam, caustic fluids or toxic gases can be emitted. Severe scalding, burns and poisoning are possible!
- During operation the valve may become very hot or very cold. Installation and maintenance work should only be carried out if the valve's temperature is the same as the ambient temperature.
- Prior to dismounting the valve, preventative measures against the possible leakage of dangerous media should be made.
- When removing the valve from the pipeline, it is important to ensure that the valve disc and liner are not damaged. Damaged parts may only be replaced by genuine ChemValve-Schmid AG parts.

8.1 Procedure

Pipeline medium may remain in the dead space of the valve

1. Secure the valve against falling
2. Close the valve disc
3. Loosen and remove the flange screws
4. Spreads the flanges with an appropriate tool
5. Remove valve from the pipeline

9 Disposal

It is possible that residues can remain inside the valve, which are harmful to human and environment. Therefore the valve has to be treated with adequate precaution. Parts of the valves which are no longer serviceable have to be disposed of professionally and in an environmentally friendly manner.

ChemFlyer | CST

Appendix | Declaration of Conformity according to Pressure Equipment Directive 2014/68/EU

Directive	Pressure Equipment Directive 2014/68/EU
Name and Address of the Manufacturer	ChemValve-Schmid AG | Duennernstrasse 540 | 4716 Welschenrohr quality@chemvalve-schmid.com | chemvalve-schmid.com
Pressure Equipment & Object of the Declaration	ChemFlyer | CST PTFE Lined Butterfly Valve | DN032–1200 | 1¼"–48" | all PS | up to category III
Intended Use	Fluids of groups 2 and 1, excluding unstable gases
Conformity Assessment Procedure	Categories I, II, & III: Annex III, point 11, module H
Applied Technical Specifications	EN 13445-2:2018 | DIN EN 12516-1:2018 DIN EN 12516-2:2015 | EN 12266-1:2012
Notified Body	Swiss Association for Quality and Management Systems (SQS) Identification Number 1250 Bernstrasse 103 | 3052 Zollikofen | Switzerland | www.sqs.ch
Certificate Registration Number	39660
CE Marking	CE 1250

This declaration of conformity is issued under the sole responsibility of ChemValve-Schmid AG. The object of the declaration described above complies with the relevant European Union harmonisation legislation.

Welschenrohr, 12.08.2021

Pascal Willi
Quality Manager

ChemFlyer | CST

Appendix | Declaration of Conformity for Food Safety according to EN ISO/IEC 17050-1:2010

Manufacturer's Name and Address ChemValve-Schmid AG I Duennernstrasse 540 I CH-4716 Welschenrohr
quality@chemvalve-schmid.com I www.chemvalve-schmid.com

Product PTFE lined butterfly valve **ChemFlyer | CST**

Type	Auxiliary Materials	Disc	Liner	Backup	Body	Auxiliary Materials & Small Parts
						
	Direct contact with foodstuff			No direct contact with foodstuff		

	Code	Material	Code	Material	Code	Material	Code	Material	Code	Material	Code	Material
CST	–	various [5]	P	PFA [1,2]	P	PTFE [1,2]	S	VMQ [3]	G	5.3103 ⚠	–	various ⚠
			C	PFAc ⚠	T	mPTFE [1,2]	V	FKM ⚠	K	VECF ⚠	_food	various [1,2,5,6,7]
			S	Stainless Steel [6,7]	C	mPTFEc [1,2,4]	F	FKMsf [3]	S	1.4301 [6,7]		
			F	Stainless Steel [6,7]	U	UHMPE [1,2]	E	EPDM ⚠	S	1.4404 [6,7]		
			J	Stainless Steel [6,7]	K	PTFEc ⚠			C	S355J2+N ⚠		
			G	Stainless Steel [6,7]					H	Hastelloy [7]		
			T	Titanium [7]								
			H	Hastelloy [7]								

Regulations

⚠ Material is **not** suitable to come into contact with food!

1 (EC) No 1935/2004 & (EU) No 10/2011
2 FDA 21CFR177.1550 Perfluorocarbon resins
3 FDA 21CFR177.2600 Rubber articles intended for repeated use
4 FDA 21CFR178.3297 Colorants for polymers
5 NSF Registration No. 140150, No. 122875 & No. 122320
6 - France: Arrêté du 13 Janvier 1976: relatif aux matériaux et objets en acier in-oxydable au contact des denrées alimentiaux
- Italy: Decreto Ministrale 21 March 1973, Supplement to issue 104 of the Gazetta Ufficiale della Republica Italiana, 20 April 1973
- DIN 10528:2009-06
7 - The safety review, recommendations and specific release limits (SRLs) according to
Council of Europe (2013): Metals and alloys used in food contact materials and articles. A practical guide for manufacturers and regulators. (P-SC-EMB) 1-215.
have to be considered.

We declare under our sole responsibility that the product to which this declaration relates is in conformity with the regulations referenced above.

Welschenrohr, 24.02.2022

Pascal Willi
Quality Manager

ChemFlyer | CST

Appendix | Manufacturer's Declaration for Explosion Prevention

Manufacturer ChemValve-Schmid AG I Duennernstrasse 540 I CH-4716 Welschenrohr
quality@chemvalve-schmid.com I chemvalve-schmid.com

Product **ChemFlyer | CST** PTFE lined butterfly valve, inc. manually and automatically actuated

Subject Explosion Prevention

Hereby the manufacturer, ChemValve-Schmid AG, declares that the ChemFlyer | CST butterfly valve, to which this declaration relates, does not fall within the scope of *"Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to equipment and protective systems intended for use in potentially explosive atmospheres (recast)"*. This assessment is based on §38 - 'Simple' products - from the ATEX 2014/34/EU Guidelines, 1st Edition April 2016. Hence, the conformity assessment pursuant to said directive is omitted.

Disc			Liner			Backup			Body		
P	PFA	EX_{min}	P	PTFE	EX_{min}	S	Silicone (VMQ)	N/A	G	5.3103	**EX_{max}**
C	PFAc	**EX_{max}**	T	mPTFE	EX_{min}	V	FKM	N/A	S	Stainless Steel	**EX_{max}**
S	Duplex	**EX_{max}**	C	mPTFEc	**EX_{max}**	E	EPDM	N/A	C	Carbon Steel	**EX_{max}**
F	Duplex p	**EX_{max}**	U	UHMPE	EX_{min}	D	FKMs	N/A	K	VECF	**EX_{max}**
J	Stainlees Steel p	**EX_{max}**	K	PTFEc	**EX_{max}**						
G	Stainless Steel e-p	**EX_{max}**									
T	Titanium	**EX_{max}**									
H	Hastelloy C	**EX_{max}**									

The risk analysis and assessment of ignition sources by the manufacturer, together with the test report IBExU IB-13-8-014 on 22/02/2013, proves that butterfly valves of the type **EX_{max}** - whereby the disc, liner and body are composed entirely of conductive materials – cannot be charged, so they do not have their own potential source of ignition.

In contrast, butterfly valves of the type EX_{min} only ensure that any electrostatic charges caused by the friction of aerosols or liquid droplets on internal insulating materials are specifically controlled by means of a grounding cable and safely discharged.

This results in the following table, which displays the permissible zones and operating media, according to Directive 1999/92/EC, for each product type:

Design Type	Zone 0	Zone 20	Zone 1	Zone 21	Zone 2	Zone 22	Operating Media
EX_{max}	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Unlimited**
EX_{min}	Yes	Yes	Yes	Yes	Yes	Yes	Limited*

* Aerosols and liquid droplets can cause electrostatic charges in internal components

Further Information:

- The ChemFlyer | CST butterfly valve may not bear the specific ATEX-mark  nor the EX-mark in accordance with Directive 2014/34/EU!
- The instructions in the operating manual must be followed!
- The assembly of the ChemFlyer | CST butterfly valve with a pneumatic or electric actuator does not create any additional potential sources of ignition!
- Upon delivery of the ChemFlyer | CST butterfly valve together with pneumatic and electric actuators, the manufacturer will provide the correspondent ATEX declarations of conformity.
- The requirements according to TRGS 727 chapter 8 regarding grounding and potential equalisation must be observed!
- The responsibility for the safe use and operation of the device in potentially explosive atmospheres lies with the operator, who must produce an explosion protection document in accordance with Directive 1999/92/EC. This declaration of conformity serves as a safety statement and the manufacturer recommends that this be listed in the annex to the explosion protection document.
- If accessories are provided by the customer (e.g. actuators, limit switches, etc.), the operator is responsible for ensuring that these accessories are appropriately compliant!

Welschenrohr, 05.05.2022

Pascal Willi
Leiter Qualitätsmanagement

Status 28.07.2022 Despite the most careful checking of all data given in the catalogue, we do not accept any liability for any incorrect or incomplete information. We reserve the right to make technical changes. Passing on and reproduction of this document, use of its contents and communication are prohibited unless expressly permitted. Representation may differ from the actual scope of delivery.

We are certified to ISO 9001:2015 and manufacture according to the Pressure Equipment Directive 2014/68/EU.