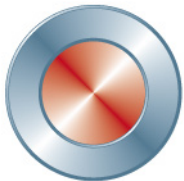
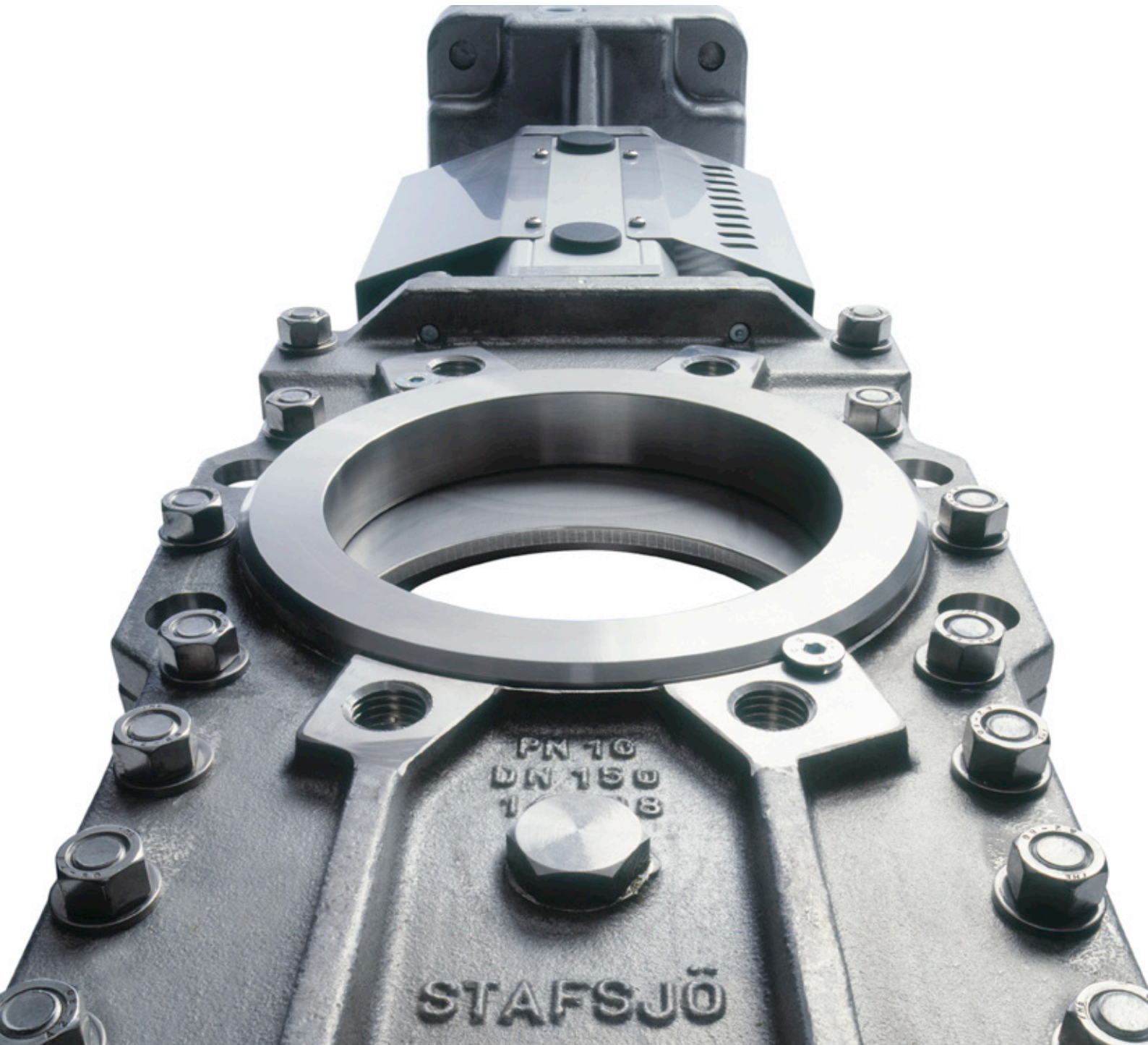


Knife gate valve HG



Stafsjö
SINCE 1666

Data is only for informational purpose. All specifications are subject to change without notice.

Knife gate valve HG

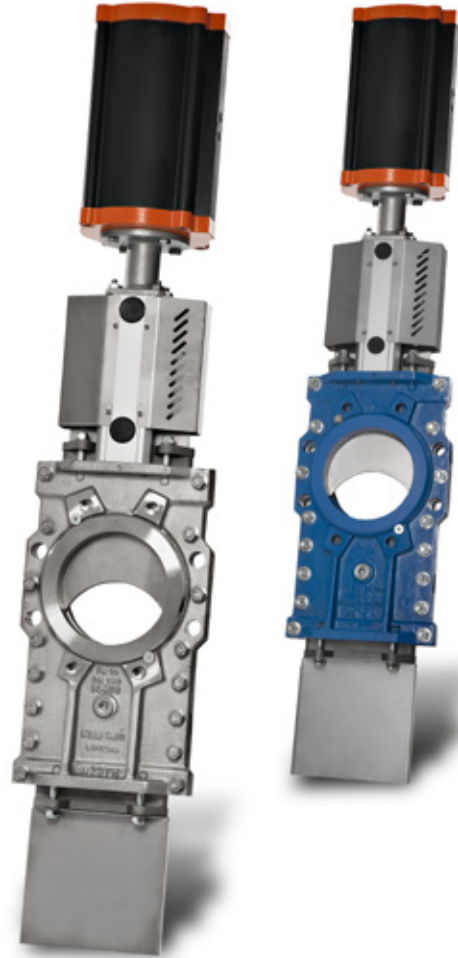
Stafsjö's knife gate valve HG has excellent flow characteristics and gives a bi-directional tight sealing. The valve is equipped with a through-going gate for secure shut-off of concentrated and static media. This shut-off performance, along with its flow characteristics, makes it suitable for severe operating conditions with media as pulp (pulp concentration > 5%), liquor, reject, powder and ash.

HG is supplied as standard with a valve body in stainless steel or coated cast iron, which has integrated purge ports from DN 100. To be able to cope with bi-directional pressures, the HG has the retainer ring system on both body halves. The valve is equipped with a gate in stainless steel, but Duplex material and hard chromed surface are options to increase strength and the wear resistance. The gland boxes are equipped with Stafsjö's box packing TwinPack™, to secure that no media reaches surrounding environment. The gland boxes 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. The valve is modular designed and can easily be customized to specific processes requirements. There are several actuator types and accessories to choose from in our standard collection.

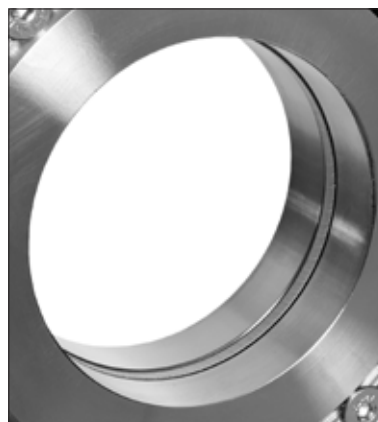
The HG valve is designed, manufactured, inspected and tested according to pressure equipment directive 2014/68/EU category I and II module A2. The valve is CE marked when it is applicable.

The HG valve is one out of five valves in Stafsjö's product range with through-going gates. The HP is a high pressure version of HG while the HL is a slim line version. HPT is a high pressure version entirely made in Titanium and finally the HX is an extreme high pressure version.



Reliable shut-off and bi-directional sealing

The retainer ring system on both sides of the gate makes it independent of flow direction. The through-going gate assures a reliable shut-off of highly concentrated and static media.



A bore with excellent flow characteristics

In open position, the HG valve's bore has almost no cavity at all, making the flow characteristics really excellent. In this position the PTFE seats are protected by the retainer rings and the gate.



Solid design to preserve a first class sealing

The gate is supported all the way from open to close position which, together with a proper dimensioned top works, makes the shut-off reliable and repeatable.

Design data

Sizes	Flange drilling	Face-to-face dimension	ATEX design	Corrosion protection
DN 80 - DN 1200	EN 1092 PN 10 EN 1092 PN 16 JIS B 2238 10K ANSI/ASME B16.5 Class 150 ANSI/ASME B16.47 Class 150, series A BS 10 Table D AS 2129 Table D and E	Stafsjö manufacturing standard MSS-SP81	On request directive 2014/34/EU Group II category: 3 G/D (zone 2 or 22) 2 G/D (zone 1 or 21)	Non-corrosive resistant materials are coated in colour RAL5015 acc. to Stafsjö's standard, which fulfill the requirements in EN ISO 12944 class C3.

Other sizes, flange drillings, ATEX zones and corrosion protection on request.

Leakage rate	Pressure tests
EN 12266-1:2009 rate A: No visually detectable leakage is allowed for duration of the test. Rate A is not applicable for valves equipped with metal seat	Pressure tests are performed with water at 20° C according to EN 12266-1:2009. 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 at 20°C	
DN	bar	DN	bar
80 - 250	10	80 - 250	10
300 - 800	6	300 - 800	6
900 - 1200	4	900 - 1200	4

Basic equipment

A. Valve body			
Material	Code	Type	Maximum temperature °C
Stainless steel	E	EN 1.4408	400
Nodular iron, Cast iron	L, A	EN 5.3105, EN-JL1030	150

The valve body is as standard supplied with purge ports from DN 100: G1/2"

B. Gate		
Material	Type	Option
Stainless steel	EN 1.4404 (AISI 316L)	Hard chromed surface
<i>Option:</i>		
Duplex stainless steel	EN 1.4462 (S32205)	Hard chromed surface

C. Retainer rings	
Material	Type
Stainless steel ¹⁾	EN 1.4408
Nodular iron, Cast iron ²⁾	EN-JS1050 (GGG50), EN-JL1030 (GG20)

¹⁾ Standard on HG-E. ²⁾ Nodular iron on HG-A DN ≤ DN 300 and cast iron on HG-A ≥ DN 350.

D. Seats		
Material	Code	Maximum temperature °C
PTFE with o-ring Nitrile	P	100
PTFE with o-ring Viton	PV	180
Polyurethane	U	90
Metal with Grafoil	MHT	400 (E)/150 (A)
Metal with o-ring Nitrile	M	100

E. Box packings		
Material	Code	Maximum temperature °C
TwinPack™	TY	260
PTFE	TF	280
Graphite	TG	650

Actuators

Manual	Code	Automatic	Code
Hand wheel ³⁾	HW	Pneumatic cylinder	EC
Chain wheel ⁴⁾	CW	Electrical motor	EM
Bevel gear ⁴⁾	BG	Hydraulic cylinder ⁴⁾	MH

³⁾ For recommended size, see page 5 column E

⁴⁾ For recommended size, see separate data sheet

Double-acting pneumatic cylinder			Electric motor (AUMA multi-turn)		
DN valve	Size EC	Force at 5 bar (kN)	DN valve	AUMA type	Attachment
80 - 125	EC 100	3,5	80 - 125	SA 07.2	F10/A
150 - 250	EC 160	9,0	150 - 250	SA 07.6	F10/A
300 - 400	EC 200	14,1	300 - 450	SA 10.2	F10/A
450 - 500	EC 250	22,1	500 - 600	SA 14.2	F14/A
600 - 800	EC 320	36,2	700 - 800	SA 14.6	F14/A
900 - 1200	On request		900 - 1200	On request	

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.

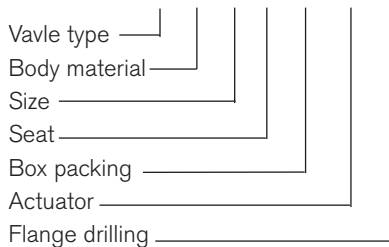
The table above gives recommended motor sizes at normal operation. For other operating conditions, please contact Stafsjö or your local representative for advice.

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

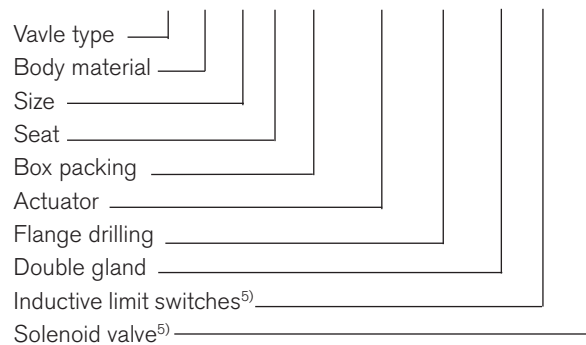
Specify the Stafsjö valve

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.

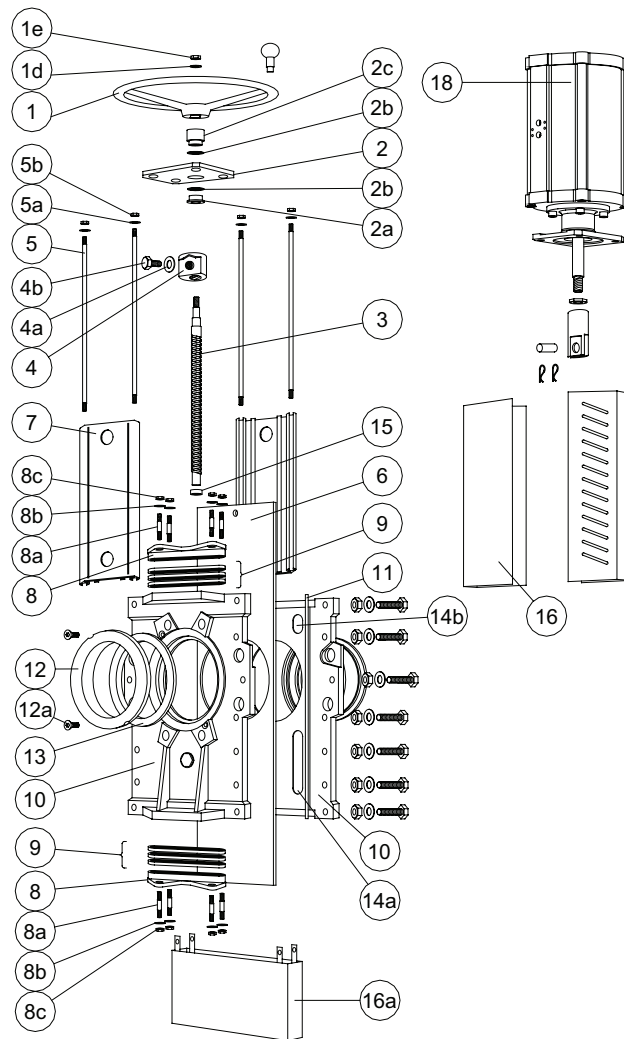
HG-E-200-P-TY-HW-PN10



HG-E-400-P-TY-EC160-PN10-DG-ILS-SV



⁵⁾ All electronics must be specified in detail.

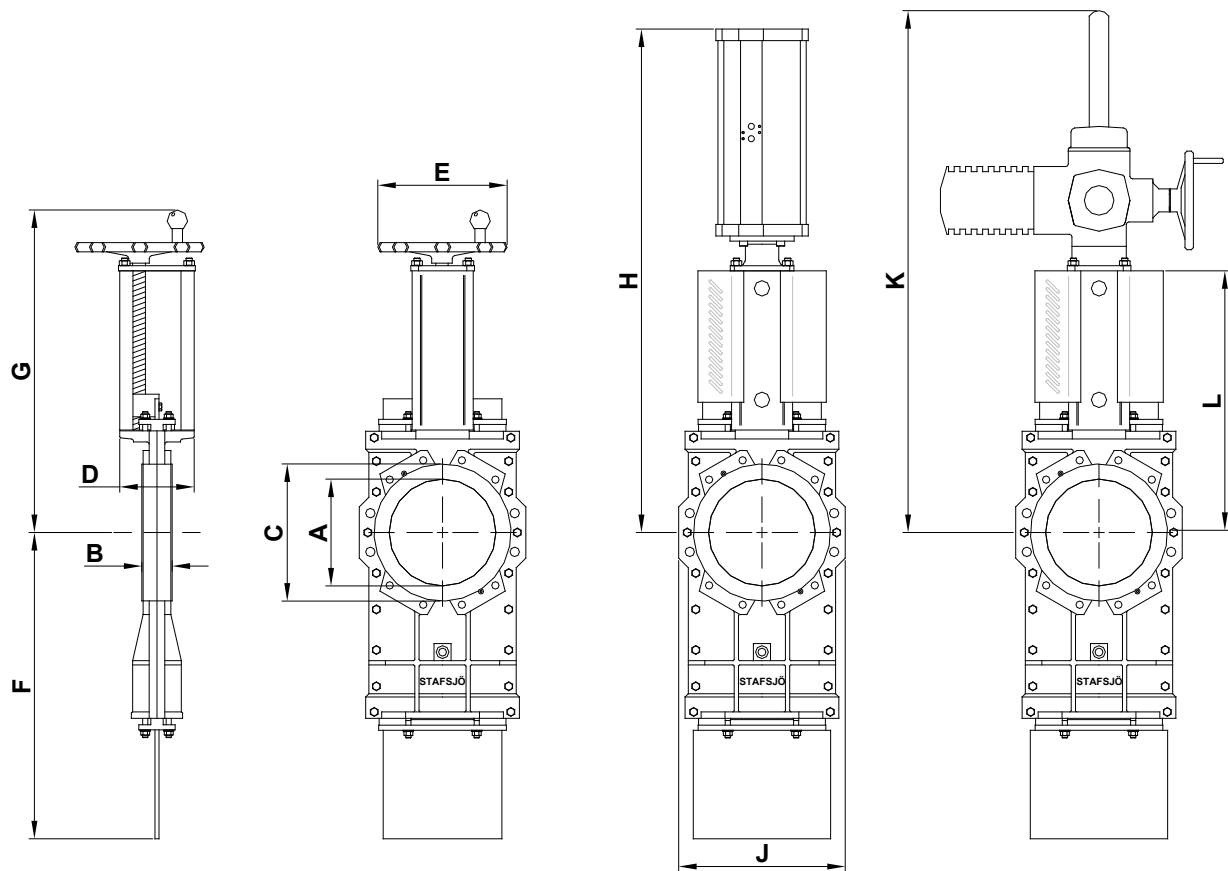


Part list

Pos.	Detail	Material (Type)
1	Hand wheel	Coated cast iron Ø 200 - Ø 315 (EN-JL1040 (GG25)), ≥ Ø 400 (EN-JL1030 (GG20))
2	Yoke	Stainless steel (EN 1.4301)
2a	Bearing	Brass (CuZn39Pb3)
2b	Slide washer	POM
2c	Bearing	Brass (CuZn39Pb3)
3	Stem	Stainless steel (EN 1.4016 alt. EN 1.4305)
4	Stem nut	Brass (CW603N alt. CW614N)
4a	Washer	Stainless steel (A2)
4b	Screw	Stainless steel (A2)
5	Tie rod	Stainless steel (EN 1.4301)
5a	Washer	Stainless steel (A2)
5b	Nut	Stainless steel (A2)
6	Gate	See equipment B
7	Beam	Aluminium (EN AW-6063-T6)

Pos.	Detail	Material (Type)
8	Gland	Stainless steel (1.4408)
8a	Stud bolt	Stainless steel (A2), zinc coated
8b	Washer	Stainless steel (A2)
8c	Nut	Stainless steel (A2), zinc coated
9 ⁶⁾	Box packing	See equipment E
10	Valve body	See equipment A
11	Body gasket	Grafoil DN ≥ 200: PTFE
12	Retainer ring	See equipment C
12a	Locking screw	Stainless steel (A2)
13 ⁶⁾	Seat	See equipment D
14a	Guide strip	Only DN ≥ 250: PTFE
14b	Guide strip	Only DN ≥ 250: PTFE
15	Bushing	Oil-bronze
16/a	Gate guard, not for HW	Stainless steel (EN 1.4301)
18	Cylinder	See data sheet

⁶⁾ Recommended spare parts

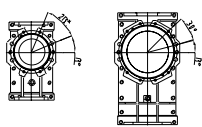


Main dimensions

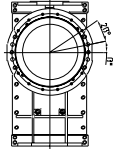
Dimensions (mm)												
DN	A	B	C	D	E	F	G	H	J	K	L	Weight ¹⁾
80	79	51	125	70	200	285	405	488	180	744	275	17
100	103	51	153	72	200	385	445	533	210	809	315	22
125	128	56	179	80	250	424	485	665	240	874	355	29
150	153	60	205	80	250	455	530	735	260	944	400	34
200	202	60	270	150	315	600	659	886	330	1070	520	75
250	250	69	320	150	315	725	739	1021	390	1200	600	100
300	302	78	375	180	400	865	893	1257	455	1420	720	170
350	332	78	425	175	400	980	948	1342	510	1505	775	200
400	380	89	480	210	520	1070	1033	1510	570	1650	873	290
450	428	89	534	220	520	1210	1124	1657	625	1790	963	410
500	470	114	580	320	635	1412	1299	1882	690	2020	1138	670
600	540	122	679	350	635	1553	1336	1981	800	2135	1175	820
700	665	128	800	320	635	1891	1556	2326	995	2505	1395	1300
800	760	128	900	320	635	2132	1721	2591	1070	2770	1560	1700
900	880	128	1009	310	-	2467	-	2886	1168	3026	1740	-
1000	980	150	1110	310	-	2710	-	3196	1270	3320	1935	-
1200	1200	150	1334	505	-	3339	-	-	1500	4222	2485	-

¹⁾ Weight in kg for valve with hand wheel (HW)

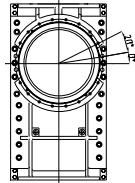
Main dimensions are only for information. Contact Stafsjö for certified drawings.



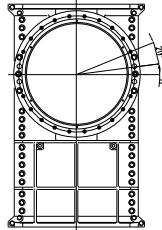
DN 80-DN 200



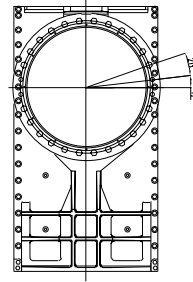
DN 250-DN 300



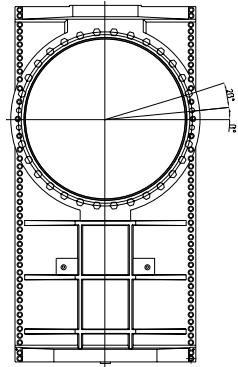
DN 350-DN 400



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	80	100	125	150	200	250	300	350	400
Outside flange diameter	200	220	250	285	340	395	445	505	565
Bolt circle diameter	160	180	210	240	295	350	400	460	515
Number of throughgoing bolts (°)	4	4	4	4	4	4	4	4	4
Number of tapped holes on each side (•)	4	4	4	4	4	8	8	12	12
Bolt size	M16	M16	M16	M20	M20	M20	M20	M20	M24
Size of throughgoing holes	Ø18	Ø18	Ø18	Ø22	Ø22	Ø22	Ø22	Ø22	Ø26
β°	22,5	22,5	22,5	22,5	22,5	15	15	11,25	11,25
Screw lengths ⁸⁾	13	13	15	15	16	18	20	20	25
Flange drilling information (mm)									
DN	450	500	600	700	800	900	1000	1200	
Outside flange diameter	615	670	780	895	1015	1115	1230	1455	
Bolt circle diameter	565	620	725	840	950	1050	1160	1380	
Number of throughgoing bolts (°)	4	4	4	4	4	4	4	4	
Number of tapped holes on each side (•)	16	16	16	20	20	24	24	28	
Bolt size	M24	M24	M27	M27	M30	M30	M33	M36	
Size of throughgoing holes	Ø26	Ø26	Ø30	Ø30	Ø33	Ø33	Ø36	Ø39	
β°	9	9	9	7,5	7,5	6,43	6,43	5,625	
Screw lengths ⁸⁾	25	27	28	28	31	31	38	40	

⁸⁾ Add the values with the thickness of flanges, washers and gaskets.

° Throughgoing holes

• Tapped holes