

Knife gate valve

DN 200-300, 500-600

The Stafsjö HPT knife gate valve is designed in sizes DN 200, 250, 300, 500 and 600. For other sizes, please contact AB Stafsjö Bruk or your local representative.

The Stafsjö HPT knife gate valve made entirely of titanium is the reliable option in the bleaching plant for mixers, bleaching towers and pumps. It is a bi-directional seated valve suitable for severe operating conditions in which the solution demands a combination of tightness and corrosion resistance.

The HPT is designed of a two piece valve body in titanium equipped with titanium gate and glands. The top part is made of stainless steel, with epoxy painted pneumatic cylinder as standard. The titanium retainer rings mechanically locks the PTFE seats, making them easy to replace.

Due to the flexible design of the HPT, it can be provided with different types of manual and automatic actuators and accessories, such as limit switches.

The Stafsjö knife gate valve HPT is designed, manufactured, inspected and tested according to the European directive Pressure Equipment Directive (PED 97/23/EC) category II module A1 and is therefore CE marked.



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Design data

Maximum working pressure body at 20°C

DN	bar
200-600	10

Maximum differential pressure at 20°C

DN	bar
200-600	10

Basic equipment

A. Valve body

Material		
Titanium	T	ASTM B265 Grade 2

B. Gate

Body	Material
Titanium	T ASTM B265 Grade 2

C. Retainer ring

Body	Material	Seat
Titanium	T ASTM B265 Grade 2	PV

D. Seat

		Maximum temp. °C
PTFE with o-ring viton	PV	180

E. Box packing

		pH	Maximum temp. °C
PTFE	TF	0-14	280

F. Flange drilling

EN 1092 PN 10
ANSI B16.5 Class 150
JIS B 2238 10K

H. Face-to-face dimensions

Stafsjö standard – see table p. 5

Actuator

Manual

Hand wheel	HW
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Automatic

Pneumatic cylinder	AC
Electric motor	EM

Pneumatic cylinder epoxy painted– recommended sizes at 5 bar air pressure

DN	200	250	300	500	600
AC	160-200	160-250	200-300	250-500	320-575
Maximum force (kN)	9,0	9,0	14,1	22,1	36,2

The table gives recommended cylinder sizes at normal operation at 5 bar air pressure. For other operating conditions, please contact Stafsjö or your local representative for advice.

Electric motor – recommended sizes with AUMA multi-turn

DN	200	250	300	500	600
AUMA	SA 07.5	SA 07.5	SA 10.1	SA 14.1	SA 14.1
Attachment	F10/A	F10/A	F10/A	F14/A	F14/A

Electric motors are mounted according to standard ISO 5210. The table gives recommended motor sizes at normal operation. For other operating conditions, please contact Stafsjö or your local representative for advice.

For other actuators, please contact Stafsjö or your local representative for advice.

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Accessories

Limit switches

Mechanical	Ersce E100	
Inductive	ifm electronic IG-2008-ABOA / IG0006	2-wire 20-250 V AC/DC
	ifm electronic IG-3008-BPKG / IG5401	3-wire 10-36 V DC PNP

Accessories to pneumatic cylinder

Solenoid valve	Metal Work SOV 35 SOS OO	1/4"
	Metal Work SOV 45 SOS OO	1/2"
Magnetic limit switch	Elobau 102 247	2-wire 10-250 V AC/DC
	Elobau 102 290 PE	3-wire 10-30 V DC

Purge port

The HPT knife gate valve DN 200-600 is equipped with purge ports with pipe thread G1/2" acc. to ISO 228/1.

For advice regarding accessories, please contact Stafsjö or your local representative.

Pressure tests

Pressure tests are performed with water at 20°C according to ISO 5208 meaning:

1,5 x maximum working pressure for open valve – shell test

1,1 x maximum differential pressure for closed valve – obturator tightness test

Leakage rate

For soft sealed valves rate A according to ISO 5208 – no visible leakage for the duration of the test
TAPPI TIS 405-8, MSS SP-81

Weight, valve incl. hand wheel (HW)

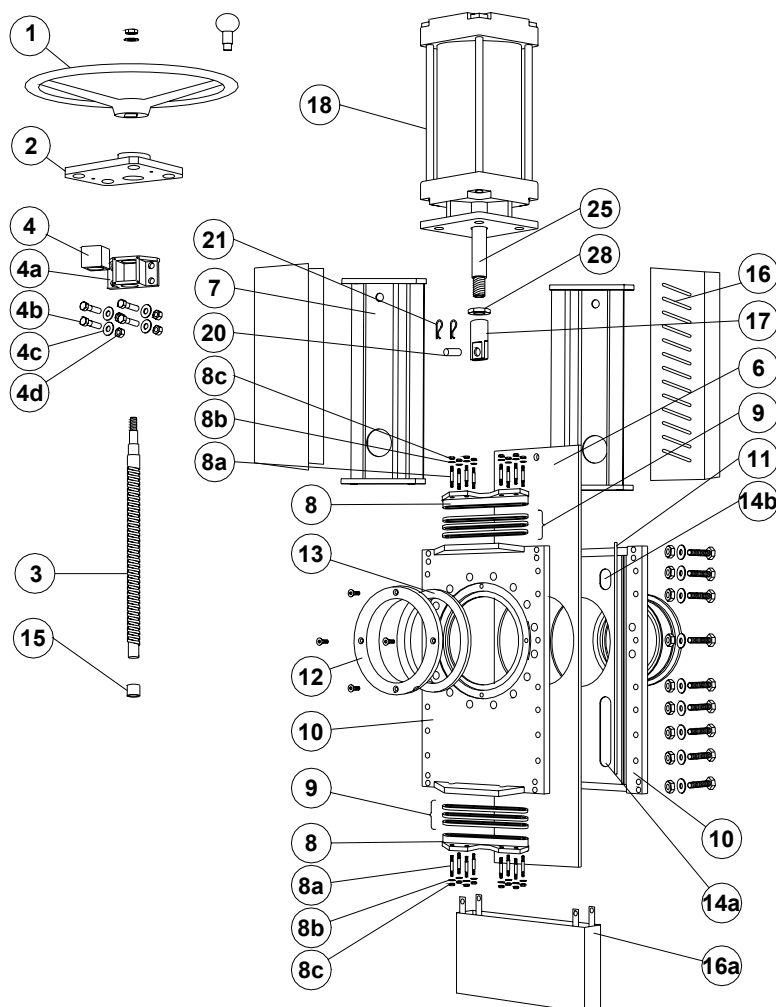
DN	200	250	300	500	600
kg	75	100	170	670	820

Materials – corresponding foreign materials

Stafsjö standard	Type of material	Sweden		Germany		USA			England	Japan
		SS	W. Nr.	DIN	ASTM	AISI	UNS	BS	JIS	
A2	Stainless	SS2333	W1.4301	X5CrNi18 M 10		304	S30400	304S15	SUS 304	
AISI 304	Stainless	AISI 304	W1.4301	X5CrNi18 M 10		304	S30400	304S15	SUS 304	
EN AW-6063-T6	Aluminium	EN AW-6063-T6		AlMgSi 0,5	AA 6063					
GG25	Cast iron	SS0125-00	0.6025	GG 25	A 48 No 40 B			Grade 260	FC 250	
GGG50	Nodular iron	SS0727	0.7050	GGG 50				Grade 500/7	FCD 500	
SS0120-00	Cast iron	SS0120-00	0.6020	GG 20	A 48 No 30 B			Grade 220	FC 200	
SS1312	Carbon steel	SS1312		RSt 37-2	A 36			40 B		
SS2303-03	Stainless	SS2303-03	W1.4021	X20Cr13		420	S42010	420S37	SUS 420J1	
SS2320-02	Stainless	SS2320-02	W1.4016	X6Cr17		430	S43000	430S17	SUS 430	
SS2333-02	Stainless	SS2333-02	W1.4301	X5CrNi18 M 10		304	S30400	304S15	SUS 304	
SS2343-12	Stainless	SS2343-12	W1.4408	G-X6CrNiMo 18 10	A 743-91 CF-8M			316 C 16	SCS 14	
SS2343-28	Stainless	SS2343-28	W1.4436	X3CrNiMo17 13 3	A 240, Type 316			Gr 316 S 33		
SS2346-02	Stainless	SS2346-02	W1.4305	X10CrNiS 18-9		303		303S31	SUS303	
SS2347-02	Stainless	SS2347-02	W1.4401	X5CrNiMo17 12 2		316	S31600	316S31	SUS 316	
SS2383-02	Stainless	SS2383-02	W1.4104	X12CrNiOS17		430 F	S43020		430 F	
SS5170-00	Brass	SS5170-00		CuZn39Pb3	C 36000			CZ 121		
SS2377-02	Stainless	SS2377-02	W1.4462	X2CrNiMoN22 5 3			S31803	318S13		
W1.4408	Stainless	W1.4408	W1.4408	G-X6CrNiMo 18 10	A 743-91 CF-8M			316 C 16	SCS 14	

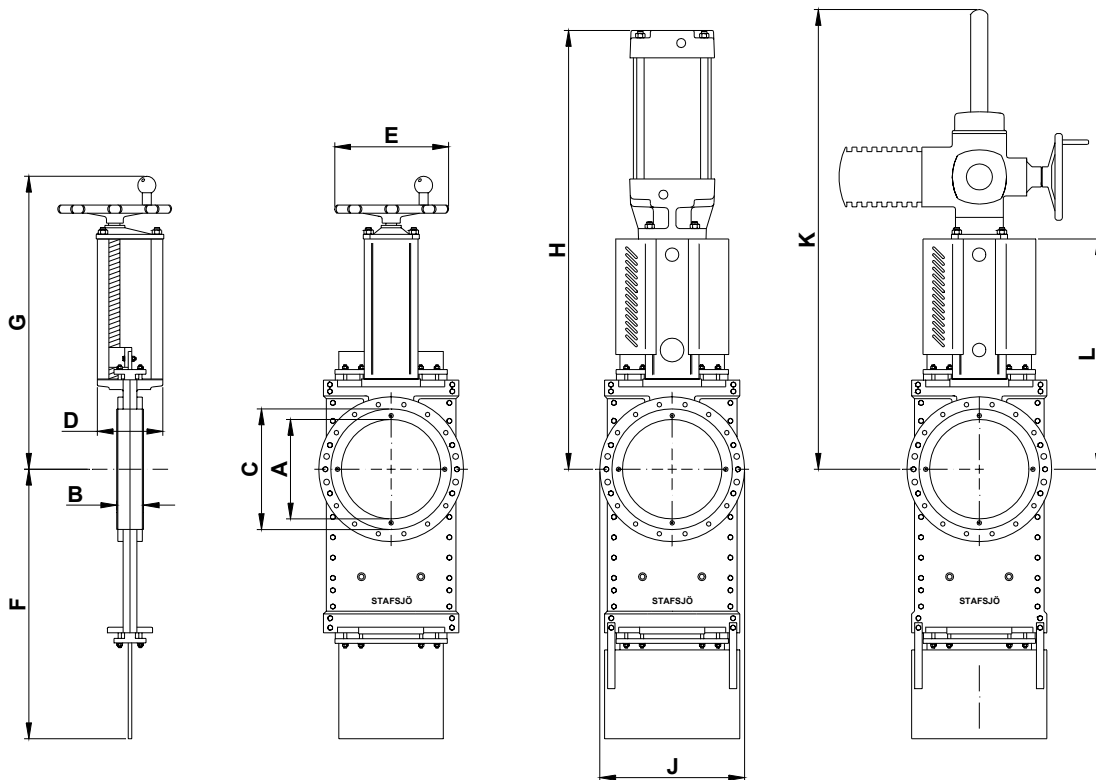
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Pos	Part	Material	Pos	Part	Material
1	Hand wheel	DN 200-250 Stainless steel SS2333/ 1.4308, DN>250 Cast iron GG20 epoxy	11	Body gasket	PTFE
2	Yoke	Stainless steel SS2343/1.4436/316	12	Retainer ring	See equipment C
3	Stem	Stainless steel SS2343/1.4436/316	13	Seat*	See equipment D
4	Stem nut	Brass SS5170-00	14a	Guide strip	Only DN>200 PTFE
4a	Stem nut holder	Stainless steel SS2333/1.4301/304	14b	Top guide strip	Only DN>200 PTFE
4b	Screw	A4	15	Plain bearing bushing	PTFE
4c	Washer	A4	16	Gate guard, not for HW	Stainless steel SS2333-02
4d	Nut	A4	16a	Gate guard, not for HW	Stainless steel SS2333-02
6	Gate	See equipment B	17	Gate clevis	Stainless steel SS2346-02
7	Pillars DN80-450 Beam DN>450	Stainless steel SS2343/1.4436/316	18	Cylinder	See data sheet, epoxy painted
8	Gland	Titanium	20	Clevis pin	Stainless steel SS2346-02
8a	Stud bolt	A4	21	Split pin	Stainless steel SS2343-02
8b	Washer	A4	25	Piston rod	Stainless steel SS2383-02
8c	Nut	A4	28	Locking nut	Stainless steel SS2346-02
9	Box packing*	See equipment E			
10	Valve body	See equipment A			

* Recommended spare parts



Dimensions (mm)

DN	200	250	300	500	600
A	202	250	302	470	540
B	60	69	78	114	122
C	270	320	375	580	679
D	150	150	180	320	350
E	315	315	400	635	635
F	600	725	865	1412	1553
G	659	739	893	1299	1336
H	925	1055	1287	2048	2160
J	330	402	460	690	800
K	1070	1200	1420	2020	2135
L	520	600	720	1138	1175

