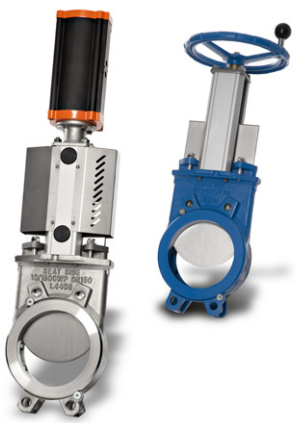
Knife gate valve MV



Stafsjö
SINCE 1666

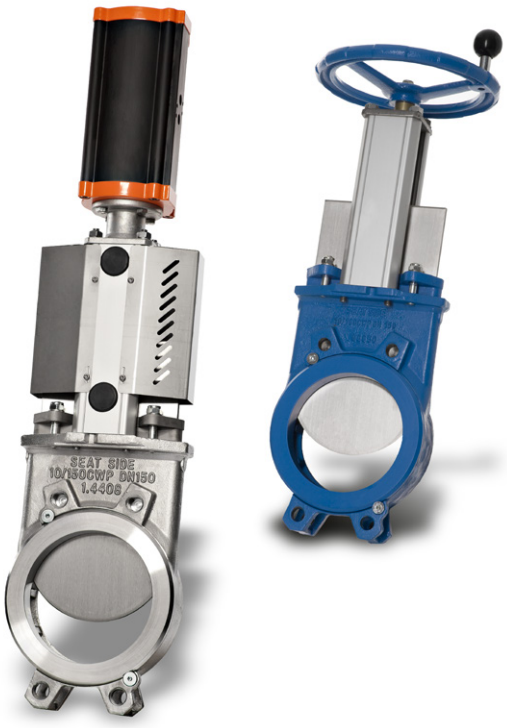
Knife gate valve MV

Stafsjö's knife gate valve MV is used within many different fields of applications. The valve has a gate with a bevel edge that effectively cuts through different media. In closed position the gate is pushed onto the seat which gives a tight and reliable sealing. This special shut-off technique makes the MV valve suitable for both fluids and dry media such as pulp, sludge, biomass, powder and different kinds of waste.

MV is modular designed and can easily be customized to specific process conditions. As standard it is supplied with a valve body in either stainless steel or epoxy coated nodular iron, but it can also be supplied in a range of high alloy materials such as Duplex, Hastelloy, SMO and Titanium. The process adaptation becomes an easy task with Stafsjö's retainer ring system, since it offers several seat materials and any change of seat can easily be performed both smooth and cost-efficient. The valve is equipepd with a gate in stainless steel, with different alloys as options. Just like other Stafsjö valves the MV is as standard equipped with Stafsjö's box packing TwinPack™, to secure that no media reaches surrounding environment. The gland box can also be supplied with a box bottom scraper or with double gland for the most demanding applications.

The top work consists of aluminium beams and stainless steel tie rods, which gives good corrosion resistance and a stable operation. There are several actuator types and accessories to choose from in Stafsjö's standard collection. All easily exchangeable between each other.

The MV valve is designed, manufactured, inspected and tested according to the European Pressure Equipment Directive (PED 97/23/EC) category I and II module A1. The valve is CE marked when it is applicable.



Proven and reliable shut-off

The design of the gate and the valve body, especially the bore, gives the valve its ability to securely and effectively shut-off almost any flow. Minimal friction makes the valve easy to operate.

Solid and flexible top works

Stainless steel tie rods and aluminium beams gives good corrosion resistance and a stable operation, which is a prerequisite for a first-rate sealing. Changing from one actuator to another one can easily be performed on the site.

Excellent adaptability

MV can easily be customized with valve materials to specific processes, e.g. in special materials as 254SMO or Titanium. The retainer ring system offers flexibility and cost-efficient on-site maintenance.

Design data

Sizes	Flange drilling	Face-to-face dimension	ATEX design
DN 50 - DN 1200	**EN 1092 PN 10** **EN 1092 PN 16** **ASME/ANSI B16.5** **Class 150** **ASME/ANSI B16.47** **Class 150, series A** **JIS B 2238 10K** **BS 10 Table D** **AS 2129 Table D and E**	**Stafsjö manufacturing standard** **MSS SP-81** **TAPPI TIS 405-8**	**ATEX 94/ 9/EC II cat 3 G/D for zone 2 and 22 on request**

Other sizes on request

Leakage rate	Pressure tests
EN 12266-1:2012 rate A: No visually detectable leakage is allowed for duration of the test. Rate A is not applicable for valves equipped with metal seat **MSS SP-81**	Pressure tests are performed with water at 20° C according to EN 12266-1:2012. Pressure shell test: 1,5 times maximum allowable working pressure for open valve. Pressure seat tightness test: 1,1 times maximum allowable differential pressure for closed valve.

Maximum working pressure body at 20°C		Maximum differential pressure in preferred direction at 20°C		Maximum differential pressure in reverse direction at 20°C for seats E/N/V		
DN	bar	DN	bar	DN	bar (E-body)	bar (L-body)
50 - 125	**16**	**50 - 125**	**16**	**50 - 200**	**3,5**	**3,5**
150 - 300	**10**	**150 - 300**	**10**	**250**	**3,0**	**3,0**
350 - 600	**6**	**350 - 600**	**6**	**300 - 450**	**-**	**3,0**
700 - 1200	**4**	**700 - 1000**	**4**	**500 - 1200**	**-**	**-**
		1200	**2 or 4**			

Basic equipment

A. Valve Body			
Material	Code	Type	Maximum temperature °C
Stainless steel	**(E)**	**EN 1.4408**	**400**
Nodular iron	**(L)**	**EN-JS1050/GGG50**	**200**
Carbon steel **DN 900 & DN 1000**	**(C)**	**WCC/ASTM A216**	**425**

Standard colour valve body L and C: epoxy, RAL 5015, thickness 140-200 µm.

B. Gate		
Material	Type	Option
Stainless steel[1)]	**EN 1.4301/AISI 304/SS 2333**	**Hard chromed surface**
Stainless steel[2)]	**EN 1.4404/AISI 316L/SS 2348**	**Hard chromed surface**
Option		
Duplex stainless steel	**EN 1.4462/AISI 2205/SS 2377**	**Hard chromed surface**

[1)] Standard on MV-L DN 50 - DN 500.
[2)] Standard on MV-E and MV-L DN ≥ DN 600.

C. Retainer ring	
Material	Type
Stainless steel[3)]	**EN 1.4408**
Nodular iron, Cast iron[4)]	**EN-JS1050/GGG50, EN-JL1030/GG20**

[3)] Standard on MV-E.

D. Seat		
Material	Code	Maximum temperature °C
EPDM	**(E)**	**120**
Nitrile	**(N)**	**100**
Viton	**(V)**	**180**
PTFE with o-ring Nitrile	**(P)**	**100**

PTFE with o-ring Viton	**(PV)**	**180**
Polyurethane	**(U)**	**90**
Metal with o-ring Nitrile	**(M)**	**100**
Metal with o-ring Viton	**(MV)**	**180**
Metal with Grafoil	**(MHT)**	**400 (E)/200 (L)/425 (C)**

E. Box Packing		
Material	Code	Maximum temperature °C
TwinPack™	**(TY)**	**260**
PTFE	**(TF)**	**280**
Garlock 127	**(TG)**	**650**

Actuators

Manual	Code	**Automatic**	Code
Hand wheel[5)]	**(HW)**	**Pneumatic cylinder**	**(AC)**
Chain wheel[6)]	**(CW)**	**Electrical motor**	**(EM)**
Hand lever[6)7)]	**(HL)**	**Hydraulic cylinder[6)]**	**(MH)**
Ratchet wrench[6)]	**(RW)**		
Bevel gear[6)]	**(BG)**		

[5)] For recommended size, see page 5 column E

[6)] For recommended size, see separate data sheet

[7)] Pressures according to design data are not valid for valve equipped with hand lever (HL). Maximum working and differential pressure in preferred direction at 20°C for DN 50 - DN 200: 4 bar.

Double-acting pneumatic cylinder			**Electric motor (AUMA multi-turn)**		
DN valve	EC type	Maximum force (kN)	DN valve	AUMA type	Attachment
50 - 150	**EC 100**	**3,5**	**50 - 150**	**SA 07.2**	**F10/A**
200 - 300	**EC 160**	**9,0**	**200 - 250**	**SA 07.6**	**F10/A**
350 - 500	**EC 200**	**14,1**	**300 - 600**	**SA 10.2**	**F10/A**
600 - 700	**EC 250**	**22,1**	**700 - 800**	**SA 14.2**	**F14/A**
750 - 1000	**EC 320**	**36,2**	**900 - 1000**	**SA 14.6**	**F14/A**
1200	**-**	**-**	**1200**	**SA 16.2**	**F16/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 separate data sheets. For advice and information on other actuators or on ATEX-classified ones, please contact Stafsjö or your local representative.

Options and accessories

Knife gate valve			
Accessories	Code	Model	Design
Mechanical limit switch	**(MLS)**	**Omron D4V**	**12-250 V AC/12-125 V DC, IP 65**
Inductive limit switch	**(ILS)**	**ifm electronic IG0006**	**2-wire, 20-250 V AC/DC, IP 67**
		ifm electronic IG5401	**3-wire, 10-36 V DC PNP, IP 67**
Stem extension	**(SES)**	**Short**	**Pipe Length < 1,5 m**
	(SEL)	**Long**	**Pipe Length > 1,5 m**
Positioner for control	**(POS)**	**PMV Palmstierna/Metso/ABB**	
Purge ports	**(PP)**	**MV DN 50 - DN 450 on order**	
		MV DN 500 - DN 1200 are equipped with purge ports.	**Pipe thread G1/2" acc. to ISO 228/1**
Double gland	**(DG)**	**For MV DN 80 - DN 400**	**Stainless steel (EN 1.4408)**
Box bottom scraper	**(BBS)**	**Available on order**	**Available in Nonfric, UHMWPE, PTFE or Brass**

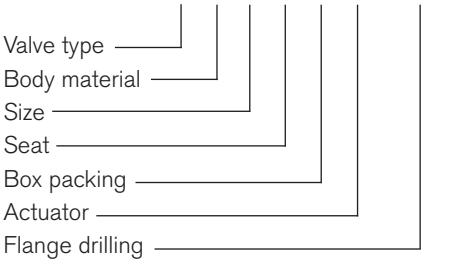
Deflection cone	**(DC)**	**For MV DN 50 - DN 600**	**Stainless steel (EN 1.4408)**
V-port	**(VP)**	**For MV DN 50 - DN 600**	**Stainless steel (EN 1.4408)**
Pneumatic cylinder			
Accessories	Code	Model	Design
Solenoid valve	**(SV)**	**Parker Namur valves for EC 100 - EC 160**	**G1/4", Mono stable 5/2, Namur series VDI/VDE 3845, 24 V DC/110 V AC/220 V AC, IP 65**
		Parker Namur valves for EC 200 - EC 320	**G1/2", Mono stable 5/2, Namur series VDI/VDE 3845, 24 V DC/110 V AC/220 V AC, IP 65**
Magnetic limit switch	**(MagLS)**	**KITA KT-50R for EC 100 - EC 320**	**2-wire, 5-240 V AC/DC, IP 65**
		KITA KT-50N for EC 100 - EC 320	**3-wire, 10-30 V DC, IP 65**

The accessories are described in separate data sheets. For advice and information on other accessories or on ATEX-classified ones, please contact Stafsjö or your local representative.

Specify the Stafsjö valve

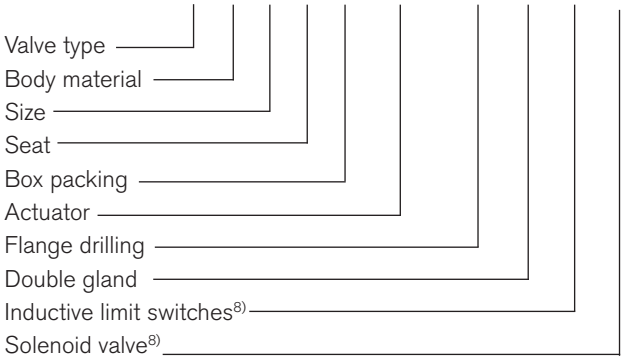
Stafsjö's valves are modular designed and they can easily be customized with gate, seat and box packings according to media and requirements, as well for actuators and accessories. Below are examples of how you can specify your Stafsjö valve. Further information is available on www.stafsjo.com.

MV-E-200-P-TY-HW-PN10



[8] *All electronics must be specified in detail.*

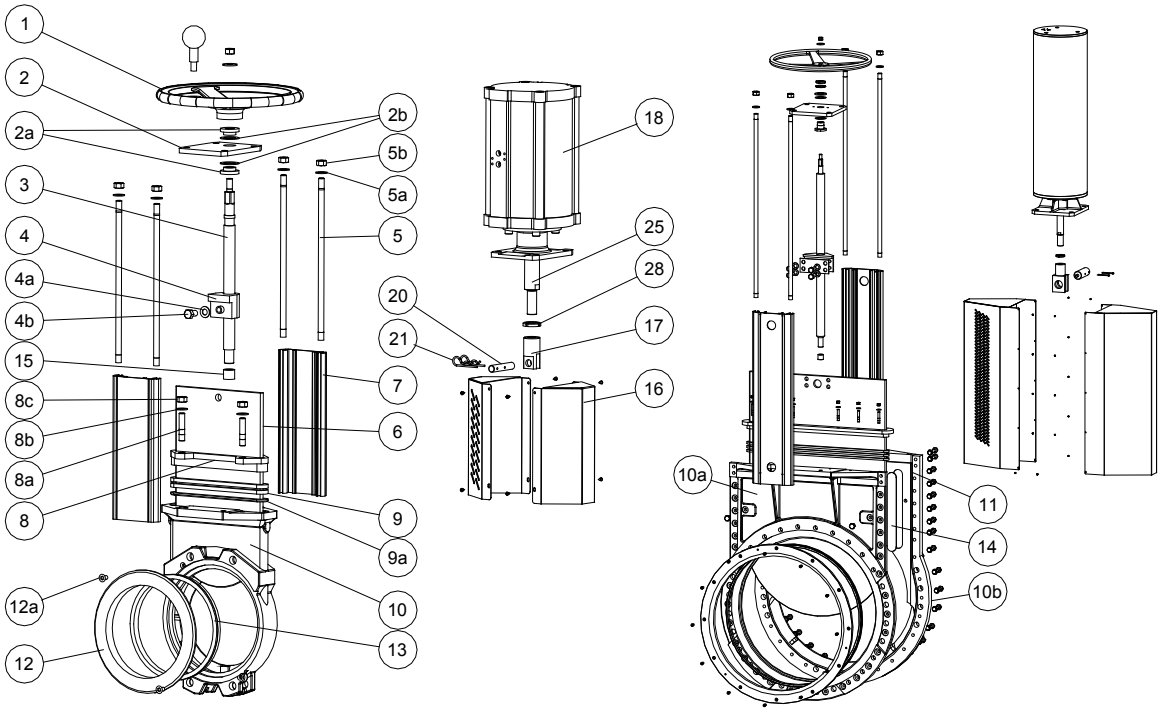
MV-E-400-P-TY-EC200-PN10-DG-ILS-SV



ILS: IFM IG0006, 2-wire 20-250V AC/DC
SV: Parker Numur valve G1/4", 5/2, 220/230V AC

One piece valve body: DN 50 - DN 800

Two piece valve body: DN 900 - DN 1200

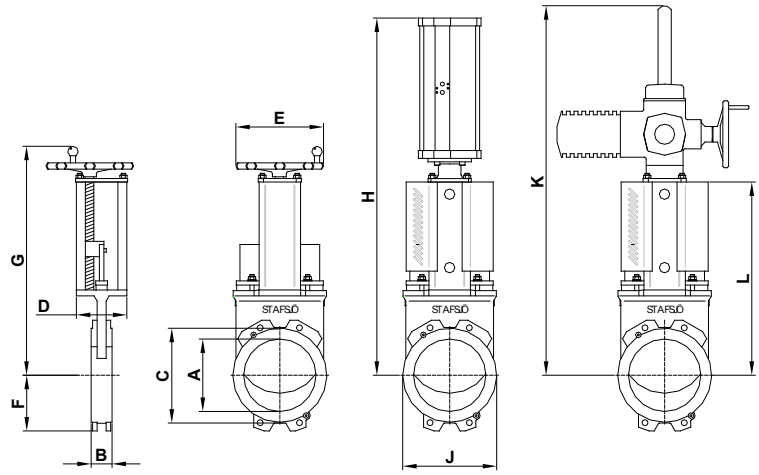


Part List

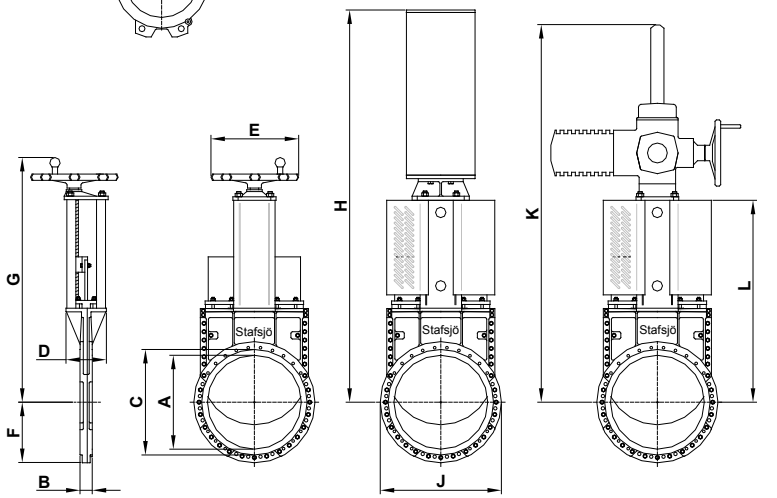
Pos.	Part	Material (Name)
1	Hand wheel	Epoxy coated cast iron Ø 200 - Ø 315 (EN-JL1040/GG25), ≥ Ø 400 (EN-JL1030/GG20)
2	Yoke	Stainless steel (EN 1.4301/SS 2333)
2a	Bearing	Brass (CuZn39Pb3/SS 5170)
2b	Slide washer	POM
3	Stem	Stainless steel (EN 1.4016/SS 2320 alt. EN 1.4305/SS 2346)
4	Stem nut	Brass (CW603N) > DN 800: Brass (SS 5453)
4b	Screw	Stainless steel (A2)
4c	Washer	Stainless steel (A2)
4d	Nut	Stainless steel (A2)
5	Tie rod	Stainless steel (EN 1.4301/SS 2333)
5a	Washer	Stainless steel (A2)
5b	Nut	Stainless steel (A2)
6	Gate	See equipment B
7	Beam	Aluminium (EN AW-6063-T6)
8	Gland E-body Gland L-body	Stainless steel (EN 1.4408) Epoxy coated nodular iron (EN-JS1050/GGG50)

Pos.	Part	Material (Name)
8a	Stud bolt	Stainless steel (A2), zinc coated
8b	Washer	Stainless steel (A2)
8c	Nut	Stainless steel (A2), zinc coated
9[9)]	Box packing	See equipment E
9a[9)]	Box bottom support	DN 500 - DN 800 HD-polyethylene
10a/b	Valve body	See equipment A
11	Body gasket	PTFE
12	Retainer ring	See equipment C
12a	Locking screw	Stainless steel (A2)
13[9)]	Seat	See equipment D
14	Guiding pad	HD-polyethylene
15	Bushing	Oil-bronze
16	Gate guard, not for HW	Stainless steel (EN 1.4301/SS 2333)
17	Gate clevis	Stainless steel (EN 1.4305/SS 2346)
18	Cylinder	See data sheet
20	Clevis pin	Stainless steel (EN 1.4305/SS 2346)
21	Split pin	Stainless steel (EN 1.4436/SS 2343)
25	Piston rod	Stainless steel (EN 1.4305/SS 2346)
28	Locking nut	Stainless steel (EN 1.4305/SS2346)

[9)] *Recommended spare part*



One piece valve body: DN 50 - DN 800



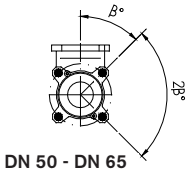
Two piece valve body: DN 900 - DN 1200

Main dimensions

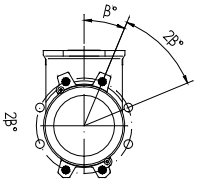
Dimensions (mm)												
DN	A	B	C	D	E	F	G	H	J	K	L	Wheight[10)]
50	**52**	**41**	**91**	**80**	**200**	**56**	**360**	**468**	**116**	**674**	**230**	**7**
65	**64**	**41**	**107**	**80**	**200**	**65**	**380**	**488**	**130**	**704**	**250**	**7**
80	**79**	**51**	**124**	**80**	**200**	**88**	**405**	**513**	**135**	**744**	**275**	**8**
100	**103**	**51**	**154**	**80**	**200**	**102**	**453**	**561**	**155**	**819**	**323**	**10**
125	**128**	**56**	**179**	**80**	**250**	**116**	**495**	**653**	**178**	**884**	**365**	**13**
150	**153**	**60**	**204**	**80**	**250**	**130**	**550**	**708**	**205**	**964**	**420**	**15**
200	**202**	**60**	**267**	**145**	**315**	**160**	**694**	**921**	**268**	**1115**	**555**	**31**
250	**250**	**69**	**320**	**145**	**315**	**192**	**779**	**1111**	**320**	**1250**	**640**	**40**
300	**302**	**78**	**374**	**145**	**315**	**230**	**879**	**1211**	**375**	**1400**	**740**	**55**
350	**332**	**78**	**419**	**175**	**400**	**210**	**993**	**1507**	**420**	**1550**	**820**	**90**
400	**380**	**89**	**479**	**175**	**400**	**245**	**1083**	**1597**	**490**	**1690**	**910**	**120**
450	**428**	**89**	**535**	**200**	**520**	**280**	**1180**	**1677**	**560**	**1820**	**990**	**180**
500	**470**	**114**	**580**	**250**	**520**	**315**	**1333**	**1932**	**625**	**2028**	**1145**	**245**
600	**560**	**114**	**680**	**260**	**635**	**370**	**1558**	**2244**	**740**	**2358**	**1370**	**340**
700	**665**	**118**	**800**	**310**	**635**	**400**	**1750**	**2605**	**865**	**2650**	**1565**	**460**
750	**710**	**118**	**860**	**305**	**635**	**430**	**1880**	**2675**	**930**	**2830**	**1635**	**700**
800	**760**	**118**	**900**	**310**	**635**	**450**	**1970**	**2824**	**985**	**2970**	**1780**	**540**
900	**855**	**118**	**1010**	**320**	**635**	**580**	**2220**	**3131**	**1160**	**3340**	**1985**	**900**
1000	**950**	**150**	**1110**	**320**	**635**	**640**	**2400**	**3476**	**1280**	**3630**	**2215**	**1500**
1200	**1200**	**150**	**1335**	**490**	**-**	**750**	**-**	**-**	**1500**	**4300**	**2860**	**-**

[10)] Weight in kg for valve equipped with hand wheel.

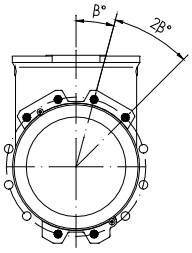
Main dimensions are only for information. Contact Stafsjö for certified drawings.



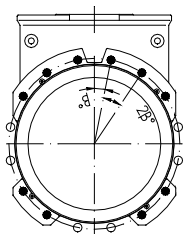
DN 50 - DN 65



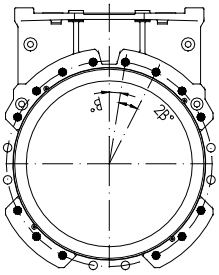
DN 80 - DN 200



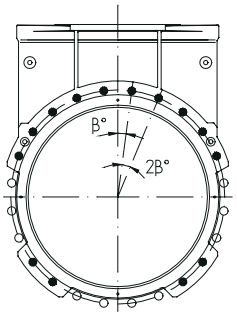
DN 250 - DN 300



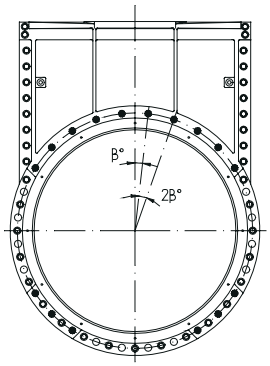
DN 350 - DN 400



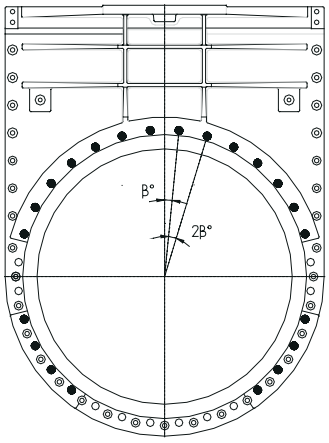
DN 450 - DN 600



DN 700 - DN 800



DN 900 - DN 1000

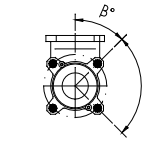


DN 1200

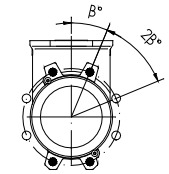
Flange drilling according to EN 1092 PN 10

Flange drilling information (mm)										
DN	50	65	80	100	125	150	200	250	300	350
Outside flange diameter	**165**	**185**	**200**	**220**	**250**	**285**	**340**	**395**	**445**	**505**
Bolt circle diameter	**125**	**145**	**160**	**180**	**210**	**240**	**295**	**350**	**400**	**460**
Number of throughgoing bolts (○)	**-**	**-**	**4**	**4**	**4**	**4**	**4**	**6**	**6**	**6**
Number of tapped holes (•)	**4**	**4**	**4**	**4**	**4**	**4**	**4**	**6**	**6**	**10**
Bolt size	**M16**	**M16**	**M16**	**M16**	**M16**	**M20**	**M20**	**M20**	**M20**	**M20**
Size of throughgoing holes in flange	**Ø18**	**Ø18**	**Ø18**	**Ø18**	**Ø18**	**Ø22**	**Ø22**	**Ø22**	**Ø22**	**Ø22**
β°	**45**	**45**	**22,5**	**22,5**	**22,5**	**22,5**	**22,5**	**15**	**15**	**11,25**
Screw lengths[11)]	**8[12)]**	**8[12)]**	**12**	**12**	**12**	**14**	**13**	**17**	**20**	**19**
Flange drilling information (mm)										
DN	400	450	500	600	700	800	900	1000	1200	
Outside flange diameter	**565**	**615**	**670**	**780**	**895**	**1015**	**1115**	**1230**	**1455**	
Bolt circle diameter	**515**	**565**	**620**	**725**	**840**	**950**	**1050**	**1160**	**1380**	
Number of throughgoing bolts (○)	**6**	**6**	**6**	**6**	**10**	**10**	**12**	**12**	**10**	
Number of tapped holes (•)	**10**	**14**	**14**	**14**	**14**	**14**	**16**	**16**	**22**	
Bolt size	**M24**	**M24**	**M24**	**M27**	**M27**	**M30**	**M30**	**M33**	**M36**	
Size of throughgoing holes in flange	**Ø26**	**Ø26**	**Ø26**	**Ø30**	**Ø30**	**Ø33**	**Ø33**	**Ø36**	**Ø39**	
β°	**11,25**	**9**	**9**	**9**	**7,5**	**7,5**	**6,43**	**6,43**	**5,63**	
Screw lengths[11)]	**22**	**22**	**27**	**27**	**25**	**27**	**27**	**30**	**32**	

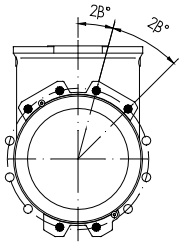
[11)] Add the values with the thickness of flanges, washers and gaskets.
[12)] The screws one the seatside has to be 3 mm longer
○ *Throughgoing holes*
• *Tapped holes*



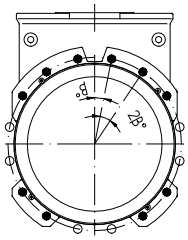
DN 50 - DN 65



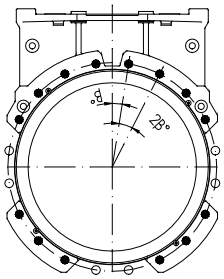
DN 80 - DN 150



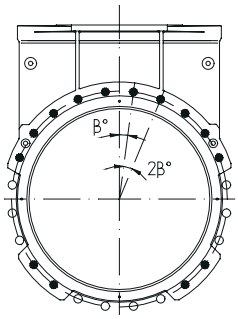
DN 200 - DN 300



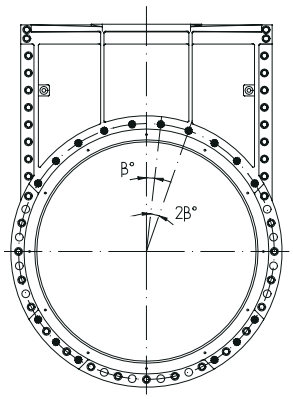
DN 350 - DN 400



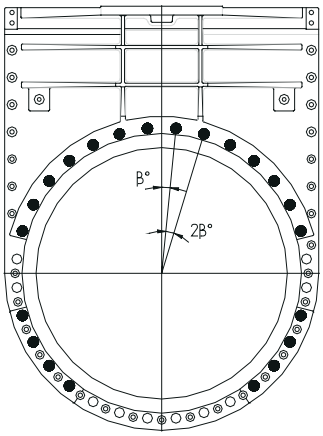
DN 450 - DN 600



DN 700 - DN 800



DN 900 - DN 1000

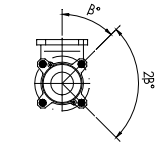


DN 1200

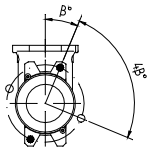
Flange drilling according to EN 1092 PN 16

Flange drilling information (mm)										
DN	50	65	80	100	125	150	200	250	300	350
Outside flange diameter (mm)	**165**	**185**	**200**	**220**	**250**	**285**	**340**	**405**	**460**	**520**
Bolt circle diameter (mm)	**125**	**145**	**160**	**180**	**210**	**240**	**295**	**355**	**410**	**470**
Number of throughgoing bolts (○)	**-**	**-**	**4**	**4**	**4**	**4**	**6**	**6**	**6**	**6**
Number of tapped holes (•)	**4**	**4**	**4**	**4**	**4**	**4**	**6**	**6**	**6**	**10**
Bolt size	**M16**	**M16**	**M16**	**M16**	**M16**	**M20**	**M20**	**M24**	**M24**	**M24**
Size of throughgoing holes in flange	**Ø18**	**Ø18**	**Ø18**	**Ø18**	**Ø18**	**Ø22**	**Ø22**	**Ø26**	**Ø26**	**Ø26**
β°	**45**	**45**	**22,5**	**22,5**	**22,5**	**22,5**	**15**	**15**	**15**	**11,25**
Screw lengths[11)]	**8[12)]**	**8[12)]**	**12**	**12**	**12**	**14**	**13**	**17**	**20**	**19**
Flange drilling information (mm)										
DN	400	450	500	600	700	800	900	1000	1200	
Outside flange diameter	**580**	**640**	**715**	**840**	**910**	**1025**	**1125**	**1255**	**1485**	
Bolt circle diameter	**525**	**585**	**650**	**770**	**840**	**950**	**1050**	**1170**	**1390**	
Number of throughgoing bolts (○)	**6**	**6**	**6**	**6**	**10**	**10**	**12**	**12**	**10**	
Number of tapped holes (•)	**10**	**14**	**14**	**14**	**14**	**14**	**16**	**16**	**22**	
Bolt size	**M27**	**M27**	**M30**	**M33**	**M33**	**M36**	**M36**	**M39**	**M45**	
Size of throughgoing holes in flange	**Ø30**	**Ø30**	**Ø33**	**Ø36**	**Ø36**	**Ø39**	**Ø39**	**Ø42**	**Ø48**	
β°	**11,25**	**9**	**9**	**9**	**7,5**	**7,5**	**6,43**	**6,43**	**5,63**	
Screw lengths[11)]	**22**	**22**	**27**	**27**	**25**	**27**	**27**	**30**	**32**	

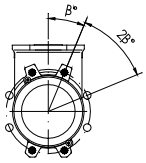
[11)] Add the values with the thickness of flanges, washers and gaskets.
[12)] The screws one the seatside has to be 3 mm longer
○ *Throughgoing holes*
• *Tapped holes*



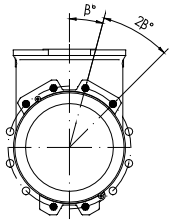
DN 50 - DN 65



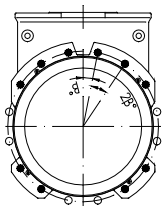
DN 80



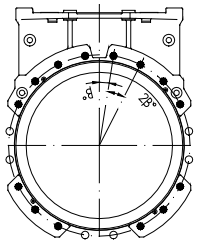
DN 100 - DN 200



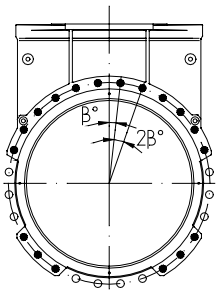
DN 250 - DN 350



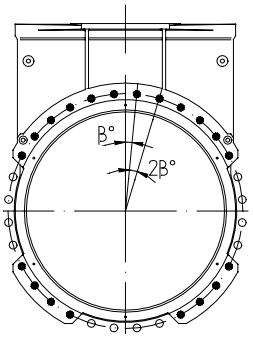
DN 400 - DN 450



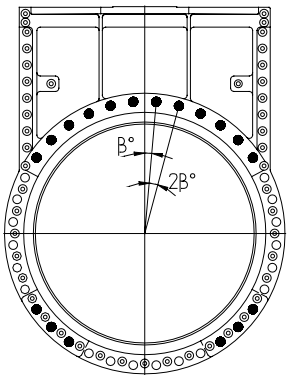
DN 500 - DN 600



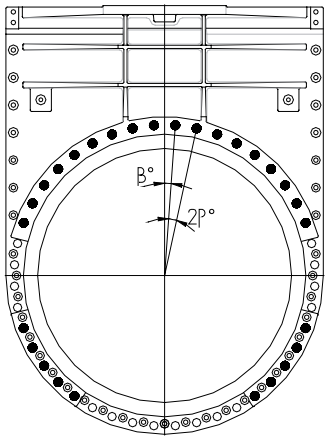
DN 700 - DN 800



DN 900



DN 1000

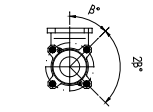


DN 1200

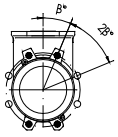
Flange drilling according to ASME/ANSI B16.5 and B16.47 Class 150

Flange drilling information (mm)										
DN	50	65	80	100	125	150	200	250	300	350
Outside flange diameter	**152,4**	**177,8**	**190,5**	**228,6**	**254**	**297,4**	**342,9**	**406,4**	**482,6**	**533**
Bolt circle diameter	**120,7**	**139,7**	**152,4**	**190,5**	**215,9**	**241,3**	**298,5**	**362**	**431,8**	**476,3**
Number of throughgoing bolts (○)	**-**	**-**	**2**	**4**	**4**	**4**	**4**	**6**	**6**	**6**
Number of tapped holes (•)	**4**	**4**	**2**	**4**	**4**	**4**	**4**	**6**	**6**	**6**
Bolt size (UNC)	**5/8-11**	**5/8-11**	**5/8-11**	**5/8-11**	**3/4-10**	**3/4-10**	**3/4-10**	**7/8-9**	**7/8-9**	**1-8**
Size of throughgoing holes in flange	**Ø18**	**Ø18**	**Ø18**	**Ø18**	**Ø22**	**Ø22**	**Ø22**	**Ø26**	**Ø26**	**Ø30**
β°	**45**	**45**	**22,5**	**22,5**	**22,5**	**22,5**	**22,5**	**15**	**15**	**15**
Screw lengths[11)]	**8[12)]**	**8[12)]**	**12**	**12**	**12**	**14**	**13[13)]**	**17**	**20**	**19**
Flange drilling information (≥ DN 700: ASME/ANSI B16.47 Class 150 series A) (mm)										
DN	400	450	500	600	700	750	800	900	1000	1200
Outside flange diameter	**597**	**635**	**699**	**813**	**927,1**	**984,3**	**1060**	**1168,4**	**1289,1**	**1511**
Bolt circle diameter	**539,8**	**577,9**	**635**	**749,3**	**863,6**	**914,4**	**977,9**	**1085,9**	**1200,1**	**1422,4**
Number of throughgoing bolts (○)	**6**	**6**	**6**	**6**	**10**	**10**	**10**	**12**	**18**	**28**
Number of tapped holes (•)	**10**	**10**	**14**	**14**	**18**	**18**	**18**	**20**	**18**	**16**
Bolt size (UNC)	**1-8**	**1 1/8-7**	**1 1/8-7**	**1 1/4-7**	**1 1/4-7**	**1 1/4-7**	**1 1/2-6**	**1 1/2-6**	**1 1/2-6**	**1 1/2-6**
Size of throughgoing holes in flange	**Ø30**	**Ø33**	**Ø33**	**Ø36**	**Ø36**	**Ø36**	**Ø42**	**Ø42**	**Ø42**	**Ø42**
β°	**11,25**	**11,25**	**9**	**9**	**6,43**	**6,43**	**6,43**	**5,63**	**5**	**4,01**
Screw lengths[11)]	**22**	**22**	**27**	**27**	**25**	**25**	**27**	**27**	**33**	**32**

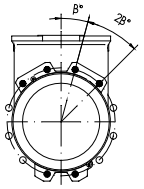
[11)] Add the values with the thickness of flanges, washers and gaskets.
[12)] The screws one the seatside has to be 3 mm longer
[13)] The screws on the seatside has to be 10 mm longer for face-to-face TAPPI
○ Throughgoing holes
• Tapped holes



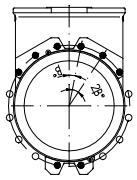
DN 50 - DN 65



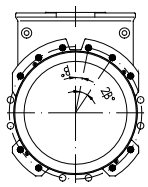
DN 80 - DN 150



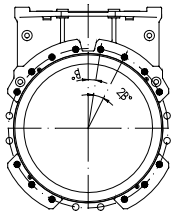
DN 200 - DN 250



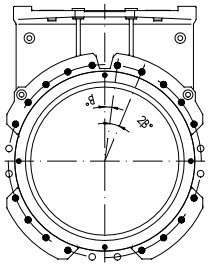
DN 300



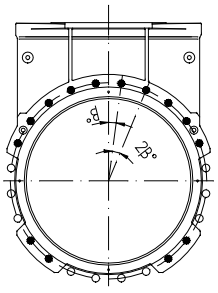
DN 350 - DN 400



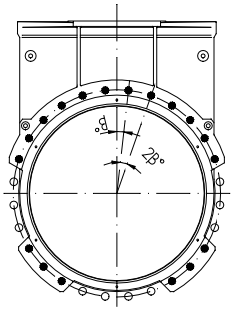
DN 450 - DN 500



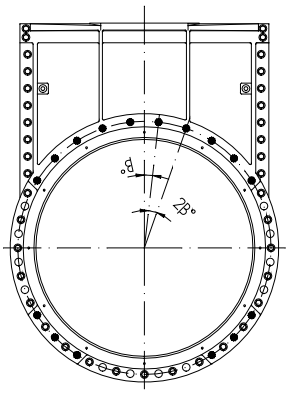
DN 600



DN 700 - DN 750



DN 800



DN 900 - DN 1000

Flange drilling according to JIS B 2238 10K

Flange drilling information (mm)										
DN	50	65	80	100	125	150	200	250	300	350
Outside flange diameter	**155**	**175**	**185**	**210**	**250**	**280**	**330**	**400**	**445**	**490**
Bolt circle diameter	**120**	**140**	**150**	**175**	**210**	**240**	**290**	**355**	**400**	**445**
Number of throughgoing bolts (○)	**-**	**-**	**4**	**4**	**4**	**4**	**6**	**6**	**8**	**6**
Number of tapped holes (•)	**4**	**4**	**4**	**4**	**4**	**4**	**6**	**6**	**8**	**10**
Bolt size	**M16**	**M16**	**M16**	**M16**	**M20**	**M20**	**M20**	**M22**	**M22**	**M22**
Size of throughgoing holes in flange	**Ø19**	**Ø19**	**Ø19**	**Ø19**	**Ø23**	**Ø23**	**Ø23**	**Ø25**	**Ø25**	**Ø25**
β°	**45**	**45**	**22,5**	**22,5**	**22,5**	**22,5**	**15**	**15**	**15**	**11,25**
Screw lengths[11)]	**8[12)]**	**8[12)]**	**12**	**12**	**12**	**14**	**13**	**17**	**20**	**19**
Flange drilling information (mm)										
DN	400	450	500	600	700	750	800	900	1000	
Outside flange diameter	**550**	**620**	**675**	**795**	**905**	**970**	**1020**	**1120**	**1235**	
Bolt circle diameter	**510**	**565**	**620**	**730**	**840**	**900**	**950**	**1050**	**1160**	
Number of throughgoing bolts (○)	**6**	**6**	**6**	**6**	**10**	**10**	**10**	**12**	**12**	
Number of tapped holes (•)	**10**	**14**	**14**	**18**	**14**	**14**	**18**	**16**	**16**	
Bolt size	**M24**	**M24**	**M24**	**M30**	**M30**	**M30**	**M30**	**M30**	**M36**	
Size of throughgoing holes in flange	**Ø27**	**Ø27**	**Ø27**	**Ø33**	**Ø33**	**Ø33**	**Ø33**	**Ø33**	**Ø39**	
β°	**11,25**	**9**	**9**	**7,5**	**7,5**	**7,5**	**6,43**	**6,43**	**6,43**	
Screw lengths[11)]	**22**	**22**	**27**	**27**	**25**	**25**	**27**	**27**	**30**	

[11)] Add the values with the thickness of flanges, washers and gaskets.
[12)] The screws one the seatside has to be 3 mm longer
○ *Throughgoing holes*
• *Tapped holes*

Further information is available on www.stafsjo.com

Globally active. Locally represented.

AFRICA South Africa: Valve & Automation (Pty) Ltd, ASIA China: EBRO ARMATUREN (BEIJING) CO., LTD, India: Ebro Armaturen India Pvt. Ltd, Indonesia: Contromatic Prima Mandiri PT, Japan: SKC Co. Ltd, Malaysia: Precision Control SdnBnd, Philippines: EBRO ARMATUREN (PHILIPPINES) INC., Thailand: EBRO VALVES (Trading) Co. Ltd., Vietnam: EBRO VALVES (Thailand) Co., Ltd, AUSTRALIA WITH OCEANIA Australia: EBRO ARMATUREN Pacific PTY. LTD, New Zeeland: H.J.Asmuss&Co.Ltd, EUROPE Austria: EBRO ARMATUREN GmbH, Belgium: V.C.T. - Valve & Connector Technology n.v., Denmark: Valtor Industri A/S, Finland: Tecalemit Flow Oy, France: EBRO ARMATUREN and GL&V, Germany: EBRO ARMATUREN Gebr. Bröer GmbH, Great Britain: EBRO Valves Ltd, Hungary: EBRO ARMATUREN Kft, Ireland: Induchem Components Ltd, Iceland: Hédinn HF, Italy: EBRO VALVOLE SRL, The Netherlands: EBRO VALVES B.V., Norway: BAGGES AS, Poland: EBRO ARMATUREN GmbH, Portugal: AxFlow Comércio de Aquipamentos LDA, RUSSIA/ BELARUS/UKRAINE: EBRO ARMATUREN and LesBumMash Ltd, Spain: EBRO ARMATUREN ESPAÑA, S.L., Switzerland: EBRO Armaturen Est. & Co. KG, Sweden: Stafsjö Valves AB and Ahlsell, Turkey: EBRO ARMATUREN Otomasyon Sistemleri San ve Tic Ltd. Sti NORTH & SOUTH AMERICA Argentina: ESCO ARGENTINA S.A, Brazil: Ebro Stafsjö Valves do Brasil LTD, Canada: Armour Valve Ltd, Chile: Ebro Stafsjö Valves Chile Ltd, USA: EBRO ARMATUREN USA Inc., For other countries, please contact us directly.

Stafsjö
SINCE 1666

Stafsjö Valves AB. SE-618 95 Stavsjö, Sweden. Tel: +46 (0)11-39 31 00. Fax: +46 (0)11-39 30 67. info@stafsjo.se www.stafsjo.com
A Bröer Group company