



XL4 penstock (Seal on the plate)

made of stainless steel

FITTING WITH RECTANGULAR OPENING, 4-SIDED SEALING

Opening size and pressure stage

Opening size 150 x 150 mm to 4000 x 4000 mm
Selectable pressure level on both sides: 2-15 mWS

Frame and plate

- Supplied as pre-assembled fitting which does not require assembly, setting and adjusting works up to 1200 mm *(multiple frame as of 1300 mm)
- Design as self-supporting frame construction made of stainless steel with integrated spindle bearing
- Welded frame and slide panel made of stainless steel, optimised for maximum safety and durability by means of FEM certification
- Bridge screwed on, thereby all wear parts (spindle, spindle nut, spindle bearing and seal) can be exchanged in the installed condition without dismantling the fitting from the structure
- Up to opening size 1200 mm:
Integrated closing wedges made of stainless steel, in the penstock plate made of polyethylene (PE-UHMW)
From opening size 1300 mm:
Integrated closing wedges made of seawater- and wastewater-resistant bronze, in the stainless steel penstock plate
- Penstock for embedding in concrete: Equipped with setting sleeve for aligning the penstock in the channel recess
- No crack in the base of the embedded penstock
- Welding certificate in accordance with DIN EN 1090-2 EXC2

Material

- 1.4301 (304) / 1.4404 (316L) / 1.4410 (507) / 1.4462 (318LN) / 1.4539 (904L) / 1.4571 (316Ti) / A36-hot-dip galvanized

Spindle

- Polyethylene spindle protection
- Spindle with rolled trapezoidal thread made of stainless steel from opening dimensions 150-1600 mm
- Spindle with whirled trapezoidal thread made of stainless steel from opening dimensions 1700-4000 mm
- Single spindle design or twin spindle design
- Self-cleaning spindle nut made of seawater- and wastewater-resistant bronze with cleaning recess
Optional: Spindle outside the medium rising or non-rising (easier to lubricate)

Seal

- Assembled on the sliding plate, note profile seal with hot vulcanised (minimum temperature 180° C) UNO corner connections made from wastewater and UV resistant EPDM or oil-resistant NBR
- Easy replacement of the seal possible during operation, as the slide plate can be pulled upwards
- Factory pre-assembled seal against the wall made of solid, wastewater-resistant cellular rubber on the seal support with maximum pressure stage 6 mwc on both sides
- Seal line 50 mm larger than the masonry opening to prevent leaks on masonry openings



XL4 penstock 2000 x 2000 mm



YOUR ADVANTAGES

- **READY FOR IMMEDIATE USE**
Penstock is delivered ready for assembly*
- **SEAL ON PENSTOCK PLATE**
Exchangeable during operation by pulling out the entire penstock plate
- **PERFECT CORROSION PROTECTION**
All welded stainless steel parts from our own pickling plant
- **EX-PROTECTION**
Proven to comply with ATEX directive 2014/35/EU

Leak tightness class

- Leak rate better than DIN EN 19569; Part 4 Table 1:
 - Pressure on front side: max. 1% of $0,021 \cdot s^{-1} \cdot m^{-1}$ (Leak tightness class 5)
 - Pressure on rear side: max. 5% of: $0,02$ to $0,051 \cdot s^{-1} \cdot m^{-1}$ (Leak tightness class 4)
- Alternative:
 - Leak rate on both sides according to DIN EN 12266-2, Part 2, Table A.5: Leak rate C.

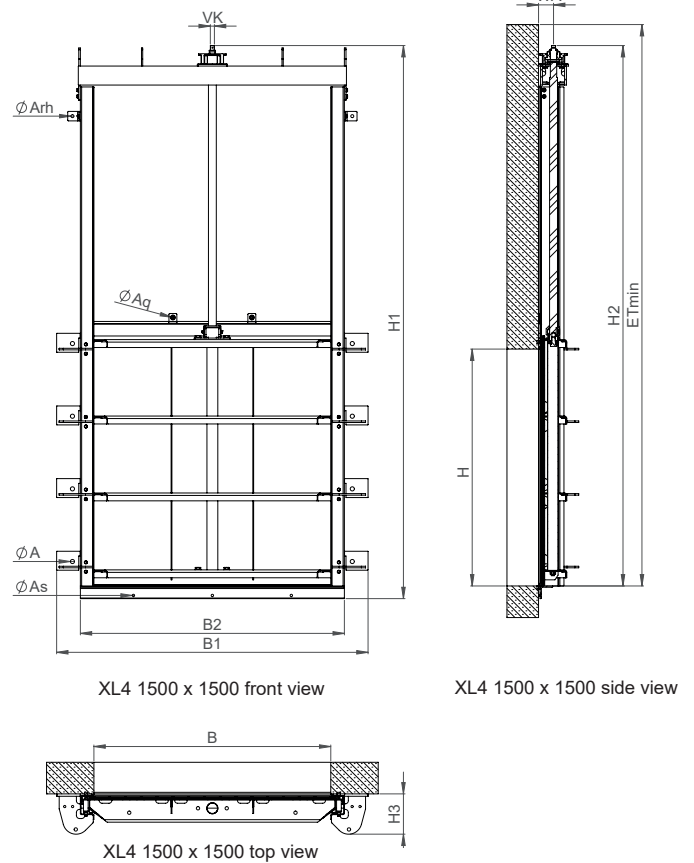
Mounting

- Concreted into recess
- Dowelling to the wall in front of the opening
- Dowelling laterally on the wall
- Dowelling onto the base

Actuation of the penstock

- Stainless steel handwheel on transverse yoke
- Lateral actuation with BÜSCH stainless steel gearbox with stainless steel handwheel or stainless steel crank handle
- BÜSCH All-in-one control key via square cap
- BÜSCH MOBITORQ electric or accu mobile actuators via square stem cap
- BEAservo stainless steel electric actuator assembled on transverse yoke
 - Optional: with BÜSCH weather protection roof
- Pneumatic actuation assembled on transverse yoke
- Hydraulic actuation assembled on transverse yoke

Dimensional drawing



Dimensions in mm

B x H	150 x 150	200 x 200	250 x 250	300 x 300	400 x 400	500 x 500	600 x 600	700 x 700	800 x 800	900 x 900	1000 x 1000	1200 x 1200
B1	350	400	450	500	600	740	840	1058	1158	1258	1358	1672
B2	210	260	310	360	460	600	700	820	920	1020	1120	1372
H1	493	593	743	793	1008	1240	1140	1745	1945	2145	2345	2902
H2	448	548	698	748	948	1195	1395	1685	1885	2085	2285	2822
H3	ca. 90	ca. 90	ca. 90	ca. 90	ca. 90	ca. 130	ca. 130	ca. 192	ca. 192	ca. 192	ca. 192	ca. 192
ET min.	508	608	758	808	1008	1255	1455	1745	1945	2145	2345	2882
WA	47	50	50	50	50	50	50	67	67	67	67	67
Rev./stroke	31	41	51	61	81	101	121	141	161	181	201	172
VK	□16	□16	□16	□16	□16	□16	□16	□26	□26	□26	□26	□26
A	"2x Ø13 M10x130"				"4x Ø13 M10x130"			"4x Ø19 M16x190"		"6x Ø19 M16x190"		
As	-	-	-	-	-	-	-	-	-	-	"1x Ø13 M10x130"	
Aq	-	-	-	-	-	-	-	-	-	-	"2x Ø10 M8x90"	
Arh	-	-	-	-	-	-	-	"2x Ø10 M8x90"				

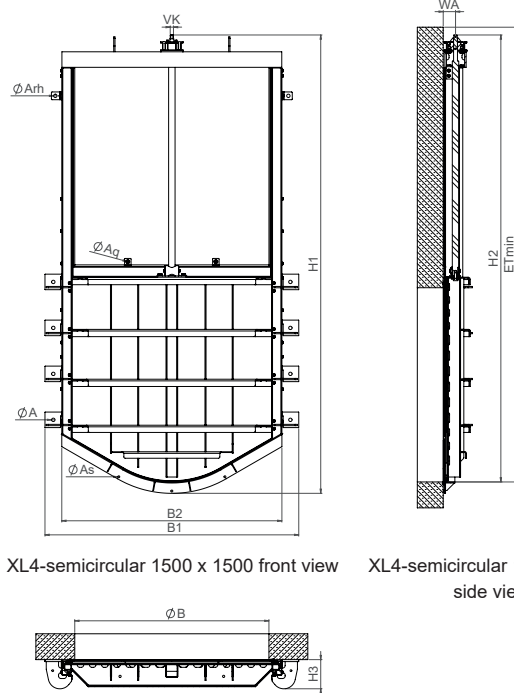
B x H	1300 x 1300	1400 x 1400	1600 x 1600	1800 x 1800	2000 x 2000	2200 x 2200	2400 x 2400	2600 x 2600	2800 x 2800	3000 x 3000
B1	1772	1872	2072	2272	2472	2672	2872	3072	3272	3472
B2	1472	1572	1772	1972	2172	2372	2572	2772	2972	3172
H1	3102	3302	3702	4102	4502	4902	5302	5702	6102	6502
H2	3022	3222	3622	4022	4422	4822	5222	5622	6022	6422
H3	ca. 245	ca. 245	ca. 245	ca. 265	ca. 265	ca. 265	ca. 265	ca. 265	ca. 265	ca. 265
ET min.	3082	3282	3682	4082	4482	4882	5282	5682	6082	6482
WA	95	95	95	95	95	130	130	130	130	130
Rev./stroke	163	176	201	201	223	221	241	261	281	281
VK	□26	□26	□26	□30	□30	□30	□35	□35	□60	□60
A	"8x Ø26 M20x260"			"10x Ø26 M20x260"						
As	"3x Ø15 M12x160"				"4x Ø15 M12x160"					
Aq	"2x Ø10 M8x90"			"4x Ø10 M8x90"						
Arh	"2x Ø13 M10x130"			"2x Ø26 M20x260"						

Dimensions for other nominal sizes on request.

XL4-semicircular VARIANT* FROM XL4

PENSTOCK WITH SEMICIRCULAR OPENING, 4-SIDED SEALING

Dimensional drawing



XL4-semicircular 1500 x 1500 front view

XL4-semicircular 1500 x 1500 side view

XL4-semicircular 1500 x 1500 top view

SPECIAL FEATURES

- **ROUND BOTTOM**
For easy concreting into the channel, water flow at the same level

*STANDARD DATA: please refer XL4 penstock



XL4-semicircular 2100 x 2100 mm with e-actuator

Dimensions in mm

DN	150	200	250	300	350	400	500	600	700	800	900	1000
B1	390	440	490	540	590	640	740	840	1058	1158	1258	1358
B2	250	300	350	400	450	500	600	700	820	920	1020	1120
H1	545	593	720	830	924	1042	1235	1435	1750	1954	2154	2355
H2	504	554	688	792	888	1002	1196	1395	1684	1888	2088	2287
H3	ca. 130	ca. 130	ca. 130	ca. 130	ca. 130	ca. 130	ca. 130	ca. 130	ca. 192	ca. 192	ca. 192	ca. 192
ET min.	564	614	748	852	948	1062	1256	1455	1744	1948	2148	2347
WA	45	45	50	50	50	50	50	50	65	65	65	65
Rev./stroke	31	41	51	81	81	81	101	121	141	161	181	201
VK	□16	□16	□16	□16	□16	□16	□16	□16	□26	□26	□26	□26
A	"2x Ø13 M10x130"			"4x Ø13 M10x130"				"4x Ø19 M16x190"		"6x Ø19 M16x190"		
As	-	-	-	-	-	-	-	-	"3x Ø13 M10x130"			
Aq	-	-	-	-	-	-	-	-	"2x Ø10 M8x90"			
Arh	-	-	-	-	-	-	-	-	"2x Ø13 M10x130"			

DN	1200	1300	1400	1600	1800	2000	2200	2400	2600	2800	3000
B1	1558	1658	1758	1958	2300	2500	2700	2900	3100	3300	3500
B2	1320	1420	1520	1720	2000	2200	2400	2600	2800	3000	3200
H1	2752	2942	3142	3830	4253	4522	4914	5307	5722	6164	6606
H2	2656	2876	3076	3751	4174	4442	4834	5226	5642	6084	6526
H3	ca. 192	ca. 192			ca. 265	ca. 265	ca. 265	ca. 265	ca. 265	ca. 265	ca. 265
ET min.	2716	2936	3136	3811	4234	4502	4894	5286	5702	6144	6586
WA	65	95	95	95	95	95	130	130	130	130	130
Rev./stroke	172	163	176	201	201	223	221	241	261	281	281
VK	□26	□26	□26	□26	□40	□40	□30	□35	□35	□60	□60
A	"6x Ø19 M16x190"	"8x Ø26 M20x260"			"10x Ø26 M20x260"	"12x Ø26 M20x260"		On demand			
As	"3x Ø13 M10x130"	"3x Ø15 M12x160"			"5x Ø15 M12x160"						
Aq	"2x Ø10 M8x90"			"4x Ø10 M8x90"							
Arh	"2x Ø13 M10x130"			"2x Ø26 M20x260"							

Dimensions for other nominal sizes on request.