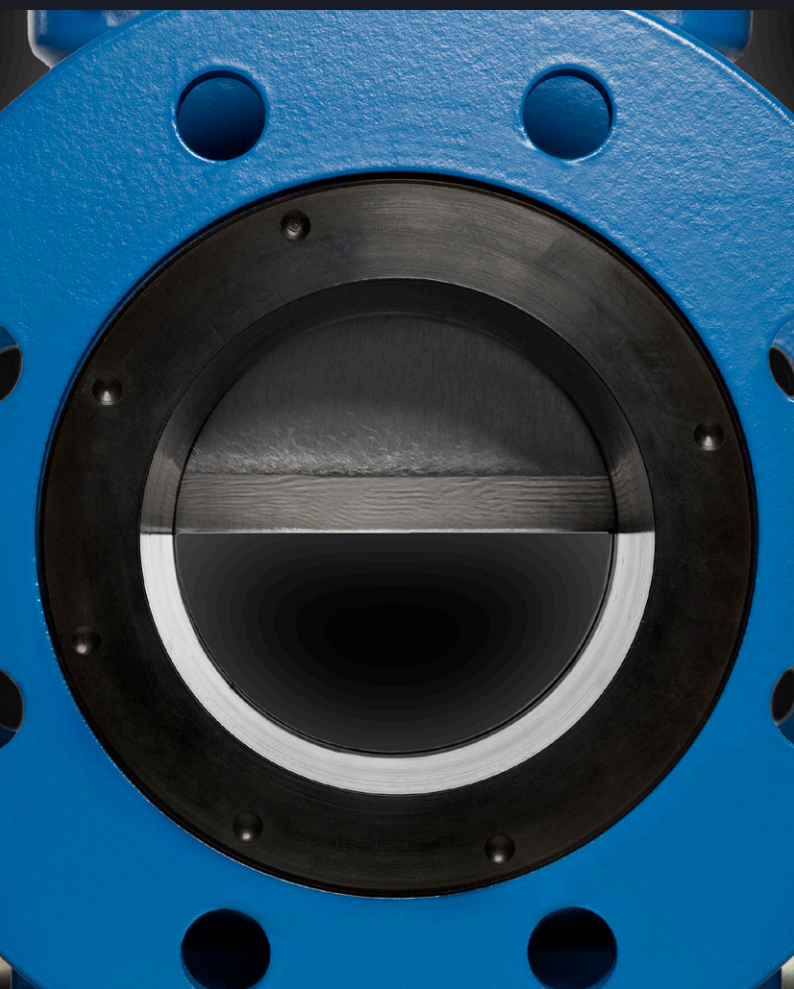


Knife gate valve SLF

Heavy duty push through slurry knife gate valve

Size range:
DN 80 - DN 600 (3" - 24")



About SLF

Stafsjö's heavy duty SLF is a 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.

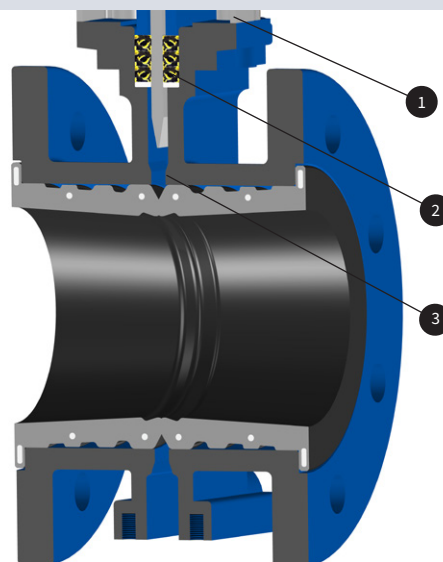
The SLF valve is modular designed and it can easily be customized with actuators and related automation accessories to different process conditions. The valve is also available with mechanical lock out. As standard, the SLF is supplied with a flanged robust precision machined nodular iron valve body up to DN 400 and larger sizes features heavy duty two-piece fully lugged versions. The strong duplex gate is special grinded with purpose of reducing the friction when it cycles through the valve's rubber seats.

In addition to this slurry valve Stafsjö also offers the compact SLV up to DN 900 and two high pressure versions, the SLH and SLX, available in pressure class up to 50 bar.



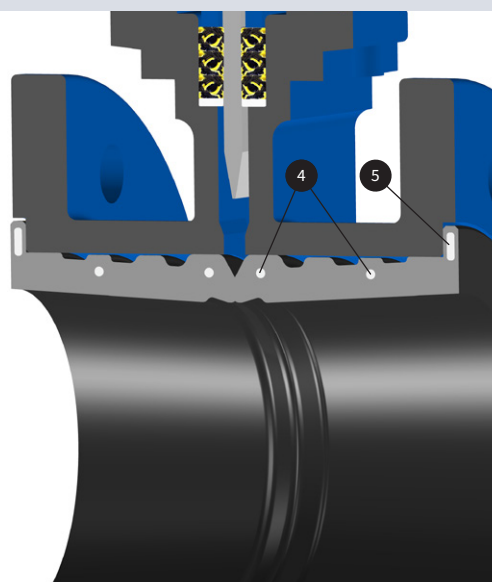
A precise gate alignment extend the service life

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



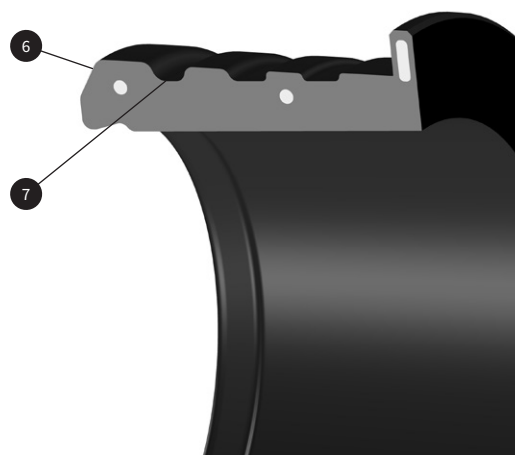
Reinforcements rings ensure stability and performance

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

Max working pressure at 20 °C		Max differential pressure at 20 °C	
DN	bar	DN	bar
80 - 600	10	80 - 400	10
		450 - 600	6

Configurations

Standard

Sizes: DN 80 - DN 600

Valve body: 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 body²⁾

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 ≥ DN 350

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 Class 150 series A

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 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.

Face-to-face dimensions

Stafsjö manufacturing standard.

Corrosion protection

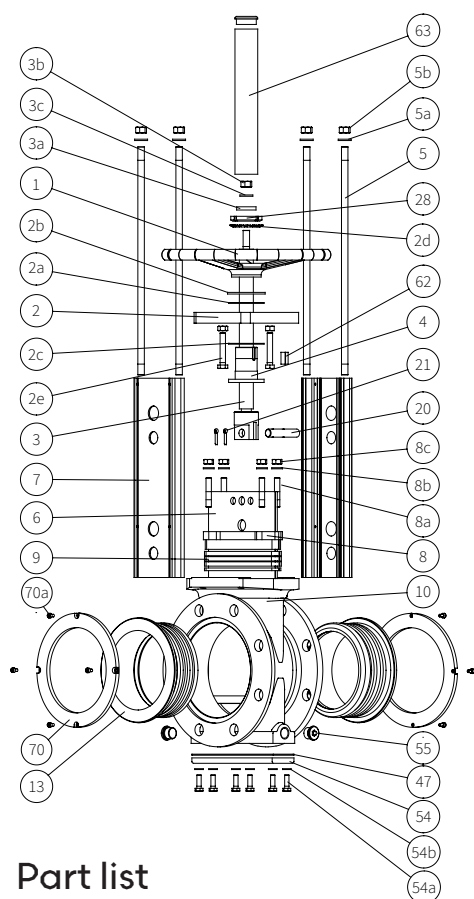
Painted valve parts fulfill in applicable areas corrosion protection against environment according EN ISO 12944, corrosivity category C3. Other paint systems can be offered on request.

Service temperature

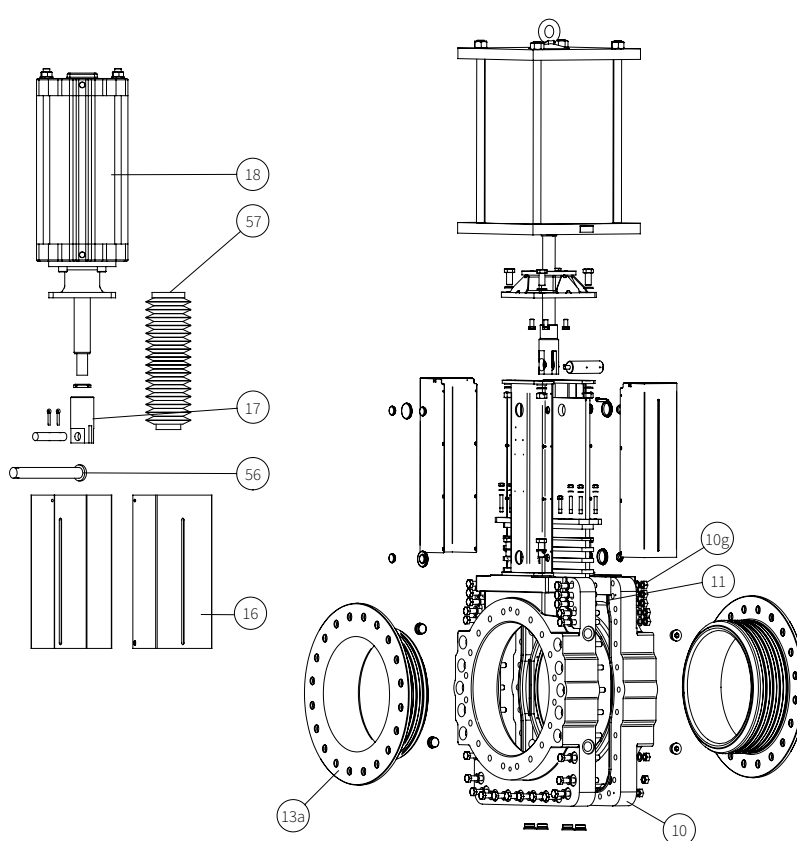
Information to determine minimum and maximum temperature for the knife gate valve is available on stafsjo.com/support/temperatures/.

2) Up to DN 400 SLF is supplied with a flanged valve body with purge ports: DN 80-DN 200: 1/2", DN 250-DN 400: 3/4". From DN 450 SLF is supplied with a two-piece and fully lugged valve body with purge ports: 1 1/4".

Single piece valve body: DN 80 - DN 400



Two-piece valve body: DN 450 - DN 600



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 EN 1.0038
2a	Bearing	Iglidur XTM
2b	Slide washer	Brass
2c	Bearing	Iglidur XTM
2d	Washer	Stainless steel EN 1.4305
2e	Screw	Zinc plated steel
3	Stem with gate clevis	Stainless steel EN 1.4305 ≥ DN 350: Gate clevis in coated carbon steel EN 1.0045
3a	Stop washer	Stainless steel EN 1.4301
3b	Screw	Stainless steel A2
3c	Washer	Stainless steel A2
4	Stem nut	Brass
5	Tie rod	≤ DN 300: 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	≤ DN 300: Anodized aluminium ≥ DN 350: 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

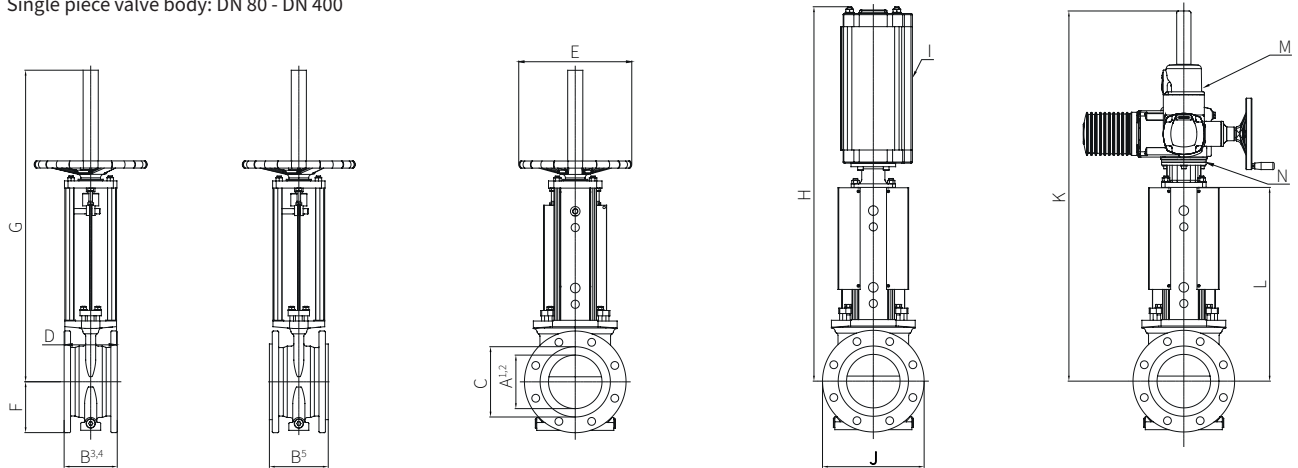
Pos.	Part	Material
10	Valve body	Coated nodular iron EN 5.3105
11	Body gasket	FKM/FPM
10g	Valve body boltings	Zinc plated steel
13 ²⁾	Seat	Natural rubber or EPDM
13a ²⁾	Seat with integrated load distribution ring	Only on ≥ DN 500: Natural rubber or EPDM
16	Gate guards	Stainless steel EN 1.4301
17	Gate 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
47 ¹⁾	Gasket	Dixo 4000
54 ¹⁾	Bottom cover	Coated steel EN 1.0425
54a ¹⁾	Screw	Stainless steel A2
54b ¹⁾	Washer	Stainless steel A2
55	Plug	Zinc plated steel
57	Bellow	Artificial leather
56 ¹⁾	Locking pin	Stainless steel EN 1.4301
62	Wedge	Stainless steel
63	Stemtube	Coated steel EN 1.0038
65	Gate indicator	Stainless steel EN 1.4436
70 ¹⁾	Load distribution rings	≤ DN 450: Stainless steel EN 1.4301
70a ¹⁾	Screws	Stainless steel A4

1) Optional accessories

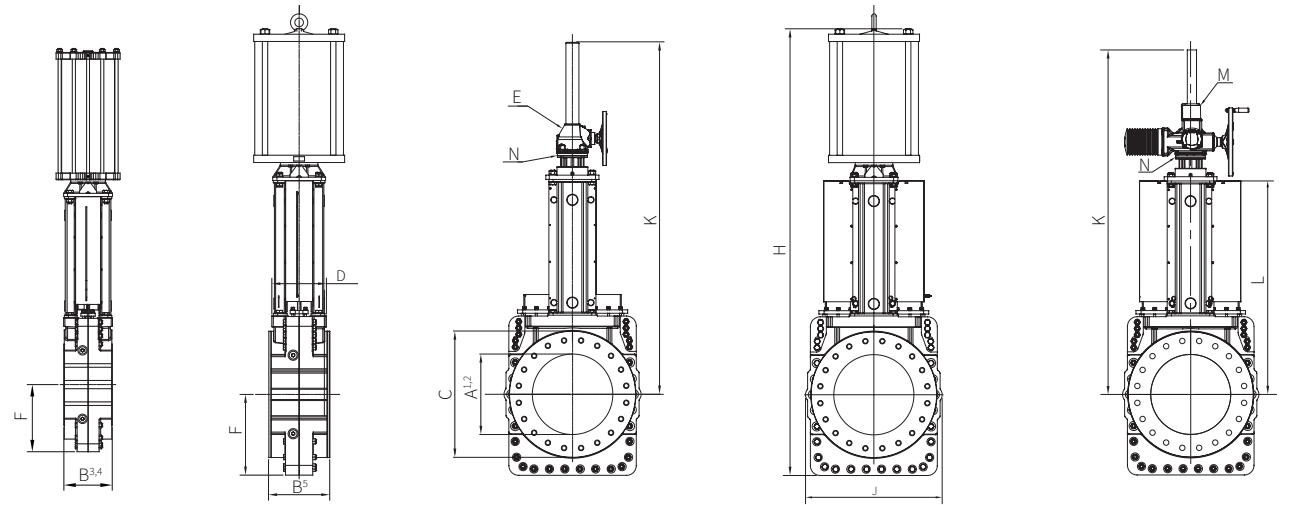
2) Recommended spare parts

3) ≥ DN 350 details are replaced by screws, washers and nuts.

Single piece valve body: DN 80 - DN 400



Two-piece valve body: DN 450 - DN 600



Main dimensions (mm)

DN	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⁾	kg ⁹⁾
80	80	75	151	146	158	116	80	315	100	712	817	SC160	200	801	419	SA 07.2	F10/A	22
100	100	93	151	146	162	143	80	315	115	748	877	SC160	230	836	454	SA 07.6	F10/A	30
125	124	120	151	146	162	172	145	315	127	868	987	SC160	254	971	533	SA 10.2	F10/A	36
150	148	145	154	149	165	197	145	315	143	878	997	SC160	285	981	543	SA 10.2	F10/A	44
200	199	190	161	156	172	253	145	315	172	1031	1194	SC200	343	1079	641	SA 10.2	F10/A	56
250	249	240	226	221	241	303	145	400	204	1162	1326	SC200	406	1261	723	SA 10.2	F10/A	83
300	293	283	247	242	262	356	175	520	242	1400	1601	SC250	483	1409	861	SA 10.2	F10/A	142
350	337	327	256	251	271	408	200	520	268	1510	1726	SC250	535	1569	916	SA 10.2	F10/A	186
400	375	365	278	273	293	464	200	635	300	1650	1869	SC320	590	1701	998	SA 14.2	F14/A	228
450	431	401	306	302	326	514	310	GK14.6	426	-	2132	PA400	761	2340	1192	SA 14.6	F14/A	750
500	470	460	-	-	359	740	320	GK14.6	473	-	2192	PA450	801	2019	1254	SA 14.6	F14/A	1265
600	570	560	-	-	371	850	386	GK16.2	520	-	2288	PA450	1014	2341	1442	SA 16.2	F16/A	1688

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. 10 mm up to DN 400 and min. 20 mm on 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 600 have load distribution rings integrated with the seat.

6) 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.

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 according to ISO 5210 connection A (rising stem).

9) Weight in kg for valve including hand wheel with rising stem, ≥ DN 450 prepared for bevel gear or electric actuator.

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

Flange drilling according to EN 1092 PN 10

DN	80	100	125	150	200	250	300	350	400	450	500	600
Bolt circle diameter (mm)	160	180	210	240	295	350	400	460	515	565	620	725
Number of throughgoing holes/side	8	8	8	8	8	12	12	16	16	-	-	-
Size of throughgoing holes	Ø18	Ø18	Ø18	Ø22	Ø22	Ø22	Ø22	Ø22	Ø26	-	-	-
Number of tapped holes/side	-	-	-	-	-	-	-	-	-	20	20	20
Bolt size	-	-	-	-	-	-	-	-	-	M24	M24	M27
Depth of tapped holes (mm)	-	-	-	-	-	-	-	-	-	45	47	47

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

DN	80	100	125	150	200	250	300	350	400	450	500	600
Bolt circle diameter (mm)	152,4	190,5	215,9	241,3	298,5	362	431,8	476,3	539,8	577,9	635	749,3
Number of throughgoing holes/side	4	8	8	8	8	12	12	12	16	-	-	-
Size of throughgoing holes	Ø18	Ø18	Ø22	Ø22	Ø22	Ø26	Ø26	Ø30	Ø30	-	-	-
Number of tapped holes/side	-	-	-	-	-	-	-	-	-	16	20	20
Bolt size (UNC)	-	-	-	-	-	-	-	-	-	1 1/8"	1 1/8"	1 1/4"
Depth of tapped holes (mm)	-	-	-	-	-	-	-	-	-	45	47	47

Flänsborrning enligt AS 2129 Table D

DN	80	100	125	150	200	250	300	350	400	450	500	600
Bolt circle diameter (mm)	146	178	210	235	292	356	406	470	521	584	641	756
Number of throughgoing holes/side	4	4	8	8	8	8	12	12	12	-	-	-
Size of throughgoing holes	Ø18	Ø18	Ø18	Ø18	Ø18	Ø22	Ø22	Ø26	Ø26	-	-	-
Number of tapped holes/side	-	-	-	-	-	-	-	-	-	12	16	16
Bolt size	-	-	-	-	-	-	-	-	-	M24	M24	M27
Depth of tapped holes (mm)	-	-	-	-	-	-	-	-	-	45	47	47

Flänsborrning enligt AS 2129 Table E

DN	80	100	125	150	200	250	300	350	400	450	500	600
Bolt circle diameter (mm)	146	178	210	235	292	356	406	470	521	584	641	756
Number of throughgoing holes/side	4	8	8	8	8	12	12	12	12	-	-	-
Size of throughgoing holes	Ø18	Ø18	Ø18	Ø22	Ø22	Ø22	Ø26	Ø26	Ø26	-	-	-
Number of tapped holes/side	-	-	-	-	-	-	-	-	-	16	16	16
Bolt size	-	-	-	-	-	-	-	-	-	M24	M24	M30
Depth of tapped holes (mm)	-	-	-	-	-	-	-	-	-	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 bellow 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 600 have load distribution rings integrated with the seat.

