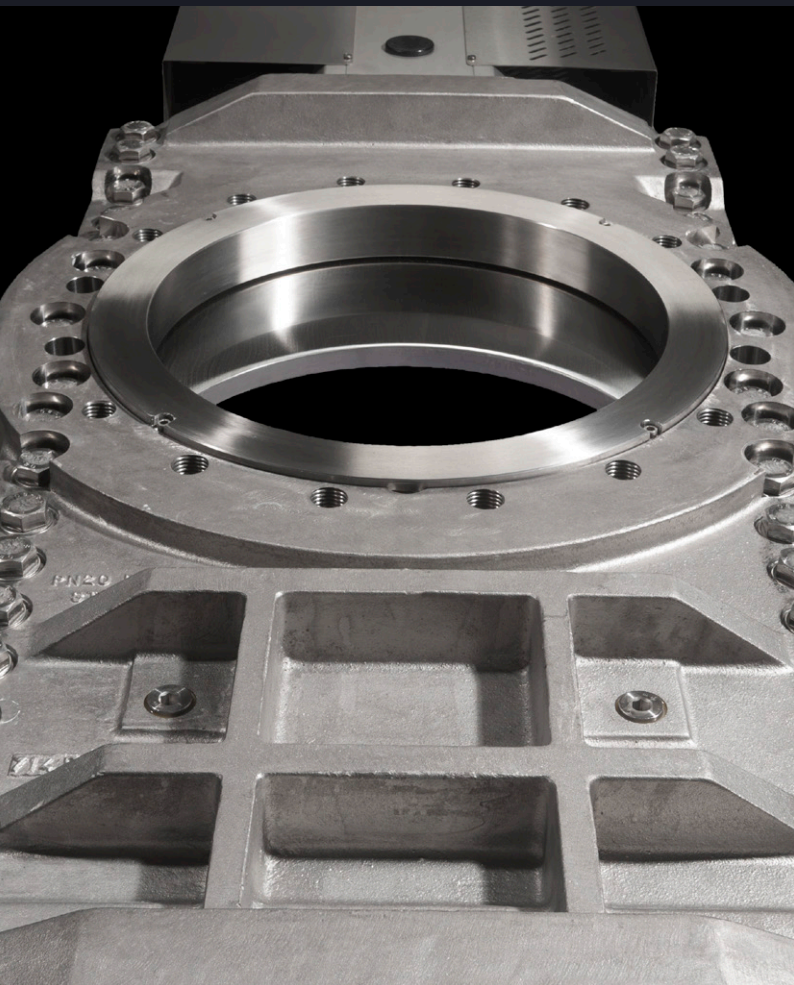


Stafsjö
SINCE 1666

Knife gate valve HX

An extreme high pressure knife gate valve with through-going gate

Size range:
DN 150 - DN 900 (6" - 36")



About HX

This is a through-going knife gate valve for extremely high pressures and demanding operating conditions. The HX offers superior flow characteristics and reliable bi-directional zero leakage shut-off on highly concentrated media and static media columns.

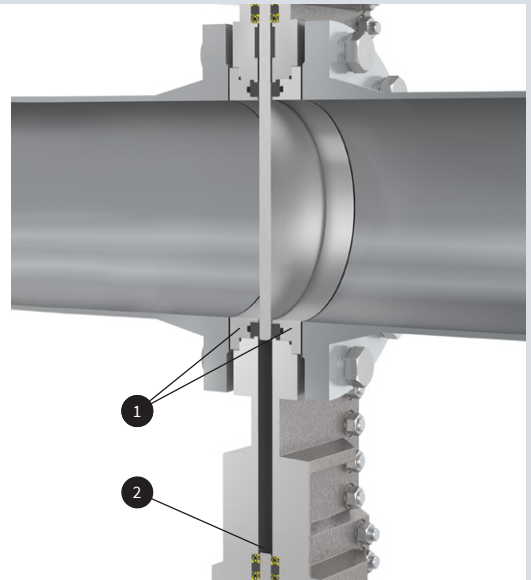
The HX valve is modular designed and it can easily be customized in materials, with actuators and related automation accessories to different process conditions. It can operate on different media such as pulp stock up to 18 % concentrations, slurry, liquor, and granulate. The valve has an extra solid 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 materials such as Duplex, 254 SMO and Titanium. With Stafsjö's retainer ring system you can repeatedly extend the service life, while minimizing downtime and cost.

The HX valve is one out of five valves in Stafsjö's product range with through-going gates. The HG valve represent the standard. HL is a compact version of HG while HP is high pressure version. HPT is a high pressure version entirely made in Titanium.



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

The through-going gate is guided and internally supported throughout the entire stroke. It can operate smoothly through difficult and highly concentrated media. The retainer ring system (1) on both side of the gate provide a tight seal independent of pressure direction. On each opening stroke the lower machined flat gate orifice (2) force media upward and back into the pipe.



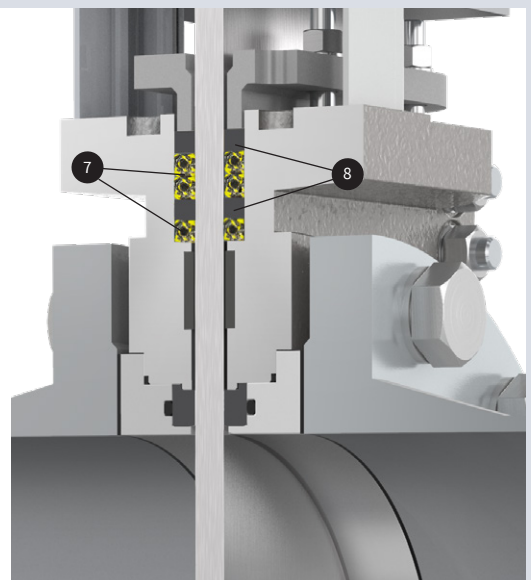
Full bore with outstanding flow characteristics

When the HX knife gate valve is in open position, it offers an unobstructed flow path where no media can collect. The enlarged and reinforced PTFE seats (3) are protected by the gate (4) and retainer rings (5). The internal back-up o-rings (6) keep the seats pressurized against the gate.



Reinforced gland box sealing system enable a tight seal to environment

The increased body and gate thickness makes the gland box sealing system steady and reliable at high pressure loads. Stafsjö's TwinPack (7) braids and the reinforced PTFE scrapers (8) ensure no media reaches surrounding environment.



Pressure class

Max working pressure at 110 °C		Max differential pressure at 110 °C	
DN	bar	DN	bar
150 - 800	20	150 - 800	20
900	16	900	16

Configurations

Standard

Sizes: DN 150 - DN 900

Valve body: Stainless steel EN 1.4408

Retainer rings: Stainless steel EN 1.4408

Gate: ≤ DN 350 stainless steel EN 1.4404, AISI 316L.

Gate: ≥ DN 400 duplex stainless steel EN 1.4462, S32205

Box packing: TwinPack including extra PTFE scrapers

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

Options

Valve body¹⁾

Stainless steel EN 1.4408

Duplex stainless steel EN 1.4470

Equivalent material to 254 SMO stainless steel

Titanium ASTM B265 Grade 2

Retainer rings

Stainless steel EN 1.4408

Duplex stainless steel EN 1.4470

Equivalent material to 254 SMO stainless steel

Titanium ASTM B265 Grade 2

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

Titanium ASTM B265 Grade 2

Hard chromed surface

Extra polished surface (max Ra 0,8)

Seats

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

Box packings

TwinPack with PTFE scrapers

WhitePack with PTFE scrapers

Top works

Stainless steel tie rods encapsulated in aluminum beams

Stainless steel pillars or beams²⁾

Actuators

Bevel gear

Chain wheel

Hand wheel with non-rising stem

Double-acting pneumatic cylinder

Single-acting pneumatic cylinder

Electric actuator

Hydraulic actuator

Flange drillings

EN 1092 PN16

EN 1092 PN25

EN 1092 PN40

ASME/ANSI B16.5 Class 150

ASME/ANSI B16.5 Class 300

Accessories

See our accessory data sheet for automation options.

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

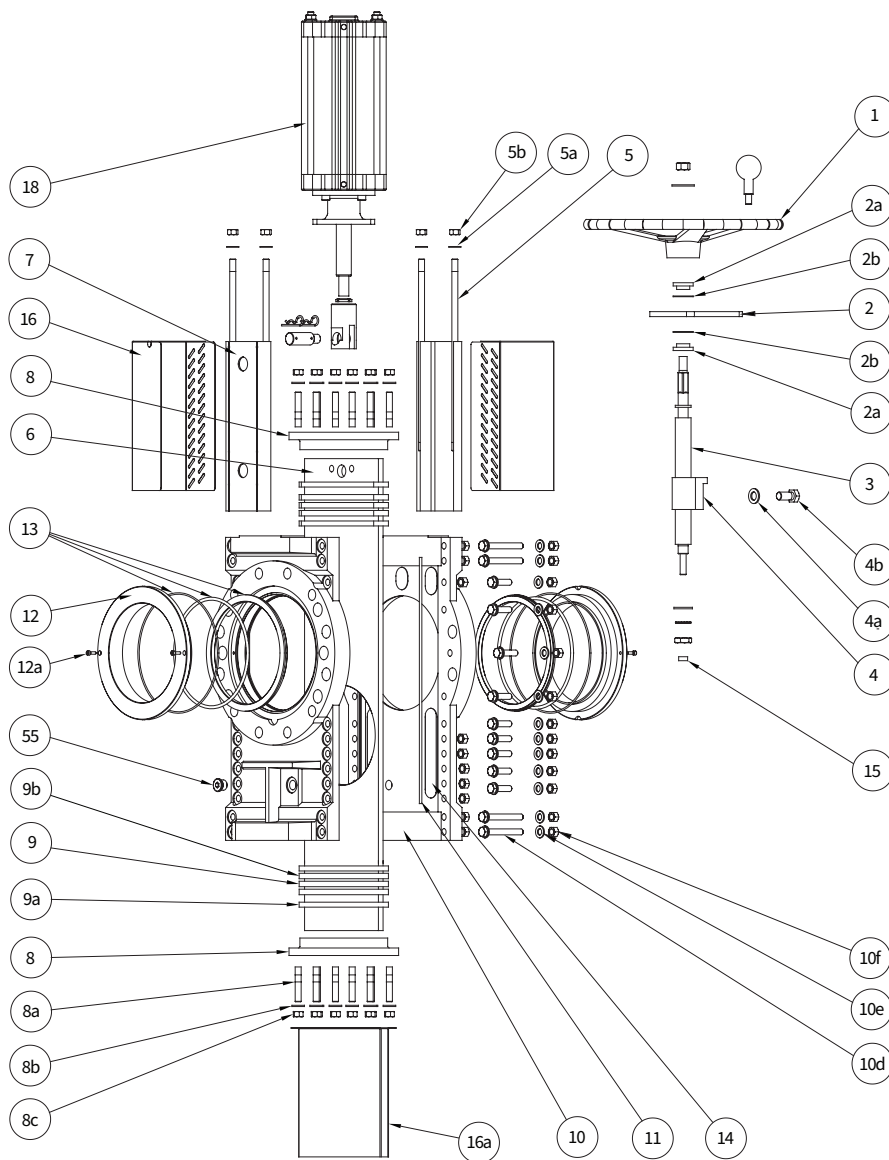
Stafsjö manufacturing standard.

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 G1/2" purge ports.

2) 1) Standard on valves supplied with valve body in Duplex, equivalent material to 254 SMO stainless steel or Titanium.



Part list

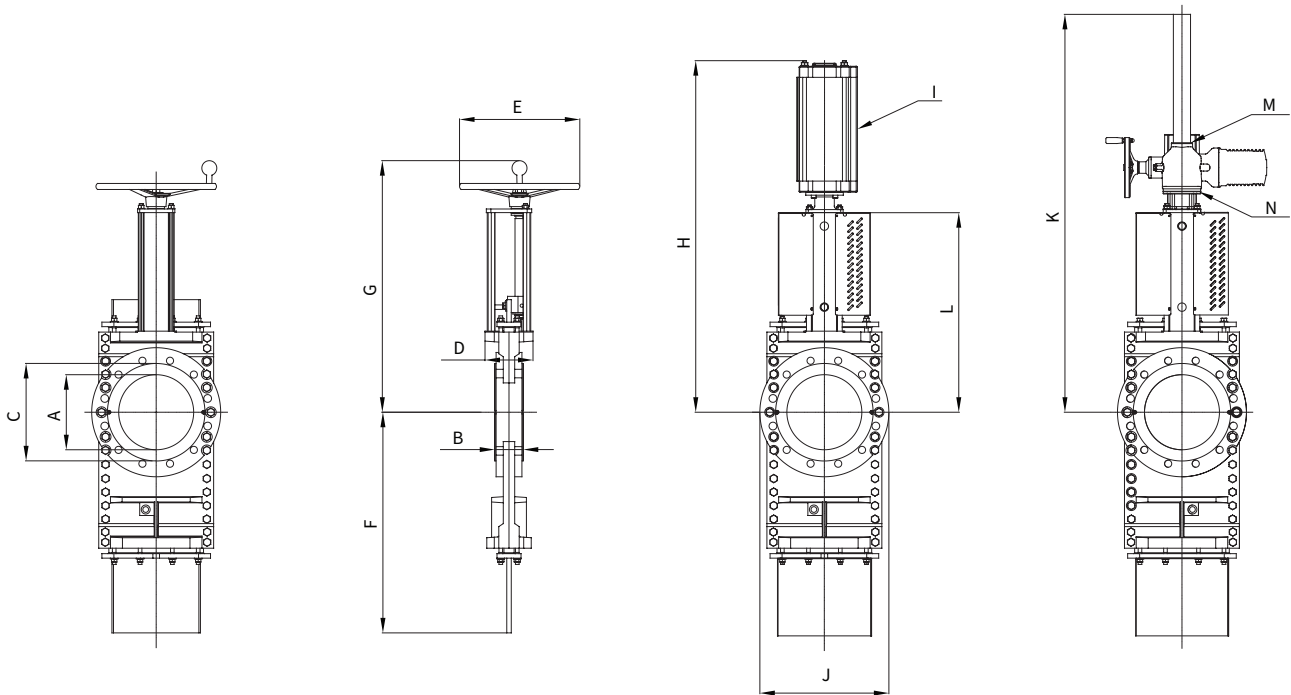
Pos.	Part	Material
1	Hand wheel	Coated cast iron EN-JL1030, GG20
2	Yoke	Stainless steel EN 1.4301
2a	Bearing	Brass
2b	Slide washer	POM
3	Stem	Stainless steel EN 1.4104, EN 1.4305
4	Stem nut	Brass
4a	Washer	Stainless steel A2
4b	Screw	Stainless steel A2
5	Tie rod	Stainless steel A2 ⁵⁾
5a	Washer	Stainless steel A2
5b	Nut	Stainless steel A2
6	Gate	See options on page 4
7	Beam	Anodized aluminium ⁵⁾
8	Gland	Stainless steel EN 1.4408
8a	Stud bolt	Stainless steel A2 ⁵⁾
8b	Washer	Stainless steel A2 ⁵⁾
8c	Nut	Stainless steel A2 ⁵⁾

Pos.	Part	Material
9/a/b ⁴⁾	Box packing	See options on page 4
10	Valve body	See options on page 4
10d	Screw	Stainless steel A4
10e	Washer	Stainless steel A4
10f	Nut	Stainless steel A4
11 ⁴⁾	Body gasket	≤ DN 300: PTFE. ≥ DN 350 FKM/FPM
12	Retainer rings	See options on page 4
12a	Locking screw	Stainless steel A4
13 ⁴⁾	Seat and o-rings	See options on page 4
14a ⁴⁾	Guide strip	PTFE
15	Bushing	Oil-bronze
16/a	Gate guards	Stainless steel EN 1.4301
18	Pneumatic cylinder	See data sheet
55	Plug	Stainless steel A4

⁴⁾ Recommended spare parts

⁵⁾ Replaced by pillars in stainless steel (EN 1.4436 or EN 1.4404) on HX in Duplex, equivalent material to 254 SMO stainless steel or Titanium.

⁶⁾ Replaced by stainless steel A4 on HX in Duplex, equivalent material to 254 SMO stainless steel and Titanium on Titanium body versions.



Main dimensions (mm)

DN	A	B	C	D	E	F	G	H	I ¹⁾	J	L	K	M ²⁾	N ³⁾	kg ⁴⁾
150	153	64	204	150	315	473	554	851	SC160	307	445	835	SA 10.2	F10/A	95
200	200	90	268	152	400	607	746	1029	SC160	370	575	775	SA 10.2	F10/A	115
250	250	95	324	160	400	735	838	1227	SC200	1152	665	915	SA 10.2	F10/A	180
300	300	114	378	184	400	910	922	1409	SC250	500	749	1049	SA 10.2	F10/A	290
350	350	125	438	192	-	1100	-	1670	SC250	575	910	1260	SA 10.2	F10/A	380
400	400	125	490	210	-	1200	-	1808	SC250	650	998	1398	SA 14.2	F14/A	560
450	450	150	539	334	-	1380	-	2036	SC320	698	1173	1673	SA 14.2	F14/A	890
500	500	150	596	310	-	1600	-	2186	SC320	745	1248	1748	SA 14.2	F14/A	950
600	600	170	708	310	-	1740	-	2376	SC320	880	1383	1983	SA 14.2	F14/A	1250
700	700	180	796	450	-	1994	-	2626	SC320	1035	1533	2333	SA 14.2	F14/A	1550
800	780	190	903	320	-	2205	-	*	*	1130	1681	2481	SA 16.2	F16/A	1840
900	880	210	1028	340	-	2506	-	*	*	1270	1898	3115	SA 16.2	F16/A	3785

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.

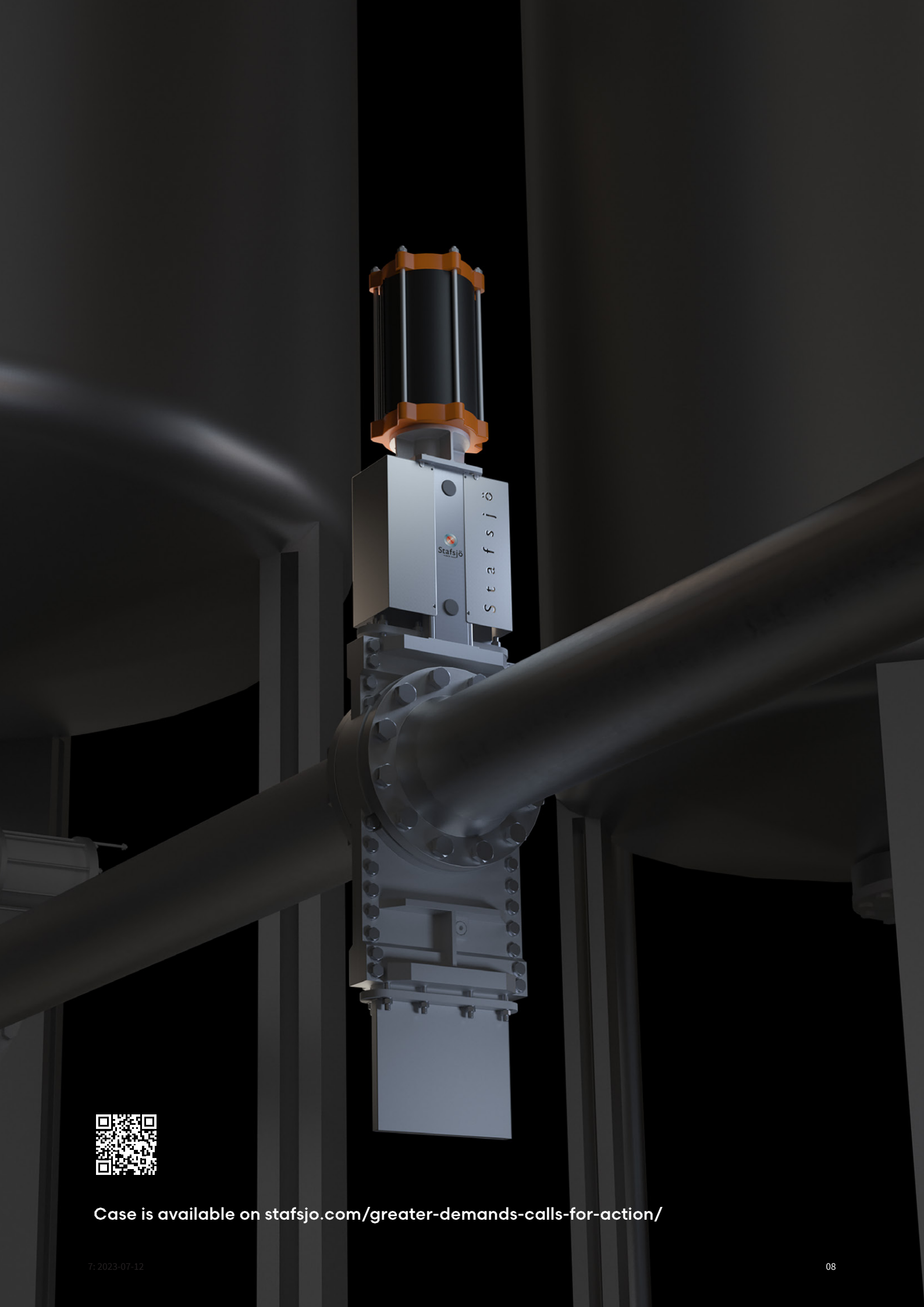
2) Recommended sizing of Auma SA electric motors at normal operation. For other operating conditions, contact Stafsjö or your local representative for advice.

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

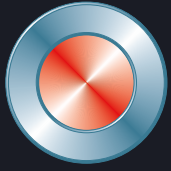
4) Weight in kg for the valve with double-acting pneumatic cylinder, DN 800-DN 900 with electric motor.

* On request.

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



Case is available on stafsjo.com/greater-demands-calls-for-action/



Stafsjö
SINCE 1666

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Stafsjö Valves AB
SE-618 95 Stavsjö, Sweden

+46 11 39 31 00 | sales@stafsjo.se | www.stafsjo.com

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