



## XL4 weir type penstock (Seal in frame)

made of stainless steel or steel

WITH RECTANGULAR OPENING, 4-SIDED SEALING

### Opening dimensions und pressure level

Opening dimensions 200 x 200 mm to 4000 x 2500 mm

Selectable pressure levels on both sides: 2-6 mwc

Standard pressure level for sizes 200 x 200 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
- In the opening dimensions 200 x 200 mm to 600 x 600 mm, the penstock is manufactured with an open frame on the base
- 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
- Integrated guide rails on the penstock plate made of polyethylene (PE-UHMW)
- 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 200-1600 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 (GC-CuSn 12) / red brass RG7
- Optional: Spindle outside the medium rising or non-rising (easier to lubricate)

### Seal

- Twin-lipped seal assembled in the frame with hot vulcanised (minimum temperature: 180°C) UNO angle joints made of wastewater and UV-resistant EPDM or oil-resistant NBR
- Easy replacement of the seal possible during operation, as the penstock plate can be pulled upwards
- Factory pre-assembled seal against the wall made of solid, wastewater-resistant cellular rubber on the penstock frame with maximum pressure stage 6 mwc on both sides
- Seal line 50 mm larger than the masonry opening to prevent leaks on masonry spalling



XL4 weir type penstock 600 x 600 mm



## YOUR ADVANTAGES

- **READY FOR IMMEDIATE USE**  
Penstock is delivered ready for assembly\*
- **SEAL IN FRAME**  
Clear control options, seal is on both sides completely in place even in the intermediate position
- **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)

### Slide sealing system

Opening dimensions 150 x 150 mm to 4000 x 2500 mm

- Integrated sliding guides on the penstock plate made of polyethylene (PE-UHMW)

### Leak tightness class

- Leak rate better than DIN EN 19569, Part 4, Table 1:
  - Pressure on front side max: 1 % of 0,05 to 0,1 l·s<sup>-1</sup>·m<sup>-1</sup> (leak tightness class 3)
  - Pressure on back side max: 5 % of 0,05 to 0,1 l·s<sup>-1</sup>·m<sup>-1</sup> (leak tightness class 3)

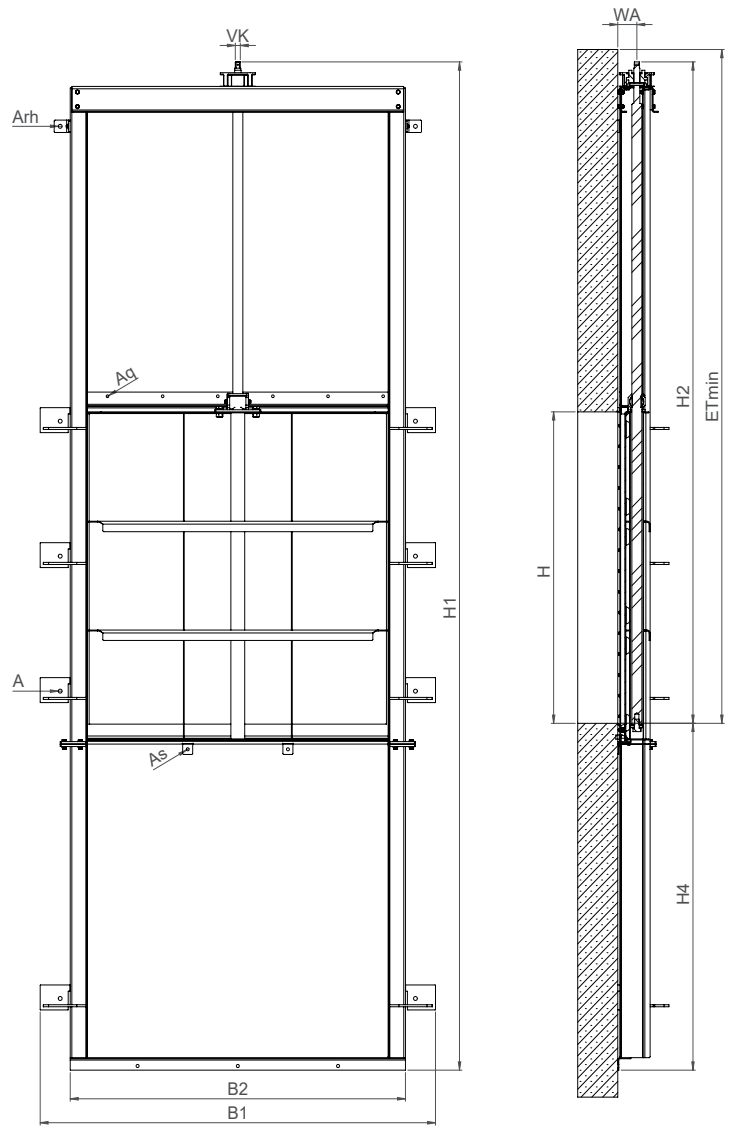
### Actuation options

- 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
- 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
- Pneumatic actuator/Hydraulic actuator with direct mounting or with Modular Actuation System MAS

### Mounting

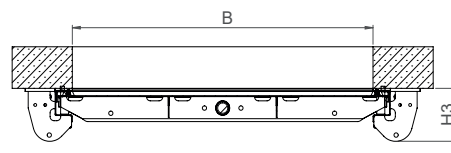
- Lateral fixing
  - Grouting into recess
  - Anchoring to the wall in front of the opening
  - Anchoring laterally on the wall
- Fastening in the base
  - Anchoring to the wall in front of the opening

### Dimensional drawing



XL4 weir type penstock  
1500 x 1500 mm front view

XL4 weir type penstock  
1500 x 1500 mm side view



XL4 weir type penstock 1500 x 1500 mm top view

B	Please specify when ordering
H	
B1	Dimension dependent
B2	
H1	Dimension dependent
H2	
H3	
H4 min.	= H + 150 mm
ET min.	Please specify when ordering
WA	Dimension dependent
Rev./Stroke	
VK	
A	
As	
Aq	
Arh	