



XL4 penstock round base (Seal on the plate)

made of stainless steel or steel

WITH SEMICIRCULAR OPENING, 4-SIDED SEALING

Opening dimensions and pressure level

Opening dimensions 150 x 150 mm to 4000 x 4000 mm

Selectable pressure level on both sides: 2-15 mwc

Standard pressure level for sizes 150 x 150 mm to 1200 x 1200 mm on both sides: 6 mwc

Higher pressure levels 7-15 mwc: available on request

Frame and plate

- Supplied as pre-assembled penstock which does not require assembly, setting and adjusting works up to 1200 mm
- Design as self-supporting frame construction made of stainless steel with integrated spindle bearing
- Welded frame and penstock plate 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 penstock from the structure
- Penstock for embedding in concrete: Equipped with adjustment sleeves for aligning the penstock in the channel recess
- No offset in rear to front invert level on the embedded penstock
- Welding certificate in accordance with DIN EN 1090-2 EXC2

Material

- Stainless steel 1.4301 (304) / 1.4404 (316L) / 1.4410 (A182 F53) / 1.4462 (A182 F51) / Steel 1.0038 (S235JR/A36) hot-dip galvanised or epoxy coated

Spindle

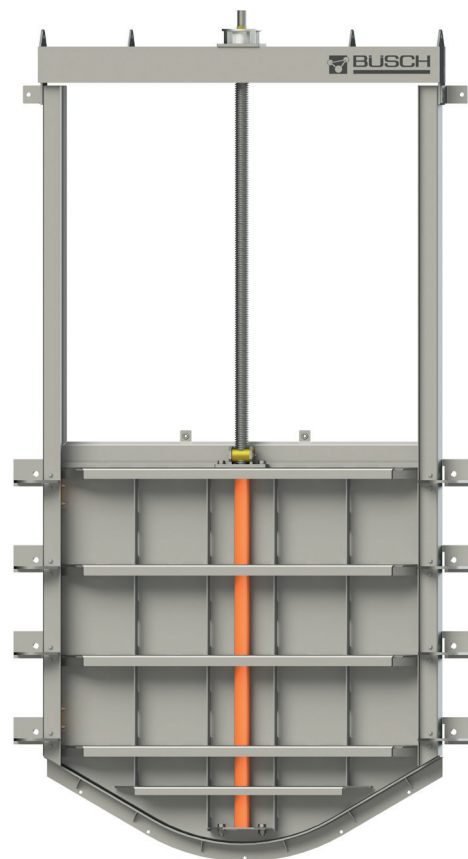
- Polyethylene spindle protection
- Spindle with rolled trapezoidal thread made of stainless steel from opening dimensions 150-1600 mm
- Spindle with whirled trapezoidal thread made of stainless steel from opening dimensions 1700-4000 mm
- Single spindle design or twin spindle design
- Spindle nut made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

Seal

- Easy seal replacement possible during operation, as the penstock plate can be pulled out 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, from 6 mwc (at higher water pressures) a 1-component sealant (SIKAFLEX®) is required with appropriate pre-treatment of the penstock and the structure using a primer
- Seal line 50 mm larger than the masonry opening to prevent leaks on masonry openings

Mounting

- Lateral fixing
 - Grouting into recess
 - Anchoring to the wall in front of the opening
 - Anchoring laterally on the wall
- Fastening in the base
 - Grouting into recess
 - Anchoring to the wall in front of the opening
 - Anchoring onto the base



XL4 penstock round base 2100 x 2100 mm

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YOUR ADVANTAGES

- **ROUND BOTTOM**
For easy concreting into the channel, water flow at the same level
- **READY FOR IMMEDIATE USE**
Penstock is delivered ready for assembly*
- **SEAL ON PENSTOCK PLATE**
Can be replaced during operation by pulling out the entire penstock plate
- **FOREVER DURABLE SEAL**
Through vulcanised UNO angle joints
- **PERFECT CORROSION PROTECTION**
All welded stainless steel parts from our own pickling plant
- **OPTIONAL EX-PROTECTION**
On request, the penstock can be proven to comply with the ATEX Directive 2014/34/EU

*(multiple frame as of 1300 mm)

Wedge sealing system (Seal on the palte)

- Assembled on the penstock plate, note profile seal with hot vulcanised (minimum temperature: 180°C) UNO angle joints made of wastewater and UV-resistant EPDM or oil-resistant NBR

up to Opening dimension 1200 x 1200 mm

- Integrated closing wedges in the frame made of stainless steel, on the penstock plate made of polyethylene (PE-UHMW)

Opening dimensions over 1200 x 1200 mm

- Integrated closing wedges in the frame made of sea and waste water resistant bronze, on the penstock plate made of stainless steel

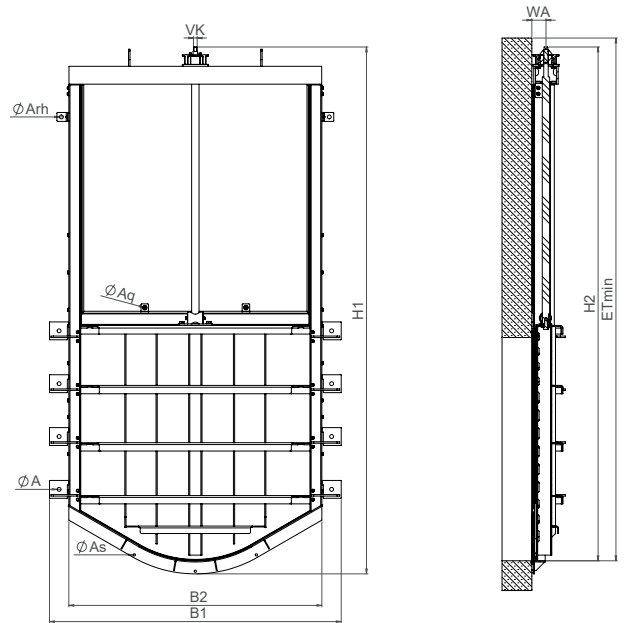
Leak tightness class

- Leak rate better than DIN EN 19569, Part 4, Table 1:
 - Pressure on front side max: 1 % of 0.02 l•s⁻¹•m⁻¹ (leak tightness class 5)
 - Pressure on back side max: 5 % of 0.02 to 0.05 l•s⁻¹•m⁻¹ (leak tightness class 4)

Actuation options

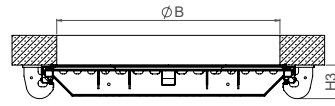
- Stainless steel handwheel with direct mounting or with Modular Actuation System MAS
- Lateral actuation with stainless steel gearbox with stainless steel handwheel or stainless steel crank handle
- Stainless steel operating key All-in-one via square cap
- MOBITORQ mobile actuators (electric or battery-powered) via square cap with Modular Actuation System MAS
- BEAmax stainless steel electric rotary actuator for open-close & modulating duty with direct mounting or with Modular Actuation System MAS, optional with stainless steel weather protection roof
- Electric actuator with direct mounting or with Modular Actuation System MAS
- Pneumatic actuator/Hydraulic actuator with direct mounting or with Modular Actuation System MAS

Dimensional drawing



XL4 penstock round base
1500 x 1500 mm front view

XL4 penstock round base
1500 x 1500 mm side view



XL4 penstock round base
1500 x 1500 mm top view

Dimensions in mm

DN	150	200	250	300	350	400	500	600
B1	350	400	450	500	550	600	740	840
B2	210	260	310	360	410	460	600	700
H1	497	602	696	794	896	1000	1235	1435
H2	467	572	666	764	866	970	1195	1395
H3	ca. 90	ca. 90	ca. 90	ca. 90	ca. 90	ca. 90	ca. 130	ca. 130
ET min.	527	632	726	824	926	1030	1255	1455
WA	50	50	50	50	50	50	50	50
Rev./stroke	31	41	51	81	81	81	101	121
VK	□16	□16	□16	□16	□16	□16	□16	□16
A	2x Ø13 M10x130				4x Ø13 M10x130			

DN	700	800	900	1000	1200
B1	1058	1158	1258	1358	1558
B2	820	920	1020	1120	1320
H1	1750	1945	2150	2355	2749
H2	1685	1885	2085	2287	2683
H3	ca. 192	ca. 192	ca. 192	ca. 192	ca. 192
ET min.	1745	1945	2145	2347	2743
WA	65	65	65	65	65
Rev./stroke	141	161	181	201	241
VK	□26	□26	□26	□26	□26
A	4x Ø19 M16x190		6x Ø19 M16x190		
As	3x Ø13 M10x130				
Aq	2x Ø14,5 M8x90				
Arh	2x Ø13 M10x130				

Dimensions for other nominal sizes on request.