

Knife gate valve

DN 250, 300, 400

The Stafsjö D2G knife gate valve is designed in sizes DN 250, 300 and 400. For other sizes, please contact AB Stafsjö Bruk or your local representative.

The D2G knife gate valve is a bi-directional seated valve for special applications which require quick stroking action. The D2G valve is well suited for contaminated media and for reject handling duties. Mounting only in a vertical flow direction.

The Stafsjö D2G valve is designed of a two piece valve body and two hard chromed gates working towards each other in the bore for fast opening or closure. The valve's inside faces are lined with unique sliding plates in POM-C, minimizing friction between the gates and the valve body and preventing clogging in the valve. The sliding plates are wear parts, easily exchanged, making maintenance fast and simple and prolonging the valve lifetime. The Stafsjö concept with retainer rings mechanically locking the seats and the Stafsjö box packing TwinPack™ also simplifies maintenance and gives high operation reliability.

Due to the flexible design of the D2G valve, it can be provided with different types of accessories such as limit switches.

The Stafsjö knife gate valve D2G 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.



Knife gate valve

DN 250, 300, 400

Design data

Maximum working pressure at 20°C

DN	bar
250-400	10

Maximum differential pressure at 20°C for static media

DN	bar
250-400	6

The D2G knife gate valve will leak when exposed to differential pressure in media type gas and liquid due to the two piece gate design

Basic equipment

A. Valve body

		Material	Maximum temp. °C	Not recommended
Stainless steel	E	EN 10028-7 1.4436	500	
Steel	B	EN 10028-2 1.0425	400	Corrosive media

Valve bodies in steel (A) are chemically nickel coated and painted on the outside with a wet epoxy colour to a minimum thickness of 80µm.

B. Gate

	Body	Material	Surface treatment
Stainless steel	E/B	EN 10028-7 1.4401	Hard chrome

C. Retainer ring

	Body	Material	Seat
Stainless steel	E	EN 10028-7 1.4436	P/PV
Steel	B	EN 10028-2 1.0425	P/PV

Retainer rings in steel (A) are painted with a wet epoxy colour to a minimum thickness of 80µm.

D. Seat

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

E. Box packing

		pH	Maximum temp. °C
TwinPack™	TY	1-13	260

F. Body gasket

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

G. Flange drilling

EN 1092 PN 10

H. Face-to-face dimensions

Stafsjö standard, see p. 4

Knife gate valve

DN 250, 300, 400

Actuator

Each D2G knife gate valve is equipped with two pneumatic cylinders, AC. The pneumatic cylinders are equipped with quick exhaust device for fast opening or closing action on request.

Pneumatic cylinder – recommended sizes at 5 bar air pressure

DN	250	300	400
AC	200	200	250
Maximum force (kN)	14,1	14,1	22,1

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.

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

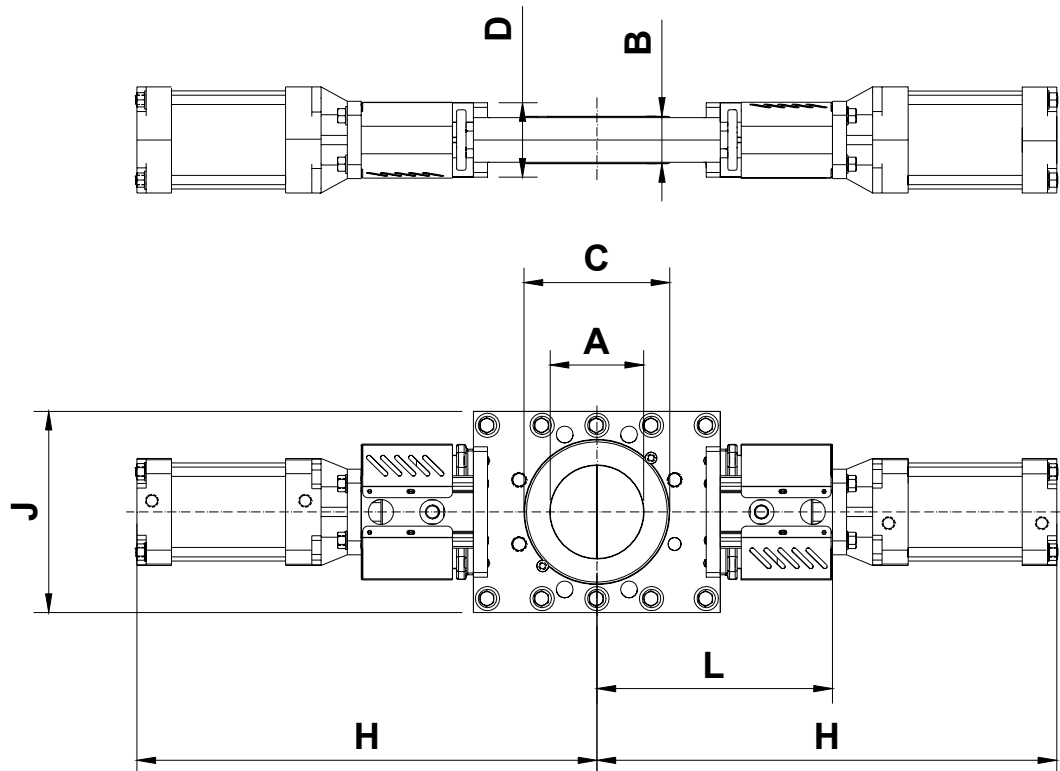
For advice regarding accessories, please contact Stafsjö or your local representative.

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
No obturator tightness test is performed due to the two piece gate design.

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
GG50	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



Dimensions (mm)

DN	250	300	400
A	250	300	400
B	69	78	89
C	319	374	479
D	154	180	210
H	859	941	1211
J	390	450	590
L	463	550	658

Weight, valve incl. pneumatic cylinder (AC)

DN	250	300	400
kg	140	170	300