



## XV

EN 1092 PN 10 • JIS B 2238 10K

Stafsjö's knife gate valve XV is a compact bi-directional valve with full bore. The XV-valve is specially designed with regards to good flow characteristics and simple maintenance.

The XV-valve is designed of a one piece or a two piece valve body in stainless steel. It's equipped with a gate in stainless steel and removable retainer rings, which simplifies changing of the seats. Stafsjö's unique box packing, TwinPack™, gives a tight sealing and assures high operation reliability.

The valve is modular designed and it can easily be provided with different actuators and accessories.

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

The XV-valve is also available in an ATEX design (ATEX 94/9/EC II cat 3 G/D for zone 2 and 22). Please contact Stafsjö or your local representative for more information and advice.



## Design data

Sizes	Flange drilling	Face-to-face dimension	Leakage rate
<b>DN 80 - DN 800</b>	<b>EN 1092 PN 10 JIS B 2238 10K ANSI B16.5 Class* AS 2129 Table D* AS 2129 Table E*</b>	<b>DN 80 - DN 300: DIN 3202 K1 DN 350 - DN 800: Stafsjö manufacturing- standard</b>	<b>EN 12266-1:2003 Rate A:</b> no visually detectable leakage is allowed for duration of the test <b>MSS SP-81</b>

*Other sizes on request*

*\* Not described in this data sheet*

### Pressure tests

Pressure tests are performed with water at 20° C according to EN 12266-1:2003.

Pressure for shell test: 1,5 times maximum allowable working pressure for open valve.

Pressure for seat tightness test: 1,1 times maximum allowable differential pressure for closed valve.

Maximum working pressure body at 20°C		Maximum differential pressure at 20°C	
DN	bar	DN	bar
<b>80 - 150</b>	<b>16</b>	<b>80 - 350</b>	<b>10</b>
<b>200 - 600</b>	<b>10</b>	<b>400 - 600</b>	<b>6</b>
<b>700 - 800</b>	<b>6</b>	<b>700 - 800</b>	<b>4</b>

## Basic equipment

### A. Valve Body

Material	Name	Maximum temperature °C
<b>Stainless steel (E)</b>	<b>1.4408</b>	<b>400</b>

### B. Gate

Material	Name
<b>Stainless steel</b>	<b>316/1.4401</b>

### C. Retainer rings

Material	Name
<b>Stainless steel</b>	<b>1.4408</b>

### D. Seats

Material	Maximum temperature °C
<b>PTFE with o-ring viton (PV)</b>	<b>180</b>
<b>PTFE with o-ring nitril (P)</b>	<b>100</b>

### E. Box Packing

Material	pH	Maximum temperature °C
<b>TwinPack™ (TY)</b>	<b>2-13</b>	<b>260</b>

## Actuators

Manual		Automatic	
Hand wheel <sup>1)</sup>	(HW)	Pneumatic cylinder	(AC)
Chain wheel <sup>2)</sup>	(CW)	Electrical motor	(EM)
		Hydraulic cylinder <sup>2)</sup>	(MH)

<sup>1)</sup> For recommended size, see page 5 column E.

<sup>2)</sup> For recommended size, see separate data sheet.

Pneumatic cylinder			Electric motor – AUMA multi-turn		
DN ventil	Size AC	Maximum Force (kN)	DN ventil	AUMA	Attachment
80 - 150	100	3.5	80 - 150	SA 07.1	F10/A
200 - 300	160	9.0	200 - 250	SA 07.5	F10/A
350 - 500	200	14.1	300 - 600	SA 10.1	F10/A
600 - 700	250	22.1	700 - 800	SA 14.1	F14/A
800	320	36.2	800	SA 14.1	F14/A

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

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

The actuators are described in detail in separate data sheets. For actuators classified according to ATEX, please contact Stafsjö or your local representative.

## Accessories

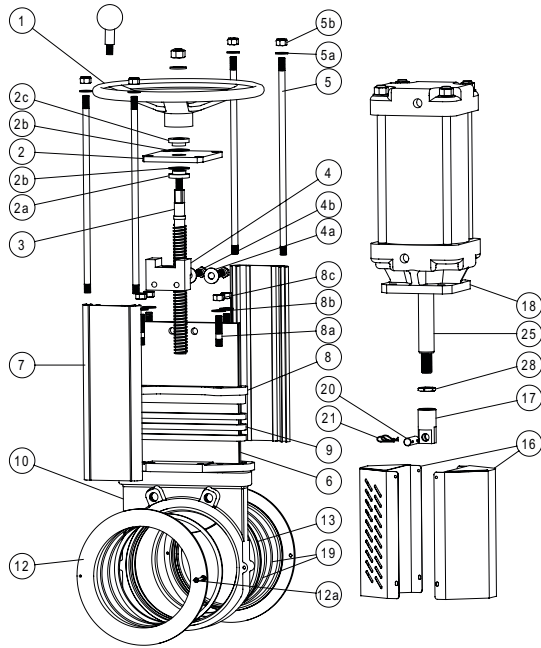
Knife gate valve		
Accessories	Model	Design
Mechanical limit switch	Ersce E100-00-11	AC15 6A/230 V
Inductive limit switch	ifm electronic IG-2008-ABOA/IG0006	2-wire, 20-250 V AC/DC
	ifm electronic IG-3008-BPKG/IG5401	3-wire, 10-36 V DC PNP
Stem extension	Short	Pipe Length: < 1.5 m
	Long	Pipe Length: > 1.5 m

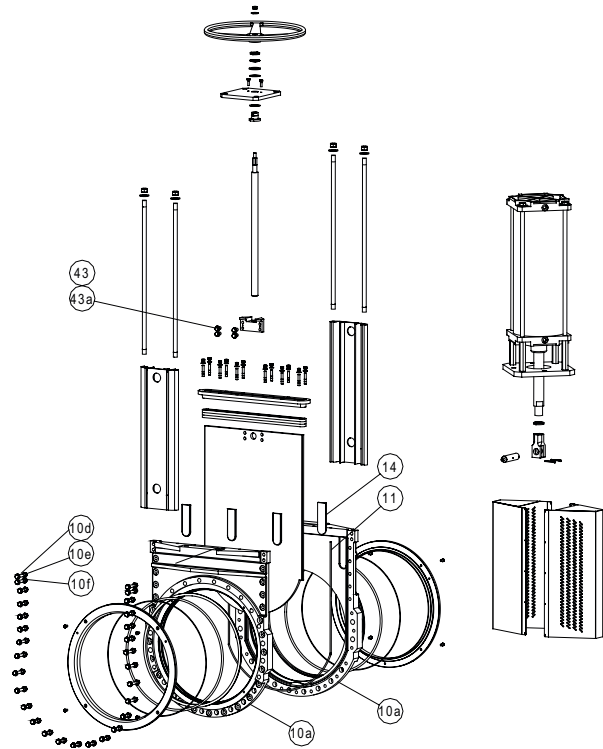
Pneumatic cylinder		
Accessories	Model	Design
Solenoid valve	Metal Work mono stable 5/2, series 70	1/4"
	Metal Work mono stable 5/2, series 70	1/2"
Magnetic limit switch	Elobau 102247 & 10224709	2-wire, 10-250 V AC/DC
	Elobau 102290PE & 102290PE09	3-wire, 10-30 V DC

The accessories are described in detail in separate data sheets. For accessories classified according to ATEX, please contact Stafsjö or your local representative.

**One piece body: DN 80 - DN 600**



**Two piece body: DN 700 - DN 800**

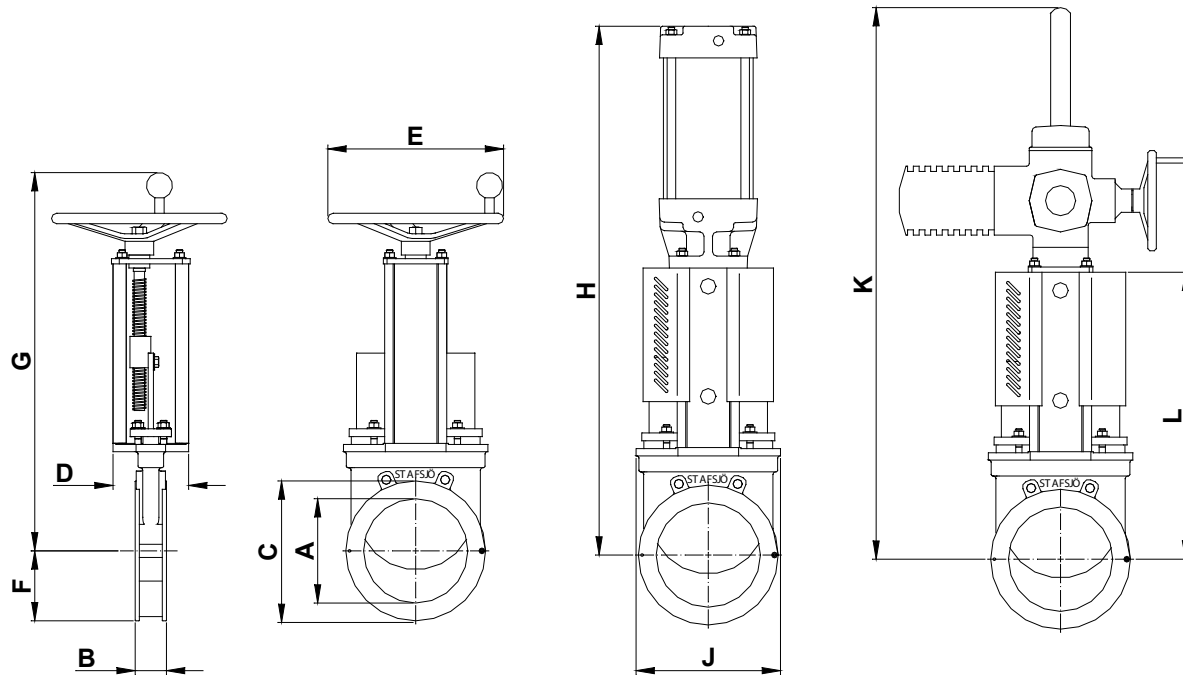


## Part List

Pos	Part	Material (Name)
1	Hand wheel	Epoxy coated Ø 200 - Ø 315 Cast iron GG25 ≥ Ø 400 Cast iron (GG20)
2	Yoke	Stainless steel (SS2333-02)
2a	Bearing	Brass (SS5170-00)
2b	Slide washer	POM
2c	Bearing	Brass (SS5170-00)
3	Stem	Stainless steel (SS2320-02)
4	Stem nut	Brass (CW603N)
4a	Washer	Stainless steel (A2)
4b	Screw	Stainless steel (A2)
5	Tie rod	Stainless steel (SS2333-02)
5a	Washer	Stainless steel (A2)
5b	Nut	Stainless steel (A2)
6	Gate	See basic equipment B
7	Beam	Aluminium (EN AW-6063-T6)
8	Gland	Cast iron (SS2343)
8a	Stud bolt	Stainless steel (A2) + zinc
8b	Washer	Stainless steel (A2)
8c	Nut	Stainless steel (A2) + zinc
9	Box packing*	See basic equipment E

Pos	Part	Material (Name)
10/a/b	Valve body	See basic equipment A
10d	Screw	Stainless steel (A2)
10e	Washer	Stainless steel (A2)
10f	Nut	Stainless steel (A2)
11	Body gasket	PTFE
12	Retainer ring	See equipment C
12a	Locking screw	Stainless steel (A2)
13	Seat*	See basic equipment D
14	Guiding pads	POM-C
16	Gate guard, not for HW	Stainless steel (SS2333-02)
17	Gate clevis	Stainless steel (SS2346-02)
18	Cylinder	See data sheet
19	O-ring	See basic equipment D
20	Gate clevis	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)
43	Screw	Stainless steel (A2)
43a	Washer	Stainless steel (A2)

\* Recommended spare parts

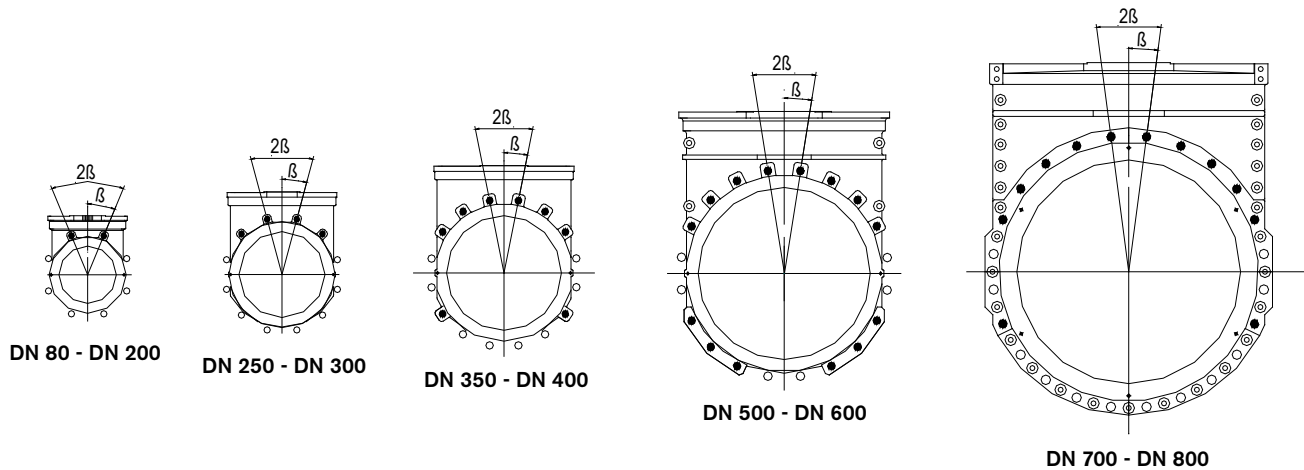


## Main dimensions

Dimension (mm)												
DN	A	B	C	D	E	F	G	H	J	K	L	Weight*
80	80	46	138	80	200	69	444	582	140	690	314	8
100	100	52	158	80	200	79	482	620	158	728	352	10
125	125	56	188	80	250	94	523	711	188	769	393	13
150	150	56	212	80	250	106	567	755	212	813	437	15
200	200	60	269	145	315	135	691	1006	277	868	546	30
250	250	68	322	145	315	161	785	1100	331	994	640	41
300	300	78	372	145	315	186	879	1244	382	1149	734	57
350	350	78	432	175	400	216	1021	1477	437	1308	841	-
400	400	89	481	175	400	241	1116	1622	488	1453	936	-
500	500	114	586	250	520	302	1342	1988	603	1770	1152	-
600	600	114	686	260	635	343	1546	2329	735	2076	1356	-
700	680	128	800	320	635	450	1650	2475	902	2382	1527	-
800	780	128	901	320	635	500	1866	2952	1002	2697	1742	-

\* Weight kg for valve including hand wheel (HW)

Main dimensions are only for information. Contact Stafsjö for certified drawings.



## Flange drilling

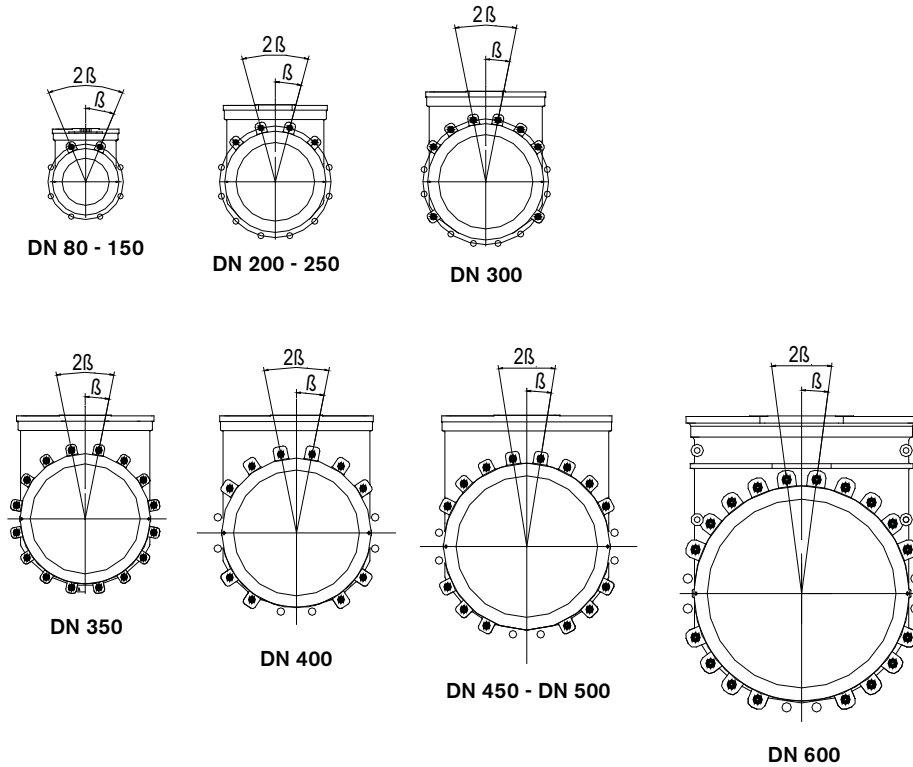
EN 1092 PN10 (mm)							
DN	80	100	125	150	200	250	300
Outside flange diameter (mm)	200	220	250	285	340	395	445
Bolt circle diameter (mm)	160	180	210	240	295	350	400
Number of throughgoing bolts (○)	6	6	6	6	6	8	8
Number of tapped holes/side (●)	2	2	2	2	2	4	4
Bolt size	M16	M16	M16	M20	M20	M20	M20
Size of throughgoing holes in flange	Ø18	Ø18	Ø18	Ø22	Ø22	Ø22	Ø22
β°	22,5	22,5	22,5	22,5	22,5	15	15
Screw lengths <sup>1)</sup>	10	12	14	12	13	15	19

EN 1092 PN10 (mm)						
DN	350	400	500	600	700	800
Outside flange diameter (mm)	505	565	670	780	895	1015
Bolt circle diameter (mm)	460	515	620	725	840	950
Number of throughgoing bolts (○)	8	8	6	6	12	12
Number of tapped holes/side (●)	8	8	14	14	12	12
Bolt size	M20	M24	M24	M27	M27	M30
Size of throughgoing holes in flange	Ø22	Ø26	Ø26	Ø30	Ø30	Ø33
β°	11,25	11,25	9	9	7,5	7,5
Screw lengths <sup>1)</sup>	19	21	27	27	31	31

<sup>1)</sup> Add the values with the thickness of the pipe flanges, the washers and estimated thickness of the gasket.

○ Throughgoing holes

● Tapped holes



## Flange drilling

JIS B 2238 10K						
DN	80	100	125	150	200	250
Outside flange diameter (mm)	185	210	250	280	330	400
Bolt circle diameter (mm)	150	175	210	240	290	355
Number of throughgoing bolts (○)	6	6	6	6	8	8
Number of tapped holes/side (●)	2	2	2	2	4	4
Bolt size	M16	M16	M20	M20	M20	M22
Screw lengths <sup>1)</sup>	Ø19	Ø19	Ø23	Ø23	Ø23	Ø25
β°	22,5	22,5	22,5	22,5	15	15
Screw lengths <sup>1)</sup>	11	12	15	13	13	16

JIS B 2238 10K						
DN	300	350	400	450	500	600
Outside flange diameter (mm)	445	490	550	620	675	795
Bolt circle diameter (mm)	400	445	510	565	620	730
Number of throughgoing bolts (○)	8	-	6	6	6	6
Number of tapped holes/side (●)	8	16	10	14	14	18
Bolt size	M22	M22	M24	M24	M24	M30
Screw lengths <sup>1)</sup>	Ø25	Ø25	Ø27	Ø27	Ø27	Ø33
β°	11,25	11,25	11,25	9	9	7,5
Screw lengths <sup>1)</sup>	20	20	22	22	24	24

<sup>1)</sup> Add the values with the thickness of the pipe flanges, the washers and estimated thickness of the gasket.

○ Throughgoing holes

● Tapped holes