

## Knife gate valve

## DN 300-800

The Stafsjö HP knife gate valve is a high pressure cousin to the Stafsjö HG knife gate valve. The HP knife gate valve is a bi-directional seated valve which is suitable for severe operating conditions where there is a risk for clogging. The through-going gate assures closing of the valve through static media. Common applications are pulp with pulp concentration >5%, liqueur, reject and waste.

The HP is designed of a two piece valve body in stainless steel and a stainless steel gate. The retainer rings mechanically locks the seats, making them easy to replace. The unique Stafsjö box packing TwinPack™ gives high operation reliability.

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

The Stafsjö knife gate valve HP 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
300-800	10

#### Maximum differential pressure at 20°C

DN	bar
300-800	10

### Basic equipment

#### A. Valve body

		Material	Maximum temp. °C
Stainless steel	E	W1.4408	300

#### B. Gate

	Body	Material	Surface treatment
Stainless steel	E	SS2377	
Stainless steel	E	SS2377	Hard chrome

#### C. Retainer ring

	Body	Material	Seat
Stainless steel	E	SS2343	P/PV
Zincd carbon steel	E		U

#### D. Seat

		Maximum temp. °C	Not recommended
PTFE with o-ring nitrile	P	100	
PTFE with o-ring viton	PV	180	
Polyurethane	U	90	

#### E. Box packing

		pH	Maximum temp. °C
TwinPack™	TY	1-13	260
PTFE	TF	0-14	280

#### F. Flange drilling

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

#### G. Face-to-face dimensions

Stafsjö standard – see table p. 5
TAPPI TIS 405-8, MSS SP-81

### Actuator

#### Manual

Hand wheel	HW
Chain wheel	CW

#### Automatic

Pneumatic cylinder	AC
Electric motor	EM
Hydraulic cylinder	MH

#### Pneumatic cylinder – recommended sizes at 5 bar air pressure

DN	300	350	400	500	600	700	800
AC	200-300	200-350	200-400	250-500	320-575	320-700	320-800
Maximum force (kN)	14,1	14,1	14,1	22,1	36,2	36,2	36,2

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

#### Electric motor – recommended sizes with AUMA multi-turn

DN	300	350	400	500	600	700	800
AUMA	SA 10.1	SA 10.1	SA 10.1	SA 14.1	SA 14.1	SA 14.5	SA 14.5
Attachment	F10/A	F10/A	F10/A	F14/A	F14/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 Staffsjö or your local representative for advice.

### Accessories

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### 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 HP knife gate valve DN 300-800 is equipped with purge ports with pipe thread G1/2" acc. to ISO 228/1.

For advice regarding actuators and 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

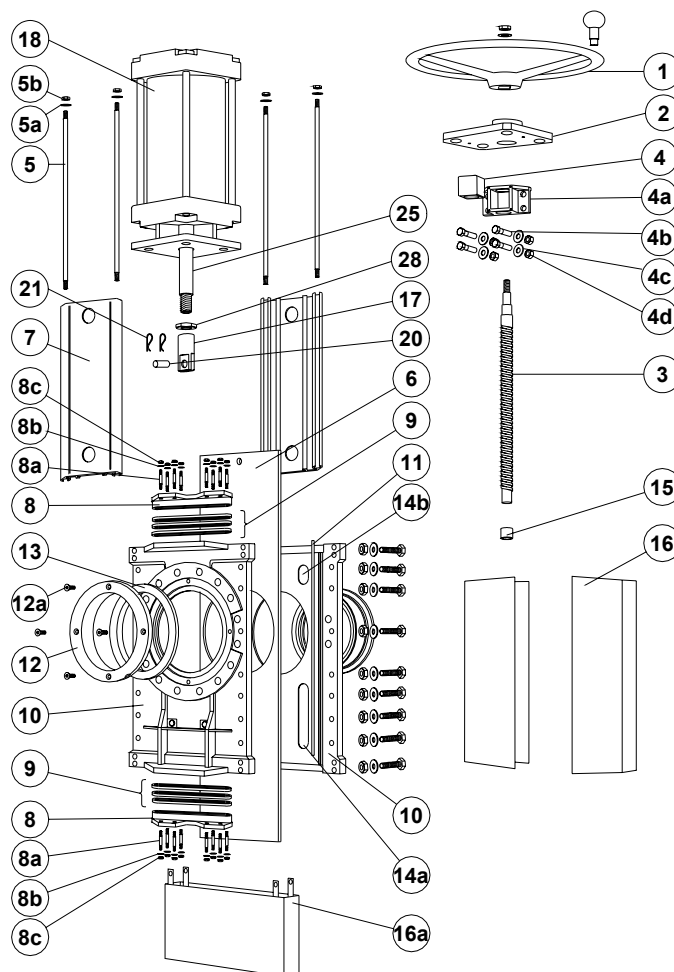
For soft sealed valves rate A according to ISO 5208 – no visible leakage for the duration of the test  
TAPPI TIS 405-8, MSS SP-81

### 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	X12CrNiMoS17		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

### Knife gate valve

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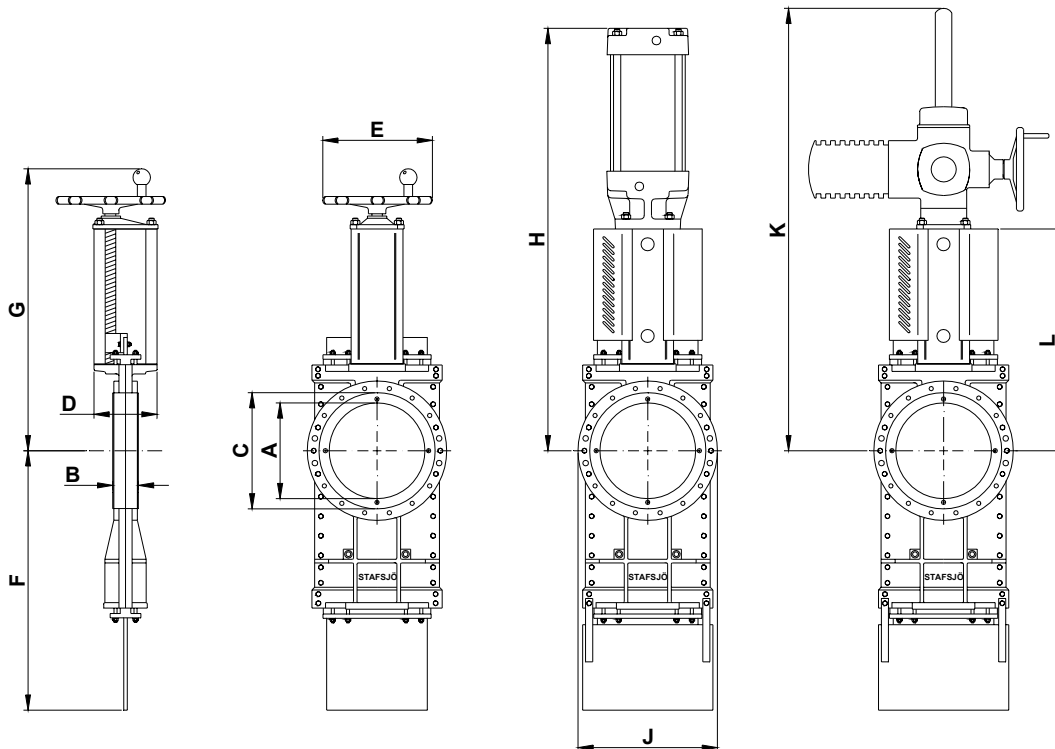
Pos	Part	Material
1	Hand wheel	Cast iron GG20
2	Yoke	Cast iron GG20
3	Stem	Stainless steel SS2383-02
4	Stem nut	Brass SS5170-00
4a	Stem nut holder	Stainless steel 2333-02
4b	Screw	A2
4c	Washer	A2
4d	Nut	A2
5	Tie rod	Stainless steel SS2333-02
5a	Washer	A2
5b	Nut	A2
6	Gate	See equipment B
7	Beam	Aluminium EN AW-6063-T6
8	Gland	Stainless steel SS2343
8a	Stud bolt	A2 + zinc
8b	Washer	A2
8c	Nut	A2 + zinc
9	Box packing*	See equipment E

Pos	Part	Material
10	Valve body	See equipment A
11	Body gasket	PTFE
12	Retainer ring	See equipment C
12a	Locking screw	A2
13	Seat*	See equipment D
14a	Guide strip	PTFE
14b	Top guide strip	PTFE
15	Bushing	Oil-bronze
16	Gate guard, not for HW	Stainless steel SS2333-02
16a	Gate guard, not for HW	Stainless steel SS2333-02
17	Gate clevis	Stainless steel SS2346-02
18	Cylinder	See data sheet
20	Clevis pin	Stainless steel SS2346-02
21	Split pin	Stainless steel SS2343-02
25	Piston rod	Stainless steel SS2383-02
28	Locking nut	Stainless steel SS2346-02

\* Recommended spare parts

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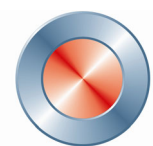


### Dimensions (mm)

DN	300	350	400	500	600	700	800
A	302	332	380	470	540	665	760
B	78	78	89	114	122	128	128
C	375	425	480	580	679	800	900
D	180	175	210	320	350	320	320
E	400	400	520	635	635	635	635
F	865	980	1070	1412	1553	1891	2132
G	893	948	1033	1299	1336	1556	1721
H	1287	1370	1672	2048	2160	2505	2770
J	455	510	570	690	800	995	1070
K	1420	1505	1650	2020	2135	2505	2770
L	720	775	873	1138	1175	1395	1560

### Weight, valve incl. hand wheel (HW)

DN	300	350	400	500	600	700	800
kg	170	200	290	670	820	1300	1700



**Stafsjö**  
SINCE 1666

All specifications subject to change without notice.

[www.stafsjo.com](http://www.stafsjo.com)

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