



XL3 channel penstock (Seal on the plate)

made of stainless steel

CHANNEL PENSTOCK WITH RECTANGULAR OPENING, 3-SIDED SEALING

Opening size and pressure stage

Opening size 150 x 150 mm to 3500 x 3500 mm

Pressure level on the front or back possible

Pressure level corresponds to the plate height

Frame and plate

- Supplied as pre-assembled fitting 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 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
- Integrated slide rails made of stainless steel, in the penstock plate made of polyethylene (PE-UHMW)
- Penstock for embedding in concrete: Equipped with setting sleeve 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 (507) / 1.4462 (318LN) / 1.4539 (904L) / A36-hot-dip galvanized

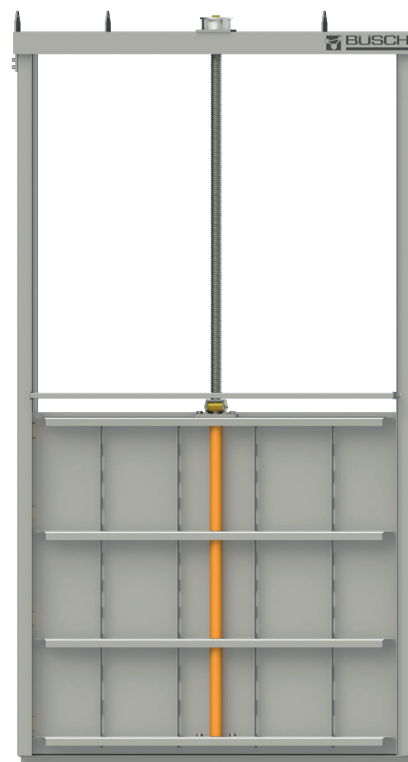
Spindle

- Polyethylene spindle protection
- Spindle with rolled trapezoidal thread made of stainless steel from opening dimensions 150-2000 mm
- Single spindle design or twin spindle design
- Spindle nut made of seawater- and wastewater-resistant bronze
- 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) BÜSCH 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 on both sides
- Seal line 50 mm larger than the masonry opening to prevent leaks on masonry openings

*(multiple frame as of 1300 mm)



XL3 channel penstock 2000 x 1850 mm

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YOUR ADVANTAGES

- **READY FOR IMMEDIATE USE**
Penstock is delivered ready for assembly*
- **LASTS FOREVER**
Only one seal, seal connection BÜSCH UNO-welded
- **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
- **OPTIONAL EX-PROTECTION**
On request, the penstock can be proven to comply with the ATEX Directive 2014/34/EU

Leak tightness class

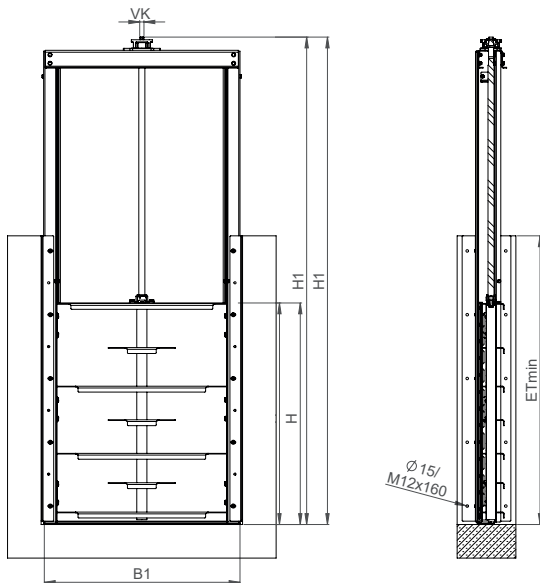
- Leak rate better than DIN EN 19569, Part 4, Table 1:
Pressure on front side max 1: % from 0.05 to $0.11 \cdot s^{-1} \cdot m^{-1}$ (leak tightness class 3)
Pressure on rear side: max 5% from 0.1 to $0,3 \cdot s^{-1} \cdot m^{-1}$ (leak tightness class 2)

Mounting

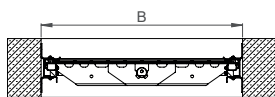
- Lateral fixing
Concreted into recess
Dowelling to the wall in front of the opening
Dowelling laterally on the wall
- Fixing onto the base
Concreted into recess
Dowelling to the wall in front of the opening
Dowelling onto the base

Dimensional drawing

Dowelling in the channel



XL3 channel penstock 1200 x 1300 mm front view Side view

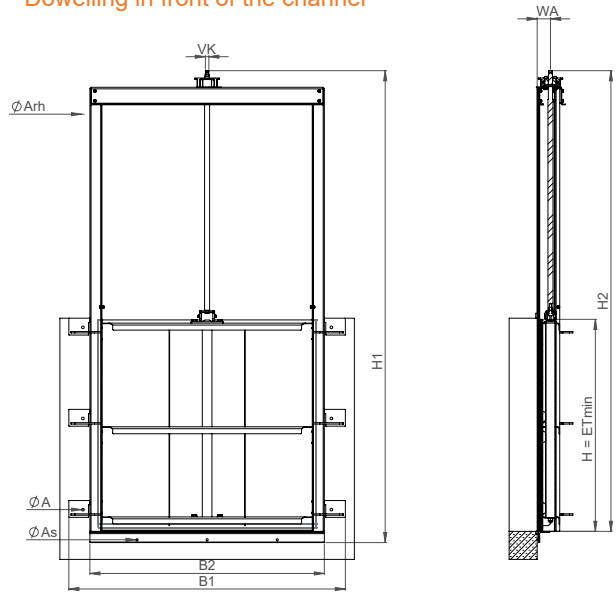


XL3 channel penstock 1200 x 1300 mm top view

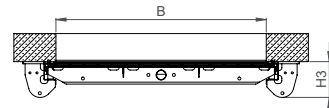
Actuation of the penstock by

- Stainless steel handwheel on transverse yoke
- Lateral actuation with gearbox with BÜSCH stainless steel bevel gearbox with stainless steel handwheel or stainless steel crank handle
- BÜSCH All-in-one operating key via square cap
- BÜSCH MOBITORQ electric or accu - mobile actuators via square cap
- BEA®servo stainless steel electric actuator assembled on transverse yoke, optional with BÜSCH weather protection roof
- Pneumatic drive unit assembled on transverse yoke
- Hydraulic drive unit assembled on transverse yoke
- E-actuator

Dowelling in front of the channel



XL3 channel penstock 1500 x 1500 mm front view Side view

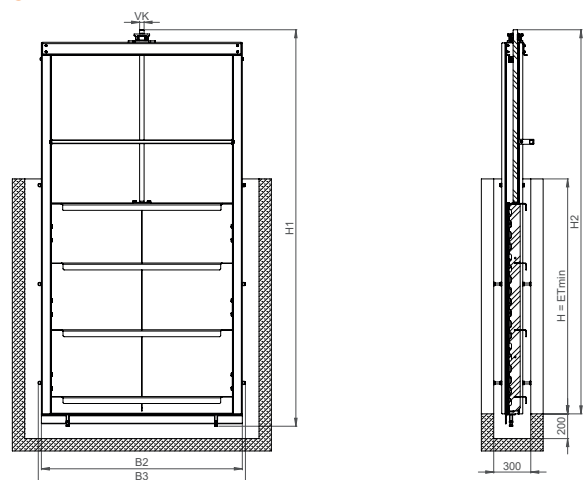


XL3 channel penstock 1500 x 1500 mm top view

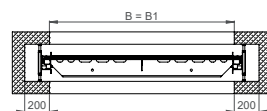
B x H

B1	Please specify when ordering
B2	
H1	Size dependent
H2	
H3	
H4	Please specify when ordering
ET min.	
WA	Size dependent
Rev./Stroke	
VK	
A	
As	
Aq	
Arh	

Concrete in the channel



XL3 channel penstock 1500 x 1500 mm front view Side view



XL3 channel penstock 1500 x 1500 mm top view

XL3 semicircular VARIANT* FROM XL3

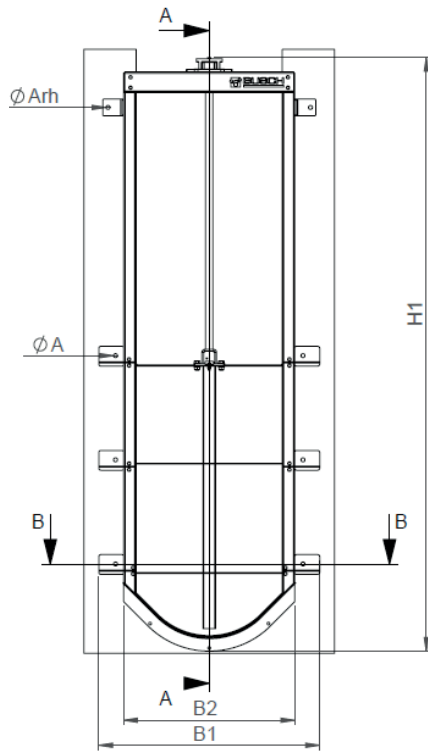
WITH SEMICIRCULAR OPENING, 3-SIDED SEALING

SPECIAL FEATURES

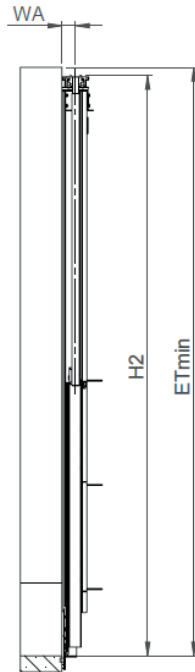
- **ROUND BOTTOM**
For easy concreting into the channel, water flow at the same level

*STANDARD DATA: please refer XL3 penstock

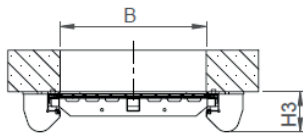
Dimensional drawing



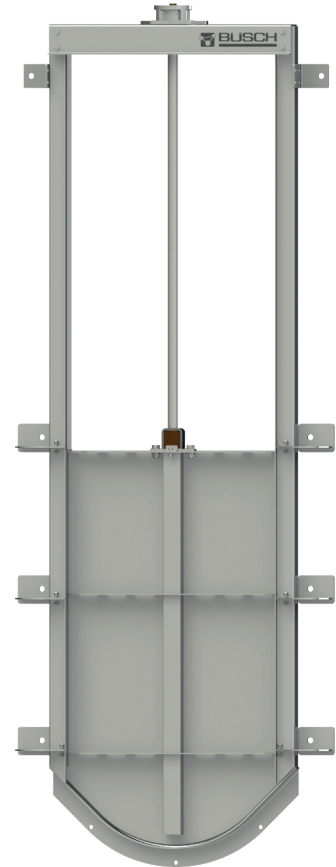
XL3 semicircular 700 x 1300 mm front view



XL3 semicircular 700 x 1300 mm side view



XL3 semicircular 700 x 1300 mm top view



XL3 semicircular 700 x 1300 mm

Dimensions in mm

B x H

B1	Please specify when ordering
B2	
H1	Size dependent
H2	
H3	
H4	Please specify when ordering
ET min.	
WA	Size dependent
Rev./Stroke	
VK	
A	
As	
Aq	
Arh	

Dimensions for other nominal widths on request.



XL3 weir type channel penstock (Seal in frame)

made of stainless steel

WITH RECTANGULAR OPENING, 3-SIDED SEALING

Opening dimensions und pressure level

Opening size 150 × 150 mm bis 4000 × 2500 mm

Pressure stage corresponds to the panel height

Frame and panel

- Supplied as pre-assembled fitting 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 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
- Integrated slide rails made from Polyethylen (PE-UHMW)
- Penstock for embedding in concrete: Equipped with setting sleeve for aligning the fitting 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 (507) / 1.4462 (318LN) / 1.4539 (904L) / A36-hot-dip galvanized

Spindle

- Polyethylene spindle protection
- Spindle with rolled trapezoidal thread made of stainless steel from opening dimensions 150-2000 mm
- Spindle with whirled trapezoidal thread made of stainless steel from opening dimensions 2100-2500 mm
- Single spindle design or twin spindle design
- Spindle nut made of sea and wastewater-resistant bronze
- Optional: Spindle outside the medium rising or non-rising (easier to lubricate)

Seal

- Double lip seal mounted in the frame with hot vulcanized (minimum temperature 180°C) BÜSCH 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 gasket to the wall made of solid, waste water resistant foam rubber on the slide frame up to maximum pressure stage on both sides
- Seal line 50 mm larger than the masonry opening to prevent leaks on masonry spalling

*(multiple frame as of 1300 mm)



XL3 weir type channel penstock 1200 x 800 mm

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YOUR ADVANTAGES

- **READY FOR IMMEDIATE USE**
The penstock is delivered ready for assembly*
- **LASTS FOREVER**
Hot-vulcanised sealing joint BÜSCH UNO-welded
- **SEAL IN THE FRAME**
Good control properties, tight in 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

Leak tightness class

- Leak rate better than DIN EN 19569, Part 4, Table 1:
 Pressure on front side: max. 1 % from 0.05 to 0.1 l·s⁻¹·m⁻¹
 (leak tightness class 3)
 Pressure on rear side: max. 5 % from 0.1 to 0.3 l·s⁻¹·m⁻¹
 (tightness class 2)

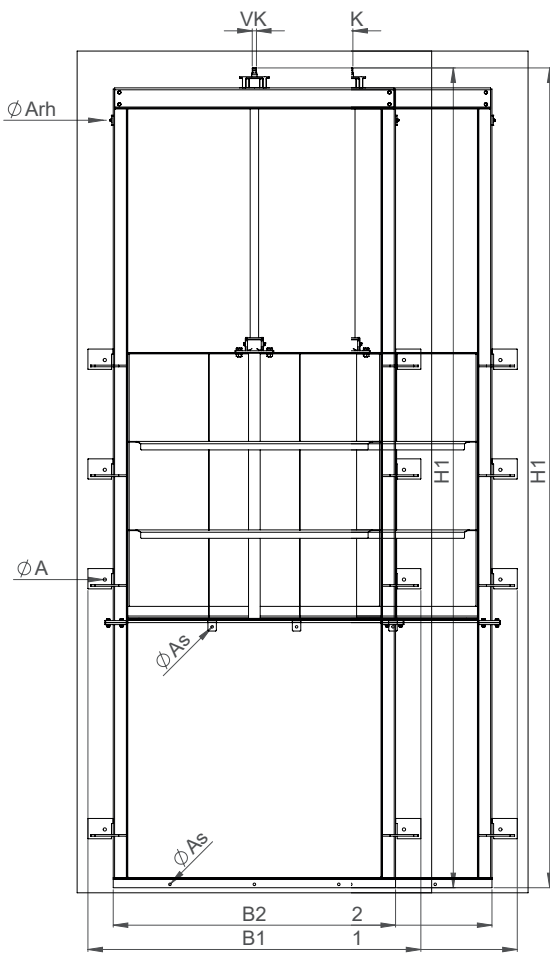
Mounting

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

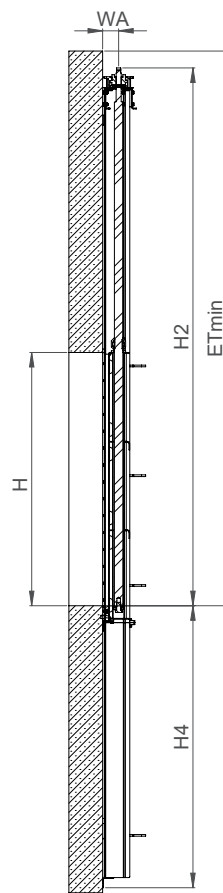
Actuation of the penstock by

- Stainless steel handwheel on transverse yoke
- Lateral actuation with gearbox with BÜSCH stainless steel bevel gearbox with stainless steel handwheel or stainless steel crank handle
- BÜSCH All-in-one operating key via square cap
- BÜSCH MOBITORQ electric or accu - mobile actuators via square cap
- BEA[®] servo stainless steel electric actuator assembled on transverse yoke, optional with BÜSCH weather protection roof
- Pneumatic actuator assembled on transverse yoke
- Hydraulic actuator assembled on transverse yoke

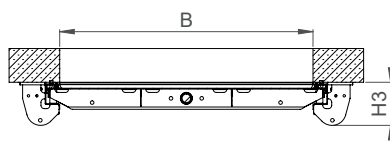
Dimensional drawing



XL3 weir type channel penstock 1500 x 1500 mm front view



Side view



XL3 weir type channel penstock 1500 x 1500 mm top view

B x H

B1	Please specify when ordering
B2	
H1	Size dependent
H2	
H3	Please specify when ordering
H4	
ET min.	Size dependent
WA	
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