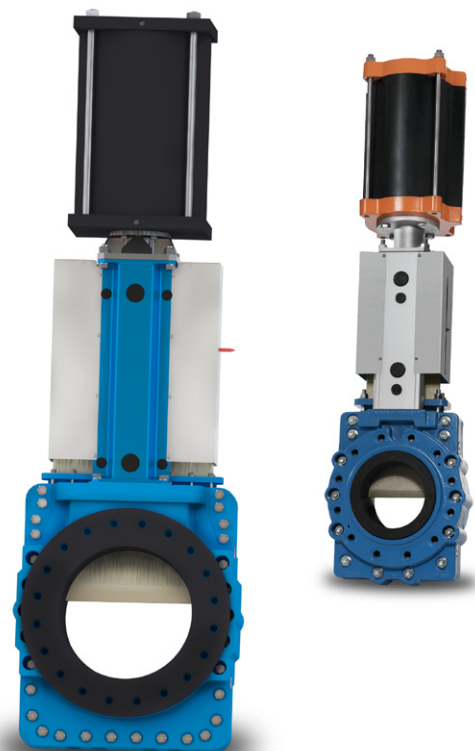
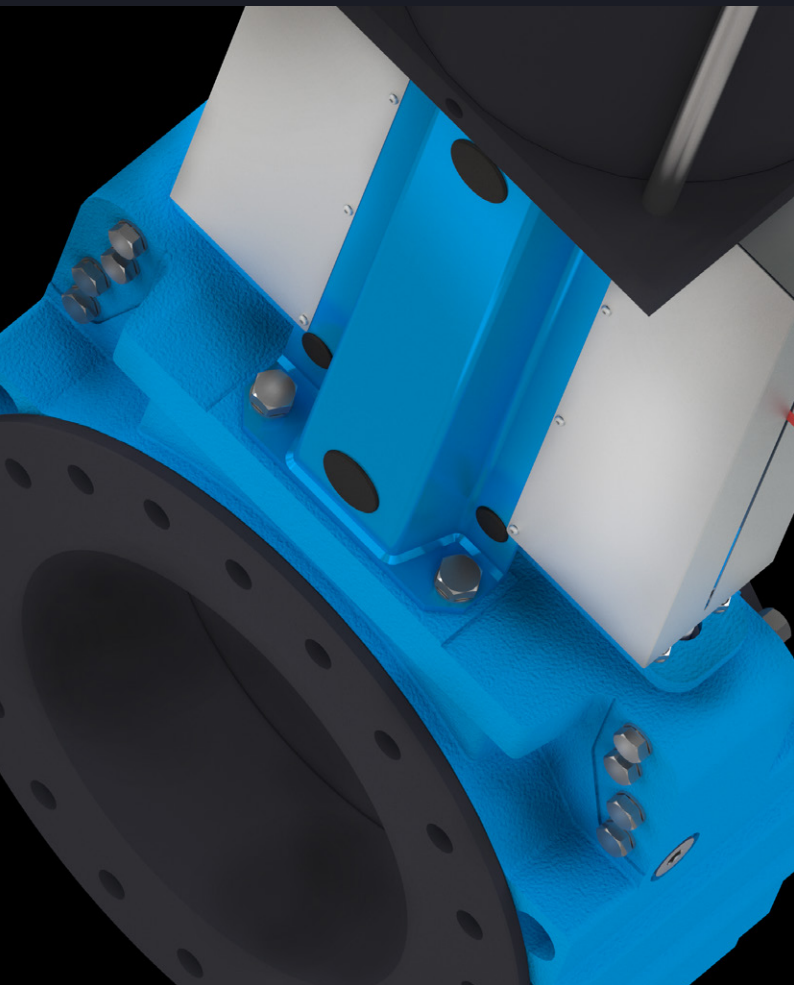


Stafsjö
SINCE 1666

Knife gate valves SLH & SLX

High pressure push through slurry knife gate valves

Size range:
DN 80 - DN 650 (3" - 26")

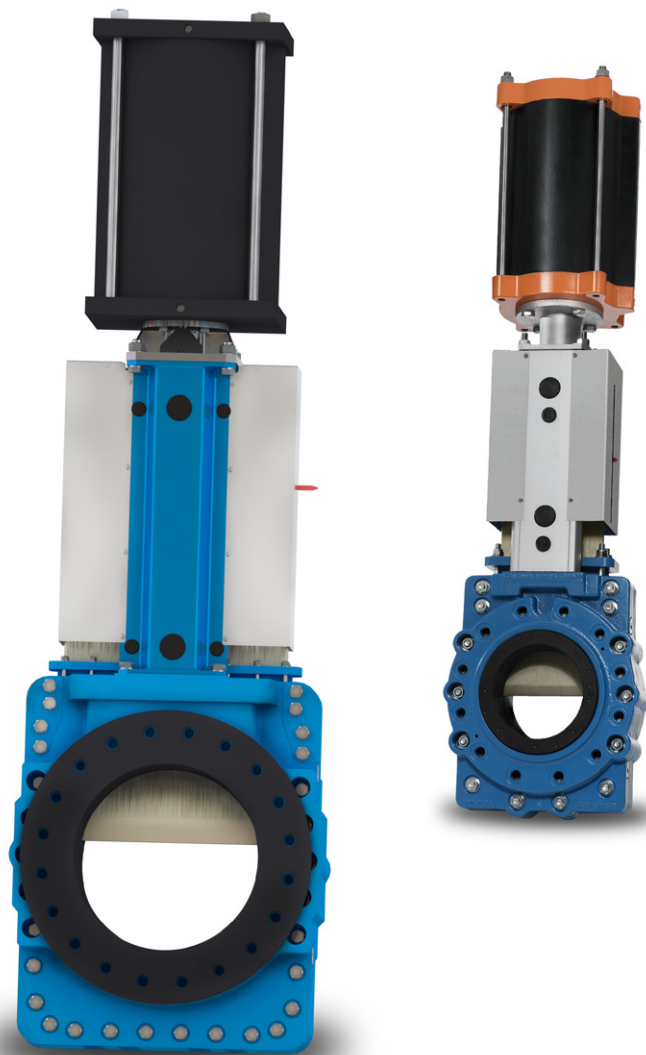


About SLH & SLX

These push through slurry knife gate valves are designed to operate and provide bi-directional tight seal in high pressure and demanding mineral processing applications, typically slurry tailing systems.

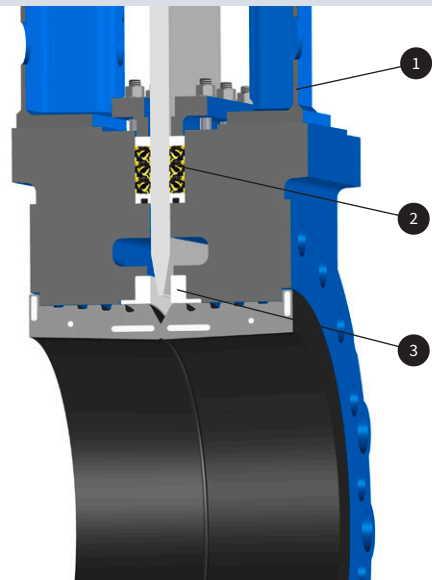
The SLH is designed to operate and provide a bi-directional tight seal up to 20 bar while the SLX has the features for 50 bar. They are modular designed and can easily be customized with actuators and related automation accessories to different process conditions. They are also available with mechanical lock out. As standard, the SLH and SLX comes with heavy duty, two-piece fully lugged valve bodies in nodular iron. Gates are provided in high strength stainless steel, special grinded and hard anti-stick coated with purpose of reducing friction when they cycle through the valves rubber seats.

In addition to these slurry valves, Stafsjö also offers the compact SLV up to DN 900 and another wide body slurry valve, the SLF, up to DN 800.



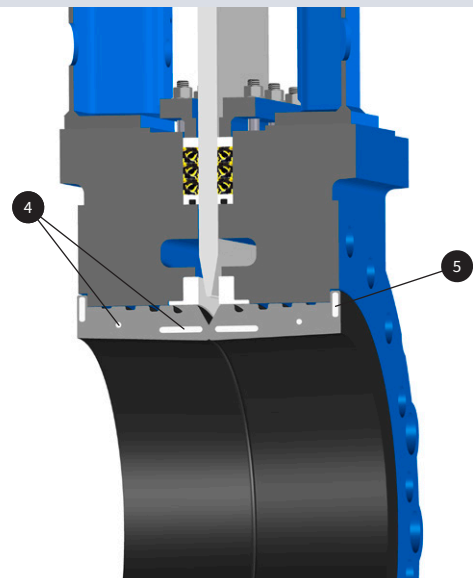
A precise gate alignment extend the service life

A solid top works (1), a robust gland box system (2) and internal friction reducing guiding supports (3) ensure gate alignment throughout the full stroke, thus reducing stress and wear on seats.



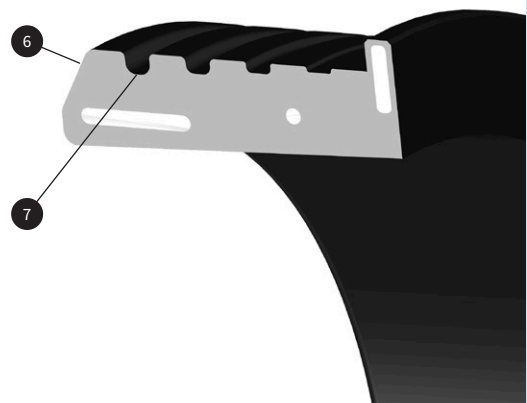
Reinforcements rings ensure stability and performance

The front reinforcement rings (4) ensure the seats shape, position and strength remain during operation while the flange sealing reinforcements (5) secure a tight and exact position of the seats towards the gate and connecting flanges.



Expansion areas reduce stress and actuation force

The seat entrance area (6) is designed to give a smooth gate entry and the expansion areas (7) allows the seat to be axially flexible with minimal actuator force.



Pressure class SLH

Max working and differential pressure at 20 °C

DN	bar
80 - 650	20

SLH configuration

Standard

Sizes: DN 80 - DN 650

Valve body¹⁾: Nodular iron EN 5.3105

Gate: Hard anti-stick coated high strength stainless steel

Box packing: TwinPack with UHMW-PE scraper

Top works: Stainless steel tie rods encapsulated in aluminum beams up to DN 250 and coated steel EN 1.0038 beams on larger sizes, including stainless steel gate guards on automated valves.

Options

Seats

EPDM

Natural rubber

Actuators

Hand wheel with rising stem

Bevel gear

Double-acting pneumatic cylinders

Single-acting pneumatic cylinders

Electric actuators

Hydraulic actuators

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.

Pressure class SLX

Max working and differential pressure at 20 °C

DN	bar
80 - 450	50

SLX configuration

Standard

Sizes: DN 80 - DN 450

Valve body¹⁾: Nodular iron EN 5.3105

Gate: Hard anti-stick coated high strength stainless steel

Box packing: TwinPack with UHMW-PE scraper

Top works: Stainless steel tie rods encapsulated in aluminum beams up to DN 250 and coated steel EN 1.0038 beams on larger sizes, including stainless steel gate guards on automated valves.

Flange drillings

EN 1092 PN16

EN 1092 PN25

EN 1092 PN40

ASME/ANSI B16.5 Class 150

ASME/ANSI B16.5 Class 300

AS 2129 Table F/H

Accessories

See p. 8 and our accessory data sheet for further information.

Face-to-face dimensions

Stafsjö manufacturing standard.

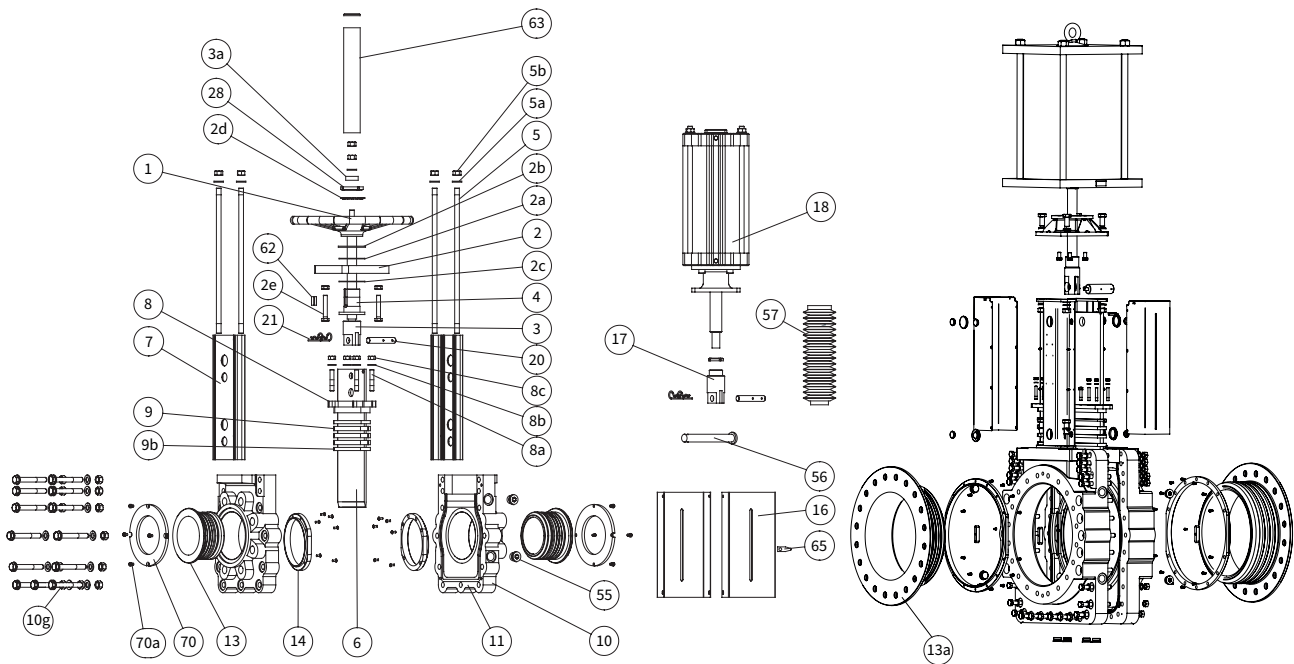
Corrosion protection

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: DN 80-DN 150: 3/4" - 1/2", DN 200: 3/4", DN 250: 3/4" - 1", DN 300: 1", DN 350 1" - 1 1/4", DN 400 - DN 650: 1 1/4"



Part list

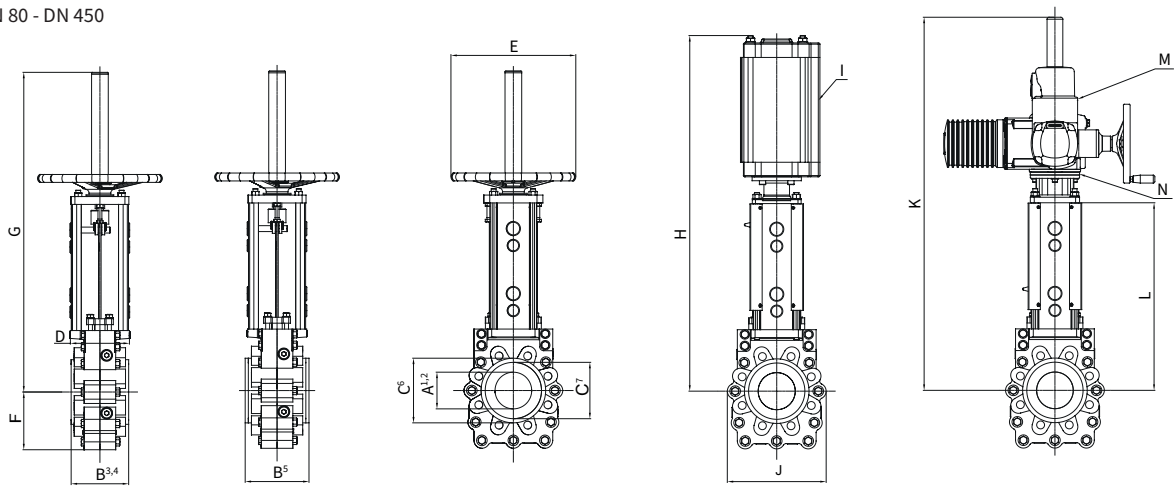
Pos.	Part	Material
1	Hand wheel	Coated cast iron Ø 315 EN-JL1040, GG25 ≥ Ø 400 EN-JL1030, GG20
2	Yoke	Coated steel
2a	Bearing	Iglidur XTM
2b	Slide washer	Brass
2c	Bearing	Iglidur XTM
2d	Washer	Stainless steel A2
2e	Locking nut	Zinc plated steel
3	Stem with gate clevis	Stainless steel EN 1.4305 ≥ DN 300: Gate clevis in coated carbon steel EN 1.0045
3a	Stop washer	Stainless steel A2
3b	Screw	Stainless steel A2
3c	Washer	Stainless steel A2
4	Stem nut	Brass
5	Tie rod	≤ DN 250: Stainless steel A2
5a	Washer	Stainless steel A2
5b	Nut	Stainless steel A2
6	Gate	Hard anti-stick coated high strength stainless steel
7	Beam	≤ DN 250: Anodized aluminium ≥ DN 300: Coated steel EN 1.0038
8	Gland	Coated nodular iron EN 5.3105 or steel EN 1.0038, EN 1.0045
8a	Stud bolt	Stainless steel A2
8b	Washer	Stainless steel A2

Pos.	Part	Material
8c	Nut	Stainless steel A2
9 ²⁾	Box packing	TwinPack with scraper in UHMW-PE
9b ²⁾	O-ring	NBR
10	Valve body	Coated nodular iron EN 5.3105
10g	Valve body boltings	Zinc plated steel
11	Body gasket	≤ DN 300: PTFE, ≥ DN 350: FKM/FPM
13 ²⁾	Seat	Natural rubber or EPDM
13a ²⁾	Seat with integrated load distribution ring	Only on ≥ DN 500. Natural rubber or EPDM
14 ²⁾	Guiding supports	POM-C
16	Gate guards	Stainless steel EN 1.4301
17	Gate clevis	Stainless steel EN 1.4305 ≥ DN 350: Coated carbon steel EN 1.0045
18	Cylinder	See data sheet
20	Clevis pin	Stainless steel EN 1.4305
21	Split pin	Stainless steel EN 1.4436
55	Plug	Zinc plated steel
56 ¹⁾	Locking pin	Stainless steel EN 1.4301
57 ¹⁾	Bellow	Artificial leather
62	Wedge	Stainless steel
63	Stemtube	Coated steel
65	Gate indicator	Nylon 12
70 ¹⁾	Load distribution rings	≤ DN 450: Stainless steel EN 1.4301
70a ¹⁾	Screws	Stainless steel A4

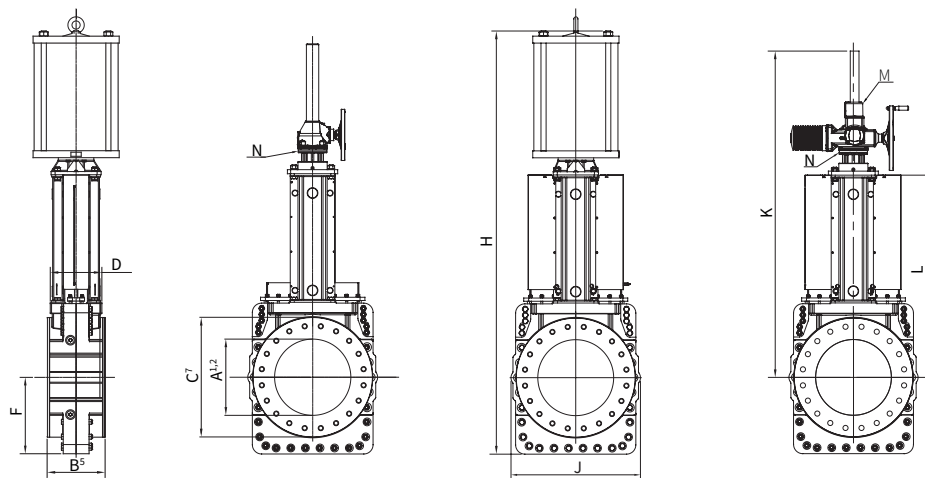
1) Optional accessories

2) Recommended spare parts

DN 80 - DN 450



DN 500 - DN 650



Main dimensions (mm)

DN	A ¹⁾	A ²⁾	B ³⁾	B ⁴⁾	B ⁵⁾	C ⁶⁾	C ⁷⁾	D	E	F	G	H	I ⁸⁾ "SLH"	I ⁸⁾ "SLX"	J	K	L	M ⁹⁾ "SLH"	M ⁹⁾ "SLX"	N ¹⁰⁾	kg ¹¹⁾	kg ¹²⁾
80	80	75	151	146	158	130	-	150	315	123	614	774	SC160	SC160	210	740	420	SA 07.6	SA 07.6	F10/A	39	41
100	100	93	151	146	162	164	-	150	400	147	812	880	SC160	SC200	251	816	476	SA 07.6	SA 07.6	F10/A	46	64
150	148	145	154	149	165	216	-	150	520	191	900	1004	SC200	SC200	323	954	565	SA 10.2	SA 10.2	F10/A	87	110
200	199	190	161	156	172	271	-	175	520	237	1133	1245	SC250	SC320	412	1133	683	SA 10.2	SA 10.2	F10/A	130	152
250	249	240	226	221	241	331	-	175	630	267	1215	1436	SC250	SC320	467	1265	765	SA 10.2	SA 10.2	F10/A	192	222
300	293	283	248	242	262	400	-	210	*	303	-	*	*	*	537	OR	859	*	*	*	-	324
350	337	327	257	251	271	442	-	210	*	239	-	*	*	*	571	OR	961	*	*	*	-	426
400	375	365	280	273	293	-	465	310	*	374	-	*	*	*	675	OR	1094	*	*	*	-	568
450	431	400	310	302	322	-	516	310	*	426	-	*	*	*	761	OR	1192	*	*	*	-	748
500	470	460	-	-	359	-	740	320	*	473	-	*	*	*	801	OR	1254	*	-	*	-	*
600	570	560	-	-	371	-	850	386	*	520	-	*	*	*	1014	OR	1442	*	-	*	-	*
650	620	610	-	-	378	-	1006	400	*	585	-	*	*	*	1175	OR	1604	*	-	*	-	*

1) Inlet diameter.

2) Bore diameter.

3) Minimum required face-to-face for installation without load distribution rings.

4) Installed face-to-face without load distribution rings.

5) Installed face-to-face with load distribution rings (LDR).

6, 7) When the connecting flanges are rubber lined or when they do not cover the metal frame around the seats (dimension C⁶ on ≤ DN 350 or dimension C⁷ + 20 mm on DN 400-DN 450, it is recommended to assemble and install the valve with load distribution rings to ensure long service life and reliable operation. Specifically DN 500 - DN 650 have load distribution rings integrated with the seat.

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

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

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

11) Weight in kg for valve including hand wheel.

12) Weight in kg for valve including double-acting pneumatic cylinder type SC, ≥ DN 450 prepared for bevel gear or electric actuator.

* On request

Flange drilling according to EN 1092 PN 16

DN	80	100	150	200	250	300	350	400	450	500	600	650
Bolt circle diameter (mm)	160	180	240	295	355	410	-	525	585	650	770	-
Number of tapped holes/side	8	8	8	12	12	12	-	16	20	20	20	-
Bolt size	M16	M20	M20	M20	M24	M24	-	M27	M27	M30	M33	-
Depth of tapped holes (mm)	33	33	34	29	57	61	-	45	45	47	47	-

Flange drilling according to EN 1092 PN 25

DN	80	100	150	200	250	300	350	400	450	500	600	650
Bolt circle diameter (mm)	160	190	250	310	370	430	490	550	600	660	770	-
Number of tapped holes/side	8	8	8	12	12	16	16	16	20	20	20	-
Bolt size	M16	M20	M24	M1624	M27	M27	M30	M33	M33	M33	M36	-
Depth of tapped holes (mm)	33	33	34	29	57	61	65	45	45	47	47	-

Flange drilling according to EN 1092 PN 40

DN	80	100	150	200	250	300	350	400	450	500	600	650
Bolt circle diameter (mm)	160	190	250	320	385	450	510	585	610	670	795	-
Number of tapped holes/side	8	8	8	12	12	16	16	16	20	20	20	-
Bolt size	M16	M20	M24	M27	M30	M30	M33	M36	M36	M39	M45	-
Depth of tapped holes (mm)	33	33	34	29	57	61	65	45	45	47	47	-

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

DN	80	100	150	200	250	300	350	400	450	500	600	650
Bolt circle diameter (mm)	152,4	190,5	241,3	298,5	362	431,8	476,3	539,8	577,9	635	749,3	806,46
Number of tapped holes/side	4	8	8	8	12	12	12	16	16	20	20	24
Bolt size (UNC)	5/8"-11	5/8"-11	3/4"-10	3/4"-10	7/8"-9	7/8"-9	1"-8	1"-8	1 1/8"-7	1 1/8"-7	1 1/4"-7	1 1/4"-7
Depth of tapped holes (mm)	33	33	34	29	57	61	65	45	45	47	47	79

Flange drilling according to ASME/ANSI B16.5 Class 300

DN	80	100	150	200	250	300	350	400	450	500	600	650
Bolt circle diameter (mm)	168,1	200,2	269,7	330,2	387,4	450,9	514,4	571,5	628,7	685,8	812,8	876,3
Number of tapped holes/side	8	8	12	12	16	16	20	20	24	24	24	28
Bolt size (UNC)	3/4"-10	3/4"-10	3/4"-10	7/8"-9	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 5/8"-5
Depth of tapped holes (mm)	33	33	34	29	57	61	65	45	45	47	47	79

Flange drilling according to AS Table F/H

DN	80	100	150	200	250	300	350	400	450	500	600	650
Bolt circle diameter (mm)	165	191	260	324	381	438	495	552	610	673	781	-
Number of tapped holes/side	8	8	12	12	12	16	16	20	20	24	24	-
Bolt size	M16	M16	M20	M20	M24	M24	M27	M27	M30	M30	M33	-
Depth of tapped holes (mm)	33	33	34	29	57	61	65	45	45	47	47	-

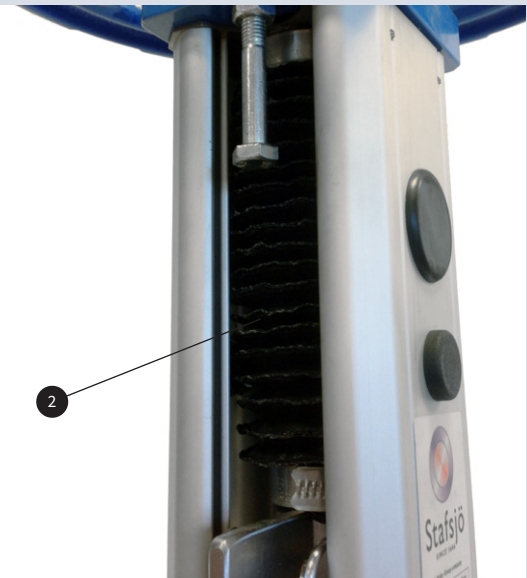
Lockout pin (1)

For security reason the slurry valves are always supplied with extra holes in the beams and gate to enable lockout in opened or closed position with a locking pin. The locking pin is supplied in stainless steel EN 1.4301.



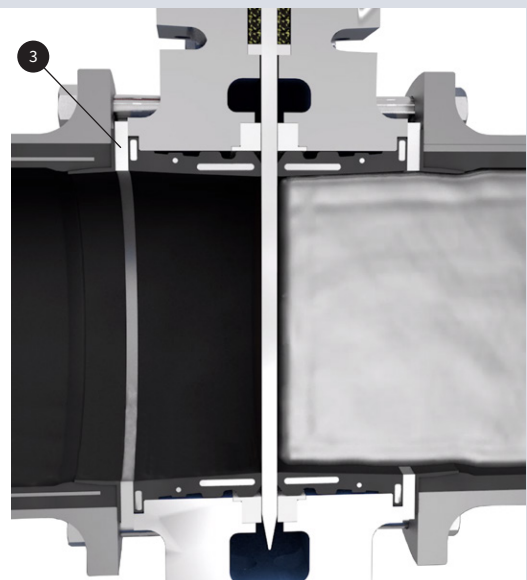
Stem and piston rod protection (2)

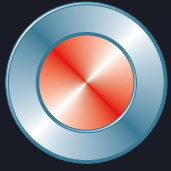
The slurry valves can be supplied with a bellows to protect the stem/piston rod from dirt and dust.



Load distribution rings (3)

When the pipes and flanges are rubber lined, they do not match up to inlet diameter of the valve or exceed dimension "C", it is recommended to assemble and install the valve with load distribution rings (LDR) to ensure long service life and reliable operation. The load distribution rings are supplied as standard in stainless steel EN 1.4301. Specifically DN 500 - DN 650 have load distribution rings integrated with the seat.





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