

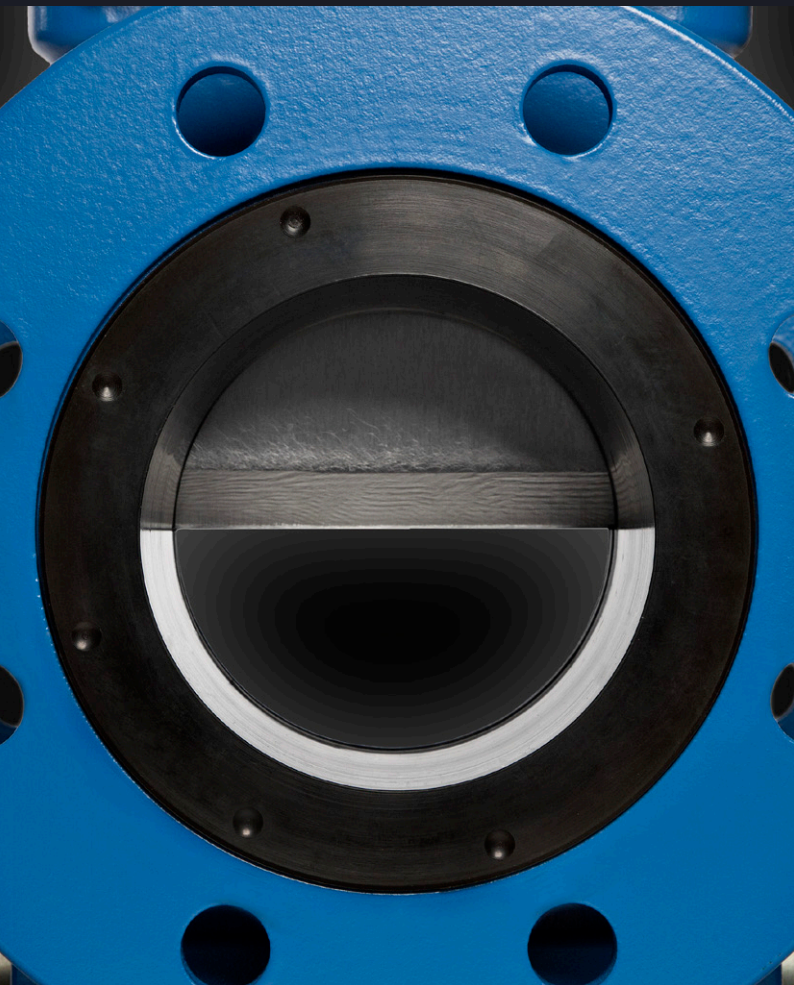
Stafsjö®
SINCE 1666

Knife gate valve SLF

Heavy duty push through slurry knife gate valve for the most abrasive and demanding mineral processing applications

Size range:

3" - 32" (DN 80 - DN 800)

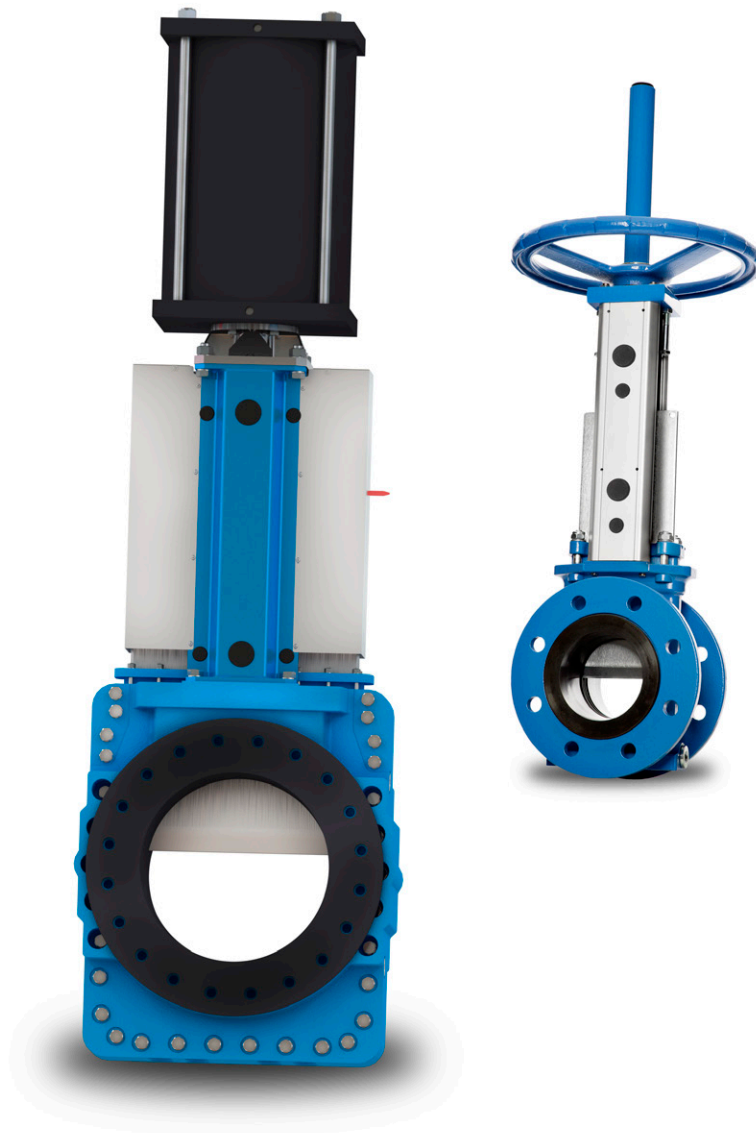


About SLF

This is a heavy duty push through slurry knife gate valve with superior flow characteristics, offering reliable and bi-directional shut-off performance in the most abrasive and demanding mineral processing applications.

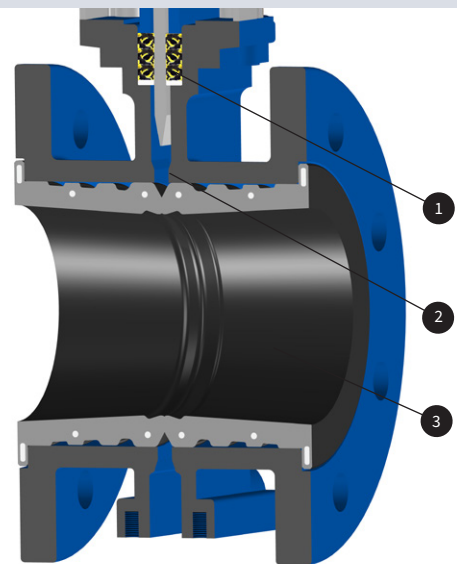
The SLF valve is modular designed and it can easily be customized with actuators and related automation accessories to different process conditions. The valve is also available with mechanical lock out. As standard, the SLF is supplied with a flanged robust precision machined ductile iron valve body up to 16" and larger sizes features heavy duty two-piece fully lugged versions. The strong duplex gate is special ground for reduction of friction when it cycles through the valve's rubber seats.

In addition to this slurry valve Stafsjö also offers the compact SLV up to 36" and two high pressure versions, the SLH and SLX, available in pressure class up to 725 psi (50 bar).



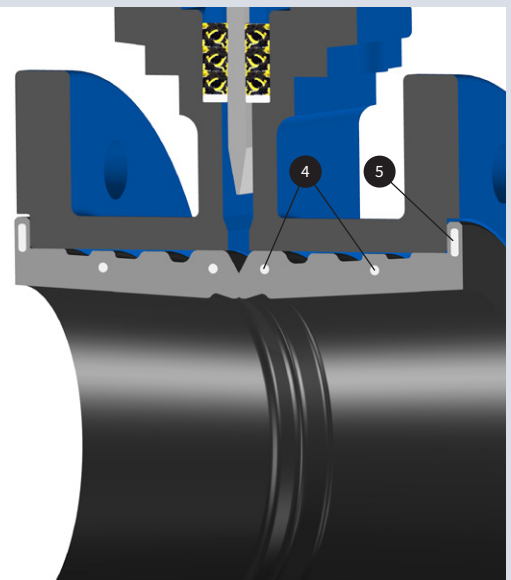
A precise gate alignment extend the service life

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



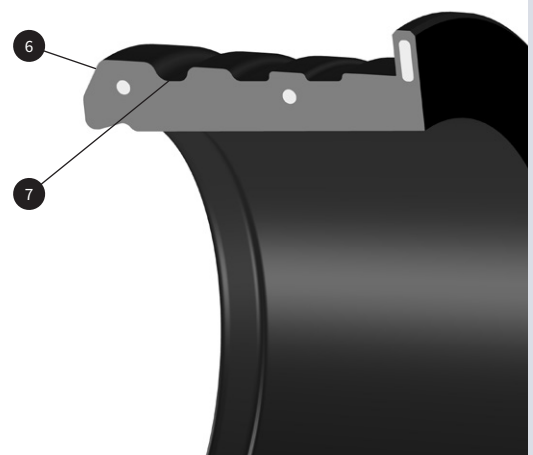
Reinforcements rings ensure stability and performance

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

Max working pressure at 68 °F		Max differential pressure at 68 °F	
Size	psi/bar	Size	psi/bar
3" - 24"	150/10	3" - 16"	150/10
30" - 32"	75/5	18" - 24"	90/6
		30" - 32"	75/5

Configurations

Standard

Size: 3" - 32"

Valve body: Ductile (Nodular) iron EN 5.3105

Gate: Duplex stainless steel EN 1.4462, S32205

Box packing: TwinPack with UHMW-PE scraper

Top works: Stainless steel tie rods encapsulated in aluminum beams up to DN 300 and coated steel EN 1.0038 beams on larger sizes, including stainless steel gate guards on automated valves.

Options

Valve body¹⁾

Ductile (Nodular) iron EN 5.3105

Gate material

Duplex stainless steel EN 1.4462, S32205

Seats

EPDM

Natural rubber

Box packings

TwinPack with scraper in UHMW-PE

Top works

Stainless steel tie rods encapsulated in aluminum beams

Steel EN 1.0038 ≥ NPS 14

Stainless steel beams

Actuators

Hand wheel with rising stem

Hand lever

Bevel gear

Double-acting pneumatic cylinders

Single-acting pneumatic cylinders

Electric actuators

Hydraulic actuator

Flange drillings

EN 1092 PN 10

ASME/ANSI B16.5 and B16.47 Class 150

AS 2129 Table D and E

Accessories

See p. 8 and our 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 with water at 68 °F before delivery in opened and closed position for the rated pressure class in bar 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.

Face-to-face dimensions

Stafsjö manufacturing standard.

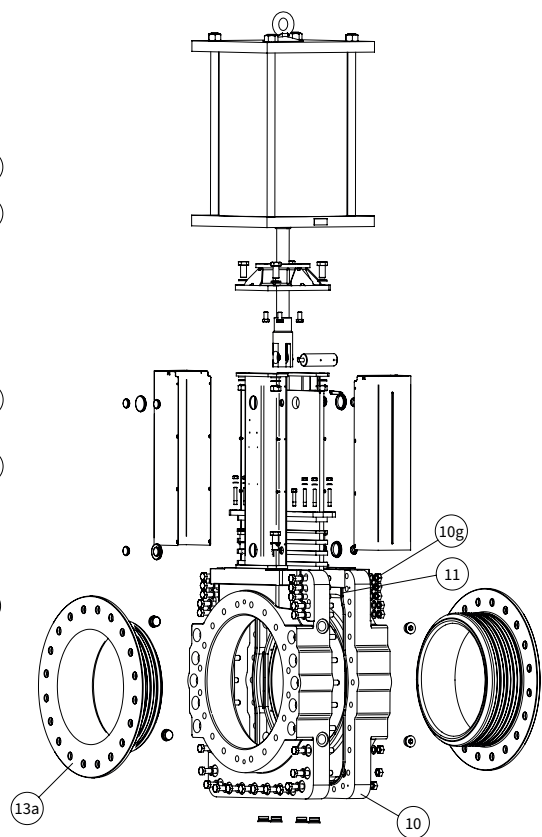
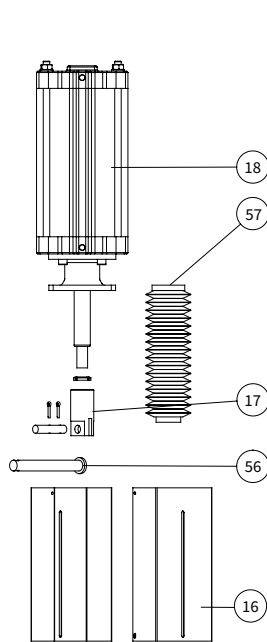
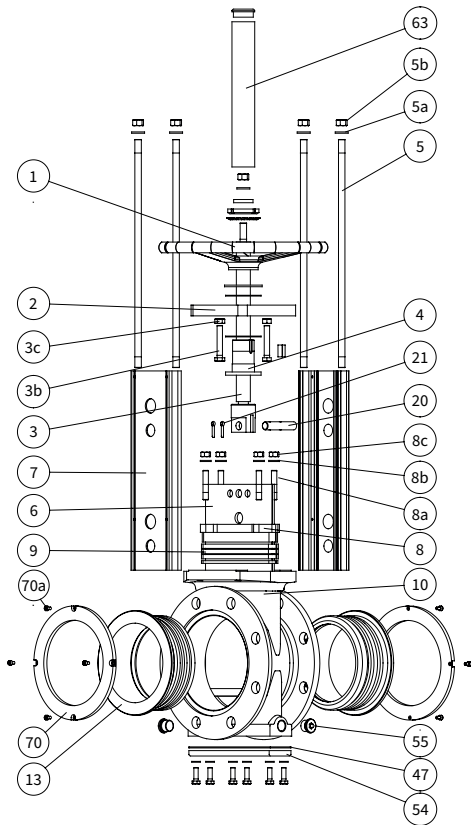
Corrosion protection

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/.

2) Up to 16" the SLF is supplied with a flanged valve body with purge ports: 3"-8": 1/2", 10"-16": 3/4". From 18" the SLF is supplied with a two-piece and fully lugged valve body with purge ports: 1 1/4".



Part list

Pos.	Part	Material
1	Hand wheel	Coated cast iron Ø 12" EN-JL1040, GG25 ≥ 16" EN-JL1030, GG20
2	Yoke	Coated steel EN 1.0038
3	Stem with gate clevis	Stainless steel EN 1.4305 ≥ 14": Gate clevis in coated carbon steel EN 1.0045
3b	Screw	Stainless steel A2
3c	Washer	Stainless steel A2
4	Stem nut	Brass
5	Tie rod	≤ 12": Stainless steel EN 1.4301
5a ³⁾	Washer	Stainless steel A2
5b ³⁾	Nut	Stainless steel A2
6	Gate	Duplex stainless steel EN 1.4462
7	Beam	≤ 12": Anodized aluminium ≥ 14": Coated steel EN 1.0038
8	Gland	Coated nodular iron EN 5.3105, WCB EN 1.0619
8a	Stud bolt	Stainless steel A2
8b	Washer	Stainless steel A2
8c	Nut	Stainless steel A2
9 ²⁾	Box packing	TwinPack with scraper in UHMW-PE
10	Valve body	Coated nodular iron EN 5.3105

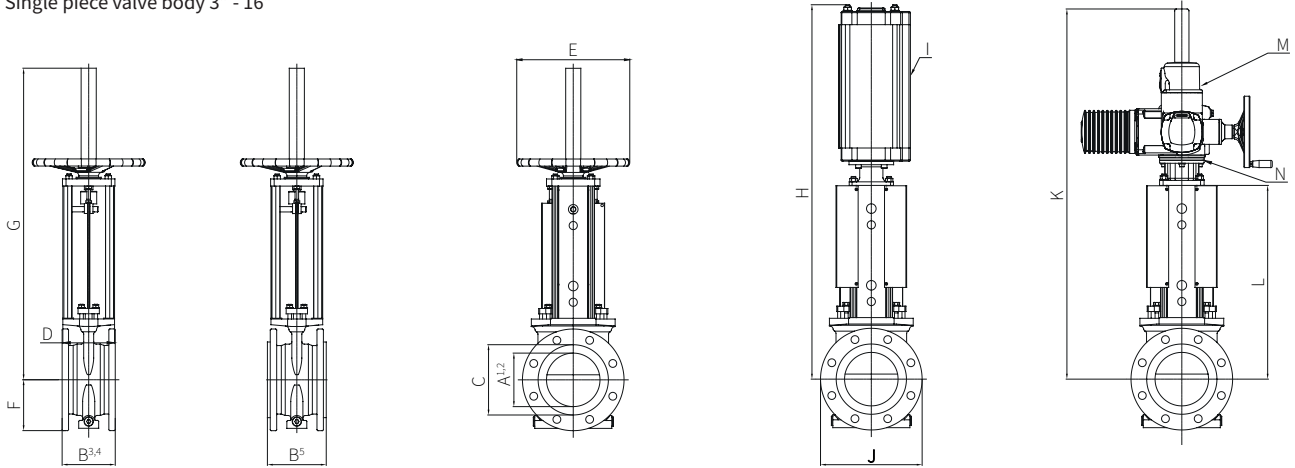
Pos.	Part	Material
11	Body gasket	FKM/FPM
10g	Valve body boltings	Zinc plated steel
13 ²⁾	Seat	Natural rubber or EPDM
13a ²⁾	Seat with integrated load distribution ring	Only on ≥ 20": Natural rubber or EPDM
16	Gate guards	Stainless steel EN 1.4301
17	Gate clevis	Stainless steel EN 1.4305 ≥ 14": Coated 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
47 ¹⁾	Gasket	Dixo 4000
54 ¹⁾	Bottom cover	Coated steel EN 1.0425
55	Plug	Zinc plated steel
57	Bellow	Artificial leather
62	Wedge	Stainless steel
63	Stemtube	Coated steel EN 1.0038
65	Gate indicator	Stainless steel EN 1.4436
70 ¹⁾	Load distribution rings	≤ 18": Stainless steel EN 1.4301
70a ¹⁾	Screws	Stainless steel A4

1) Optional accessories

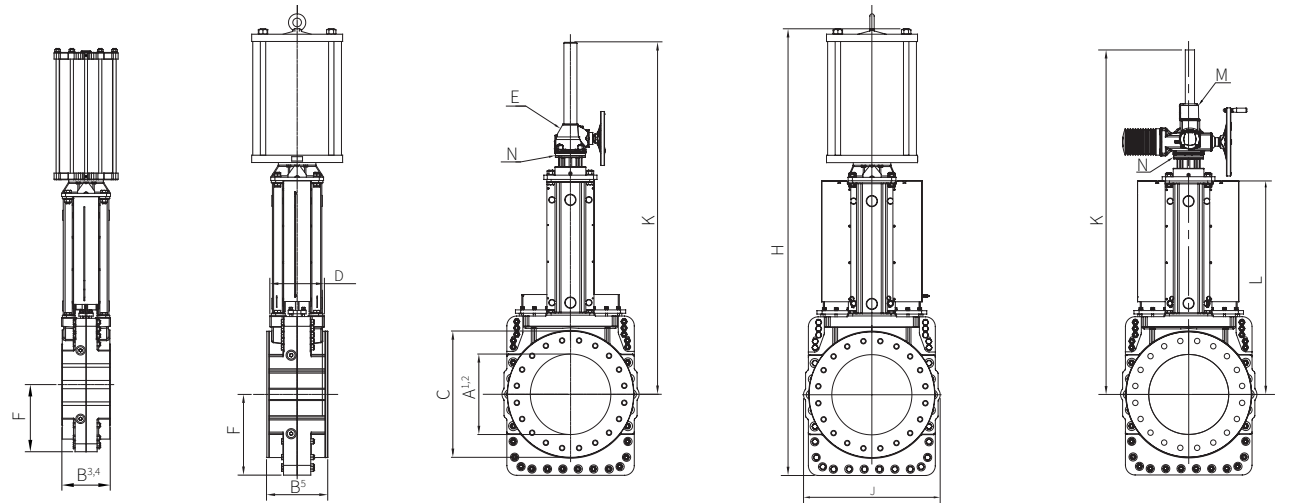
2) Recommended spare parts

3) ≥ 14" details are replaced by screws, washers and nuts.

Single piece valve body 3" - 16"



Two-piece valve body 18" - 32"



Main dimensions (inch)

Size	A ¹⁾	A ²⁾	B ³⁾	B ⁴⁾	B ⁵⁾	C	D	E	F	G	H	I ⁶⁾	J	K	L	M ⁷⁾	N ⁸⁾	lbs ⁹⁾
3	3.15	2.95	5.94	5.75	6.22	4.57	3.15	12.40	3.94	28.03	32.17	SC6.30	7.87	31.54	16.50	SA 07.2	F10/A	49
4	3.94	3.66	5.94	5.75	6.38	5.63	3.15	12.40	5.43	29.45	34.53	SC6.30	9.06	32.91	17.87	SA 07.6	F10/A	66
5	4.88	4.72	5.94	5.75	6.38	6.77	5.71	12.40	5.00	34.17	38.86	SC6.30	10.00	38.23	20.98	SA 10.2	F10/A	80
6	5.83	5.71	6.06	5.87	6.50	7.76	5.71	12.40	5.63	34.57	39.25	SC6.30	11.22	38.62	21.38	SA 10.2	F10/A	97
8	7.83	7.48	6.34	6.14	6.77	9.96	5.71	12.40	6.77	40.59	47.01	SC8.00	13.50	42.48	25.24	SA 10.2	F10/A	124
10	9.80	9.45	8.90	8.70	9.49	11.93	5.71	15.75	8.03	45.75	52.20	SC8.00	15.98	49.65	28.46	SA 10.2	F10/A	182
12	11.54	11.14	9.72	9.53	10.31	14.02	6.89	20.47	9.53	55.12	63.03	SC10.00	19.02	55.47	33.90	SA 10.2	F10/A	313
14	13.27	12.87	10.08	9.88	10.67	16.06	7.87	20.47	10.55	59.45	67.95	SC10.00	21.06	61.77	36.06	SA 10.2	F10/A	410
16	14.76	14.37	10.94	10.75	11.54	18.27	7.87	25.00	11.81	64.96	73.58	SC12.60	23.23	66.97	39.29	SA 14.2	F14/A	502
18	16.97	15.79	12.05	11.89	12.83	20.24	12.20	GK14.6	16.77	-	83.94	PA16.00	29.96	92.13	46.93	SA 14.6	F14/A	1654
20	18.50	18.11	-	-	14.13	29.13	12.60	GK14.6	18.62	-	86.30	PA18.00	31.54	79.49	49.37	SA 14.6	F14/A	2788
24	22.44	22.05	-	-	14.61	33.46	15.20	GK16.2	20.47	-	*	*	39.92	92.17	56.77	SA 16.2	F16/A	3722
30	28.11	27.72	-	-	15.51	44.09	17.01	GK25.2	25.00	-	*	*	49.61	123.43	69.06	SA 25.2	F25/A	4409
32	30.08	29.69	-	-	15.51	44.09	17.01	GK25.2	25.00	-	*	*	49.61	125.39	69.06	SA 25.2	F25/A	4629

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). When the pipes and flanges are rubber lined or when they do not match up to inlet diameter of the valve or exceed dimension "C" by min. 0.39" up to SLF 16" and min. 0.79" on SLF 18", it is recommended to assemble and install the valve with load distribution rings to ensure long service life and reliable operation. Specifically SLF 20" - 32" have load distribution rings integrated with the seat.

6) Recommended sizing of double-acting pneumatic cylinder type SC at normal operation with 75 psi (5 bar) air supply pressure. For other operating conditions, contact Stafsjö or your local representative for advice.

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

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

9) Weight in lbs for SLF including hand wheel with rising stem, ≥ 18" prepared for bevel gear or electric actuator.

* On request.

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

Flange drilling according to EN 1092 PN 10

Size	3	4	5	6	8	10	12	14	16	18	20	24	30	32
Bolt circle diameter (inch)	6.30	7.09	8.27	9.45	11.61	13.78	15.75	18.11	20.28	22.24	24.41	28.54	35.43	37.40
Number of throughgoing holes/side	8	8	8	8	8	12	12	16	16	-	-	-	-	-
Size Ø of throughgoing holes	0.71	0.71	0.71	0.87	0.87	0.87	0.87	0.87	1.02	-	-	-	-	-
Number of tapped holes/side	-	-	-	-	-	-	-	-	-	20	20	20	24	24
Bolt size	-	-	-	-	-	-	-	-	-	M24	M24	M27	M27	M30
Depth of tapped holes (inch)	-	-	-	-	-	-	-	-	-	1.77	1.85	1.85	1.85	1.85

Flange drilling according to ASME/ANSI B16.5 and 16.47 Class 150

Size	3	4	5	6	8	10	12	14	16	18	20	24	30	32
Bolt circle diameter (inch)	6.00	7.50	8.50	9.50	11.75	14.25	17.00	18.75	21.25	22.75	25.00	29.50	35.98	38.50
Number of throughgoing holes/side	4	8	8	8	8	12	12	12	16	-	-	-	-	-
Size Ø of throughgoing holes	0.71	0.71	0.87	0.87	0.87	1.02	1.02	1.18	1.18	-	-	-	-	-
Number of tapped holes/side	-	-	-	-	-	-	-	-	-	16	20	20	28	28
Bolt size (UNC)	-	-	-	-	-	-	-	-	-	1 1/8"	1 1/8"	1 1/4"	1 1/4"	1 1/2"
Depth of tapped holes (inch)	-	-	-	-	-	-	-	-	-	1.77	1.85	1.85	1.85	1.85

Flänsborrning enligt AS 2129 Table D

Size	3	4	5	6	8	10	12	14	16	18	20	24	30	32
Bolt circle diameter (inch)	5.75	7.01	8.27	9.25	11.50	14.02	15.98	18.50	20.51	22.99	25.24	29.76	36.50	38.74
Number of throughgoing holes/side	4	4	8	8	8	8	12	12	12	-	-	-	-	-
Size Ø of throughgoing holes	0.71	0.71	0.71	0.71	0.71	0.87	0.87	1.02	1.02	-	-	-	-	-
Number of tapped holes/side	-	-	-	-	-	-	-	-	-	12	16	16	20	20
Bolt size	-	-	-	-	-	-	-	-	-	M24	M24	M27	M30	M33
Depth of tapped holes (inch)	-	-	-	-	-	-	-	-	-	1.77	1.85	1.85	1.85	1.85

Flänsborrning enligt AS 2129 Table E

Size	3	4	5	6	8	10	12	14	16	18	20	24	30	32
Bolt circle diameter (inch)	5.75	7.01	8.27	9.25	11.50	14.02	15.98	18.50	20.51	22.99	25.24	29.76	36.50	38.74
Number of throughgoing holes/side	4	8	8	8	8	12	12	12	12	-	-	-	-	-
Size Ø of throughgoing holes	0.71	0.71	0.71	0.87	0.87	0.87	1.02	1.02	1.02	-	-	-	-	-
Number of tapped holes/side	-	-	-	-	-	-	-	-	-	16	16	16	20	20
Bolt size	-	-	-	-	-	-	-	-	-	M24	M24	M30	M33	M33
Depth of tapped holes (inch)	-	-	-	-	-	-	-	-	-	1.77	1.85	1.85	1.85	1.85

Lockout pin (1)

For security purposes, 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.



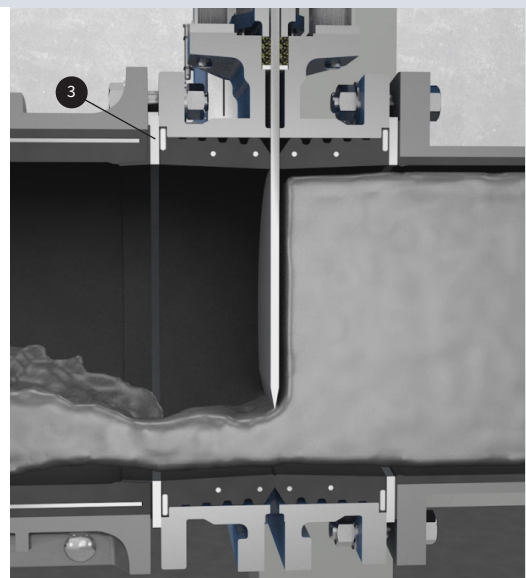
Stem and piston rod protection (2)

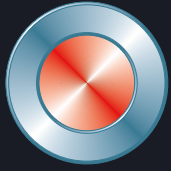
The slurry valves can be supplied with a bellows to protect the stem/piston rod from dirt and dust.



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 SLF 20" - 32" have load distribution rings integrated with the seat.





Stafsjö[®]
SINCE 1666

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