

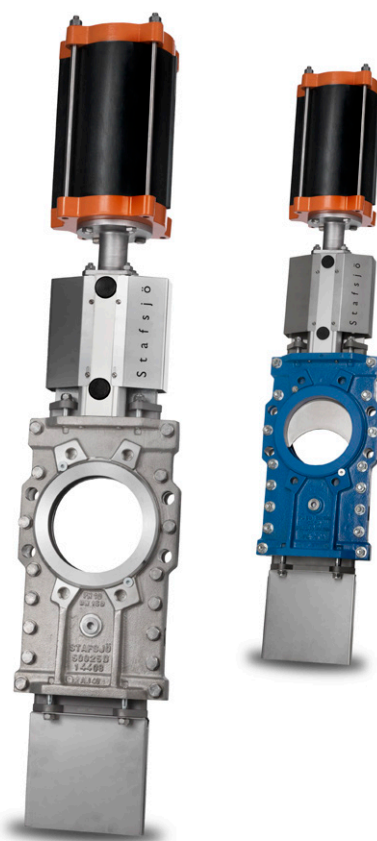
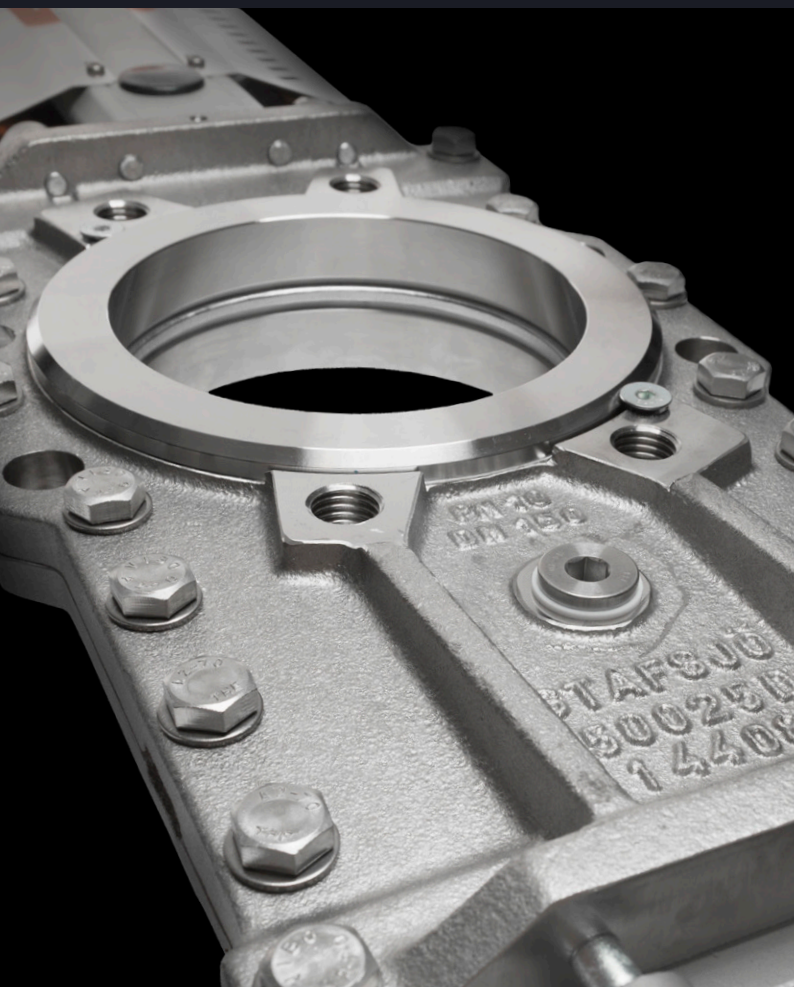


Knife gate valve HG

High performance through-going knife gate valve

Size range:

DN 50 - DN 1200 (2" - 48")

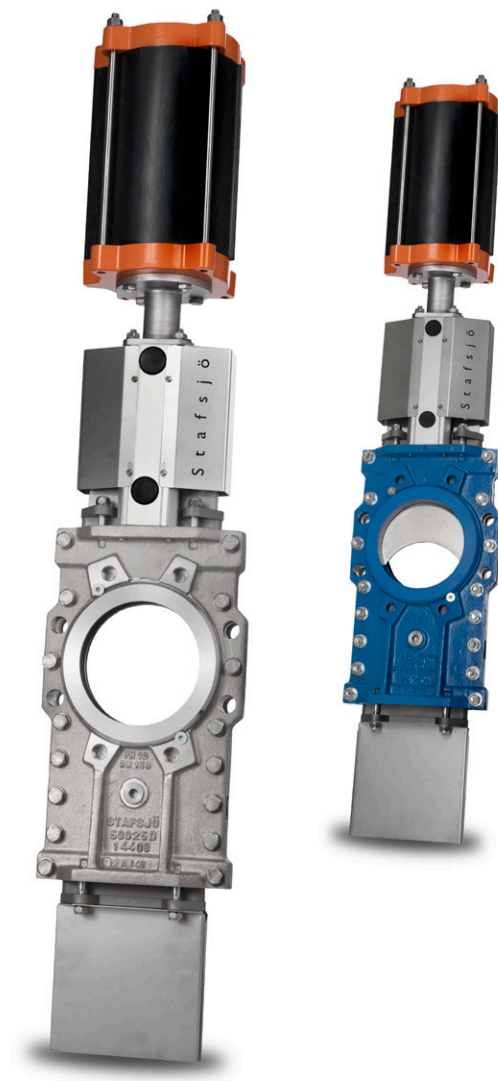


About HG

Stafsjö's HG is a through-going high performance knife gate valve with superior flow characteristics, offering reliable bi-directional zero leakage shut-off on highly concentrated media and static media columns.

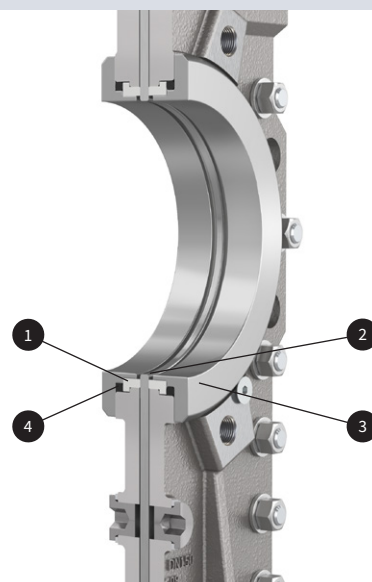
The HG knife gate valve is modular designed and can easily be customized in materials, with actuators and related automation accessories to different process conditions. It can operate on different media such as pulp stock up to 18% consistency, slurry, liquor, ash and granulate. It is also widely used in junc traps, mostly as inlet valve with our RKO as discharge valve. The HG has a rigid two-piece precision machined valve body with a high strength top works that provide an essential and precise gate alignment. As standard it is available with a valve body in stainless steel or nodular iron, but it can also be supplied in a range of high alloy materials such as Duplex and 254 SMO equivalent material.

The HG valve is one out of five of Stafsjö's through-going knife gate valve models. The HP is a high pressure version of HG while the HL is a compact version. HPT is a high pressure version entirely made in Titanium and the HX is an extreme high pressure version.



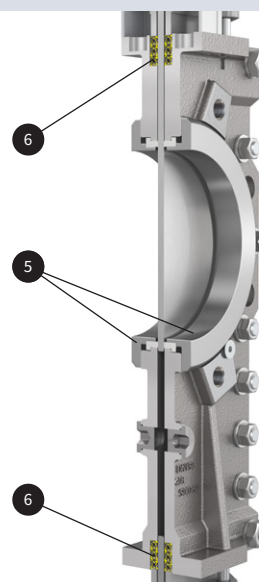
Full bore with outstanding flow characteristics

When the HG knife gate valve is in open position, it offers an unobstructed flow path where no media can collect. The PTFE seats (1) are protected by the gate (2) and retainer rings (3) and the internal back-up o-rings (4) keep the seats constantly pressurized against the gate. Polyurethane retainers/seats is an option for abrasive processes while the metal only is an extreme high temperature option.



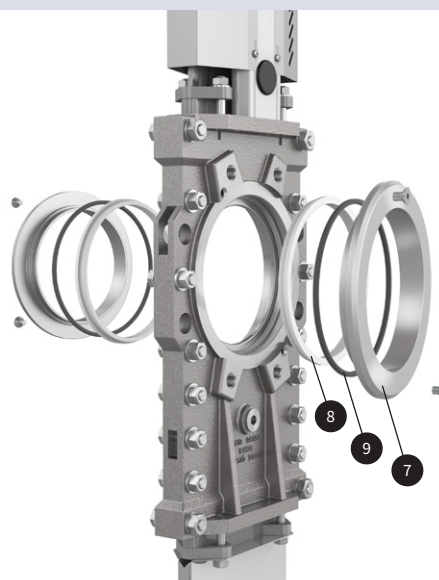
Reliable through-going and bi-directional zero leakage shut-off

The gate is guided throughout the entire stroke and operates smoothly through difficult and highly concentrated media. The retainer ring system (5) on both side of the gate provide a tight seal independent of pressure direction. The gland box sealing system with three layers of Stafsjö's TwinPack (6) ensures that no media reaches surrounding environment. Extra scrapers or double gland can be used for the most demanding services.



Quick and easy maintenance

The retainer rings (7) hold the seats (8) and the back-up o-rings (9) in exact correct position as the gate strokes. They are mechanically locked and can easily be removed for seat change. Both the retainer rings and seats are available in different materials which makes it also easy to customize the HG to different process conditions.



Pressure class

Max working pressure at 20 °C		Max differential pressure at 20 °C	
DN	bar	DN	bar
50 - 250	10	50 - 250	10
300 - 800	6	300 - 800	6
900 - 1200	4	900 - 1200	4

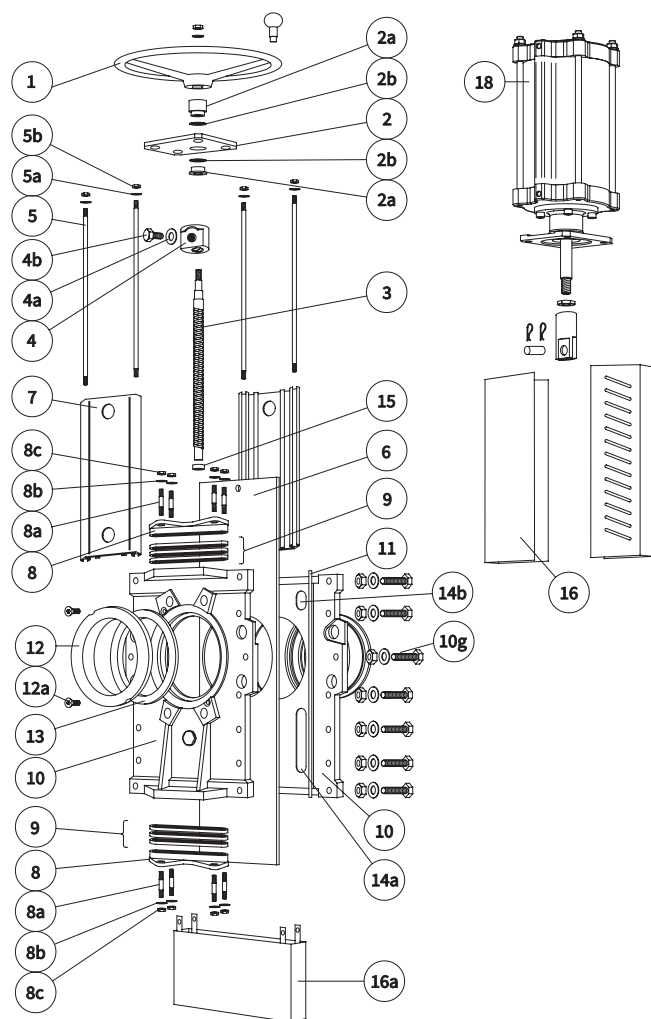
Configurations

Standard in stainless steel	Standard in nodular iron
Sizes: DN 50 - DN 1200 Valve body: Stainless steel EN 1.4408 Retainer rings: Stainless steel EN 1.4408 Gate: Stainless steel EN 1.4404, AISI 316L Box packing: TwinPack Top works: Stainless steel tie rods encapsulated in aluminum beams up to DN 1000 and stainless steel beams on larger ones including stainless steel gate guards on automated valves	Sizes: DN 80 - DN 600 Valve body: Nodular iron EN 5.3105 Retainer rings: Nodular iron EN 5.3105, EN-JS1050. DN 600: Stainless steel EN 1.4408 Gate: Stainless steel EN 1.4404, AISI 316L Box packing: TwinPack Top works: Stainless steel tie rods encapsulated in aluminum beams including stainless steel gate guards on automated valve
Options	
Valve body¹⁾ Nodular iron EN 5.3105 Stainless steel EN 1.4408 Duplex stainless steel EN 1.4470 254 SMO stainless steel equivalent	Box packings TwinPack, WhitePack, Graphite or FDA/EC 1935/2004 approved PTFE Extra scrapers in UHMW-PE, PTFE or brass
Retainer rings Nodular iron EN 5.3105, EN-JS1050 Stainless steel EN 1.4408 Duplex stainless steel EN 1.4470 254 SMO stainless steel or equivalent Polyurethane	Top works Stainless steel tie rods encapsulated in aluminum beams Stainless steel pillars ²⁾ or beams
Gate material and surface treatments Stainless steel EN 1.4404, AISI 316L Duplex stainless steel EN 1.4462, S32205 254 SMO stainless steel or equivalent Hard chromed surface Extra polished surface (max Ra 0,8)	Actuators Bevel gear Chain wheel Hand wheel with non-rising stem Double-acting pneumatic cylinder Single-acting pneumatic cylinder Electric actuator Hydraulic actuator
Seats PTFE with o-ring in NBR, EPDM or FKM/FPM FDA/EC 1935/2004 approved PTFE Polyurethane Stainless steel with grafoil tape or o-rings in NBR, EPDM or FKM/FPM	Flange drillings EN 1092 PN 10 EN 1092 PN 16 ASME/ANSI B16.5 and B16.47 Class 150, series A JIS B 2238 10K BS 10 Table D AS 2129 Table D and E on request
	Accessories See Stafsjö's accessory data sheet for further information.

Design standards	
Design, manufacturing, inspection and test According to pressure equipment directive 2014/68/EU category I and II module A2. The valves are CE marked when it is applicable. Stafsjö's valves are subject for pressure tests before delivery in opened and closed position with water at 20 °C according to EN 12266-1:2003 rate A. No visually detectable leakage is allowed for duration of the test. Rate A is not applicable on metal seated valves. On request Stafsjö can provide 2.2 test report and 3.1 inspection certificate according to EN 10204. Contact Stafsjö for further information on ATEX approved solutions.	Face-to-face dimensions Stafsjö manufacturing standard. Option in MSS-SP81. Corrosion protection Painted valve parts fulfill in applicable areas corrosion protection against environment according EN ISO 12944, corrosivity category C3. Other paint systems can be offered on request. Service temperature Information to determine minimum and maximum temperature for the knife gate valve is available on stafsjo.com/support/temperatures/ .

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

2) Standard on valves supplied with valve body in duplex or equivalent material to 254 SMO stainless steel.

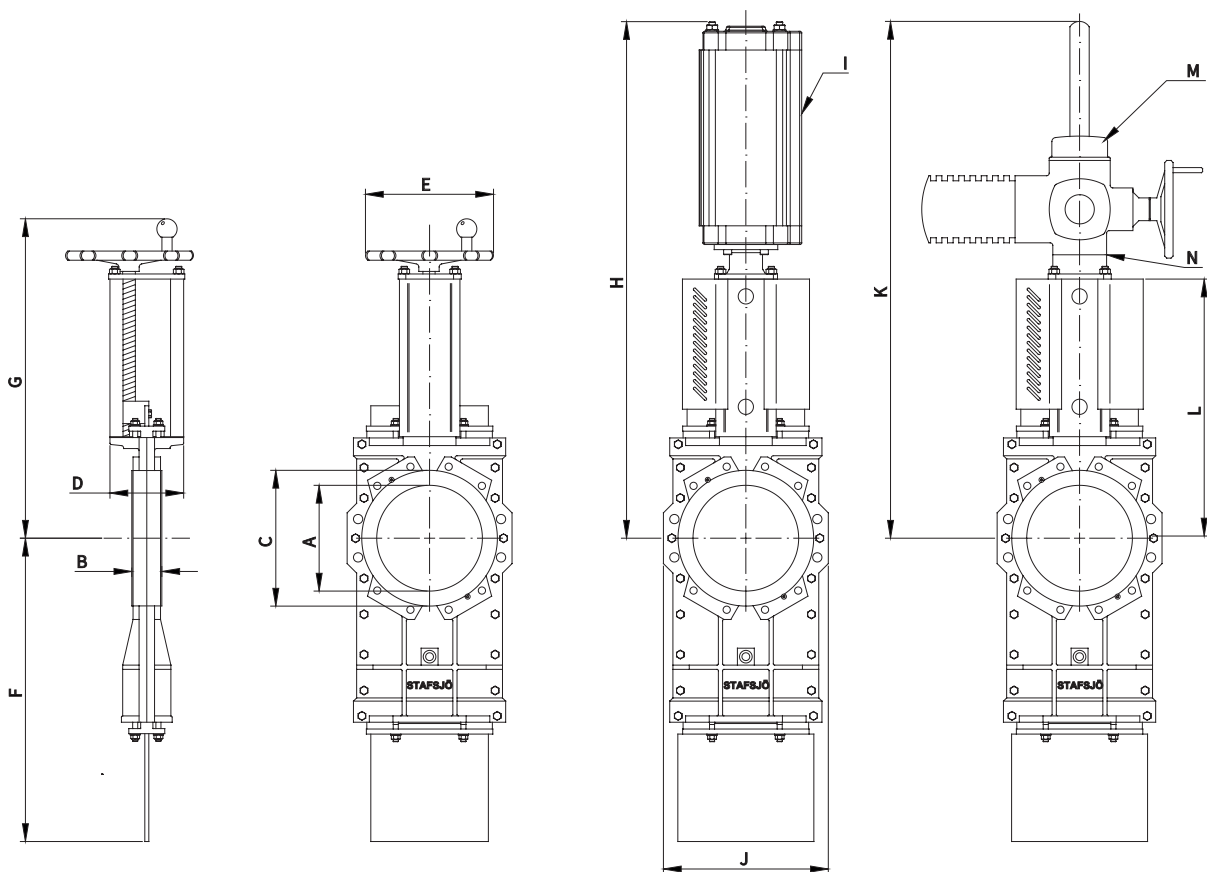


Part list

Pos.	Part	Material
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
2b	Slide washer	POM
3	Stem	Stainless steel EN 1.4016 alt. EN 1.4305
4	Stem nut	Brass
4a	Washer	Stainless steel A2
4b	Screw	Stainless steel A2
5	Tie rod	Stainless steel A2
5a	Washer	Stainless steel A2
5b	Nut	Stainless steel A2
6	Gate	See options on page 4
7	Beam	Anodized aluminum
8	Gland	HG-E: Stainless steel EN 1.4408 HG-L ≤ DN 300: Coated nodular iron EN 5.3105, EN-JS1050

Pos.	Part	Material
8a	Stud bolt	Stainless steel A2
8b	Washer	Stainless steel A2
8c	Nut	Stainless steel A2
9 ¹⁾	Box packing	See options on page 4
10	Valve body	See options on page 4
10g	Valve body boltings	HG-E: Stainless steel A2 HG-L: Zinc plated steel
11	Body gasket	DN 50-DN 150: Grafoil. DN 200-DN 250: PTFE. ≥ DN 300 FPM/FKM
12	Retainer ring	See options on page 4
12a	Locking screw	Stainless steel A2
13 ¹⁾	Seat	See options on page 4
14a	Guiding pads	Only DN ≥ 250: PTFE
14b	Guiding pads	Only DN ≥ 250: PTFE
15	Bushing	Oil-bronze
16	Gate guards	Stainless steel EN 1.4301
18	Pneumatic cylinder	See separate data sheet

1) Recommended spare part



Main dimensions (mm)

DN	A	B	C	D	E	F	G	H	I ¹⁾	J	K	L	M ²⁾	N ³⁾	kg ⁴⁾
50	75	47	91	80	200	225	351	529	SC100	150	530	230	SA07.2	F10/A	12
80	79	51	125	70	200	285	405	549	SC100	180	744	275	SA07.2	F10/A	17
100	103	51	153	72	200	385	445	614	SC100	210	809	315	SA07.2	F10/A	22
125	128	56	179	80	250	424	485	753	SC160	240	874	355	SA07.2	F10/A	29
150	153	60	205	80	250	455	530	823	SC160	260	944	400	SA07.6	F10/A	34
200	202	60	270	150	315	600	659	974	SC160	330	1070	520	SA07.6	F10/A	75
250	250	69	320	150	315	725	739	1109	SC160	390	1200	600	SA07.6	F10/A	100
300	302	78	375	180	400	865	893	1332	SC200	455	1420	720	SA10.2	F10/A	170
350	332	78	425	175	400	980	948	1417	SC200	510	1505	775	SA10.2	F10/A	200
400	380	89	480	210	520	1070	1033	1585	SC200	570	1650	873	SA10.2	F10/A	290
450	428	89	534	220	520	1210	1124	1790	SC250	625	1790	963	SA10.2	F10/A	410
500	470	114	580	320	635	1412	1299	1990	SC250	690	2020	1138	SA14.2	F14/A	670
600	540	122	679	350	635	1553	1336	2113	SC320	800	2135	1175	SA14.2	F14/A	820
700	665	128	800	320	-	1891	-	2458	SC320	995	2505	1395	SA14.6	F14/A	1300
750	710	134	859	320	-	1970	-	2594	PA350	986	2690	1480	SA 14.6	F14/A	1600
800	760	128	900	320	-	2132	-	2723	SC320	1070	2770	1560	SA14.6	F14/A	1700
900	880	128	1009	310	-	2467	-	3018	SC320	1168	3026	1740	SA14.6	F14/A	1960
1000	980	150	1110	310	-	2718	-	3328	SC320	1270	3252	1935	SA 16.2	F16/A	2500
1200	1200	150	1334	505	-	3339	-	*	*	1500	4222	2485	*	*	*

1) Recommended sizing of double-acting pneumatic cylinder type SC at normal operation with 5 bar air pressure. For other operating conditions, contact Stafsjö or your local representative for advice.

2) Recommended sizing of Auma SA electric motors at normal operation. For other operating conditions, contact Stafsjö or your local representative for advice.

3) Valve and Auma SA interface. The electric motors are mounted as standard with output drive type A (rising stem) according to ISO 5210.

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

* On request

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

Flange drilling according to EN 1092 PN 10

DN	50	80	100	125	150	200	250	300	350	400
Bolt circle diameter (mm)	125	160	180	210	240	295	350	400	460	515
Number of throughgoing holes	0	4	4	4	4	4	4	4	4	4
Number of tapped holes/side	4	4	4	4	4	4	8	8	12	12
Bolt size	M16	M16	M16	M16	M20	M20	M20	M20	M20	M24
Bolt lengths ¹⁾ (mm)	13	13	13	15	15	16	18	20	20	25

DN	450	500	600	700	750	800	900	1000	1200
Bolt circle diameter (mm)	565	620	725	840	900	950	1050	1160	1380
Number of throughgoing holes	4	4	4	4	4	4	4	4	4
Number of tapped holes/side	16	16	16	20	20	20	24	24	28
Bolt size	M24	M24	M27	M27	M27	M30	M30	M33	M36
Bolt lengths ¹⁾ (mm)	25	27	28	28	30	31	31	38	40

Flange drilling according to EN 1092 PN 16

DN	50	80	100	125	150	200	250	300	350	400
Bolt circle diameter (mm)	125	160	180	210	240	295	355	410	470	525
Number of throughgoing holes	0	4	4	4	4	4	4	4	4	4
Number of tapped holes/side	4	4	4	4	4	8	8	8	12	12
Bolt size	M16	M16	M16	M16	M20	M20	M24	M24	M24	M27
Bolt lengths ¹⁾ (mm)	13	13	13	15	15	16	18	20	20	25

DN	450	500	600	700	750	800	900	1000	1200
Bolt circle diameter (mm)	585	650	-	840	-	950	1050	1170	1390
Number of throughgoing holes	4	4	-	4	-	4	0	4	4
Number of tapped holes/side	16	16	-	20	-	20	28	24	28
Bolt size	M27	M30	-	M33	-	M36	M36	M39	M45
Bolt lengths ¹⁾ (mm)	25	27	-	28	-	31	31	38	40

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

DN	50	80	100	125	150	200	250	300	350	400
Bolt circle diameter (mm)	120,7	152,4	190,5	215,9	241,3	298,4	361,9	431,8	476,3	539,8
Number of throughgoing holes	0	2	4	4	4	4	4	4	4	4
Number of tapped holes/side	4	2	4	4	4	4	8	8	8	12
Bolt size (UNC)	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	1"-8
Bolt lengths ¹⁾ (mm)	13	13	13	15	15	16 ²⁾	18	20	20	25

DN	450	500	600	700	750	800	900	1000	1200
Bolt circle diameter (mm)	577,9	635	749,3	863,6	914,4	977,9	1085,9	1200,2	1422,4
Number of throughgoing holes	4	4	4	4	4	4	4	4	8
Number of tapped holes/side	12	16	16	24	24	24	28	32	36
Bolt size (UNC)	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
Bolt lengths ¹⁾ (mm)	25	27	28	28	30	31	31	38	40

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

2) The screws on one side has to be 10 mm longer for face-to-face according to MSS-SP81.

Flange drilling according to JIS B 2238 10K

DN	50	80	100	125	150	200	250	300	350	400
Bolt circle diameter (mm)	120	150	175	210	240	290	355	400	445	510
Number of throughgoing holes	0	4	4	4	4	4	4	4	4	4
Number of tapped holes/side	4	4	4	4	4	8	8	12	12	12
Bolt size	M16	M16	M16	M20	M20	M20	M22	M22	M22	M24
Bolt lengths ¹⁾ (mm)	13	13	13	15	15	16	18	20	20	25

DN	450	500	600	700	750	800	900	1000	1200
Bolt circle diameter (mm)	565	620	730	840	900	950	1050	1160	1380
Number of throughgoing holes	4	4	8	4	4	4	4	4	4
Number of tapped holes/side	16	16	16	20	20	24	24	24	28
Bolt size	M24	M24	M30	M30	M30	M30	M30	M36	M36
Bolt lengths ¹⁾ (mm)	25	27	28	28	30	31	31	38	40

Flange drilling according to BS 10 Table D

DN	50	80	100	125	150	200	250	300	350	400
Bolt circle diameter (mm)	-	146,1	177,8	209,6	235	292,1	355,6	406,4	469,9	520,7
Number of throughgoing holes	-	2	2	4	4	4	4	4	4	4
Number of tapped holes/side	-	2	2	4	4	4	4	8	8	8
Bolt size (UNC)	-	5/8"-11	5/8"-11	5/8"-11	5/8"-11	5/8"-11	3/4"-10	3/4"-10	7/8"-9	7/8"-9
Bolt lengths ¹⁾ (mm)	-	13	13	15	15	16	18	20	20	25

DN	450	500	600	700	750	800	900	1000	1200
Bolt circle diameter (mm)	584,2	641,4	755,7	845	927,1	984,2	1092,2	1175	*
Number of throughgoing holes	4	4	4	4	4	4	4	4	*
Number of tapped holes/side	8	12	12	16	16	16	20	20	*
Bolt size (UNC)	7/8"-9	7/8"-9	1"-8	1"-8	1 1/8"-7	1 1/4"-7	1 1/4"-7	1 1/4"-7	*
Bolt lengths ¹⁾ (mm)	25	27	28	28	30	31	31	38	*

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

* On request



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