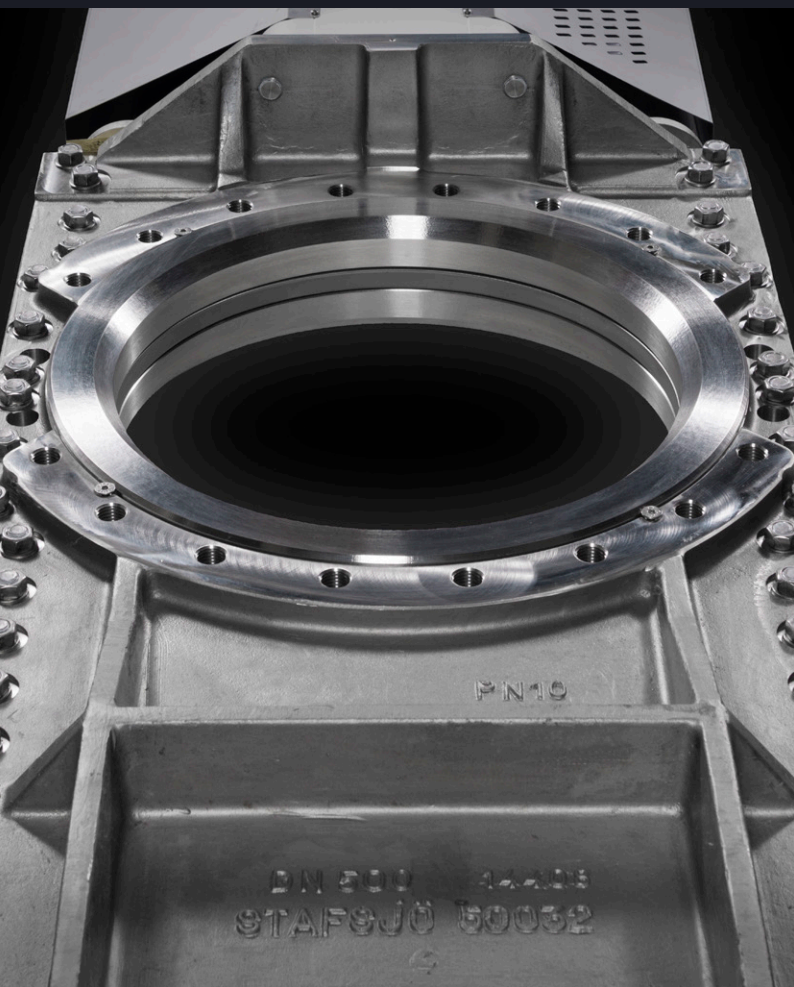


**Stafsjö**  
SINCE 1666

# Knife gate valve HP

Through-going high pressure knife gate valve

Size range:  
DN 300 - DN 900 (12" - 36")



# About HP

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

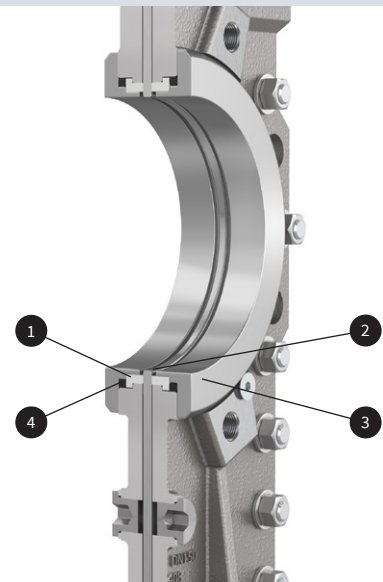
The HP knife gate valve is modular designed and it can easily be customized in materials, with actuators and related automation accessories to different process conditions. It can operate on different media such as pulp stock up to 18 % concentrations, slurry, liquor, ash and granulate. The valve has 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, but it can also be supplied in a range of high alloy such as Duplex and 254 SMO type materials.

The HP valve is one out of five of Stafsjö's through-going knife gate valve models. HG is the standard version 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.



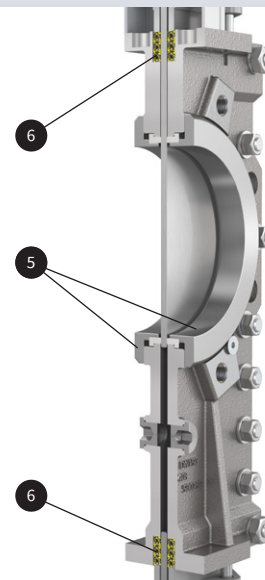
## Full bore with outstanding flow characteristics

In opened position the HP provide an unobstructed flow path where no media can collect. The PTFE seats (1) are protected by the gate (2) and retainers rings (3) and the internal back-up o-rings (4) keep the seats constantly pressurized against the gate.



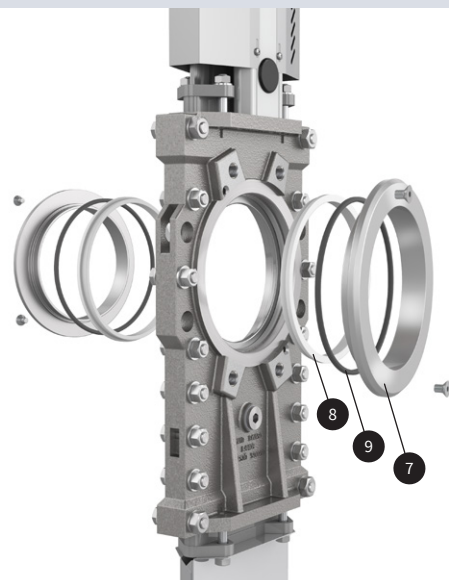
## Reliable through-going and bi-directional zero leakage shut-off

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 and the gland box sealing system with three layers of Stafsjö's TwinPack (6) ensures that no media reaches surrounding environment.



## Quick and easy maintenance

Stafsjö's retainer ring system enable smooth and easy maintenance directly on the site. The retainer rings (7) hold the seats (8) and 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, thus reducing downtime for the maintenance.



# Pressure class

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

## Configurations

### Standard in stainless steel

**Sizes:** DN 300 - DN 900

**Valve body:** Stainless steel EN 1.4408

**Retainer rings:** Stainless steel EN 1.4408

**Gate:** Duplex stainless steel EN 1.4462

**Box packing:** TwinPack

**Top works:** Stainless steel tie rods encapsulated in aluminum beams including stainless steel gate guards on automated valves

### Options

#### Valve body<sup>1)</sup>

Stainless steel EN 1.4408

Duplex stainless steel EN 1.4470

254 SMO stainless steel equivalent

#### Retainer rings

Stainless steel EN 1.4408

Duplex stainless steel EN 1.4470

254 SMO stainless steel equivalent

#### Gate material and surface treatments

Duplex stainless steel EN 1.4462, S32205

254 SMO stainless steel or equivalent

Hard chromed surface

Extra polished surface (max Ra 0,8)

#### Seats

PTFE with o-ring in NBR, EPDM or FKM/FPM

#### Box packings

TwinPack, WhitePack

Extra scrapers in UHMW-PE, PTFE or brass

#### Top works

Stainless steel tie rods encapsulated in aluminum beams

Stainless steel pillars or beams<sup>2)</sup>

#### Actuators

Bevel gear

Hand wheel with non-rising stem

Double-acting pneumatic cylinder

Single-acting pneumatic cylinder

Electric actuator

Hydraulic actuator

#### 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

#### 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.

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

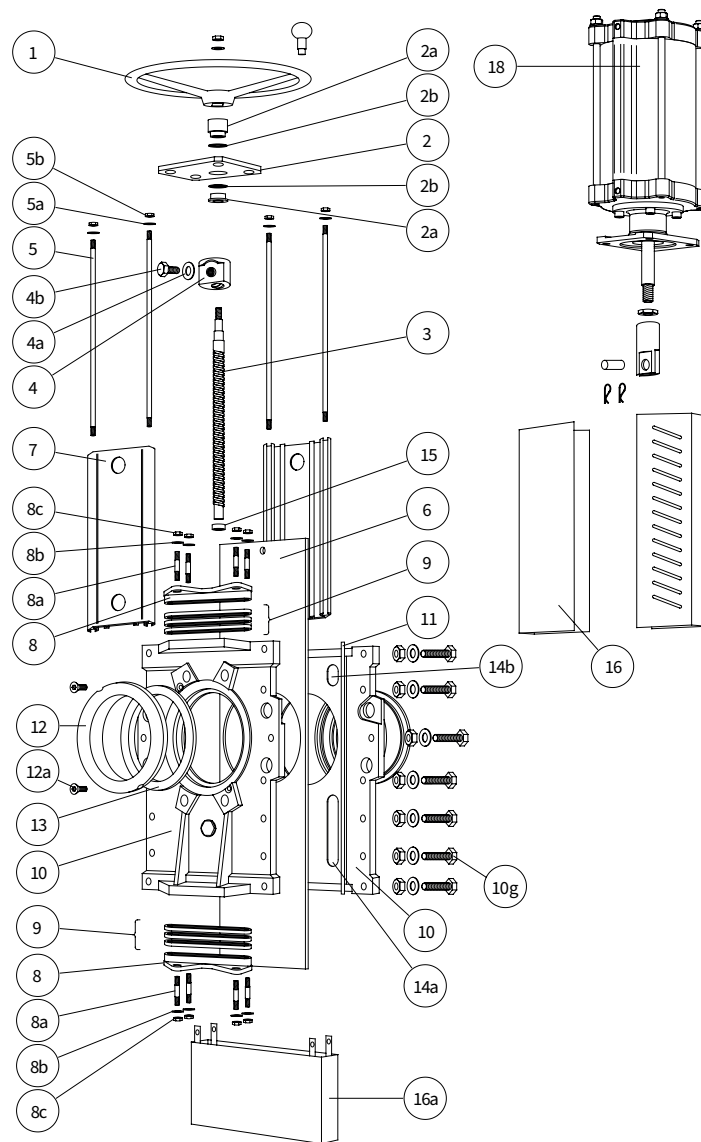
Stafsjö manufacturing standard. Option in MSS-SP81.

#### Service temperature

Information to determine minimum and maximum temperature for the knife gate valve is available on [stafsjo.com/support/temperatures/](https://stafsjo.com/support/temperatures/).

1) The valve body is as standard supplied with G1/2" purge ports.

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

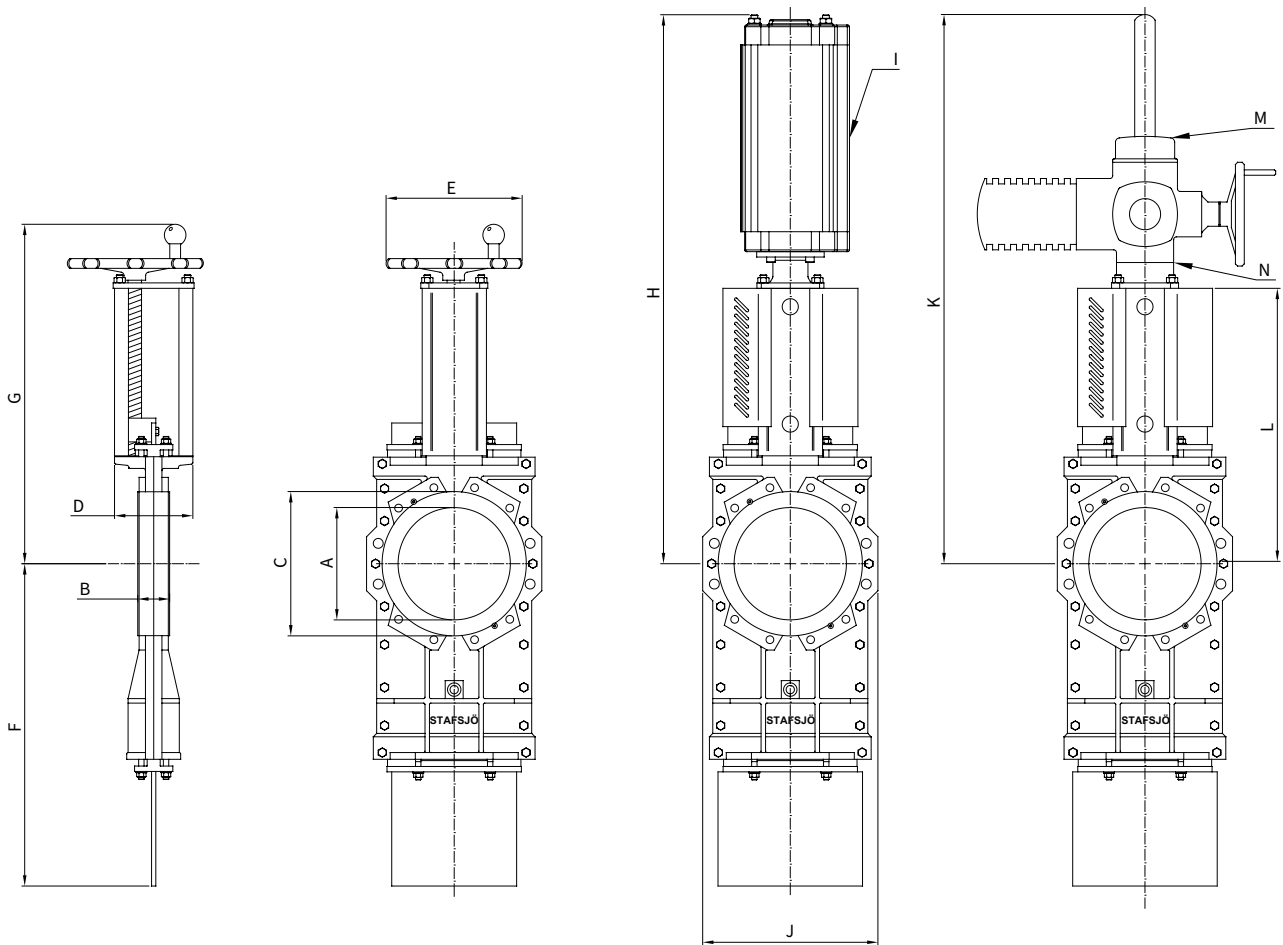


## Part list

Pos	Detail	Material
1	Hand wheel	Coated cast iron EN-JL1030, GG20
2	Yoke	Stainless steel EN 1.4301
2a	Bearing	Brass
2b	Slide washer	POM
3	Stem	Stainless steel EN 1.4104, 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	Stainless steel EN 1.4408
8a	Stud bolt	Stainless steel A2

Pos	Detail	Material
8b	Washer	Stainless steel A2
8c	Nut	Stainless steel A2
9 <sup>1)</sup>	Box packing	See options on page 4
10	Valve body	See options on page 4
10g	Valve body boltings	Stainless steel A2
11	Body gasket	FKM/FPM
12	Retainer ring	See options on page 4
12a	Locking screw	Stainless steel A2
13 <sup>1)</sup>	Seat	See options on page 4
14a	Guiding pads	PTFE
14b	Guiding pads	PTFE
15	Bushing	Oil-bronze
16/a	Gate guards	Stainless steel EN 1.4301
18	Pneumatic cylinder	See data sheet

<sup>1)</sup> Recommended spare parts



## Main dimensions (mm)

DN	A	B	C	D	E	F	G	H	I <sup>1)</sup>	J	K	L	M <sup>2)</sup>	N <sup>3)</sup>	kg <sup>4)</sup>
300	302	78	375	180	400	865	893	1332	SC200	455	1420	720	SA 10.2	F10/A	170
350	332	78	425	175	400	980	948	1417	SC200	510	1505	775	SA 10.2	F10/A	200
400	380	89	480	210	520	1070	1033	1633	SC200	570	1650	873	SA 10.2	F10/A	290
450	420	89	534	220	520	1210	1124	1773	SC250	625	1790	963	SA 10.2	F10/A	425
500	470	114	580	320	635	1412	1299	1990	SC250	690	2020	1138	SA 14.2	F14/A	670
600	540	122	679	350	635	1553	1336	2113	SC320	800	2135	1175	SA 14.2	F14/A	820
700	665	128	800	320	635	1891	1556	2458	SC320	995	2505	1395	SA 14.6	F14/A	1300
800	760	128	900	320	635	2132	1721	2723	SC320	1070	2770	1560	SA 14.6	F14/A	1700
900	880	128	1010	310	-	2450	-	3018	SC320	1168	2940	1740	SA 14.6	F14/A	1960

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 ISO 5210.

4) Weight in kg for valve with hand wheel (HW). DN 900 with double-acting pneumatic cylinder.

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

## Flange drilling according to EN 1092 PN10

DN	300	350	400	450	500	600	700	800	900
Bolt circle diameter (mm)	400	460	515	565	620	725	840	950	1050
Number of throughgoing bolts	4	4	4	4	4	4	4	4	4
Number of tapped holes/side	8	12	12	16	16	16	20	20	24
Bolt size	M20	M20	M24	M24	M24	M27	M27	M30	M30
Bolt lengths <sup>1)</sup> (mm)	20	20	25	25	27	28	28	31	31

## Flange drilling according to EN 1092 PN16

DN	300	350	400	450	500	600	700	800	900
Bolt circle diameter (mm)	410	470	525	585	650	-	840	950	1050
Number of throughgoing bolts	4	4	4	4	4	-	4	4	-
Number of tapped holes/side	8	12	12	16	16	-	20	20	28
Bolt size	M24	M24	M27	M27	M30	-	M33	M36	M36
Bolt lengths <sup>1)</sup> (mm)	20	20	25	25	27	-	28	31	31

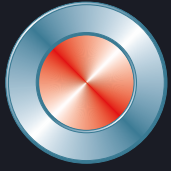
## Flange drilling according to ASME/ANSI B 16.5 and 16.47 Class 150 series A

DN	300	350	400	450	500	600	700	800	900
Bolt circle diameter (mm)	431,8	476,3	539,8	577,9	635	749,3	863,6	977,9	1085,9
Number of throughgoing bolts	4	4	4	4	4	4	4	4	4
Number of tapped holes/side	8	8	12	12	16	16	24	24	28
Bolt size (UNC)	7/8"-9	1"-8	1"-8	1 1/8"-7	1 1/8"-7	1 1/4"-7	1 1/4"-7	1 1/2"-6	1 1/2"-6
Bolt lengths <sup>1)</sup> (mm)	20	20	25	25	27	28	28	31	31

## Flange drilling according to JIS B 2238 10K

DN	300	350	400	450	500	600	700	800	900
Bolt circle diameter (mm)	400	445	510	565	620	730	840	950	1050
Number of throughgoing bolts	4	4	4	4	4	4	4	4	4
Number of tapped holes/side	12	12	12	16	16	20	20	24	24
Bolt size	M22	M22	M24	M24	M24	M30	M30	M30	M30
Bolt lengths <sup>1)</sup> (mm)	20	20	25	25	27	28	28	31	31

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



**Stafsjö**  
SINCE 1666

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