

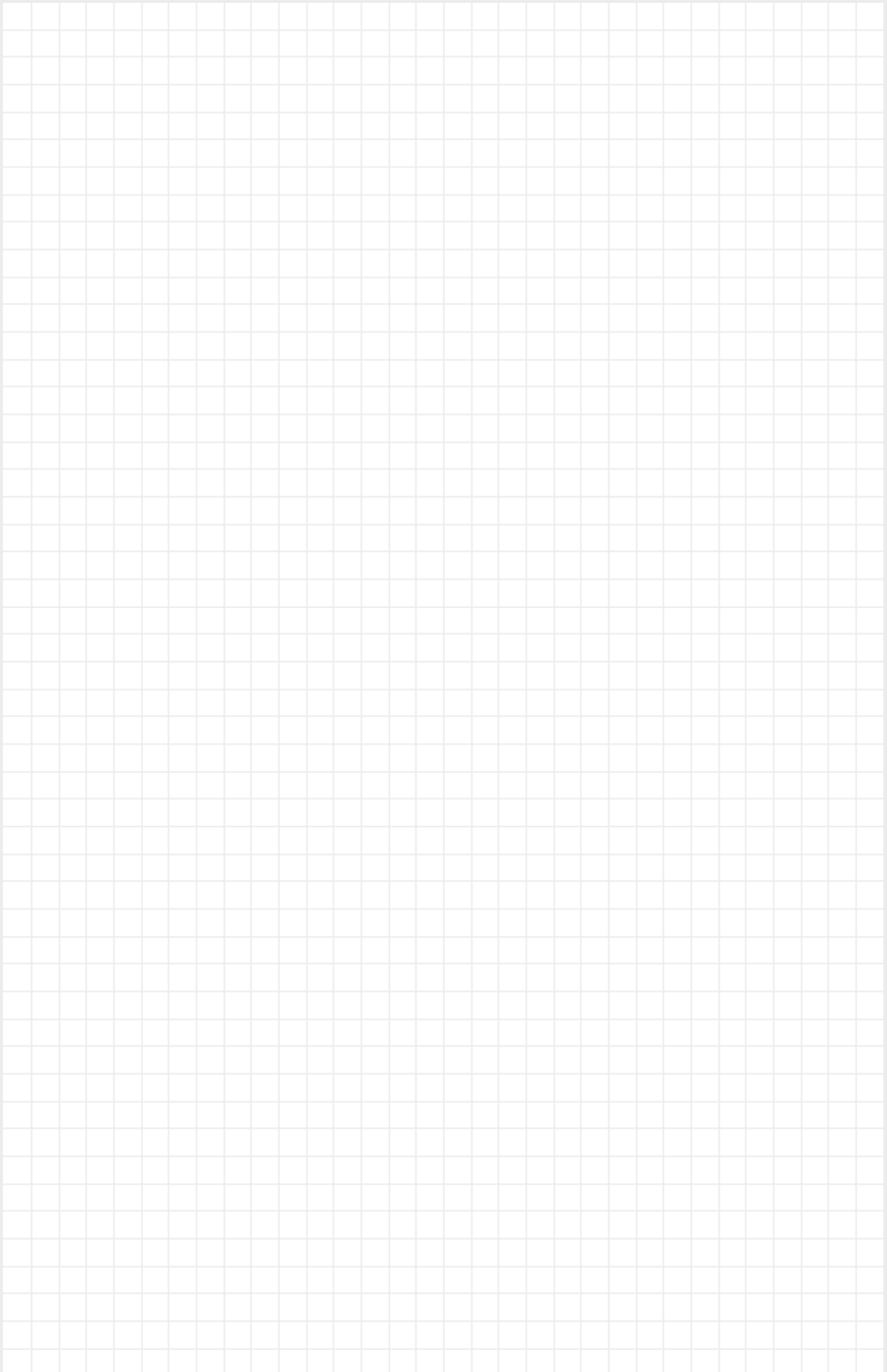


WAGU®

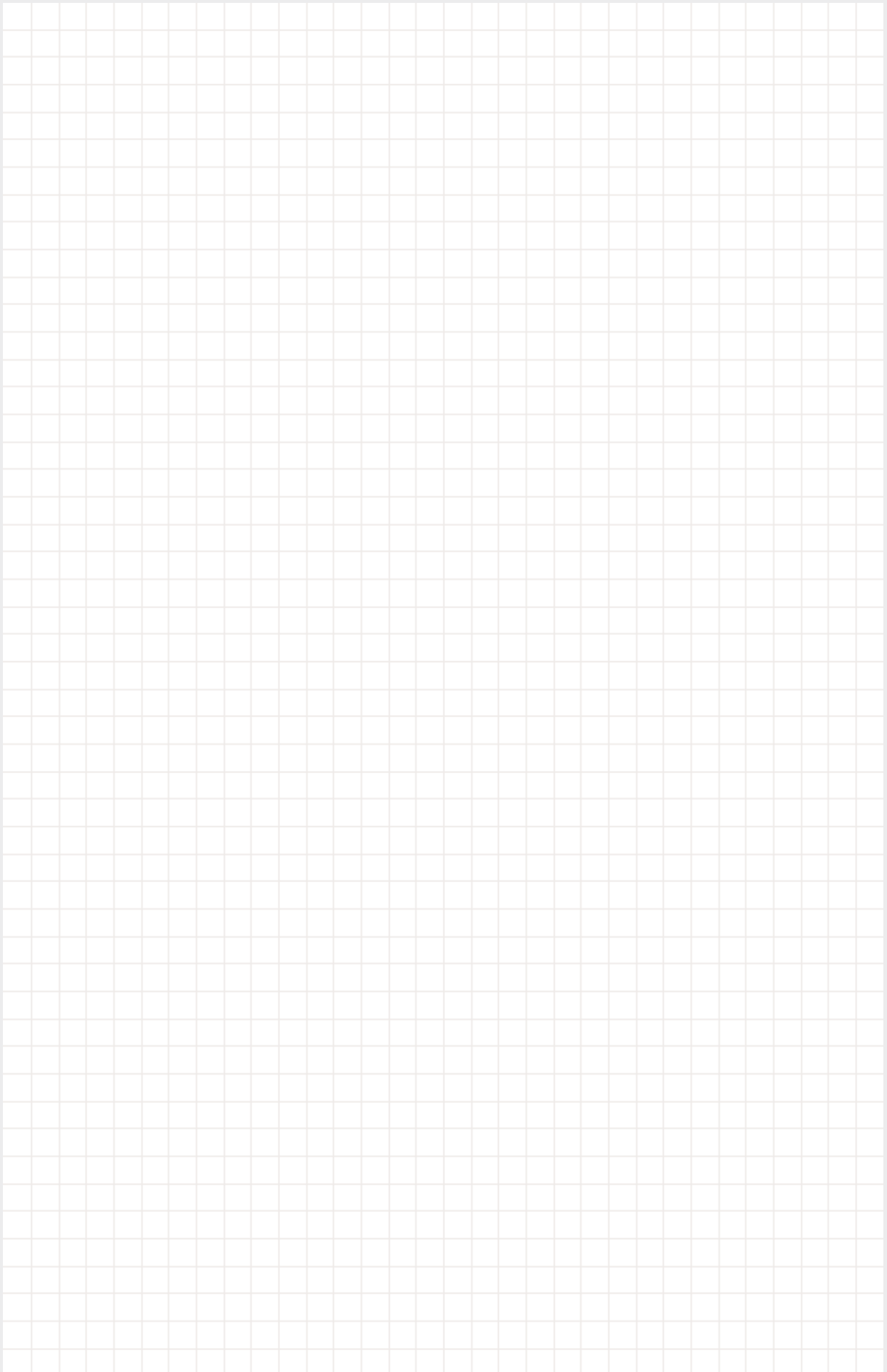
Penstock sewage technology

For a clean environment

 **ERHARD**
BY TALIS

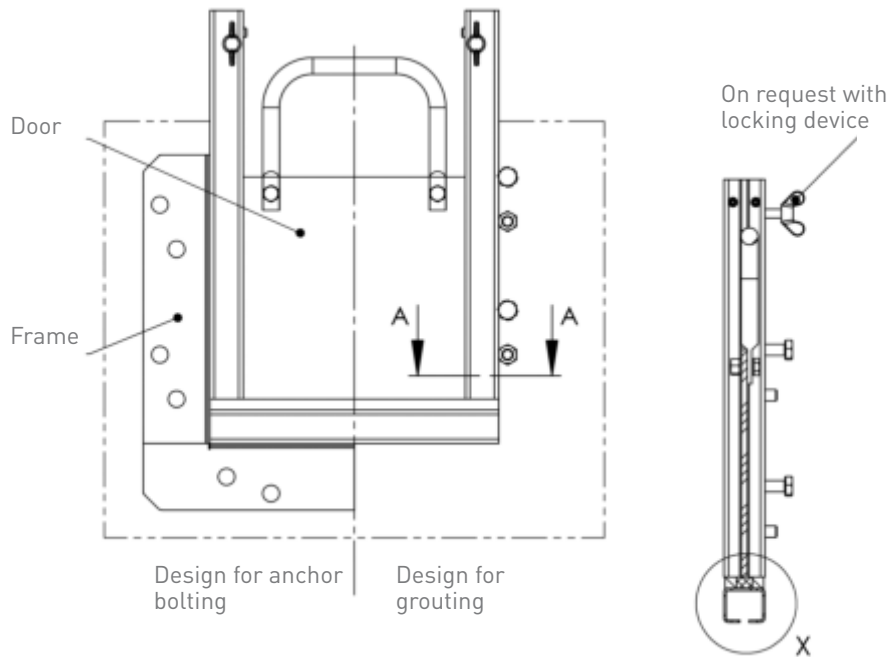


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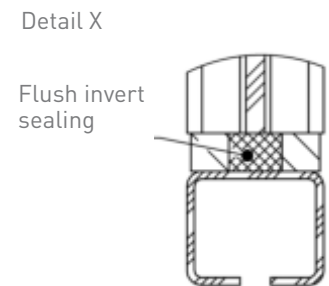
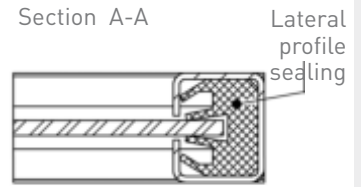


WAGU®-Handstop

3 facings, for open channels, for on-seating or off-seating pressure, for grouting into channel recess or for anchor bolting to channel outlet or in channel.



Details



Design

- ➔ Straight sill for grouting/anchor bolting
- ➔ Round sill for grouting
- ➔ Sill to be flush-mounted into channel invert
- ➔ On request with locking device

Design features

- ➔ Welded U-shaped frame of C-profile with inserted lateral profile seal and chambered sill sealing
- ➔ Door with screwed-on lifting handle, large dimensions with reinforcing ribs
- ➔ From W = 800 mm with 2 lifting handles

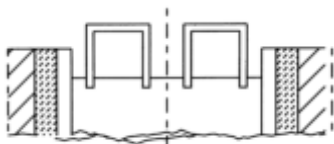
Dimensions

- ➔ W x HS [200 x 200 up to 1000 x 1000]*

* Please specify in the enquiry/ order.

Details

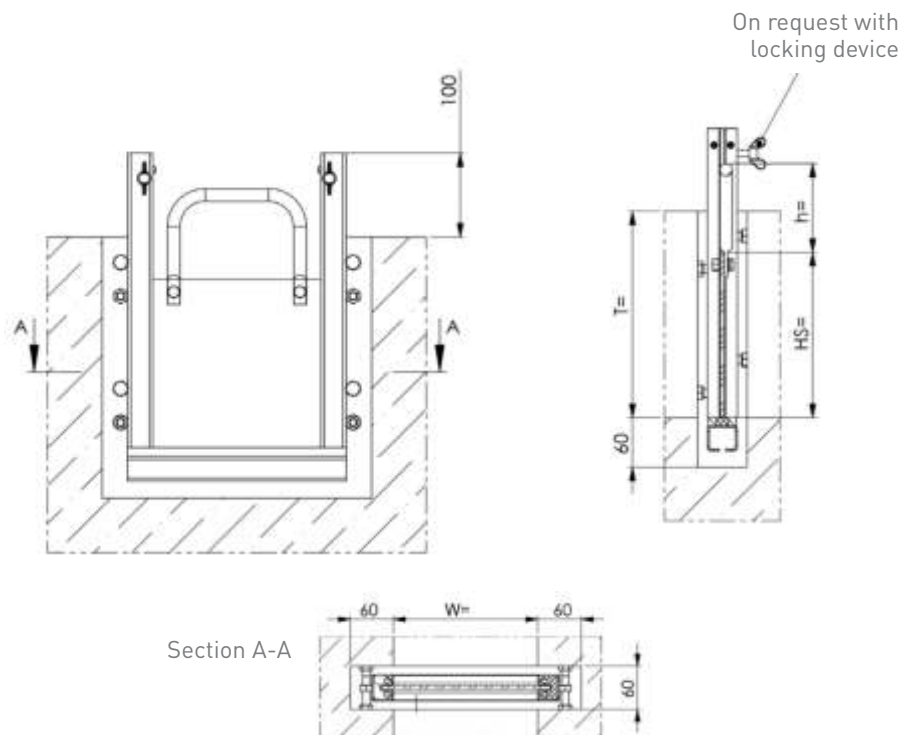
Design from W=800 with
2 lifting handles



WAGU®-Handstop for grouting

With straight sill for grouting

W x HS 200 x 200 up to 1000 x 1000



Material

Frame	Door	Sealing
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene

Other materials or combinations available on request.

Order text

Handstop for grouting, with straight sill for grouting. Cat.-sheet. 01.21.

Material*	Dimensions*
Frame:	Channel width W: mm
Door:	Door height HS: mm
Sealing:	Channel depth T: mm
	Handle height h: mm

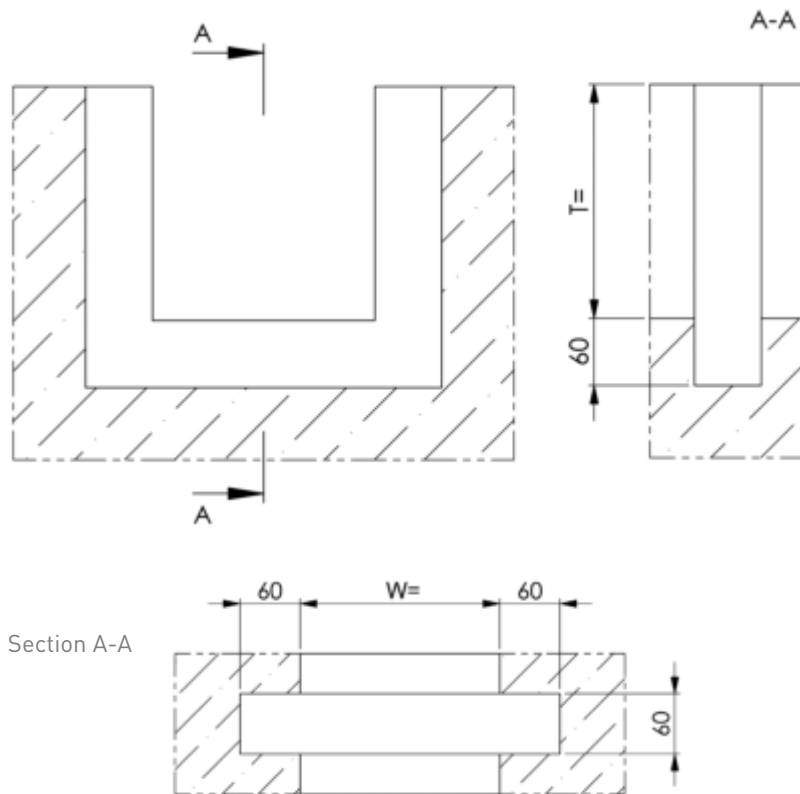
Optional equipment: Locking device ... with/ ... without

* Please specify in the enquiry/order..

WAGU®-Handstop for grouting

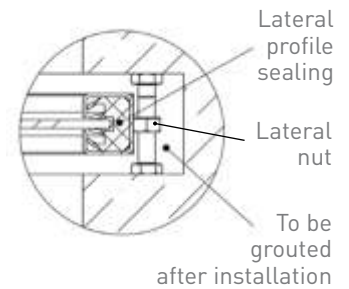
With straight sill for grouting

Wall recess

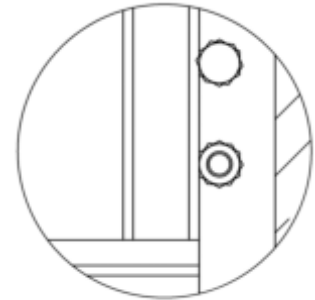


Details

Cut by lateral recess with frame profile



View on adjustment screws and clamping screws



Installation Guide

- ➔ Screw the adjusting- and set screws into the lateral nuts.
- ➔ Insert frame including stop-logs in recess.
- ➔ Align frame:
 - Screw lateral adjusting screws into the recess until the frame stands vertically and is fixed without tension.
- ➔ Before grouting, check penstock for perfect (flawless) performance and tightness, as it is not possible to change the position of the frame after grouting
- ➔ Install casing on recess and grout with grouting mortar.¹⁾
- ➔ When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.

1) We recommend a cement-based grout.

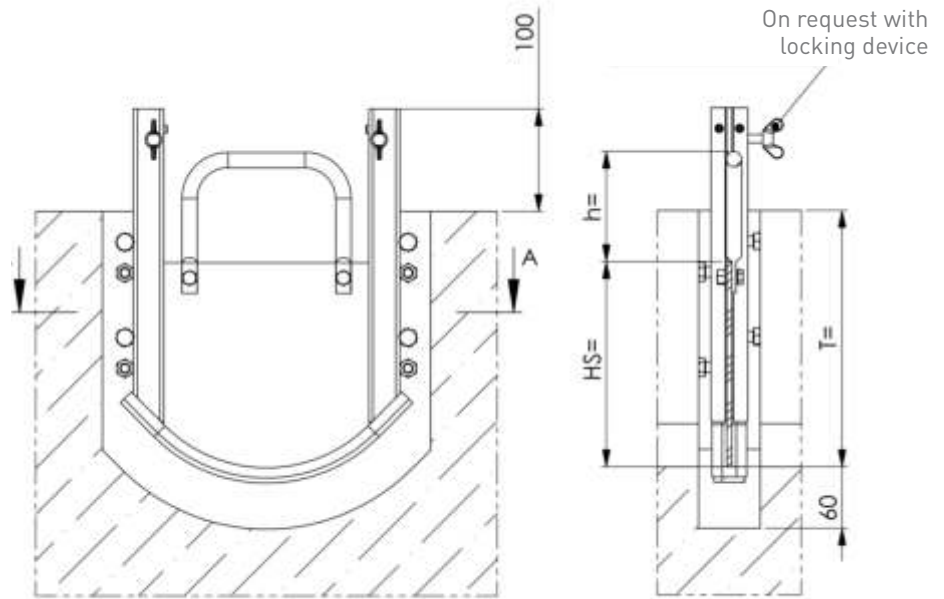
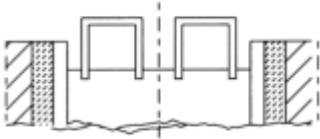
WAGU®-Handstop for grouting

With round sill for grouting

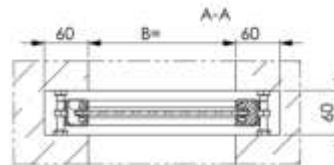
W x HS 200 x 200 up to 1000 x 1000

Details

Design from W=800 with
2 lifting handles



Section A-A



Material

Frame	Door	Sealing
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene

Other materials or combinations available on request.

Order text

Handstop for grouting, with round sill for grouting. Cat.-sheet. 01.31.

Material*	Dimensions*
Frame:	Channel width W: mm
Door:	Door height HS: mm
Sealing:	Channel depth T: mm
	Handle height h: mm

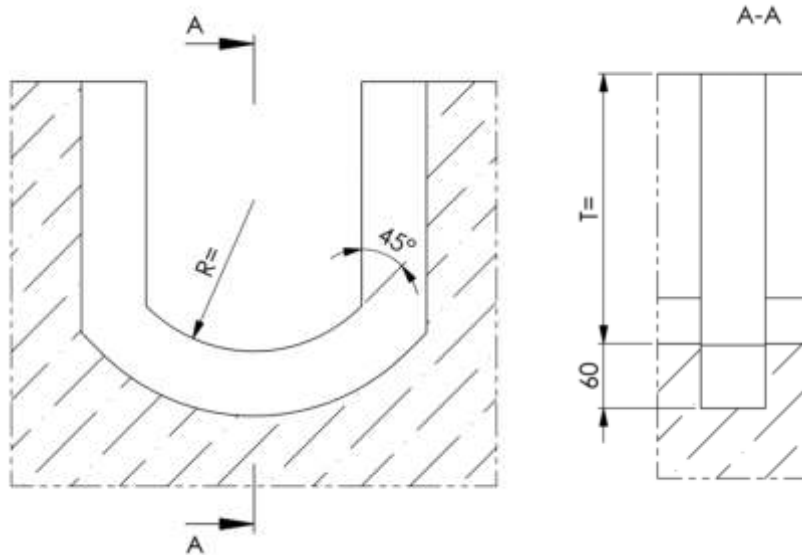
Optional equipment: Locking device ... with/ ... without

* Please specify in the enquiry/ order..

WAGU®-Handstop for grouting

With round sill for grouting

Wall recess

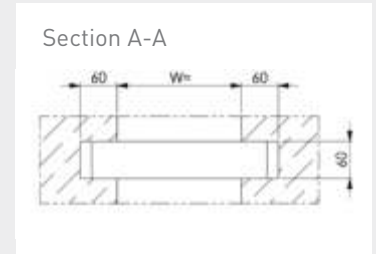


Installation Guide

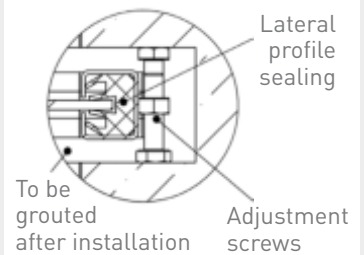
- ➔ Screw the adjusting- and set screws into the lateral nuts.
- ➔ Insert frame including door into recess.
- ➔ Align frame:
 - Screw lateral adjusting screws into the recess until the frame is vertical and fixed without tension.
- ➔ Before grouting, check penstock for perfect (flawless) performance and tightness, as it is not possible to change the position of the frame after grouting
- ➔ Install shuttering on recess and grout with grouting mortar.¹⁾ When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.

1) We recommend a cement-based grout.

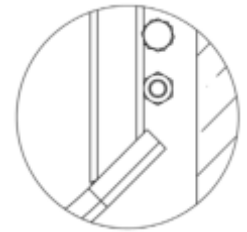
Details



Cut by lateral recess with frame profile



View on adjustment screws and clamping screws



DN (mm)	R (mm)
200	140
250	175
300	210
350	245
400	280
450	315
500	350
600	420
700	490
800	560
900	630
1000	700

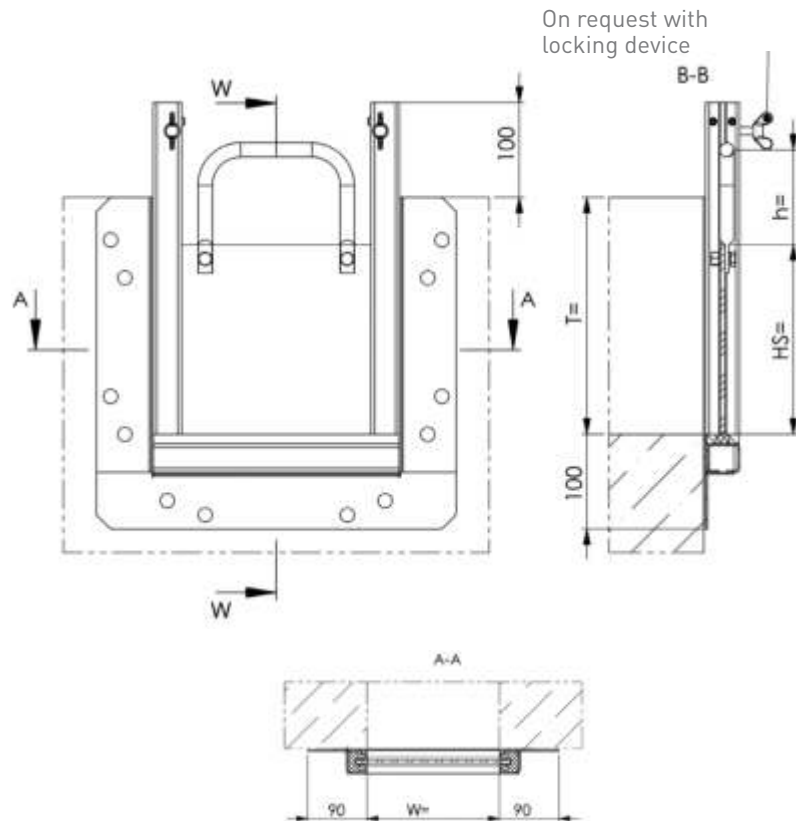
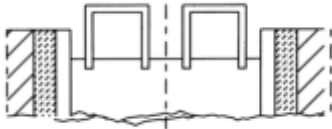
WAGU®-Handstop for anchor bolting

With straight sill for anchor bolting

W x HS 200 x 200 up to 1000 x 1000

Details

Design from W=800 with
2 lifting handles



Material

Frame	Door	Sealing
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene

Other materials or combinations available on request.

Order text

Handstop for anchor bolting, with straight sill for anchor bolting.

Cat.-sheet. 01.41.

Material*	Dimensions*
Frame:	Channel width W: mm
Door:	Door height HS: mm
Sealing:	Channel depth T: mm
	Handle height h: mm

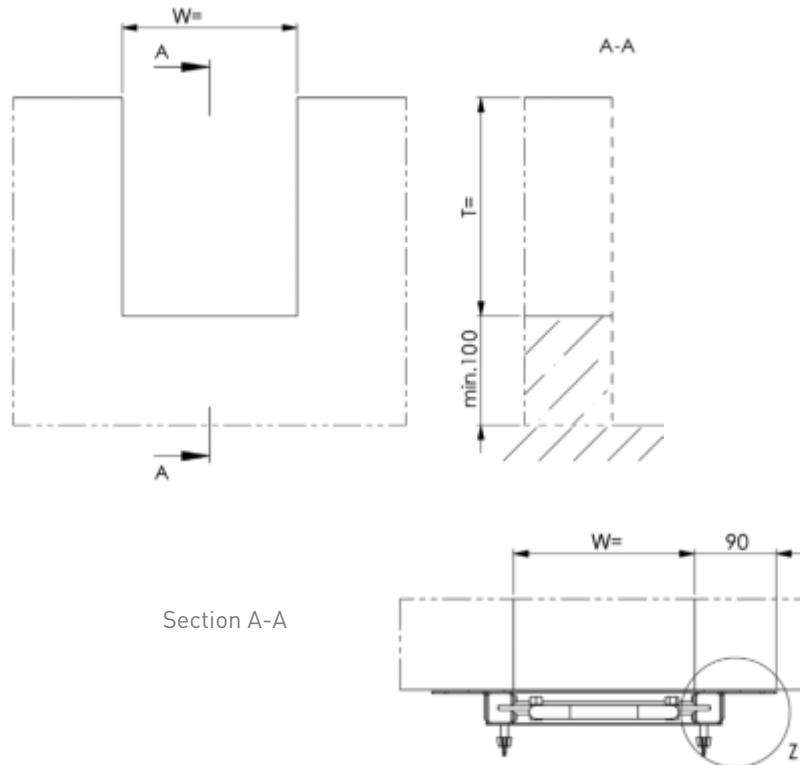
Optional equipment: Locking device ... with/ ... without

* Please specify in the enquiry/ order..

WAGU®-Handstop for anchor bolting

With straight sill for anchor bolting

Wall recess



Installation Guide

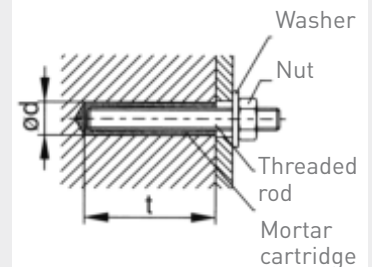
- ➔ Place frame with door in the designated position and align
- ➔ For anchor bolting, holes are double and diagonal displaced in the frame or flange.
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling. The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Compound anchor bolts are to be used for fastening.

Sealing frame/wall

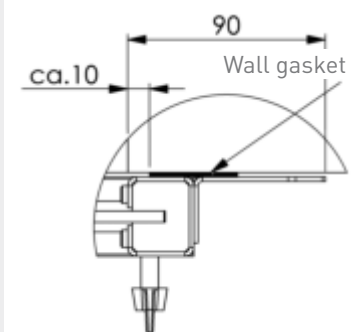
- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the frame (see Detail X).
- ➔ Fastening material and wall gasket are included.
- ➔ The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.
- ➔ Clean frame, sealing and door after fastening; check for tightness and performance.

Details

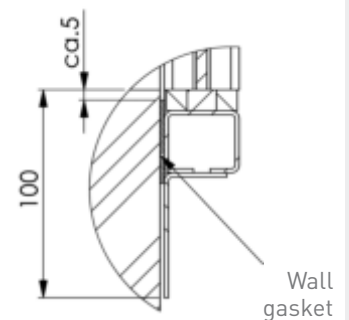
Anchor bolt



X Installation sealing tape



Installation sealing tape (Sill)



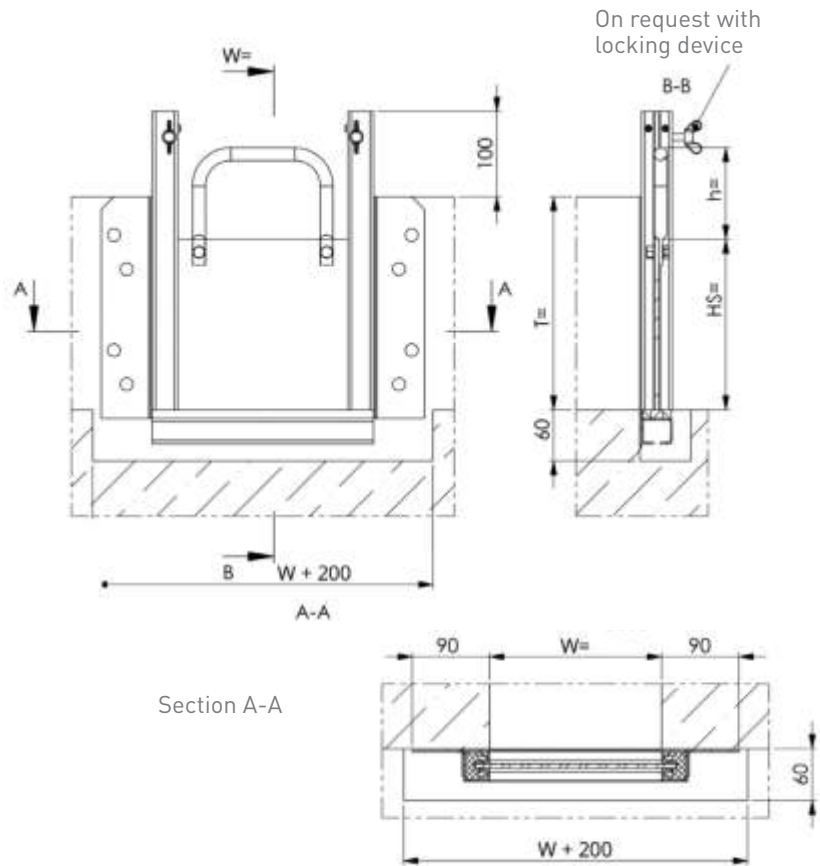
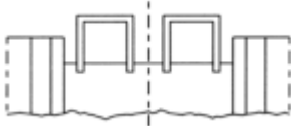
WAGU®-Handstop for anchor bolting

With straight sill for grouting

W x HS 200 x 200 up to 1000 x 1000

Details

Design from W=800 with
2 lifting handles



On request with
locking device

Section A-A

Material

Frame	Door	Sealing
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene

Other materials or combinations available on request.

Order text

Handstop for anchor bolting, with straight sill for grouting. Cat.-sheet. 01.43.

Material*	Dimensions*
Frame:	Channel width W: mm
Door:	Door height HS: mm
Sealing:	Channel depth T: mm
	Handle height h: mm

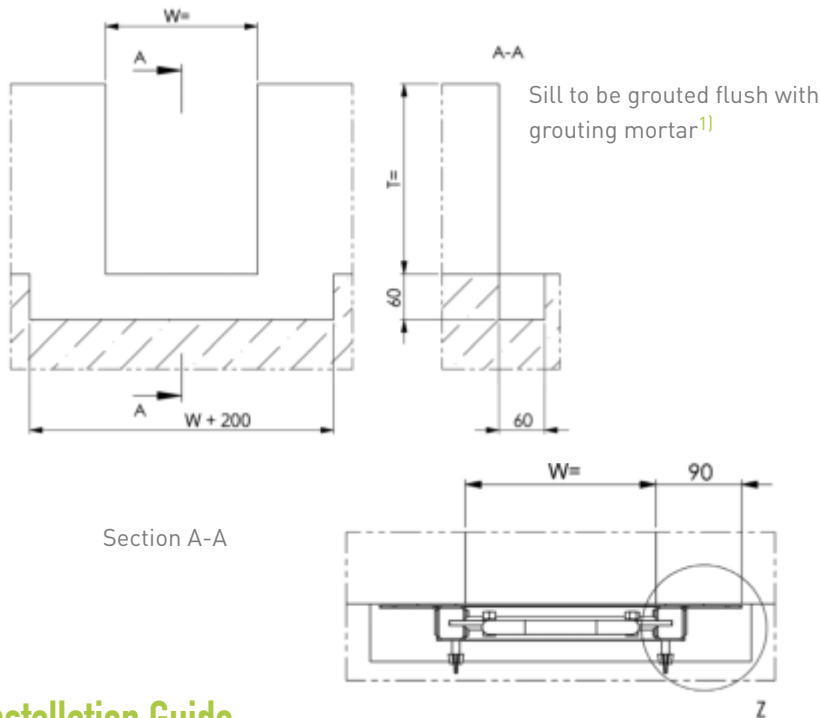
Optional equipment: Locking device ... with/ ... without

* Please specify in the enquiry/ order..

WAGU®-Handstop for anchor bolting

With straight sill for grouting

Wall recess



Section A-A

Installation Guide

- ➔ Place frame with door in the designated position and align
- ➔ For anchor bolting, holes are double and diagonal displaced in the frame or flange.
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling. The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Compound anchor bolts are to be used for fastening.

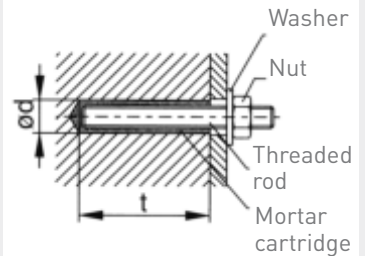
Sealing frame/wall

- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the frame (see Detail X).
- ➔ Fastening material and wall gasket are included.
- ➔ The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.
- ➔ Install casing on recess and grout with grouting mortar.¹⁾ When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.
- ➔ Clean frame, sealing and door after fastening; check for tightness and performance.

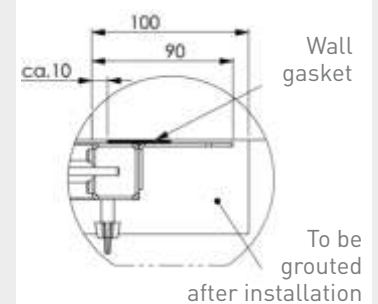
1) We recommend a cement-based grout.

Details

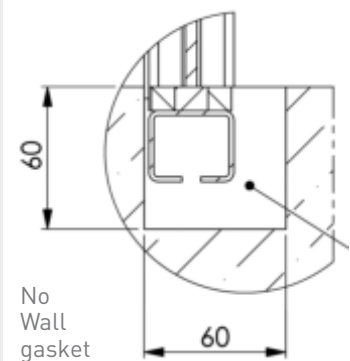
Anchor bolt



X Installation sealing tape



Installation sealing tape at Sill



WAGU®-Handstop for anchor bolting

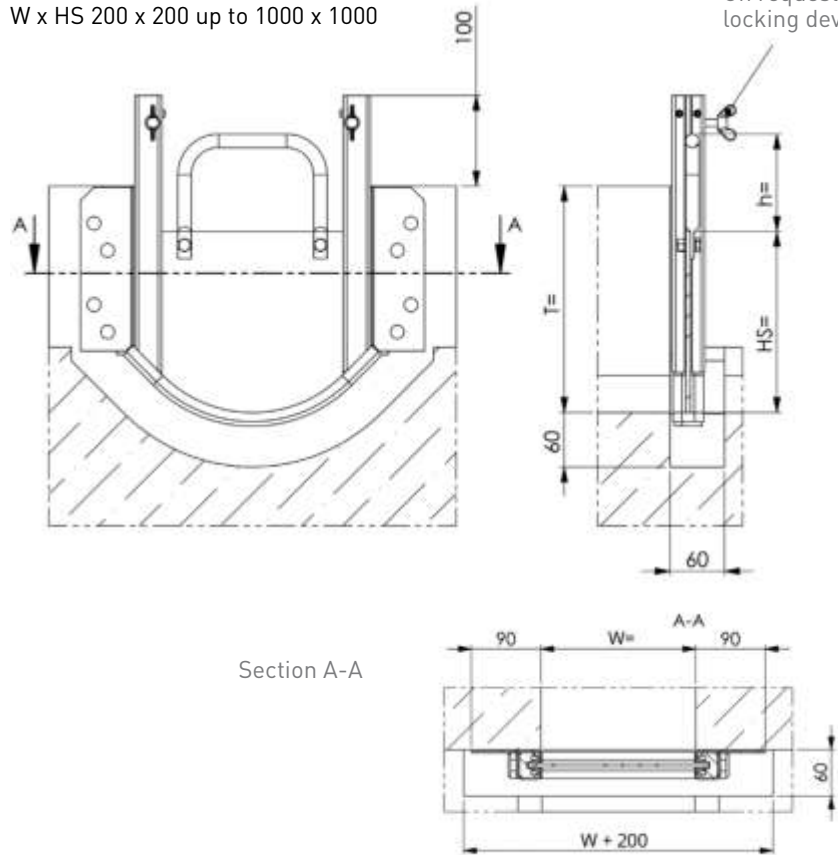
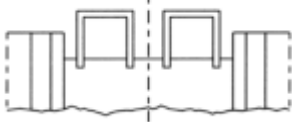
With round sill for grouting

W x HS 200 x 200 up to 1000 x 1000

On request with locking device

Details

Design from W=800 with 2 lifting handles



Section A-A

Material

Frame	Door	Sealing
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene

Other materials or combinations available on request.

Order text

Handstop for anchor bolting, with round sill for grouting. Cat.-sheet. 01.51.

Material*	Dimensions*
Frame:	Channel width B: mm
Door:	Door height HS: mm
Sealing:	Channel depth T: mm
	Handle height h: mm

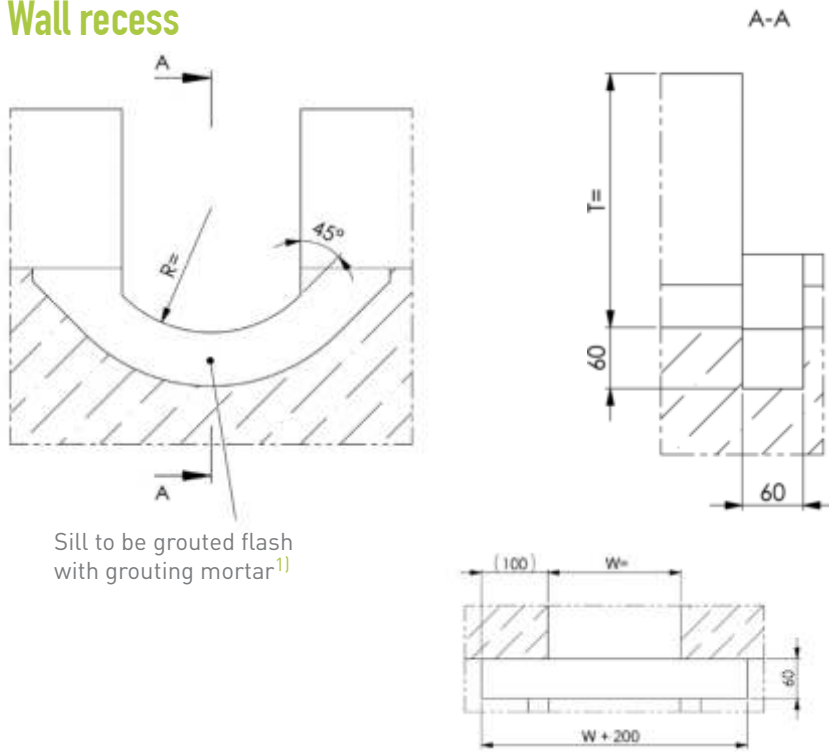
Optional equipment: Locking device ... with/ ... without

* Please specify in the enquiry/ order..

WAGU®-Handstop for anchor bolting

With round sill for grouting

Wall recess



Sill to be grouted flash with grouting mortar¹⁾

Installation Guide

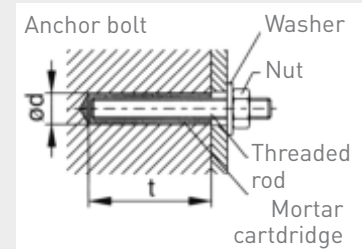
- ➔ Place frame with door in the designated position and align
- ➔ For anchor bolting, holes are double and diagonal displaced in the frame or flange.
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling. The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Compound anchor bolts are to be used for fastening.

Sealing frame/wall

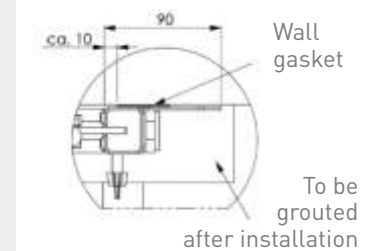
- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the frame (see Detail).
- ➔ Fastening material and wall gasket are included.
- ➔ The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.
- ➔ Install casing on recess and grout with grouting mortar.¹⁾ When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.
- ➔ Clean frame, sealing and door after fastening; check for tightness and performance.

1) We recommend a cement-based grout.

Details



Cut by lateral recess with frame profile

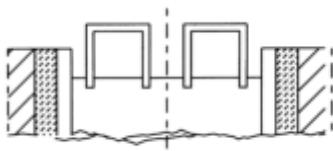


DN (mm)	R (mm)
200	140
250	175
300	210
350	245
400	280
450	315
500	350
600	420
700	490
800	560
900	630
1000	700

WAGU® - Handstop for anchor bolting in channel

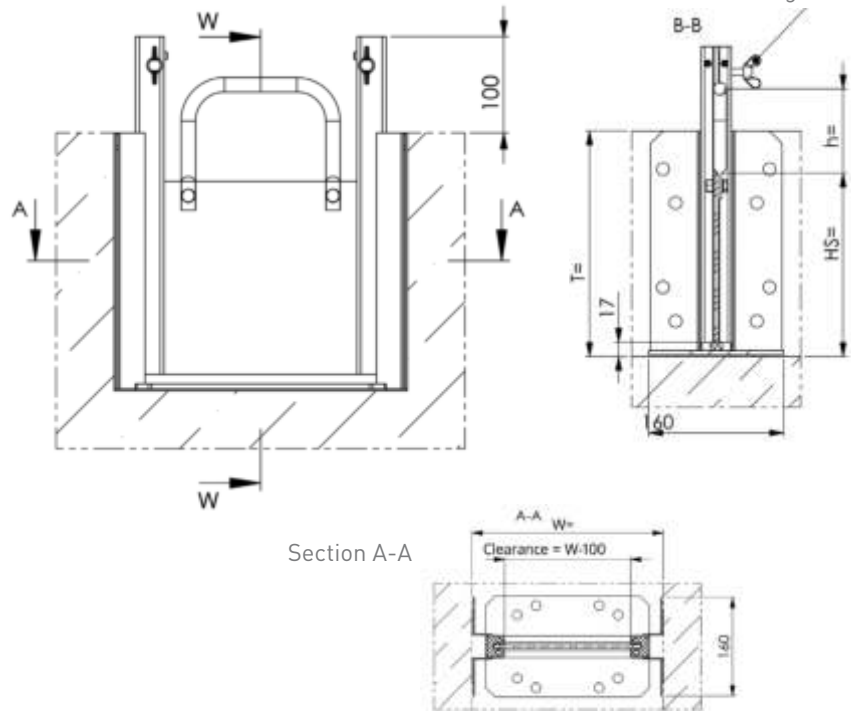
Details

Design from W=800 with
2 lifting handles



With straight sill for anchor bolting in channel invert
W x HS 200 x 200 up to 1000 x 1000

On request with
locking device



Material

Frame	Door	Sealing
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene

Other materials or combinations available on request.

Order text

Handstop for anchor bolting, with straight sill for anchor bolting in channel invert. Cat.-sheet. 01.61.

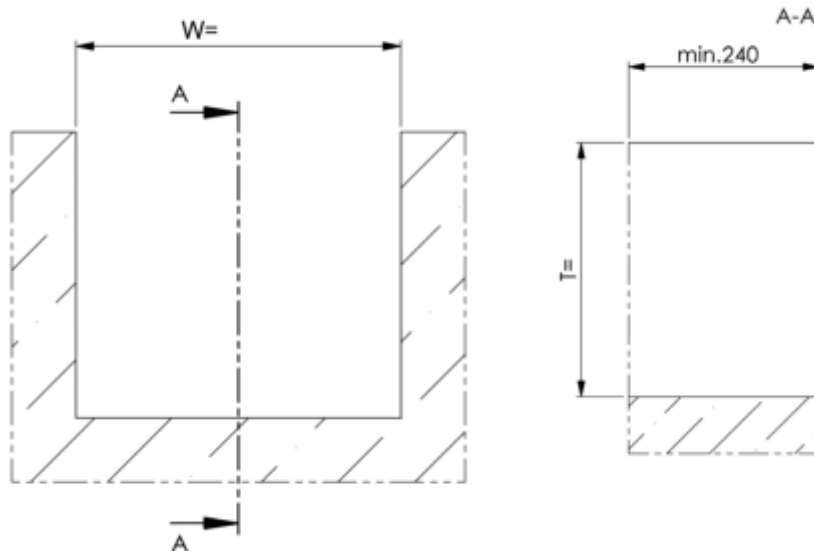
Material*	Dimensions*
Frame:	Channel width W: mm
Door:	Door height HS: mm
Sealing:	Channel depth T: mm
	Handle height h: mm

Optional equipment: Locking device ... with/ ... without

WAGU® - Handstop for anchor bolting in channel

With straight sill for anchor bolting in channel invert

Wall recess



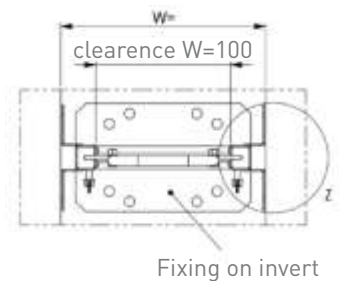
Installation Guide

- ➔ The frame is supplied with welded-on support brackets on one side and a fastening strip at the sill. The support brackets on the other side is supplied loose for adjustment in the channel
- ➔ Place the wall gasket in the center at the bottom of the fastening strip of the sill and at the welded-on support brackets. Insert frame including door in the intended position and align.
- ➔ For anchor bolting, holes are double and diagonal displaced in the support brackets and fastening strips of the sill.
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling. The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Compound anchor bolts are to be used for fastening.
- ➔ Fastening material and wall gasket are included.
- ➔ First attach the frame on the side with the welded-on support brackets to the channel wall. Then attach the loosely supplied support brackets to the channel wall and fasten them so that the frame is firmly clamped between the support brackets. Hollow spaces must then be grouted with grouting mortar.¹⁾
- ➔ When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.
- ➔ Clean frame, sealing and door after fastening; check for tightness and performance.

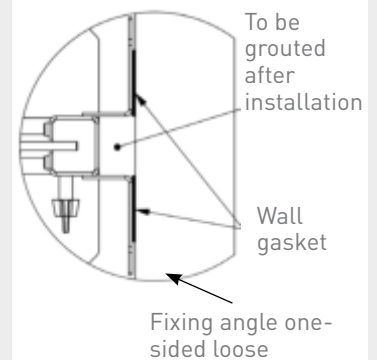
1) We recommend a cement-based grout.

Details

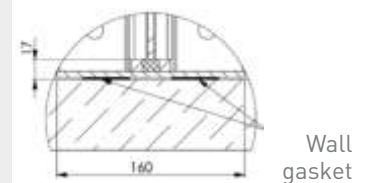
Top view

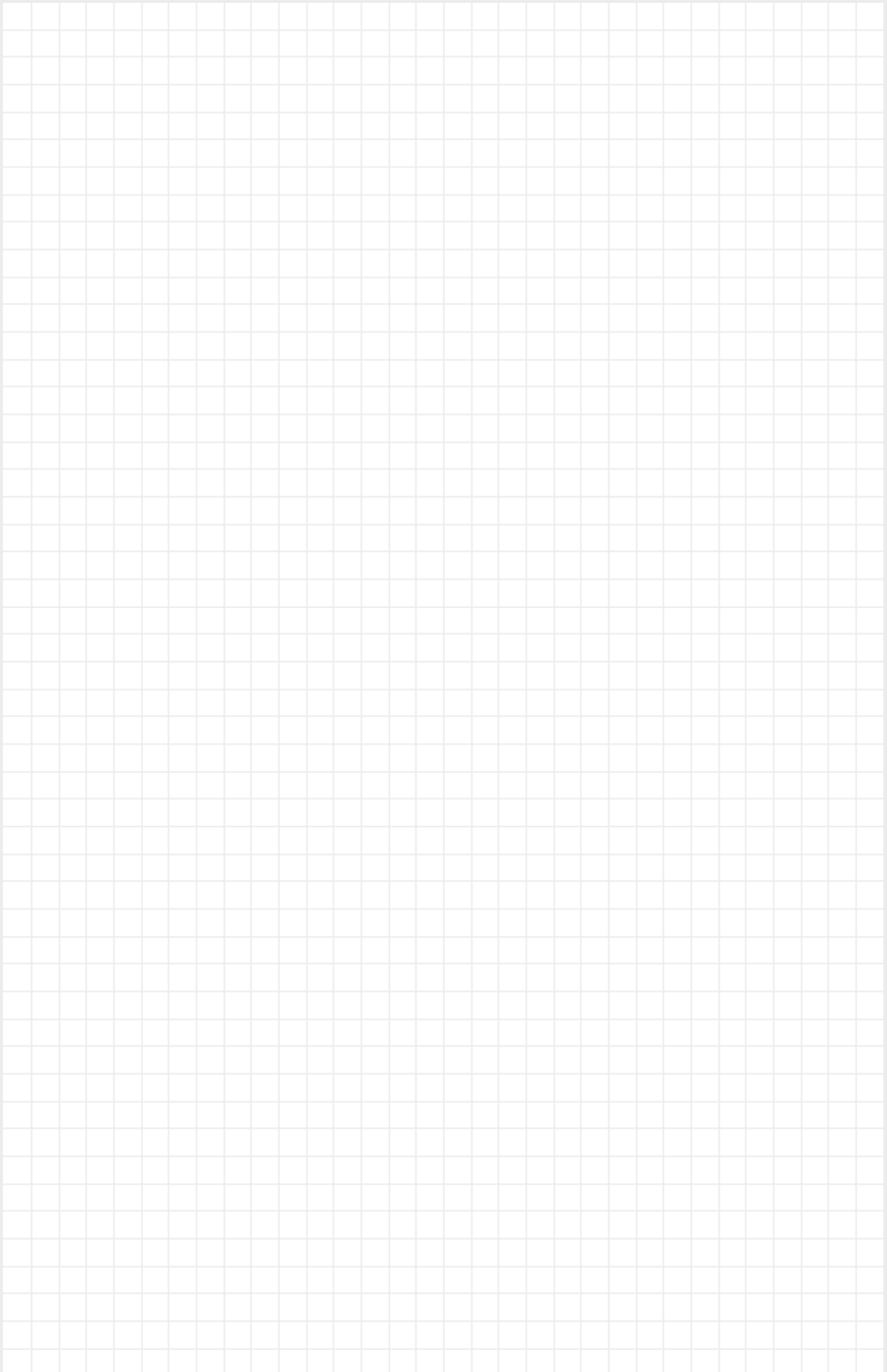


Installation sealing tape

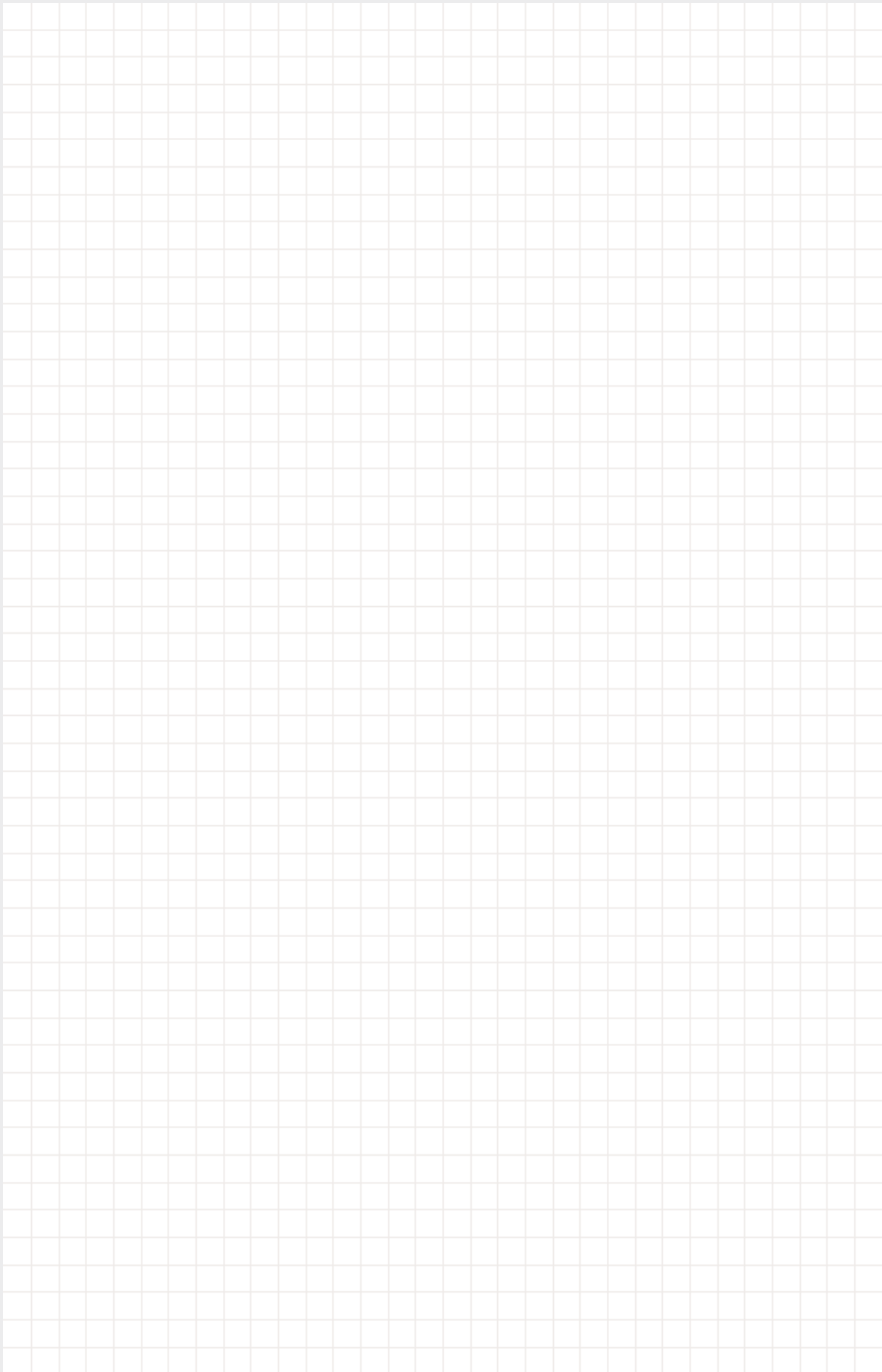


Installation sealing tape (Sill)



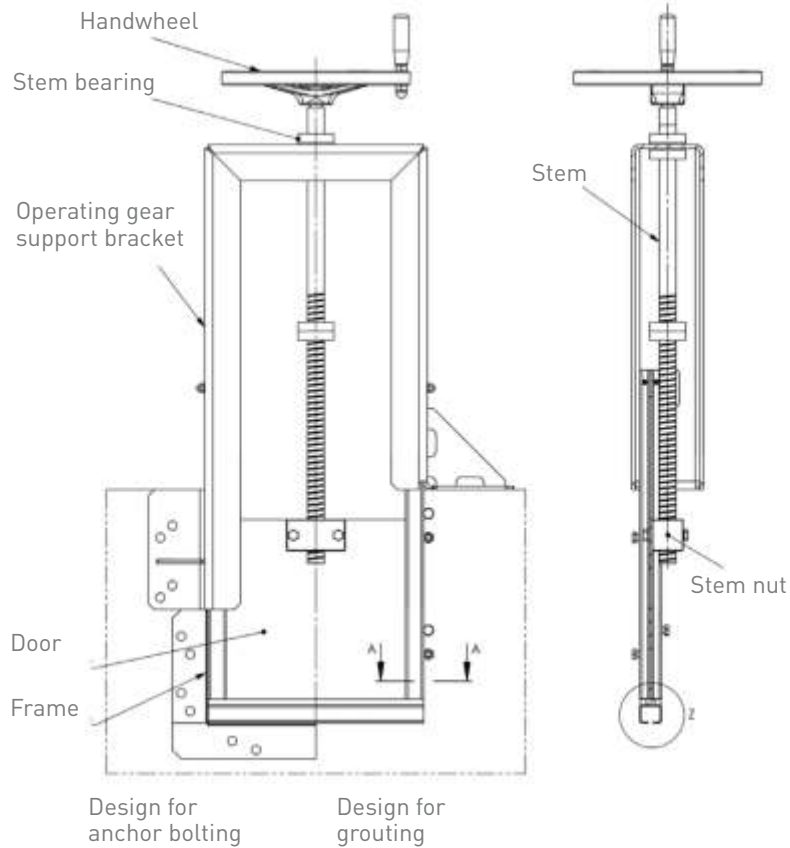


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05	WAGU®-Stop Plates	05
06	WAGU®-Weir Type Channel Penstocks (3 Facings)	06
07	WAGU®-Slide Penstocks	07
08		08
09		09
10	WAGU®-Weir Type Penstocks (4 Facings)	10
11		11
12	WAGU®-Flap Valves	12
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14	WAGU®-Tilting Flap Spillways	14
15		15
16		16
17	WAGU®-Isolating and Flushing Valves	17
18	WAGU®-Reversing Flaps	18
19		19
20	WAGU®-Telescopic Valves	20
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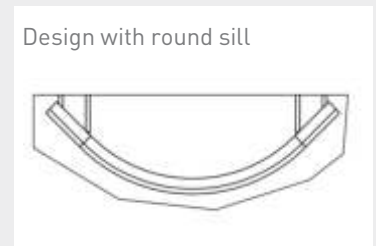
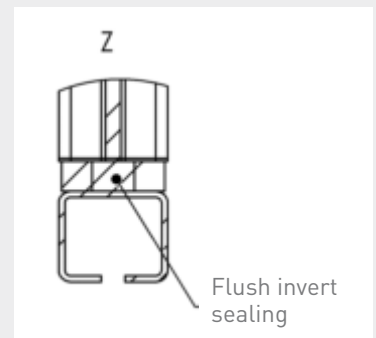
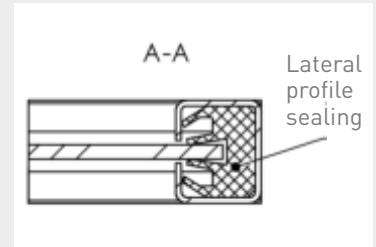


WAGU®-Channel Penstock (Lightweight) L

3 facings, for open channels, for on-seating or off-seating pressure, for grouting into channel recess or for anchor bolting to channel outlet or in channel.



Details



Designs

- ➔ Straight sill for grouting/anchor bolting
- ➔ Round sill for grouting
- ➔ Sill to be flush mounted into channel invert

Design Features

- ➔ Welded U-shaped frame of C-profile with inserted lateral profile seal and chambered sill sealing
- ➔ Smooth door with screwed-on stem nut, large dimensions with reinforcing ribs
- ➔ Operating gear support bracket with stem bearing and handwheel or other types of operating gears

Dimensions

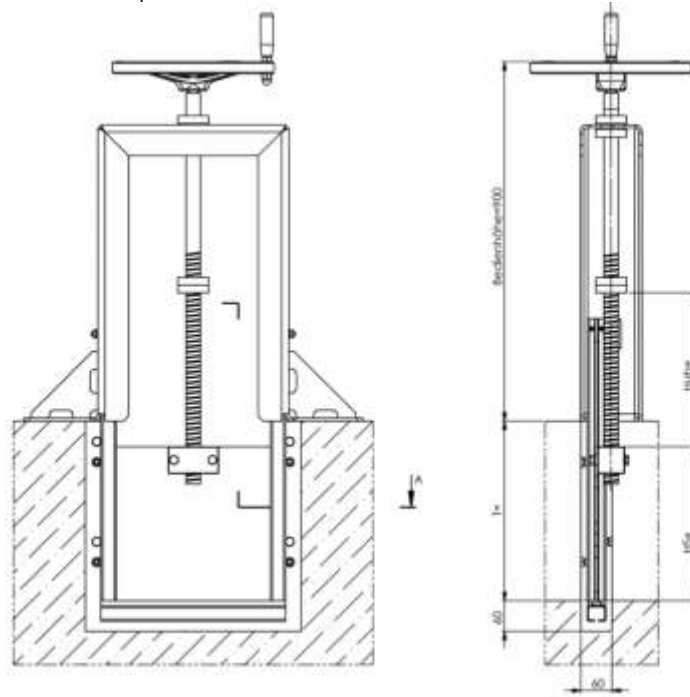
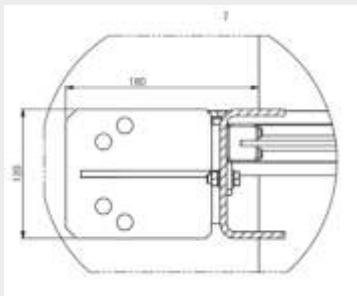
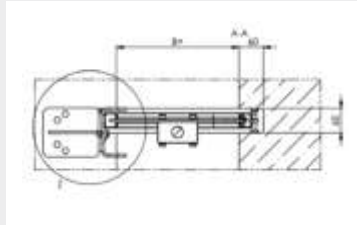
- ➔ W x HS (200 x 200 up to 1200 x 1200)*

*Please specify in the enquiry/ order.

WAGU®-Channel Penstock (Lightweight) L for grouting

With straight sill for gouting
W x HS 200 x 200 up to 1200 x 1200

Details



Material

Frame	Door	Sealing	Support bracket	Stem	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	1.4301	1.4305	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	1.4404 / 1.4571	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Channel Penstock (Lightweight) L for grouting, with straight sill for grouting.
Cat.-sheet 02.21.

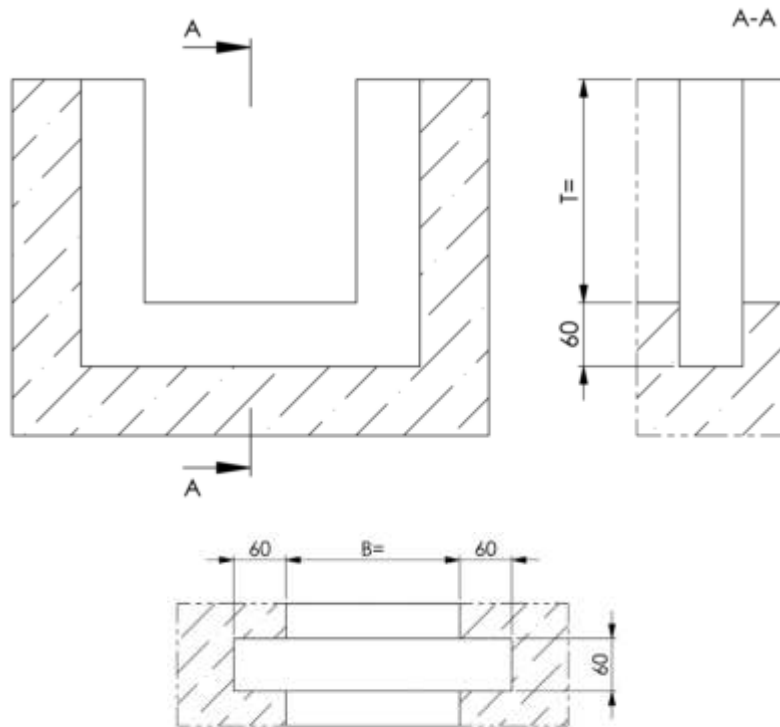
Material*	Dimensions*
Frame:	Channel width W: mm
Door:	Door height HS: mm
Sealing:	Channel depth T: mm
	Handle height h: mm

* Please specify in the enquiry/ order.

WAGU®-Channel Penstock (Lightweight) L for grouting

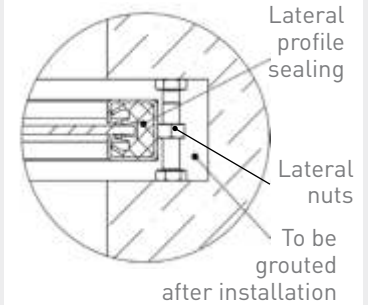
With straight sill for grouting

Wall recess



Details

Cut by lateral recess with frame profile



View on adjustment screws and clamping screws



Installation Guide

- ➔ Screw the adjusting- and set screws into the lateral nuts.
- ➔ Insert frame including door in recess.
- ➔ Align frame:
 - Screw lateral adjusting screws into the recess until the frame stands vertically and is fixed without tension.
- ➔ Before grouting, check penstock for perfect (flawless) performance and tightness as it is not possible to change the position of the frame after grouting.
- ➔ Install shuttering on recess and grout with grouting mortar.¹⁾
- ➔ When grouting, no mortar must touch the sealing or door, if necessary wash carefully before it hardens.

¹⁾ We recommend a cement-based grout.

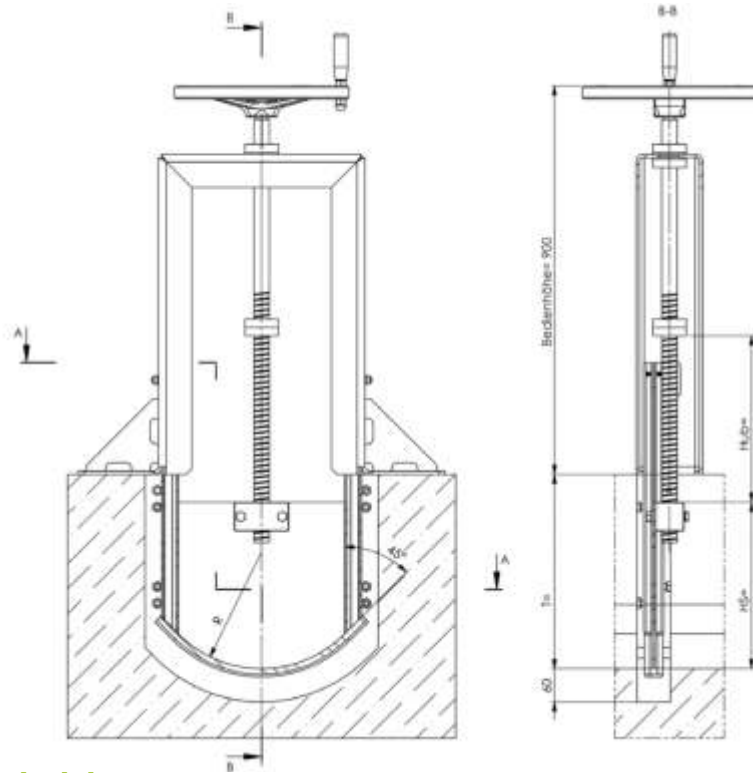
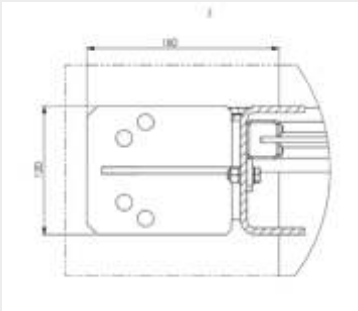
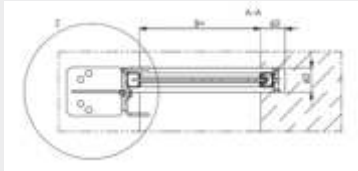
Mounting the actuator

Install the operating gear support bracket with compound anchor bolts at the top of the wall. When mounting the operating gear, care should be taken to ensure that the stem is perpendicular above the penstock. The fastening nuts of the operating gear must not be tightened before the stem with stem nut is mounted tension-free.

WAGU®-Channel Penstock (Lightweight) L for grouting

With round sill for grouting
W x HS 200 x 200 up to 1200 x 1200

Details



Material

Frame	Door	Sealing	Support bracket	Stem	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	1.4301	1.4305	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	1.4404 / 1.4571	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Channel Penstock (Lightweight) L for grouting, with round sill for grouting.
Cat.-sheet 02.31.

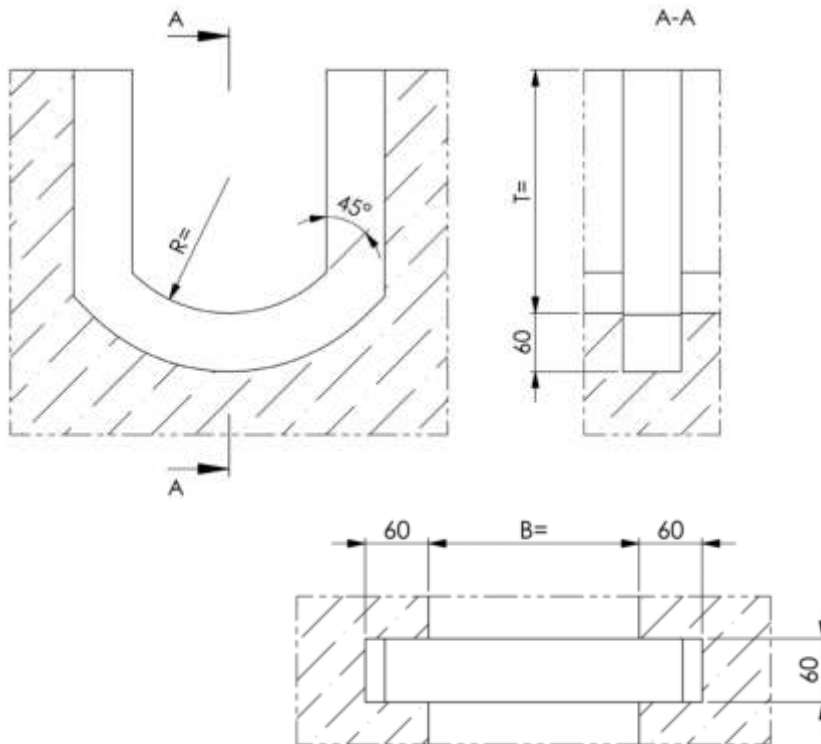
Material*	Dimensions*
Frame:	Channel width W: mm
Door:	Door height HS: mm
Sealing:	Channel depth T: mm
	Handle height h: mm

* Please specify in the enquiry/ order.

WAGU®-Channel Penstock (Lightweight) L for grouting

With round sill for grouting

Wall recess



Installation Guide

- ➔ Screw the adjusting- and set screws into the lateral nuts.
- ➔ Insert frame including door in recess.
- ➔ Align frame:
 - Screw lateral adjusting screws into the recess until the frame stands vertically and is fixed without tension.
- ➔ Before grouting, check penstock for perfect (flawless) performance and tightness as it is not possible to change the position of the frame after grouting. Install shuttering on recess and grout with grouting mortar.¹⁾
- ➔ When grouting, no mortar must touch the sealing or door, if necessary wash carefully before it hardens.

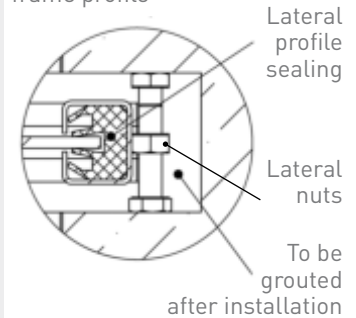
1) We recommend a cement-based grout.

Mounting the actuator

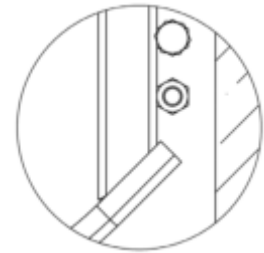
Install the operating gear support bracket with compound anchor bolts at the top of the wall. When mounting the operating gear, care should be taken to ensure that the stem is perpendicular above the penstock. The fastening nuts of the operating gear must not be tightened before the stem with stem nut is mounted tension-free.

Details

Cut by lateral recess with frame profile

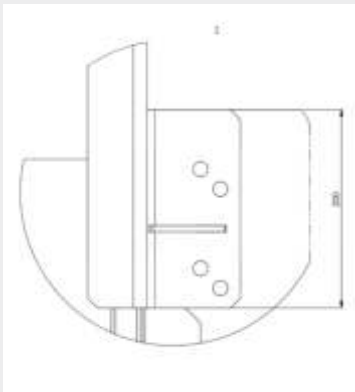
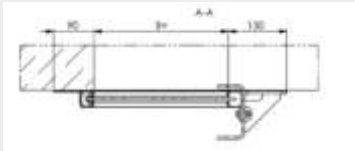


View on adjustment screws and clamping screws



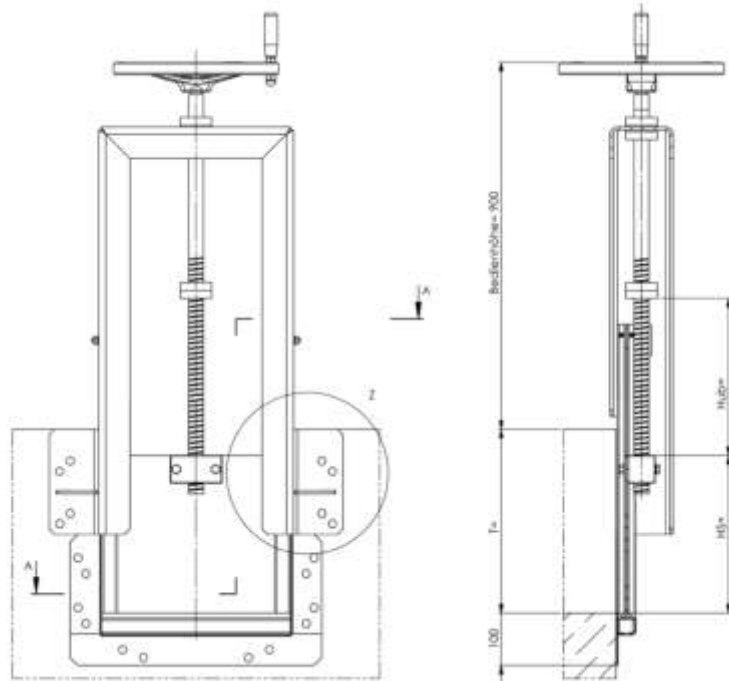
DN (mm)	R (mm)
200	140
250	175
300	210
350	245
400	280
450	315
500	350
600	420
700	490
800	560
900	630
1000	700
1100	770
1200	840

Details



WAGU®-Channel Penstock (Light weight) L for anchor bolting

With straight sill for anchor bolting
W x HS 200 x 200 up to 1200 x 1200



Material

Frame	Door	Sealing	Support bracket	Stem	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	1.4301	1.4305	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	1.4404 / 1.4571	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Channel Penstock (Lightweight) L for anchor bolting, with straight sill for anchor bolting. Cat.-sheet 02.41.

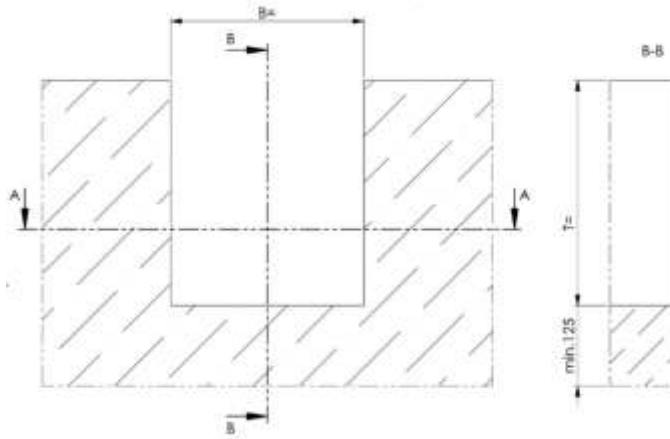
Material*	Dimensions*
Frame:	Channel width W: mm
Door:	Door height HS: mm
Sealing:	Channel depth T: mm
	Handle height h: mm

* Please specify in the enquiry/ order.

WAGU®-Channel Penstock (Light-weight) L for anchor bolting

With straight sill for anchor bolting

Wall recess



Installation Guide

- ➔ Place frame with door at the designated position and align.
- ➔ For anchor bolting there are double fastening holes, diagonally displaced, in the frame or flange.
- ➔ Thus, for mounting there are always alternative holes for drilling if for example you come across a concrete reinforcement. The bolt holes in the frame are 2mm larger than the drill and shall be used as guide for drilling.
- ➔ For fastening, compound anchor bolts must be used.

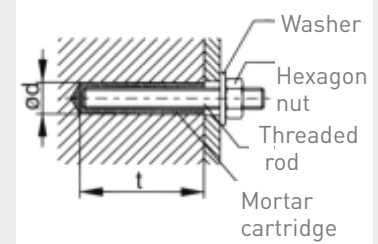
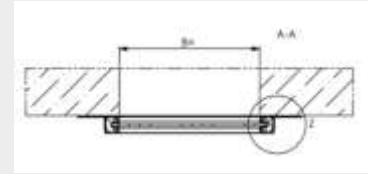
Sealing frame/wall

- ➔ Prior to the mounting on the wall, the wall gasket have to be applied on the back of the frame.
- ➔ Mounting material and wall gasket are included.
- ➔ Within the connection area of the wall gasket, the concrete wall must be smooth and even.
- ➔ When tighten the fastening nuts, take care that the frame sits even and uniform on the concrete wall. Distortion of the frame affects performance and tightness of the penstock.
- ➔ After fastening, clean frame, sealing and door; check for tightness and performance.

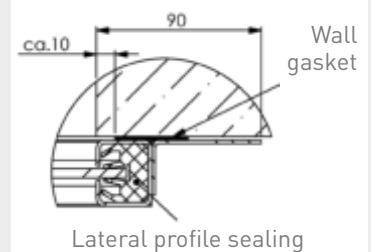
Mounting the actuator

Install the operating gear support bracket with compound anchor bolts at the top of the wall. When mounting the operating gear, care should be taken to ensure that the stem is perpendicular above the penstock. The fastening nuts of the operating gear must not be tightened before the stem with stem nut is mounted tension-free.

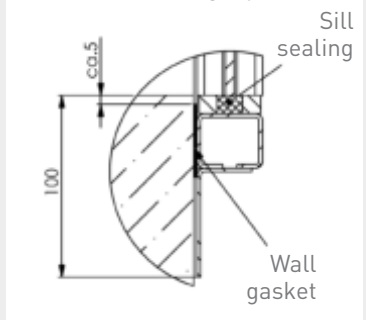
Details



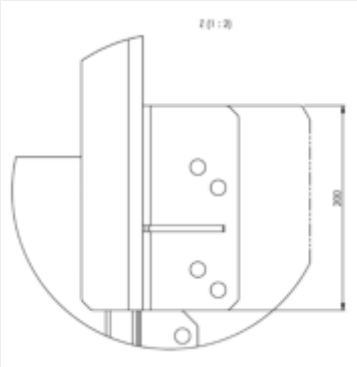
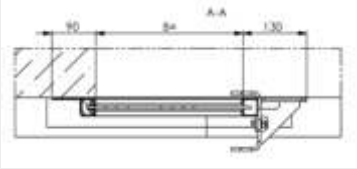
Z Installation sealing tape



Installation sealing tape



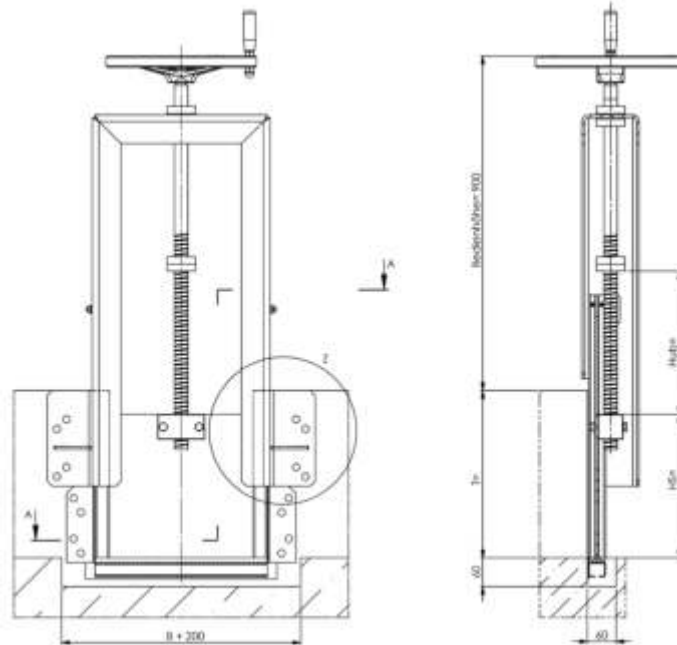
Details



WAGU®-Channel Penstock (Light weight) L for anchor bolting

With straight sill for grouting

W x HS 200 x 200 up to 1200 x 1200



Material

Frame	Door	Sealing	Support bracket	Stem	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	1.4301	1.4305	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	1.4404 / 1.4571	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Channel Penstock (Lightweight) L for anchor bolting, with straight sill for grouting. Cat.-sheet 02.43.

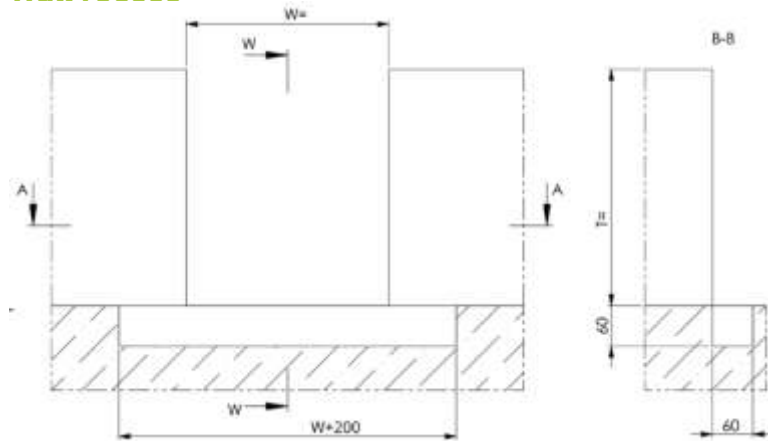
Material*	Dimensions*
Frame:	Channel width W: mm
Door:	Door height HS: mm
Sealing:	Channel depth T: mm
	Handle height h: mm

* Please specify in the enquiry/ order.

WAGU®-Channel Penstock (Light weight) L for anchor bolting

With straight sill for grouting

Wall recess



Installation Guide

- ➔ Place frame with door at the designated position and align.
- ➔ For anchor bolting there are double fastening holes, diagonally displaced, in the frame or flange.
- ➔ Thus, for mounting there are always alternative holes for drilling if for example you come across a concrete reinforcement. The bolt holes in the frame are 2mm larger than the drill and shall be used as guide for drilling.
- ➔ For fastening, compound anchor bolts must be used.

Sealing frame/wall

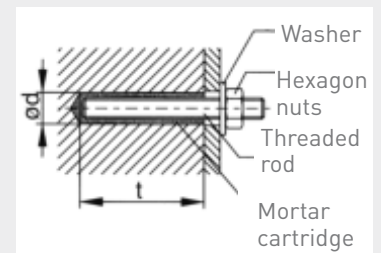
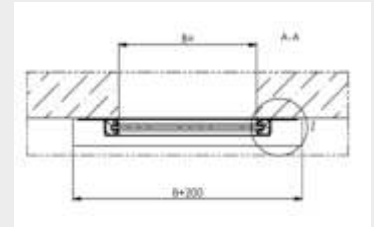
- ➔ Prior to the mounting on the wall, the wall gasket have to be applied on the back of the frame.
- ➔ Mounting material and wall gasket are included.
- ➔ Within the connection area of the wall gasket, the concrete wall must be smooth and even..
- ➔ When tighten the fastening nuts, take care that the frame sits even and uniform on the concrete wall. Distortion of the frame affects performance and tightness of the penstock.
- ➔ Grout sill with grouting mortar.¹⁾ When grouting, no mortar must touch the sealing or door, if necessary wash carefully before it hardens.
- ➔ After fastening, clean frame, sealing and door; check for tightness and performance.

¹⁾ We recommend a cement-based grout.

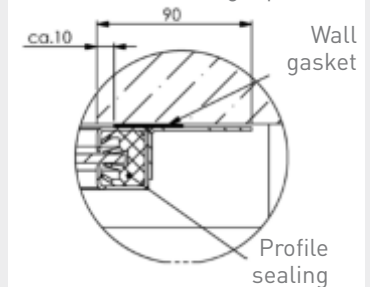
Mounting the actuator

Install the operating gear support bracket with compound anchor bolts at the top of the wall. When mounting the operating gear, care should be taken to ensure that the stem is perpendicular above the penstock. The fastening nuts of the operating gear must not be tightened before the stem with stem nut is mounted tension-free.

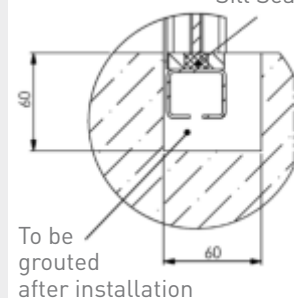
Details



Z Installation sealing tape

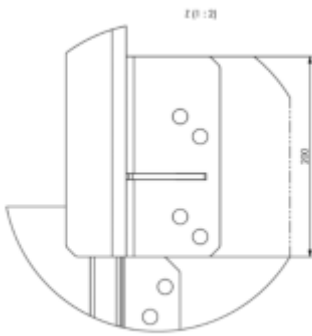
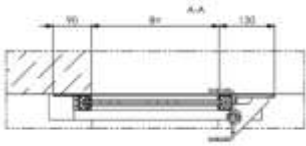


Sill Sill Sealing



Details

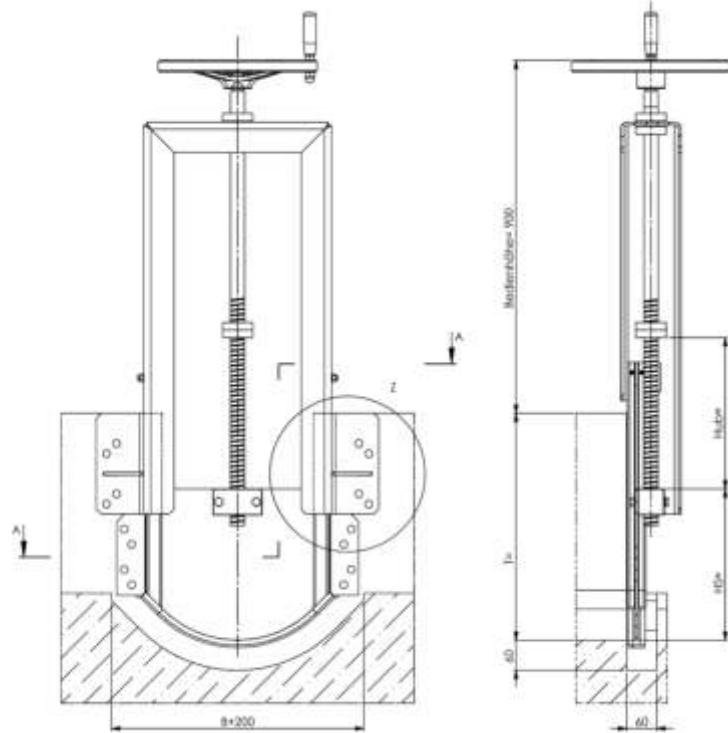
Section A-A



WAGU®-Channel Penstock (Light weight) L for anchor bolting

With round sill for grouting

W x HS 200 x 200 up to 1200 x 1200



Material

Frame	Door	Sealing	Support bracket	Stem	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	1.4301	1.4305	A4
1.4404/ 1.4571 <input type="checkbox"/>	1.4404/ 1.4571 <input type="checkbox"/>	Neoprene	1.4404/ 1.4571	1.4404/ 1.4571	A4

Other materials or combinations available on request.

Order text

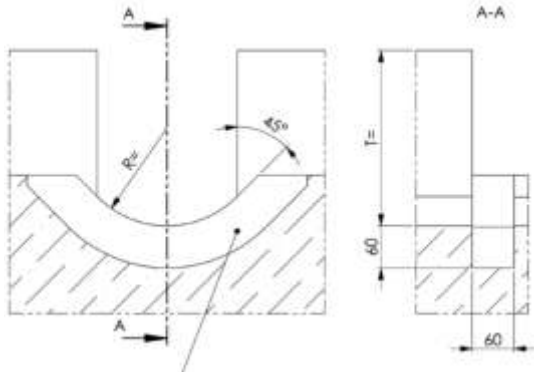
Channel Penstock (Lightweight) L for anchor bolting, with round sill for grouting. Cat.-sheet. 02.51.

Material*	Dimensions*
Frame:	Channel width W: mm
Door:	Door height HS: mm
Sealing:	Channel depth T: mm
	Handle height h: mm

* Please specify in the enquiry/ order.

WAGU®-Channel Penstock (Light weight) L for anchor bolting

With round sill for grouting



Sill to be grouted flash with grouting mortar¹⁾

Installation Guide

- ➔ Place frame with door at the designated position and align.
- ➔ For anchor bolting there are double fastening holes, diagonally displaced, in the frame or flange.
- ➔ Thus, for mounting there are always alternative holes for drilling if for example you come across a concrete reinforcement. The bolt holes in the frame are 2mm larger than the drill and shall be used as guide for drilling.
- ➔ For fastening, compound anchor bolts must be used.

Sealing frame/wall

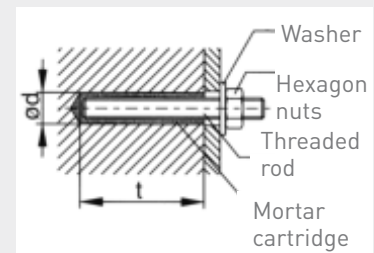
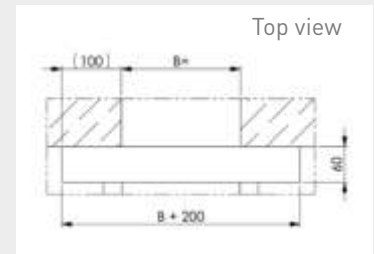
- ➔ Prior to the mounting on the wall, the wall gasket have to be applied on the back of the frame.
- ➔ Mounting material and wall gasket are included.
- ➔ Within the connection area of the wall gasket, the concrete wall must be smooth and even.
- ➔ When tighten the fastening nuts, take care that the frame sits even and uniform on the concrete wall. Distortion of the frame affects performance and tightness of the penstock.
- ➔ Grout sill with grouting mortar.¹⁾ When grouting, no mortar must touch the sealing or door, if necessary wash carefully before it hardens.
- ➔ After fastening, clean frame, sealing and door; check for tightness and performance.

¹⁾ We recommend a cement-based grout.

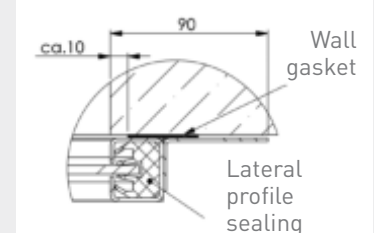
Mounting the actuator

Install the operating gear support bracket with compound anchor bolts at the top of the wall. When mounting the operating gear, care should be taken to ensure that the stem is perpendicular above the penstock. The fastening nuts of the operating gear must not be tightened before the stem with stem nut is mounted tension-free.

Details

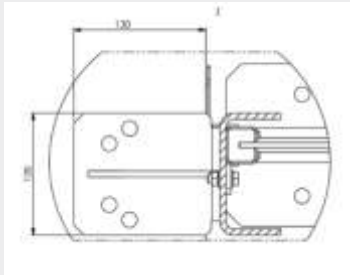
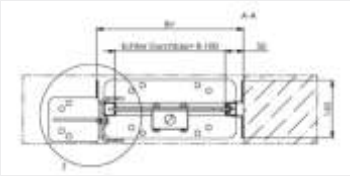


Z Installation sealing tape



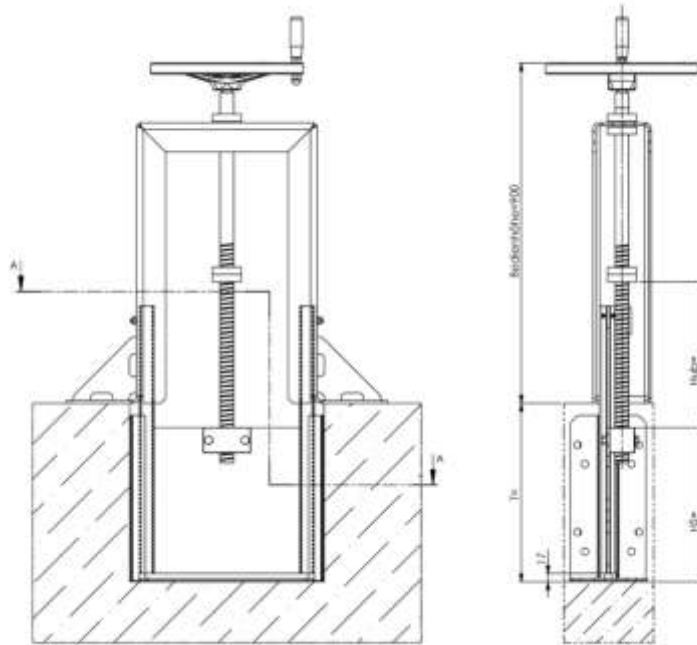
DN (mm)	R (mm)
150	105
200	140
250	175
300	210
350	245
400	280
450	315
500	350
600	420
700	490
800	560
900	630
1000	700
1100	770
1200	840

Details



WAGU®-Channel Penstock for anchor bolting in channel

With straight sill for anchor bolting in channel invert
W x HS 200 x 200 up to 1200 x 1200



Material

Frame	Door	Sealing	Support bracket	Stem	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	1.4301	1.4305	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	1.4404 / 1.4571	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Channel Penstock (Lightweight) L for anchor bolting in channel, with straight sill for anchor bolting in channel invert. Cat.-sheet 02.61.

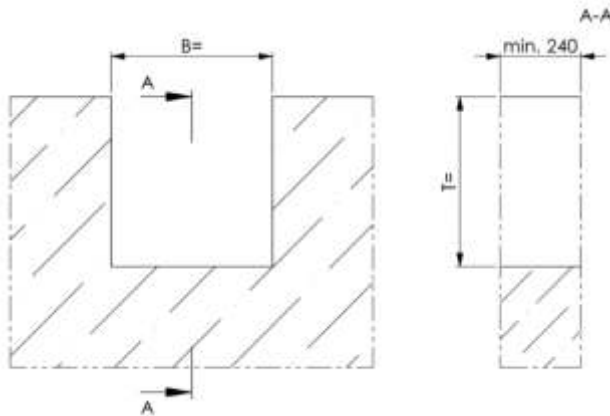
Material*	Dimensions*
Frame:	Channel width W: mm
Door:	Door height HS: mm
Sealing:	Channel depth T: mm
	Handle height h: mm

* Please specify in the enquiry/ order.

WAGU®-Channel Penstock for anchor bolting in channel

With straight sill for anchor bolting in channel invert

Wall recess



Installation Guide

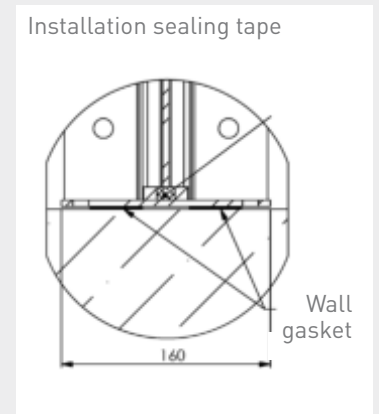
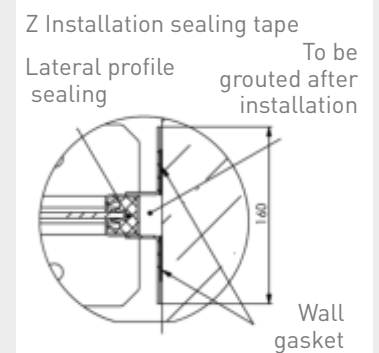
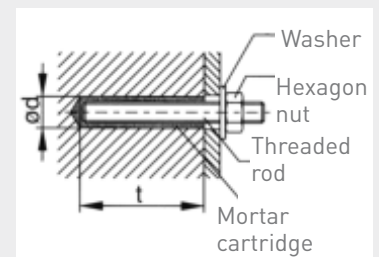
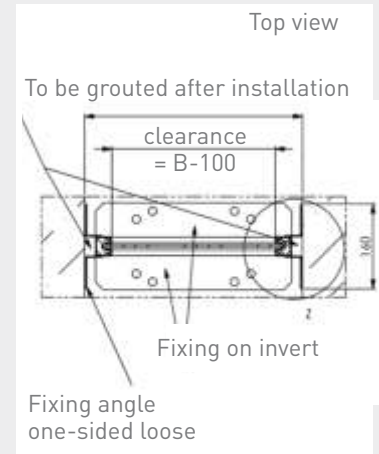
- ➔ The frame will be supplied with welded-on support brackets on one side and a fastening strip at the sill. The support brackets for the other side will be supplied loose for adaptation to the channel.
- ➔ Apply the wall gasket centered at the bottom of the fastening strip of the sill and on the welded-on support brackets. Insert frame including door into the designate position and align.
- ➔ For anchor bolting there are double fastening holes, diagonally displaced, in the support brackets and fastening strips of the sill.
- ➔ Thus, for mounting there are always alternative holes for drilling if for example you come across a concrete reinforcement. The bolt holes in the frame are 2mm larger than the drill and shall be used as guide for drilling.
- ➔ For fastening, compound anchor bolts must be used.
- ➔ Mounting material and wall gasket are included.
- ➔ First mount the frame on the side with the welded-on support brackets to the channel wall. Then install the loose supplied support brackets to the channel wall so that the frame is tightly clamped between the support brackets. Afterwards, the hollow spaces are grouted with grouting mortar.¹⁾
- ➔ When grouting, no mortar must touch the sealing or door, if necessary wash carefully before it hardens.
- ➔ After fastening, clean frame, sealing and door; check for tightness and performance.

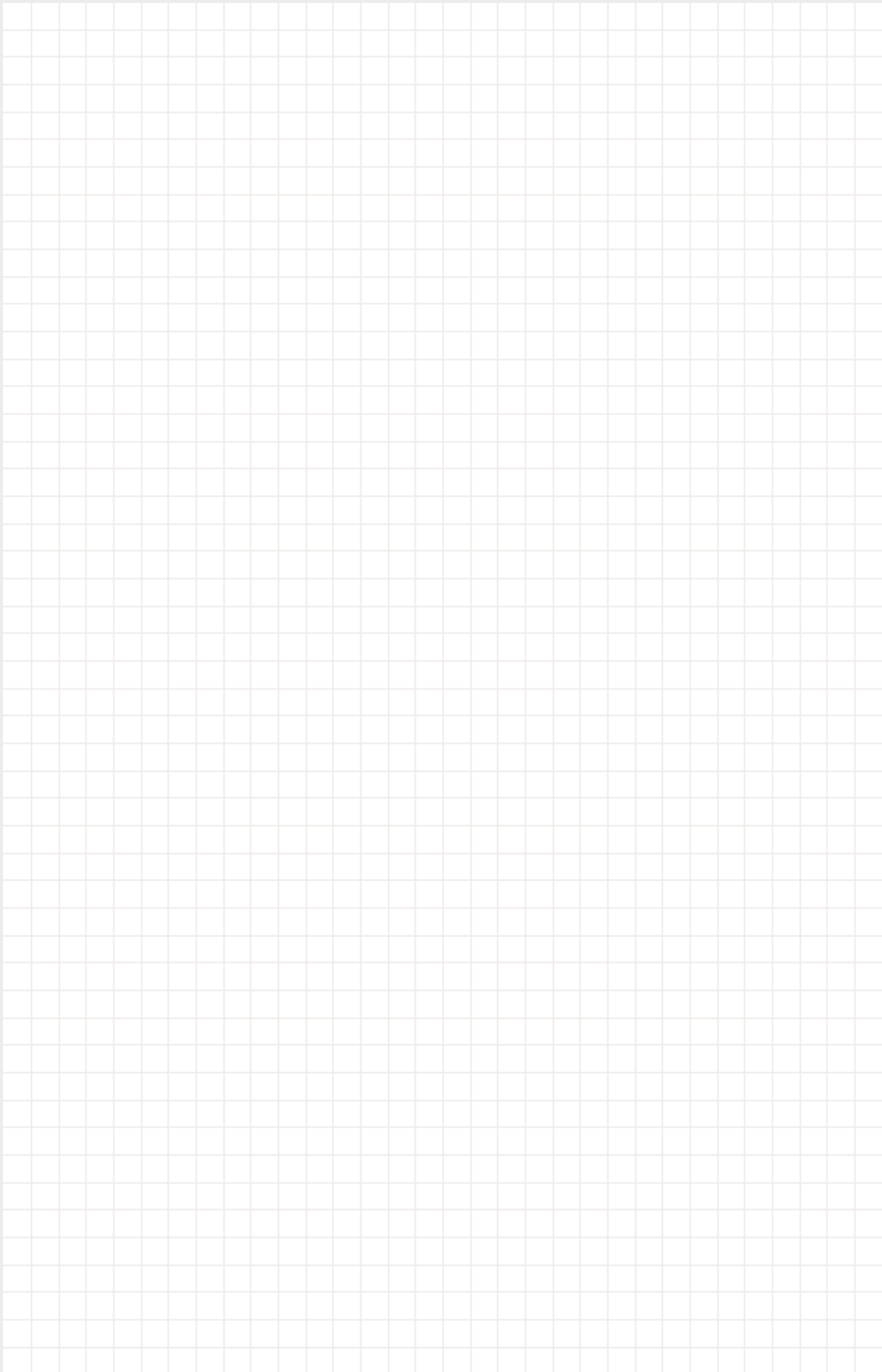
¹⁾ We recommend a cement-based grout.

Mounting the actuator

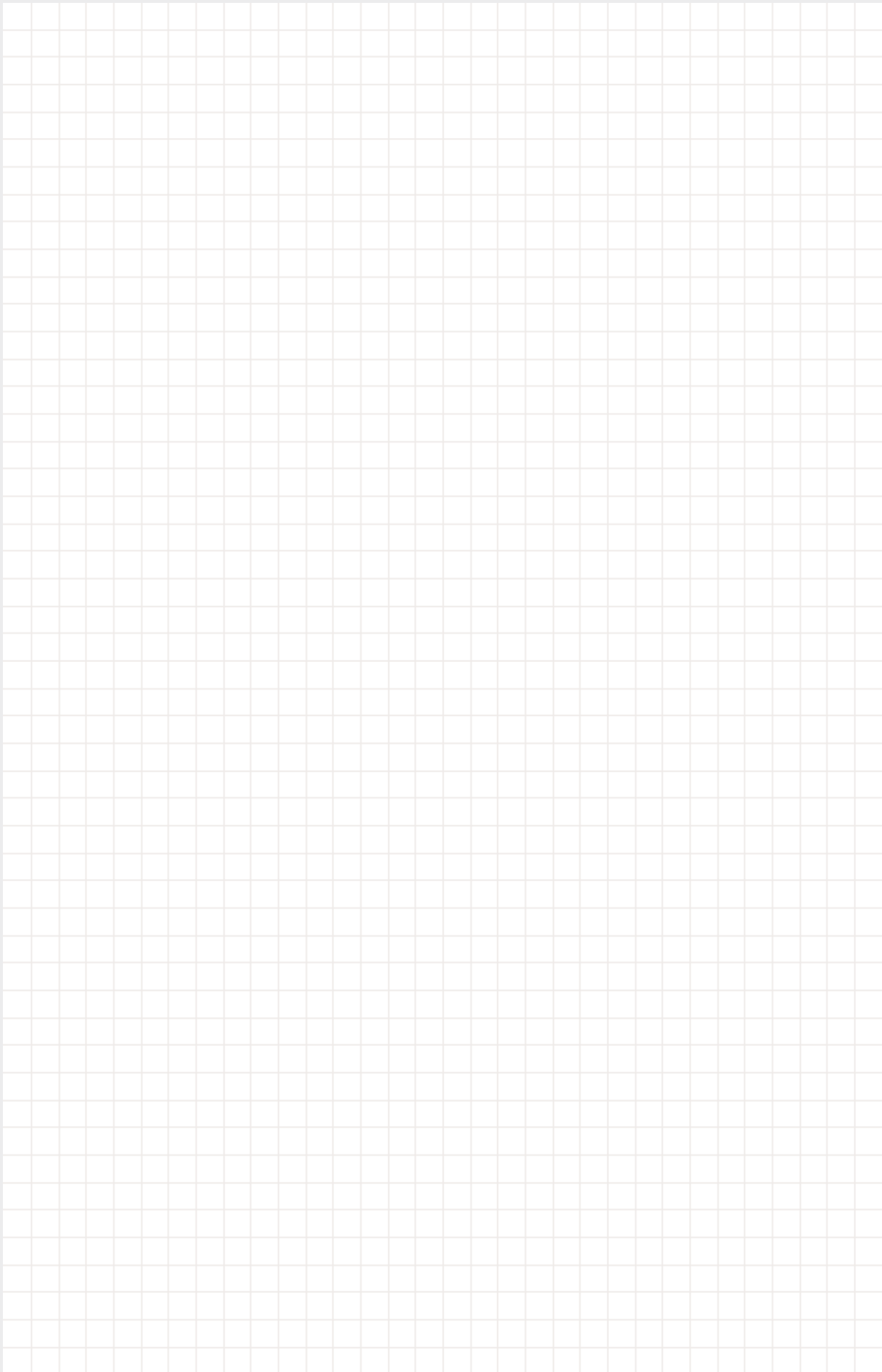
Install the operating gear support bracket with compound anchor bolts at the top of the wall. When mounting the operating gear, care should be taken to ensure that the stem is perpendicular above the penstock. The fastening nuts of the operating gear must not be tightened before the stem with stem nut is mounted tension-free.

Details



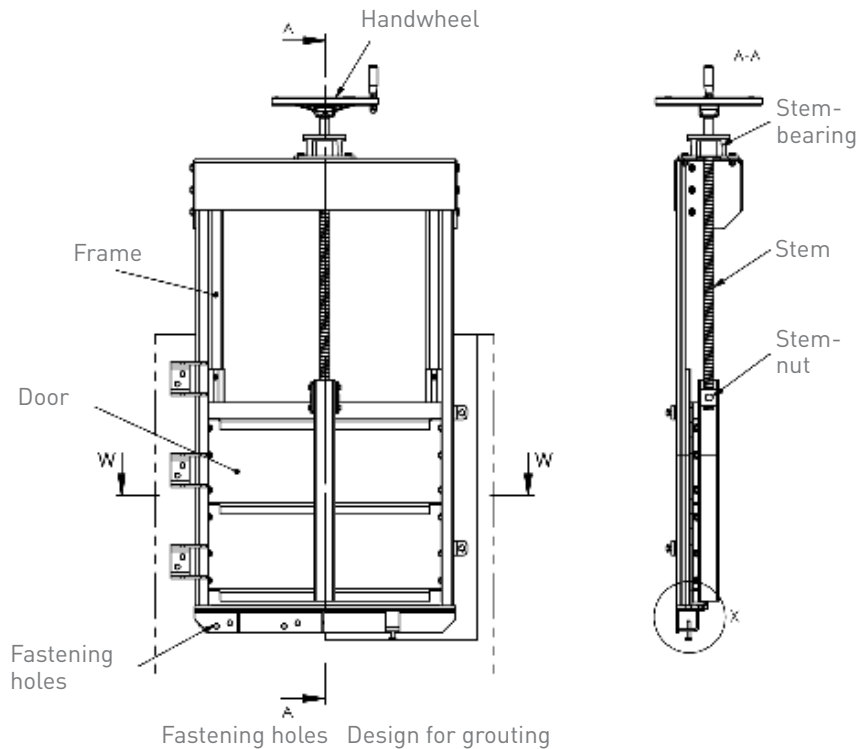


01	WAGU®-Handstops	01
02	WAGU®-Channel Penstocks (Leightweight)	02
03	WAGU®-Channel Penstocks	03
04	WAGU®-Stoplogs	04
05	WAGU®-Stop Plates	05
06	WAGU®-Weir Type Channel Penstocks (3 Facings)	06
07	WAGU®-Slide Penstocks	07
08		08
09		09
10	WAGU®-Weir Type Penstocks (4 Facings)	10
11		11
12	WAGU®-Flap Valves	12
13	WAGU®-Tidal Flaps	13
14	WAGU®-Tilting Flap Spillways	14
15		15
16		16
17	WAGU®-Isolating and Flushing Valves	17
18	WAGU®-Reversing Flaps	18
19		19
20	WAGU®-Telescopic Valves	20
21	WAGU®-Basin Inlets	21
22	WAGU®-Operating Gears	22

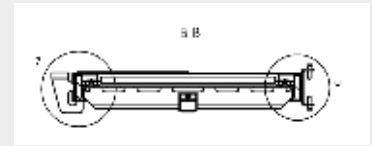


WAGU®-Channel Penstock GK

3 facing, for open channels, for on-seating or off-seating pressure, for grouting in channel recess or for anchor bolting to channel outlet or in channel.



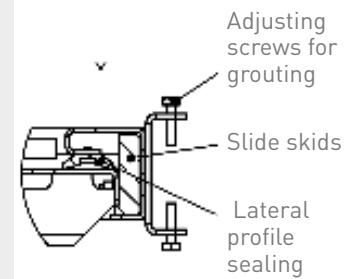
Details



Mounting bracket for anchor bolting

Lateral profile sealing

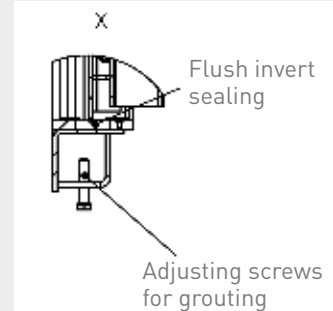
Slide skids



Adjusting screws for grouting

Slide skids

Lateral profile sealing



Flush invert sealing

Adjusting screws for grouting

Design

- ➔ Straight sill
- ➔ Round sill
- ➔ Sill to be flush mounted into channel invert
- ➔ Single-stem type
- ➔ Double-stem type

Design Features

- ➔ Welded frame of G-Profilee with thrust bridge, replaceable lateral profile sealings and chambered sill sealing
- ➔ Door with reinforcing ribs and screwd slide skids of plastic material.
- ➔ Stem nut inserted and secured on door
- ➔ Operating gear mounted on thrust bridge with stem bearing and handwheel or other types of operating gears

Dimensions

- ➔ W x HS 2000 x 2000 up to very large dimensions

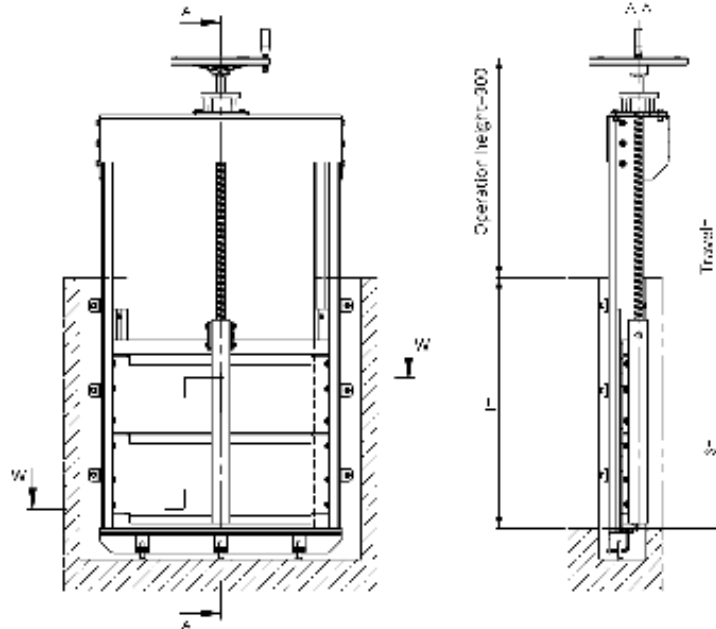
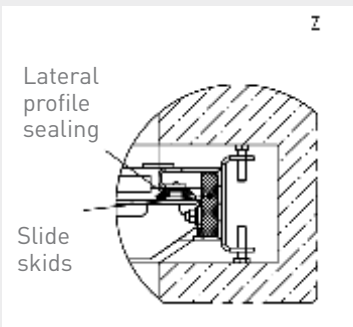
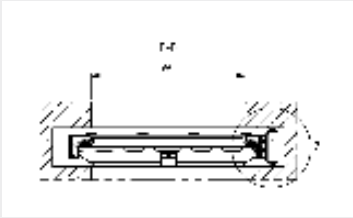


WAGU®-Channel Penstock GK for grouting

With straight sill for grouting

W x HS 2000 x 2000 up to the largest dimensions

Details



Materials

Frame	Door	Sealing	Slide skids	Stem	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	POM	1.4305	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	POM	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Channel Penstock GK for grouting, with straight sill for grouting.

Cat.-sheet 03.21, operating gear see at the corresponding cat.-sheet.

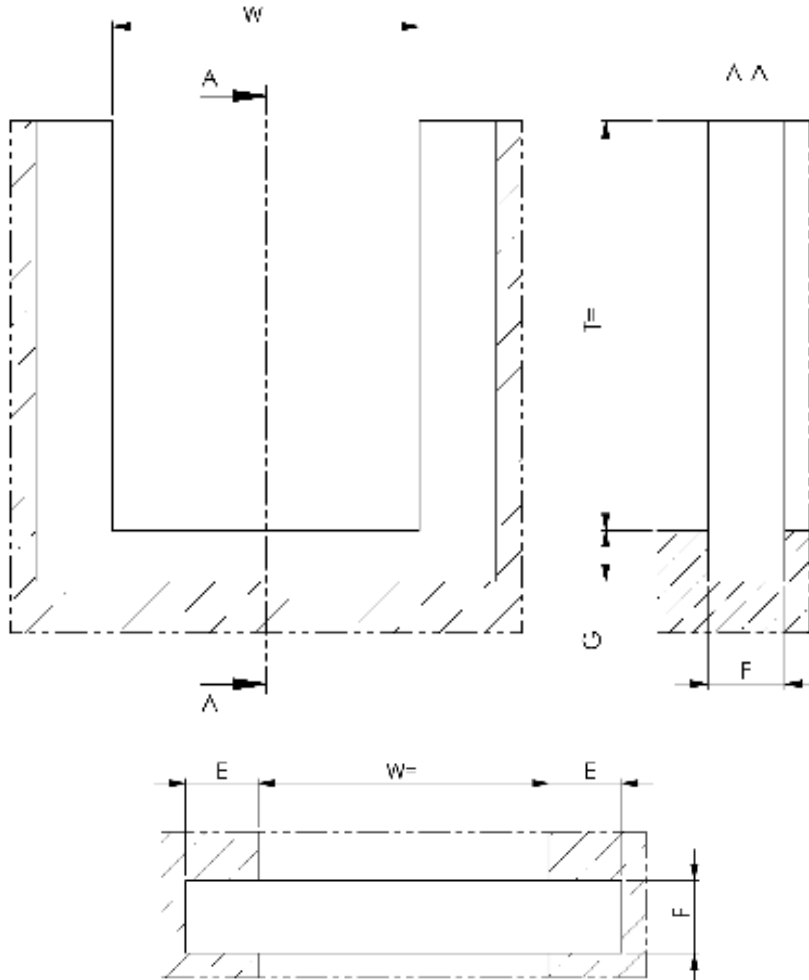
Materials*	Dimensions*
Frame:	Channel width W: mm
Door:	Door height HS: mm
Sealing:	Channel depth T: mm
Slide skids:	Travel H: mm
Stem:	
Connecting parts:	

* Please specify in the enquiry/ order.

WAGU®-Channel Penstock GK for grouting

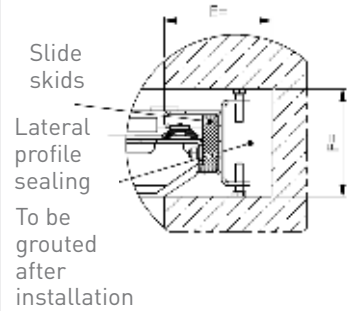
With straight sill for grouting

Wall recess

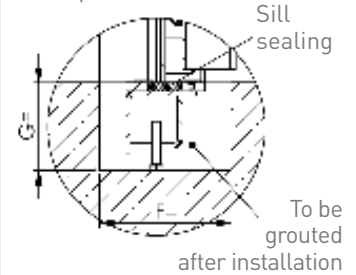


Details

Lateral recess with frame profile



Sill recess with frame profile



Wall recess (mm)

B	2000-3000	>3000
E	200	250
F	200	250
G	200	200

Installation Guide

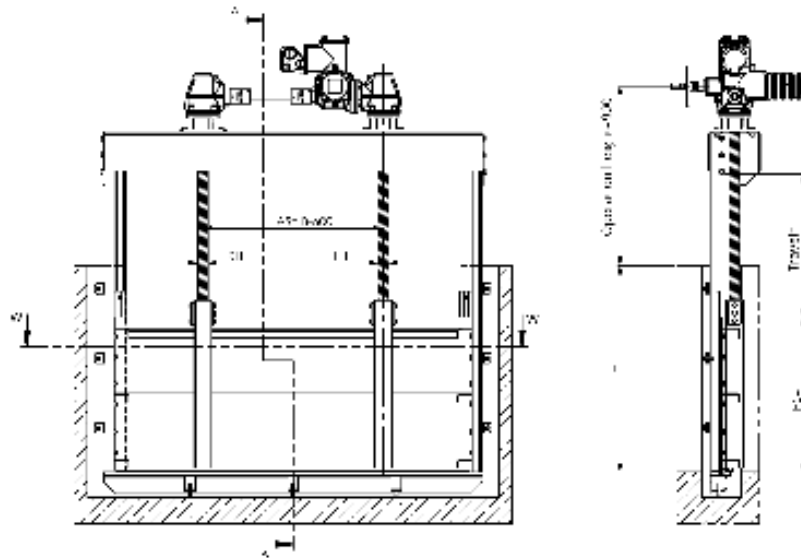
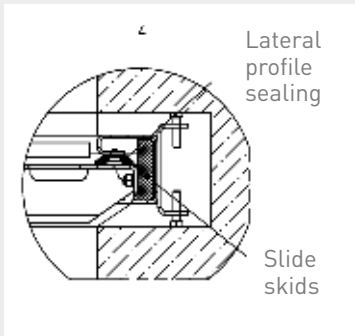
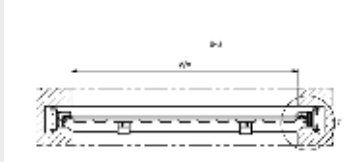
- ➔ Screw adjusting and tensioning screws into the frame.
- ➔ Insert frame including door into recess.
- ➔ Align frame:
Screw lateral adjusting screws into the recess until the frame is vertical and fixed without tension.
- ➔ Before grouting, check penstock for perfect (flawless) performance and tightness, as it is not possible to change the position of the frame after grouting.
- ➔ Install casing on recess and grout with grouting mortar.¹⁾
- ➔ When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.

¹⁾ We recommend a cement-based grout.

WAGU®-Channel Penstock GK for grouting

2-stem, with straight sill for grouting
W x HS 2000 x 2000 up to the largest dimensions

Details



Materials

Frame	Door	Sealing	Slide skids	Stem	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	POM	1.4305	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	POM	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Channel Penstock GK, 2-stem, for grouting, with straight sill for grouting. Cat.-sheet 03.23, operating gear see at the corresponding cat.-sheet.

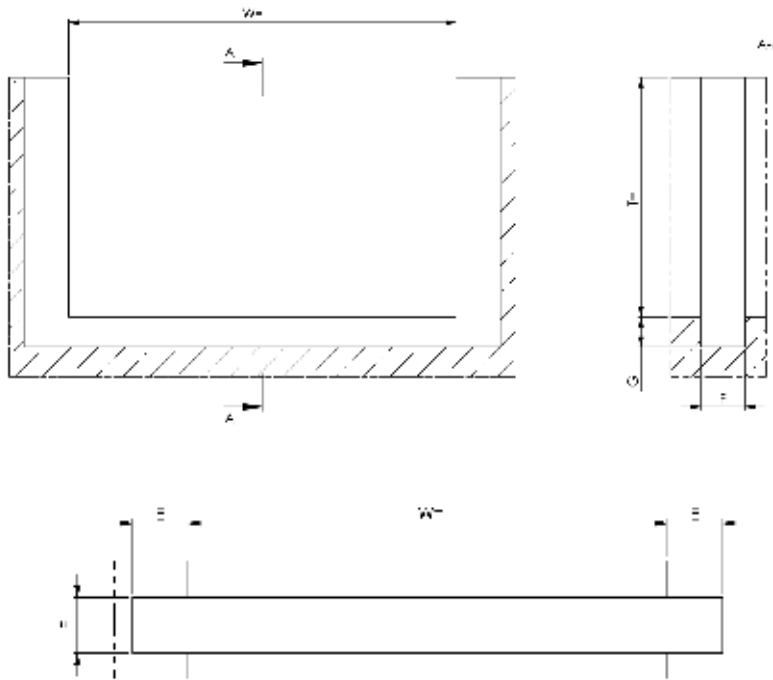
Materials*	Dimensions*
Frame:	Channel width W: mm
Door:	Door height HS: mm
Sealing:	Channel depth T: mm
Slide skids:	Travel H: mm
Stem:	
Connecting parts:	

* Please specify in the enquiry/ order.

WAGU®-Channel Penstock GK for grouting

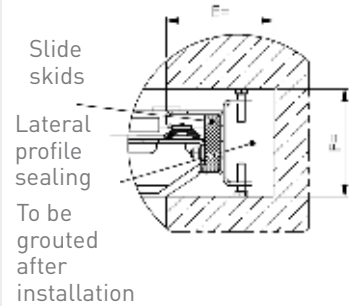
2-stem, with straight sill for grouting

Wall recess

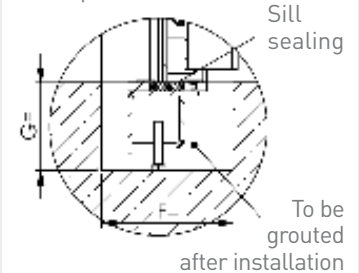


Details

Lateral recess with frame Profilee



Sill recess with frame profile



Wall recess (mm)

B	2000-3000	>3000
E	200	250
F	200	250
G	200	200

Installation Guide

- ➔ Screw adjusting and tensioning screws into the frame.
- ➔ Insert frame including door into recess.
- ➔ Align frame:
Screw lateral adjusting screws into the recess until the frame is vertical and fixed without tension.
- ➔ Before grouting, check penstock for perfect (flawless) performance and tightness, as it is not possible to change the position of the frame after grouting.
- ➔ Install casing on recess and grout with grouting mortar.¹⁾
- ➔ When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.

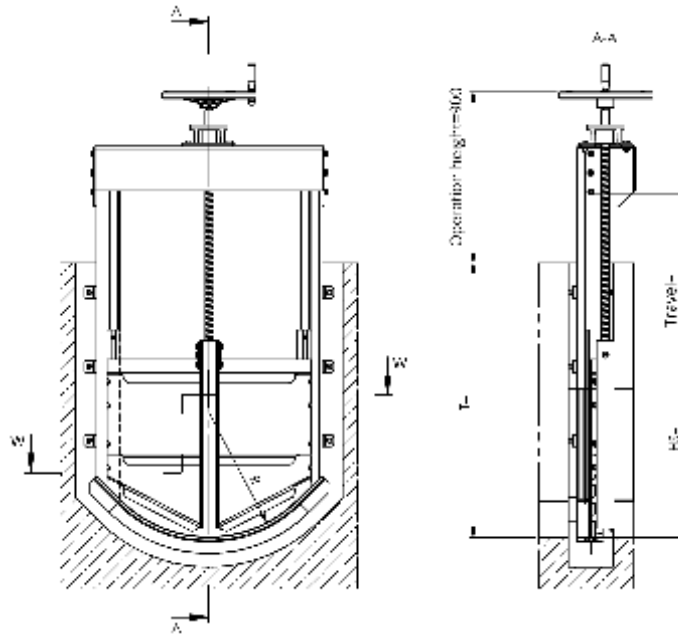
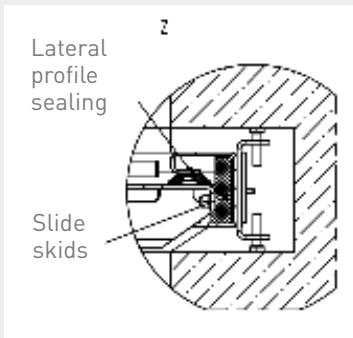
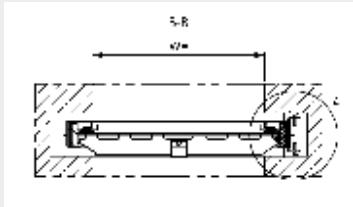
¹⁾ We recommend a cement-based grout.

WAGU®-Channel Penstock GK for grouting

With round sill for grouting

W x HS 2000 x 2000 up to the largest dimensions

Details



Materials

Frame	Door	Sealing	Slide skids	Stem	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	POM	1.4305	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	POM	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Channel Penstock GK, for grouting, with round sill for grouting. Cat.-sheet 03.31, operating gear see at the corresponding cat.-sheet.

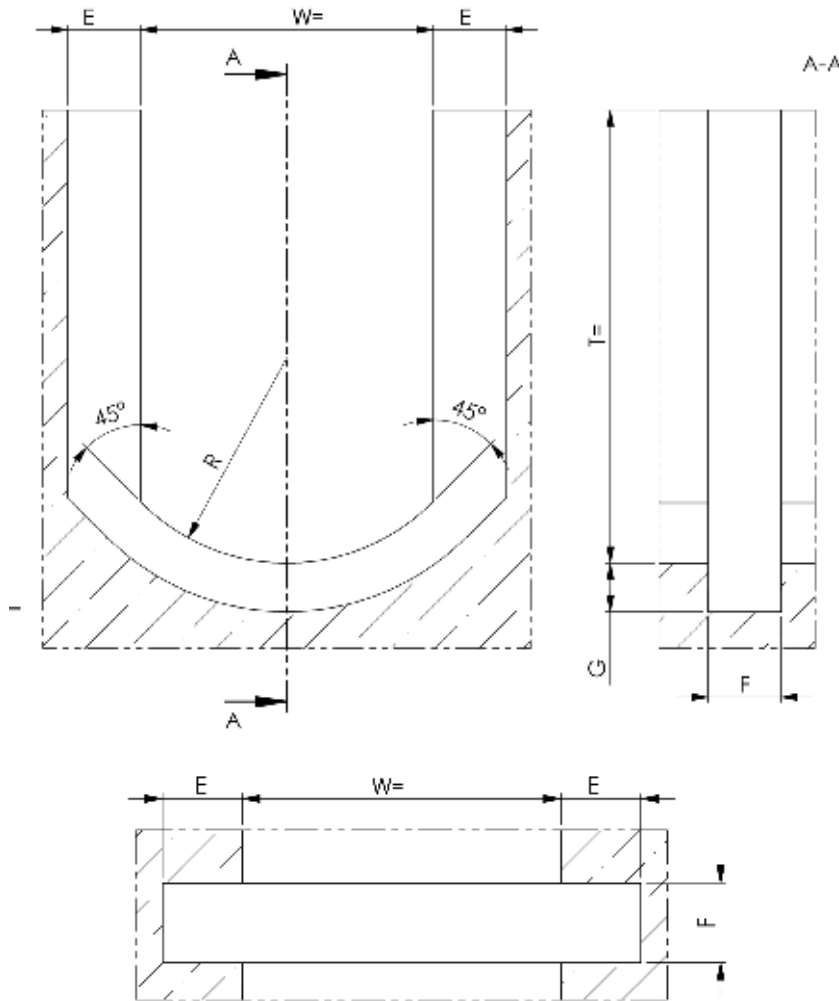
Materials*	Dimensions*
Frame:	Channel width W: mm
Door:	Door height HS: mm
Sealing:	Channel depth T: mm
Slide skids:	Travel H: mm
Stem:	
Connecting parts:	

* Please specify in the enquiry/ order.

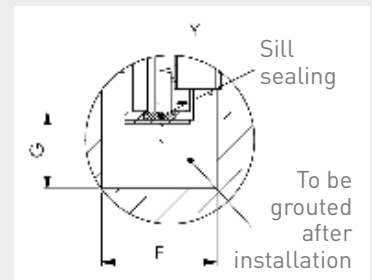
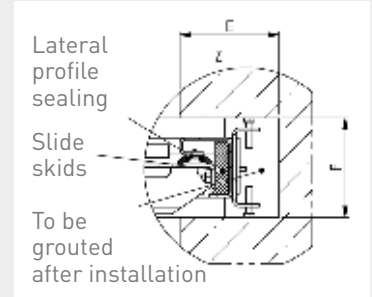
WAGU®-Channel Penstock GK for grouting

With round sill for grouting

Wall recess



Details



Wall recess (mm)

B	2000-3000	>3000
E	200	250
F	200	250
G	200	200

DN (mm) R (mm)

2000	1400
2100	1480
2200	1540
2300	1610
2400	1680
2500	1750
2600	1820
2700	1890
2800	1960
2900	2030
3000	2100

Installation Guide

- ➔ Screw adjusting and tensioning screws into the frame.
- ➔ Insert frame including door into recess.
- ➔ Align frame:
 - Screw lateral adjusting screws into the recess until the frame is vertical and fixed without tension.
- ➔ Before grouting, check penstock for perfect (flawless) performance and tightness, as it is not possible to change the position of the frame after grouting.
- ➔ Install casing on recess and grout with grouting mortar.¹⁾
- ➔ When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.

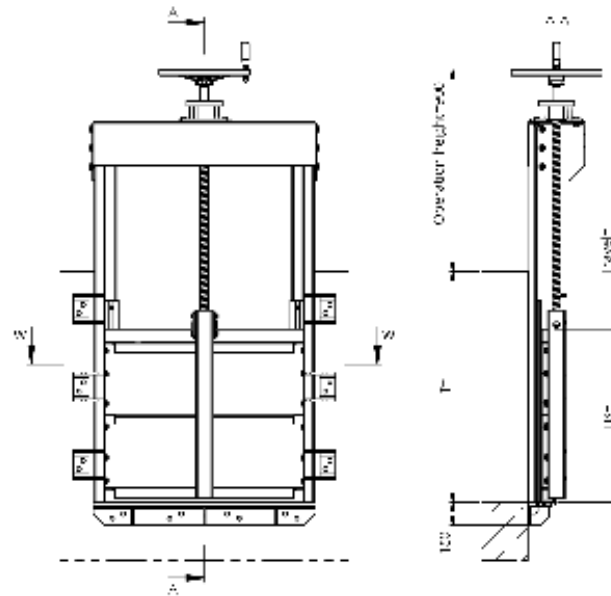
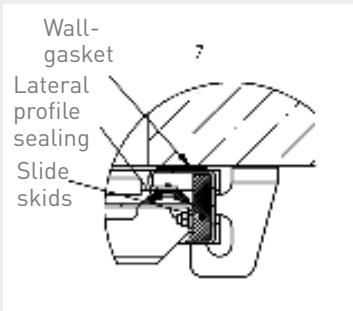
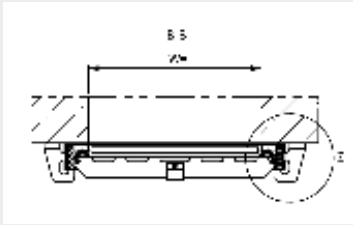
¹⁾ We recommend a cement-based grout.

WAGU®-Channel Penstock GK for anchor bolting

With straight sill for anchor bolting

W x HS 2000 x 2000 up to the largest dimensions

Details



Materials

Frame	Door	Sealing	Slide skids	Stem	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	POM	1.4305	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	POM	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Channel Penstock GK for anchor bolting, with straight sill for anchor bolting.

Cat.-sheet 03.41, operating gear see at the corresponding cat.-sheet.

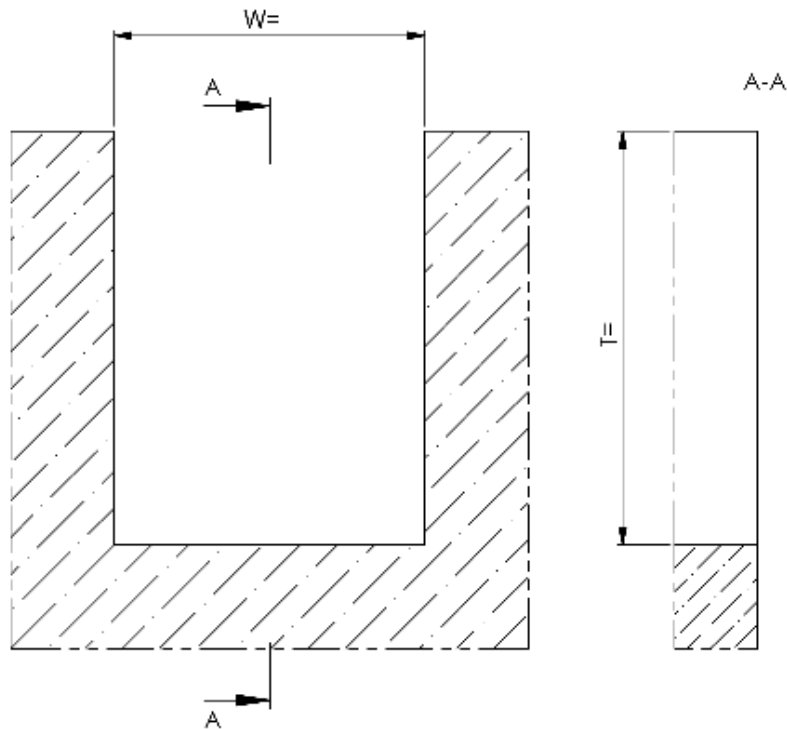
Materials*	Dimensions*
Frame:	Channel width W: mm
Door:	Door height HS: mm
Sealing:	Channel depth T: mm
Slide skids:	Travel H: mm
Stem:	
Connecting parts:	

* Please specify in the enquiry/ order.

WAGU®-Channel Penstock GK for anchor bolting

With straight sill for anchor bolting

Wall recess



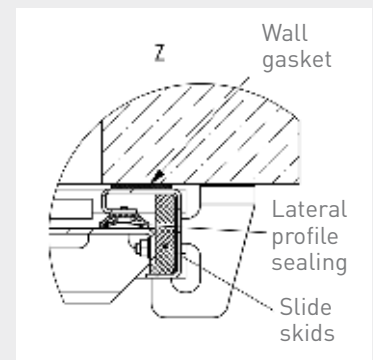
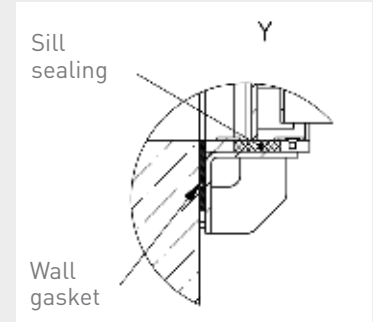
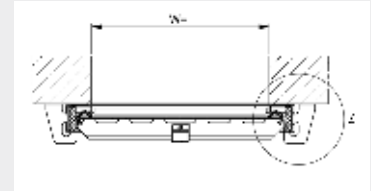
Installation Guide

- ➔ Place frame with door in the designated position and align.
- ➔ For anchor bolting, holes are double and diagonal displaced in the frame or flange.
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling. The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Compound anchor bolts are to be used for fastening.

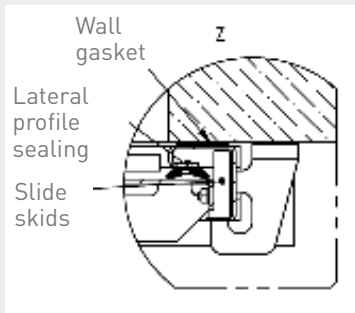
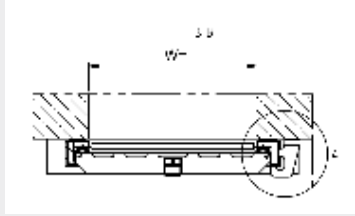
Sealing frame/wall

- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the frame
- ➔ Fastening material and wall gasket are included.
- ➔ The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.
- ➔ Clean frame, sealing and door after fastening; check for tightness and performance.

Details



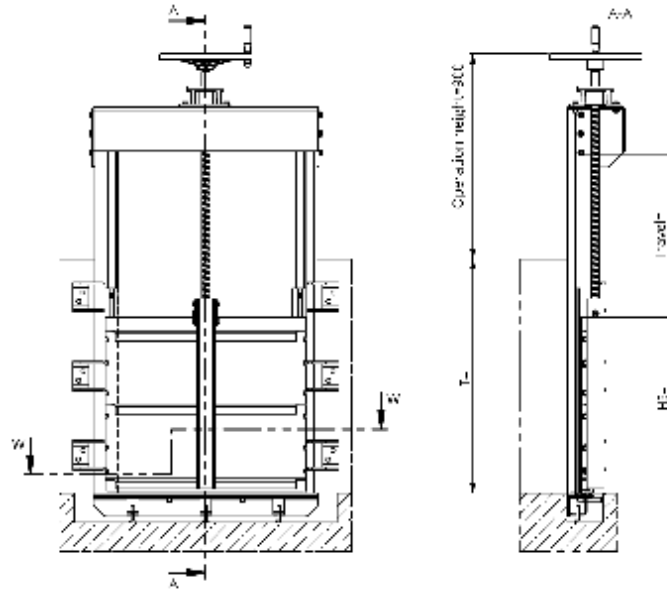
Details



WAGU®-Channel Penstock GK for anchor bolting

With straight sill for grouting

W x HS 2000 x 2000 up to the largest dimensions



Materials

Frame	Door	Sealing	Slide skids	Stem	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	POM	1.4305	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	POM	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Channel Penstock GK, for anchor bolting, with straight sill for grouting.

Cat.-sheet 03.43, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Frame:	Channel width W: mm
Door:	Door height HS: mm
Sealing:	Channel depth T: mm
Slide skids:	Travel H: mm
Stem:	
Connecting parts:	

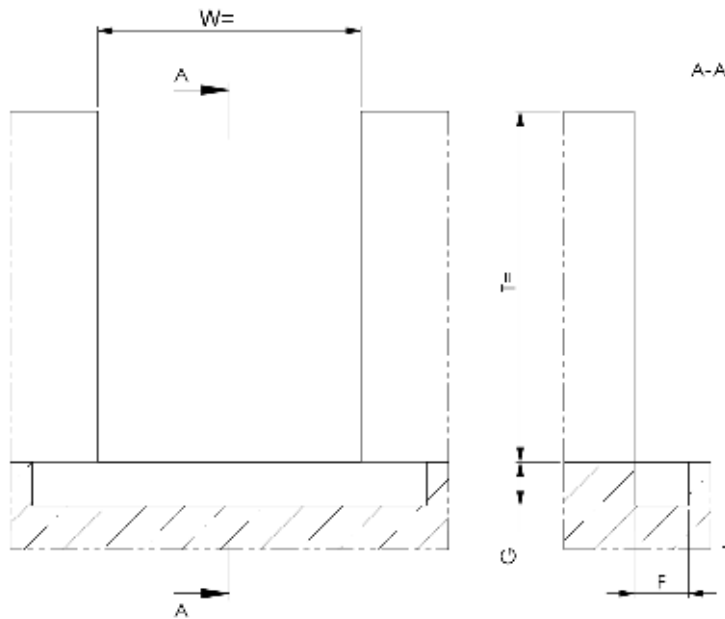
* Please specify in the enquiry/ order.

WAGU®-Channel Penstock GK for anchor bolting

With straight sill for grouting

W x HS 2000 x 2000 up to the largest dimensions

Wall recess



Installation Guide

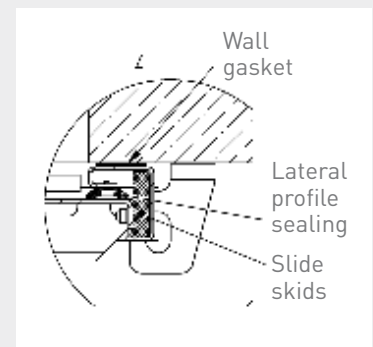
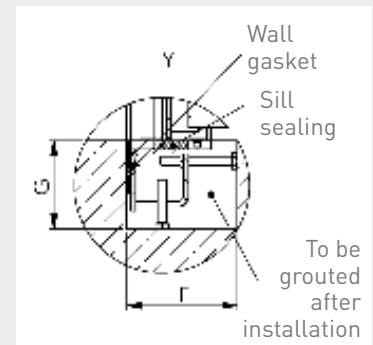
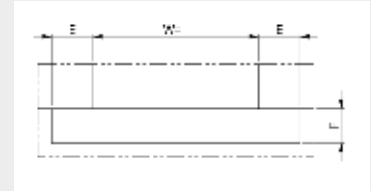
- ➔ Place frame with door in the designated position and align.
- ➔ For anchor bolting, holes are double and diagonal displaced in the frame or flange.
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling. The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Compound anchor bolts are to be used for fastening.

Sealing frame/wall

- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the frame.
- ➔ Fastening material and wall gasket are included.
- ➔ The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.
- ➔ Grout sill with grouting mortar.¹⁾ When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.
- ➔ Clean frame, sealing and door after fastening; check for tightness and performance.

¹⁾ We recommend a cement-based grout.

Details



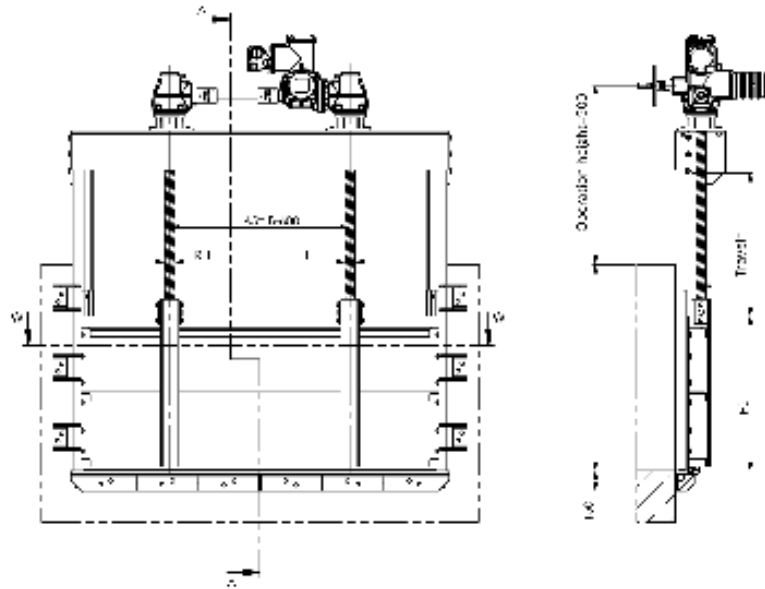
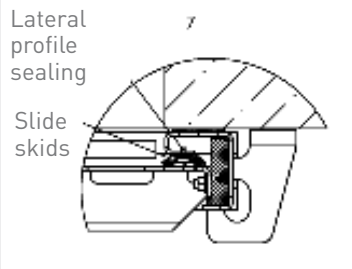
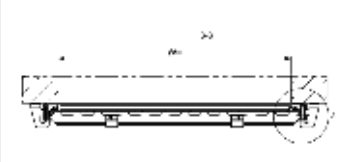
Wall recess (mm)

B	2000-3000	>3000
E	200	250
F	200	250
G	200	200

WAGU®-Channel Penstock GK for anchor bolting

2-stem, with straight sill for anchor bolting
W x HS 2000 x 2000 up to the largest dimensions

Details



Materials

Frame	Door	Sealing	Slide skids	Stem	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	POM	1.4305	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	POM	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Channel Penstock GK, 2-stem, for anchor bolting, with straight sill for anchor bolting. Cat.-sheet 03.45, operating gear see at the corresponding cat.-sheet.

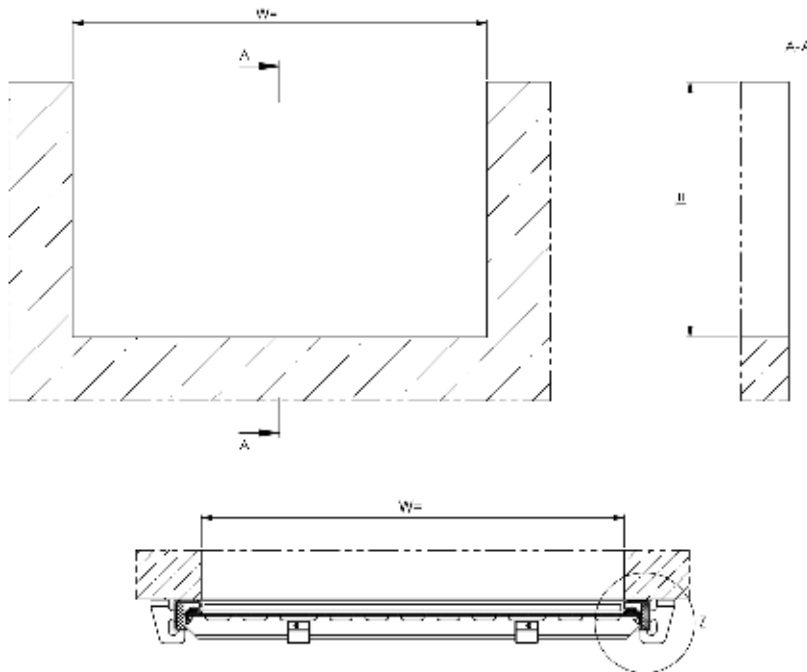
Materials*	Dimensions*
Frame:	Channel width W: mm
Door:	Door height HS: mm
Sealing:	Channel depth T: mm
Slide skids:	Travel H: mm
Stem:	
Connecting parts:	

* Please specify in the enquiry/ order.

WAGU®-Channel Penstock GK for anchor bolting

2-stem, with straight sill for anchor bolting

Wall recess



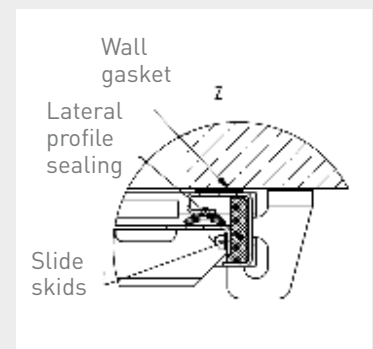
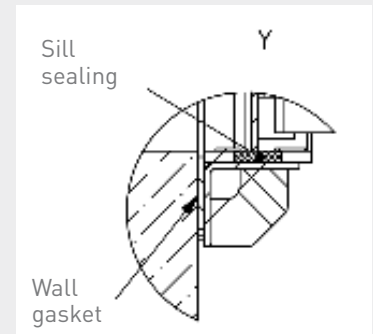
Installation Guide

- ➔ Place frame with door in the designated position and align.
- ➔ For anchor bolting, holes are double and diagonal displaced in the frame or flange.
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling. The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Compound anchor bolts are to be used for fastening.

Sealing frame/wall

- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the frame.
- ➔ Fastening material and wall gasket are included.
- ➔ The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.
- ➔ Clean frame, sealing and door after fastening; check for tightness and performance.

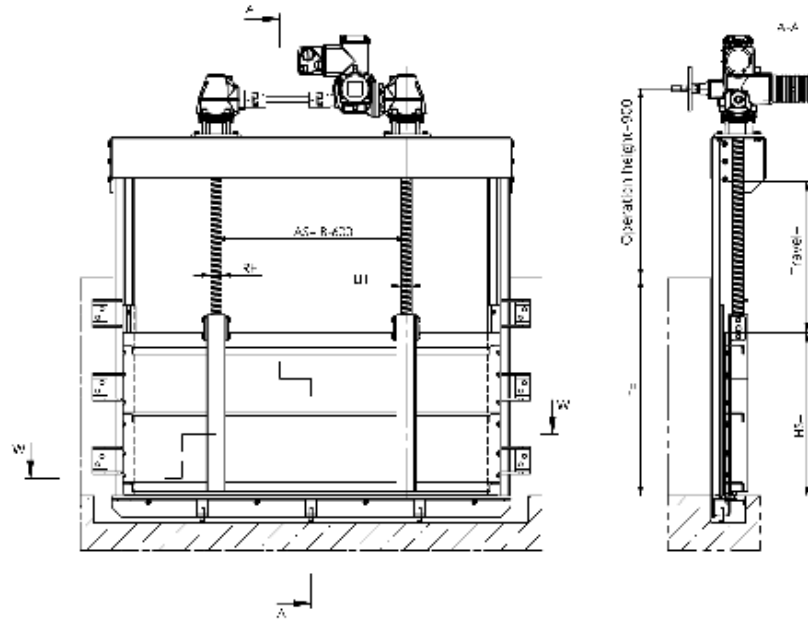
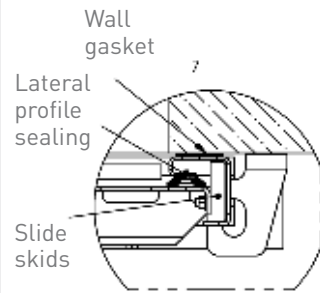
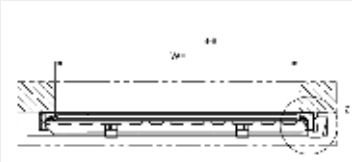
Details



WAGU®-Channel Penstock GK for anchor bolting

2-stem, with straight sill for grouting
W x HS 2000 x 2000 up to the largest dimensions

Details



Materials

Frame	Door	Sealing	Slide skids	Stem	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	POM	1.4305	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	POM	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Channel Penstock GK, 2-stem, for anchor bolting, with straight sill for grouting. Cat.-sheet 03.47, operating gear see at the corresponding cat.-sheet.

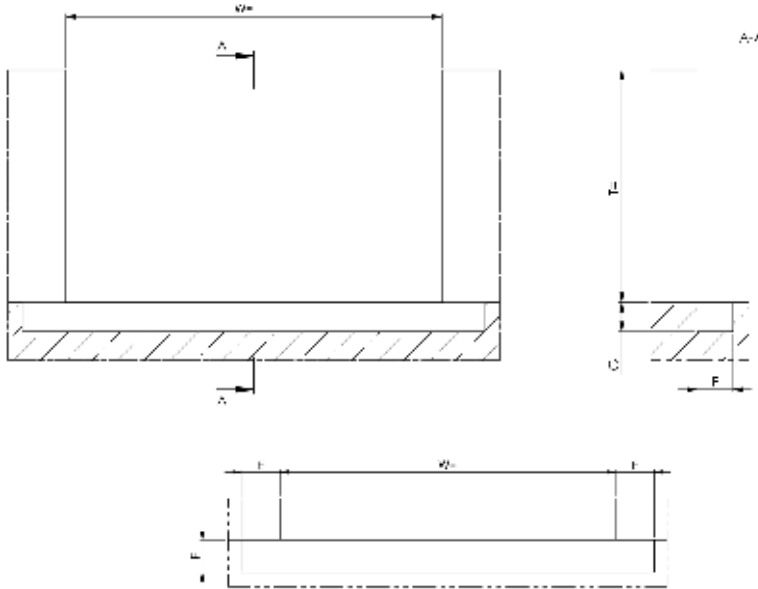
Materials*	Dimensions*
Frame:	Channel width W: mm
Door:	Door height HS: mm
Sealing:	Channel depth T: mm
Slide skids:	Travel H: mm
Stem:	
Connecting parts:	

* Please specify in the enquiry/ order.

WAGU®-Channel Penstock GK for anchor bolting

2-stem for anchor bolting, with straight sill for grouting

Wall recess



Installation Guide

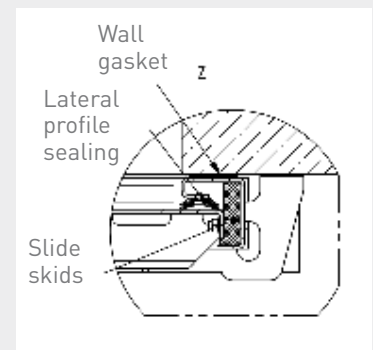
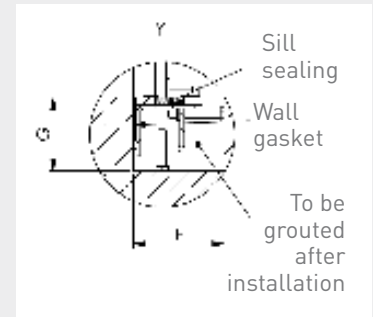
- ➔ Place frame with door in the designated position and align.
- ➔ For anchor bolting, holes are double and diagonal displaced in the frame or flange.
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling. The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Compound anchor bolts are to be used for fastening.

Sealing frame/wall

- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the frame.
- ➔ Fastening material and wall gasket are included.
- ➔ The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.
- ➔ Grout sill with grouting mortar.¹⁾ When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.
- ➔ Clean frame, sealing and door after fastening; check for tightness and performance.

1) We recommend a cement-based grout.

Details



Wall recess (mm)

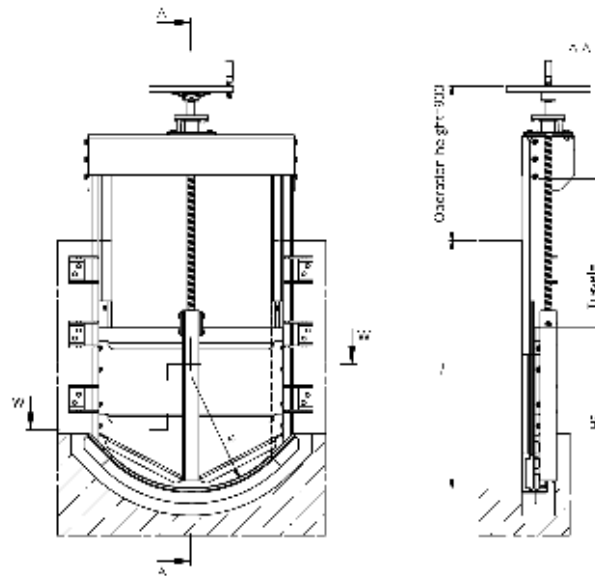
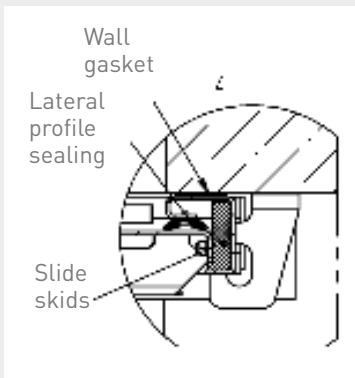
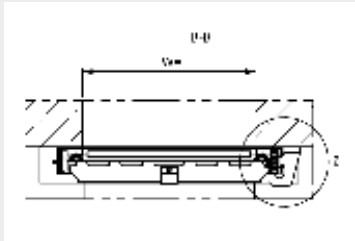
B	2000-3000	>3000
E	200	250
F	200	250
G	200	200

WAGU®-Channel Penstock GK for anchor bolting

With round sill for grouting

W x HS 2000 x 2000 up to the largest dimensions

Details



Materials

Frame	Door	Sealing	Slide skids	Stem	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	POM	1.4305	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	POM	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Channel Penstock GK, for anchor bolting, with round sill for grouting. Cat.-sheet 03.51, operating gear see at the corresponding cat.-sheet.

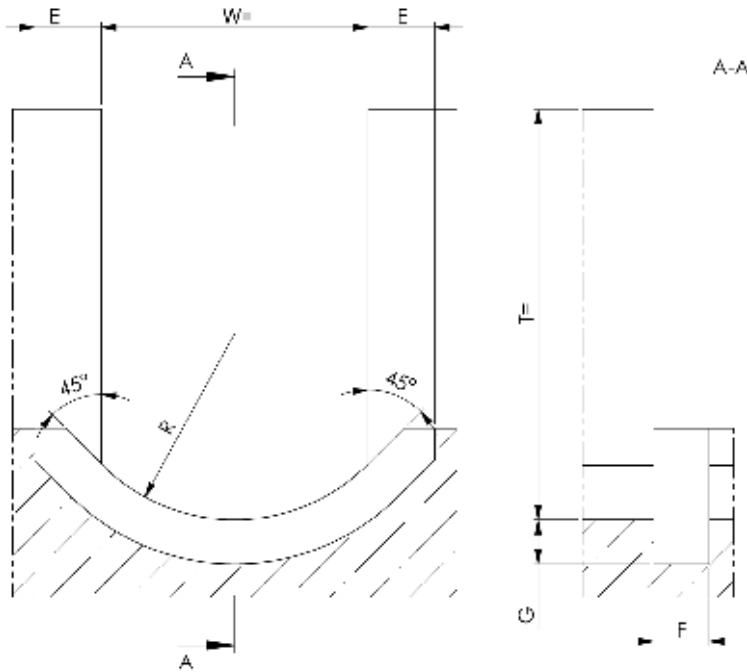
Materials*	Dimensions*
Frame:	Channel width W: mm
Door:	Door height HS: mm
Sealing:	Channel depth T: mm
Slide skids:	Travel H: mm
Stem:	
Connecting parts:	

* Please specify in the enquiry/ order.

WAGU®-Channel Penstock GK for anchor bolting

With round sill for grouting

Wall recess



Installation Guide

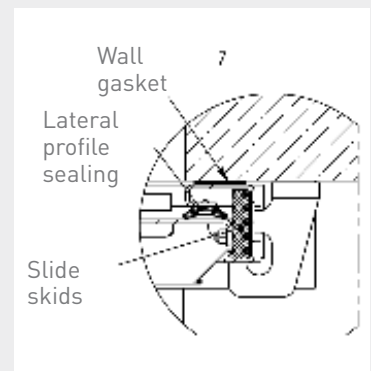
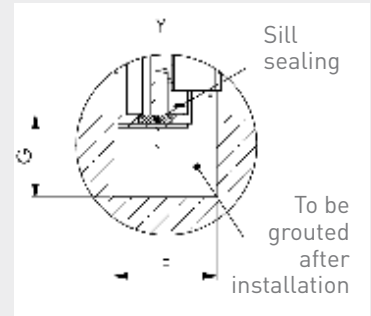
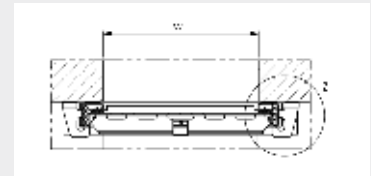
- ➔ Place frame with door in the designated position and align.
- ➔ For anchor bolting, holes are double and diagonal displaced in the frame or flange.
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling. The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Compound anchor bolts are to be used for fastening.

Sealing frame/wall

- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the frame.
- ➔ Fastening material and wall gasket are included.
- ➔ The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.
- ➔ Grout sill with grouting mortar.¹⁾
- ➔ Clean frame, sealing and door after fastening; check for tightness and performance.

1) We recommend a cement-based grout.

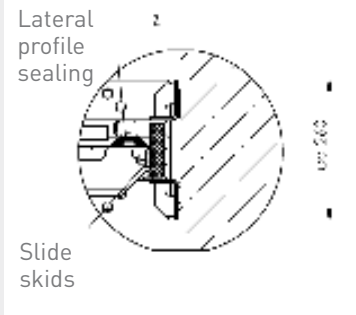
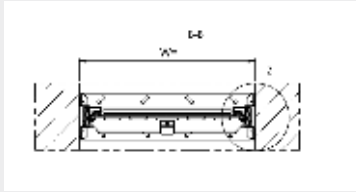
Details



DN (mm)	R (mm)
2000	1400
2100	1480
2200	1540
2300	1610
2400	1680
2500	1750
2600	1820
2700	1890
2800	1960
2900	2030
3000	2100

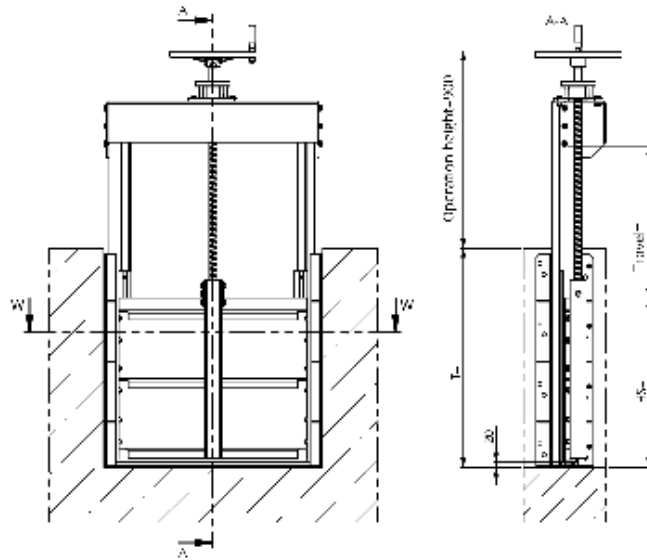
Wall recess (mm)		
B	2000-3000	>3000
E	200	250
F	200	250
G	200	200

Details



WAGU®-Channel Penstock GK for anchor bolting in channel

With straight sill for anchor bolting in channel invert
W x HS 2000 x 2000 up to the largest dimensions



Materials

Frame	Door	Sealing	Slide skids	Stem	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	POM	1.4305	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	POM	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Channel Penstock GK, for anchor bolting in channel, with straight sill for anchor bolting in channel invert. Cat.-sheet 03.61, operating gear see at the corresponding cat.-sheet.

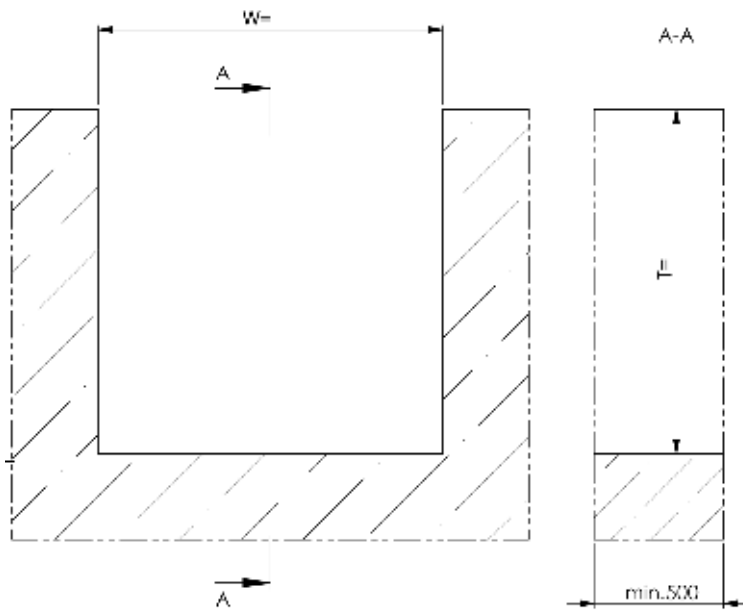
Materials*	Dimensions*
Frame:	Channel width W: mm
Door:	Door height HS: mm
Sealing:	Channel depth T: mm
Slide skids:	Travel H: mm
Stem:	
Connecting parts:	

* Please specify in the enquiry/ order.

WAGU®-Channel Penstock GK for anchor bolting in channel

With straight sill for anchor bolting in channel invert

Wall recess

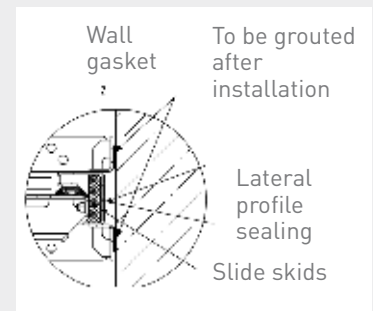
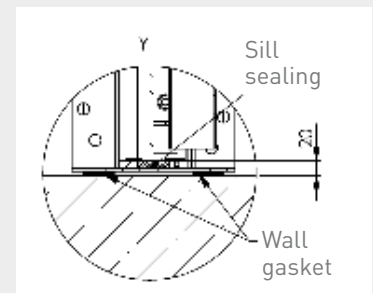
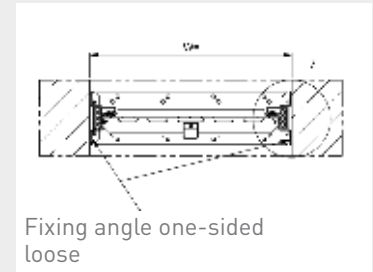


Installation Guide

- ➔ The frame is supplied with welded-on support brackets on one side and a fastening strip at the sill. The support brackets on the other side is supplied loose for adjustment in the channel.
- ➔ Place the wall gasket in the center at the bottom of the fastening strip of the sill and at the welded-on support brackets. Insert frame including door in the intended position and align.
- ➔ For anchor bolting, holes are double and diagonal displaced in the support brackets and fastening strips of the sill.
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling. The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Compound anchor bolts are to be used for fastening.
- ➔ Fastening material and wall gasket are included.
- ➔ First attach the frame on the side with the welded-on support brackets to the channel wall. Then attach the loosely supplied support brackets to the channel wall and fasten them so that the frame is firmly clamped between the support brackets. Hollow spaces must then be grouted with grouting mortar.¹⁾ When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.
- ➔ Clean frame, sealing and door after fastening; check for tightness and performance.

1) We recommend a cement-based grout.

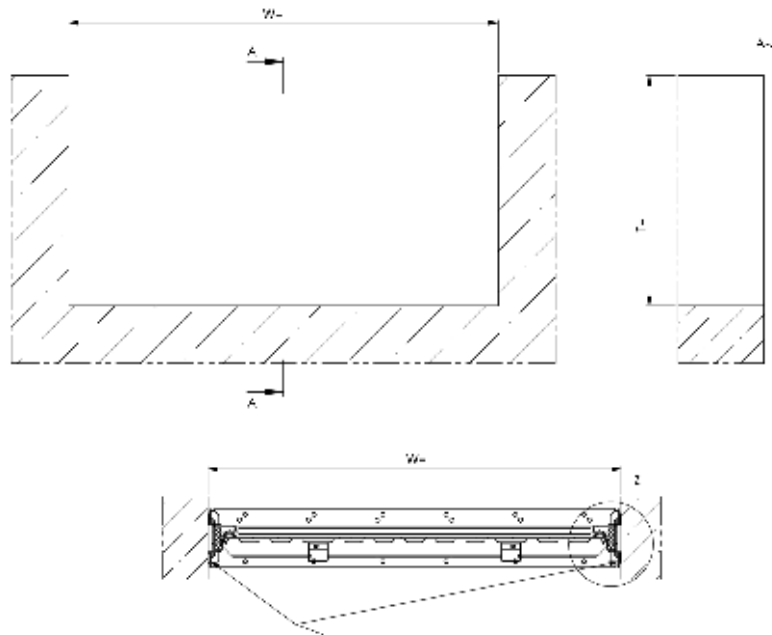
Details



WAGU®-Channel Penstock GK for anchor bolting in channel

2-stem, with straight sill for anchor bolting in channel invert

Wall recess

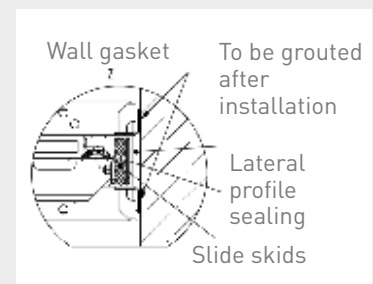
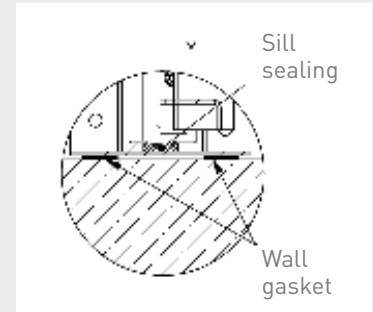


Installation Guide

- ➔ The frame is supplied with welded-on support brackets on one side and a fastening strip at the sill. The support brackets on the other side is supplied loose for adjustment in the channel.
- ➔ Place the wall gasket in the center at the bottom of the fastening strip of the sill and at the welded-on support brackets. Insert frame including door in the intended position and align.
- ➔ For anchor bolting, holes are double and diagonal displaced in the support brackets and fastening strips of the sill.
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling. The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Compound anchor bolts are to be used for fastening.
- ➔ Fastening material and wall gasket are included.
- ➔ First attach the frame on the side with the welded-on support brackets to the channel wall. Then attach the loosely supplied support brackets to the channel wall and fasten them so that the frame is firmly clamped between the support brackets. Hollow spaces must then be grouted with grouting mortar.¹⁾ When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.
- ➔ Clean frame, sealing and door after fastening; check for tightness and performance.

1) We recommend a cement-based grout.

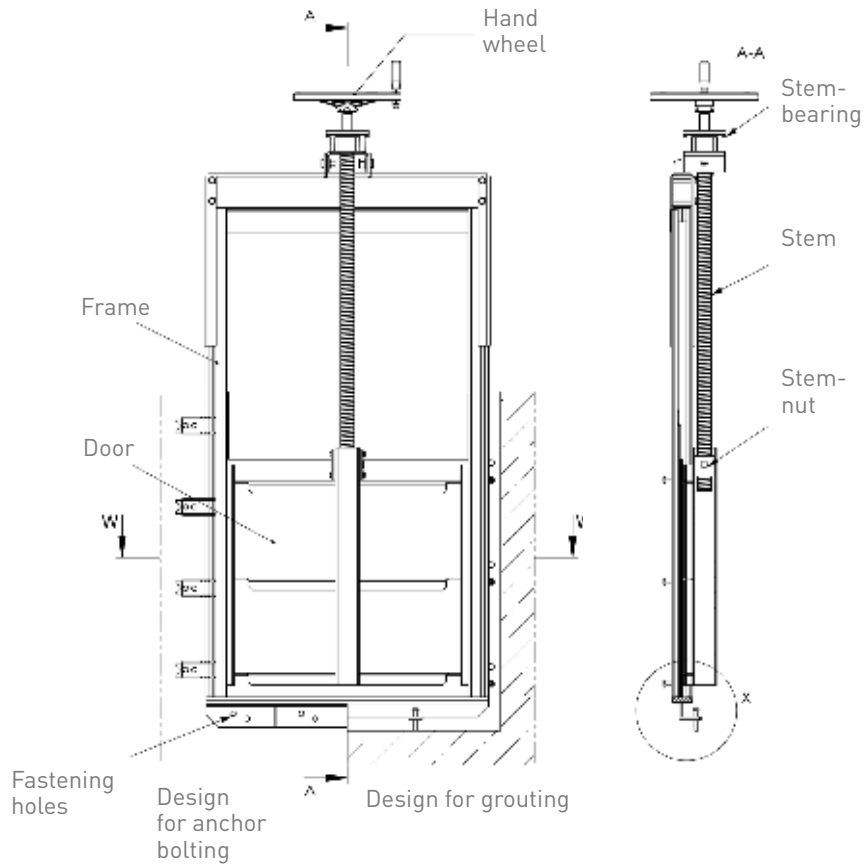
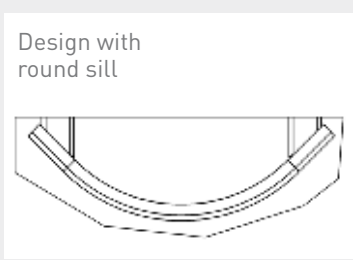
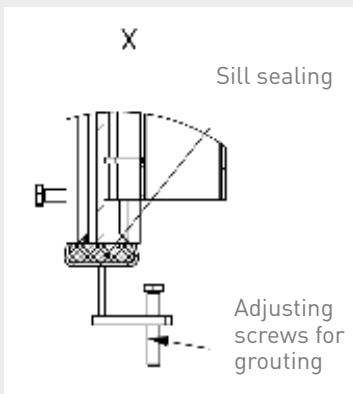
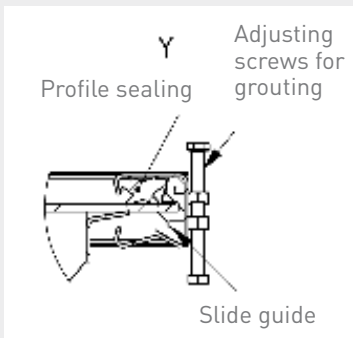
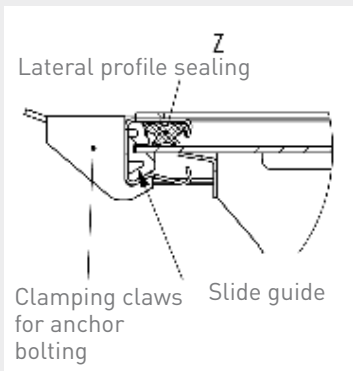
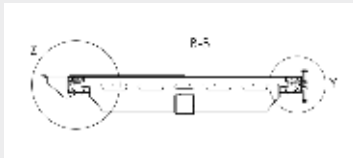
Details



WAGU®-PRO-Channel Penstock

3 facing, for open channels, for on-seating or off-seating pressure, for grouting in channel recess or for anchor bolting to channel outlet or in channel.

Details



Design

- ➔ Straight sill
- ➔ Sill to be flush mounted into channel invert
- ➔ 1-stem type
- ➔ 2-stem type
- ➔ Round sill

Design Features

- ➔ Welded frame made of tension resistant profile
- ➔ Low-wear slide guide form-fit in frame
- ➔ Lip profile sealing clamp easy to maintain
- ➔ Universal connector for connection pushing rod and stem nut (Quick fix)
- ➔ New design for reinforcement ribs at door
- ➔ Wall sealing with self-adhesive gasket tap (no grouting required)
- ➔ Anchor bolting with variable clamping claws

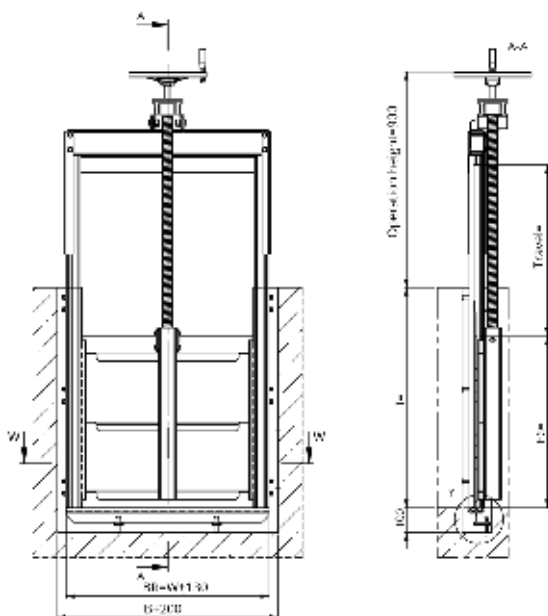
Dimensions

- ➔ W x HS 1000 x 1000 up to 2000 x 2000

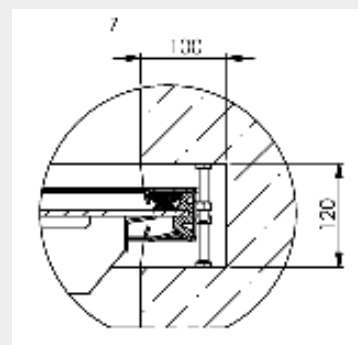
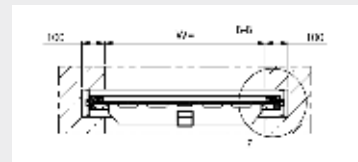
WAGU®-PRO-Channel Penstock for grouting

With straight sill for grouting

W x HS 1000 x 1000 up to 2000 x 2000



Details



Materials

Frame	Door	Sealing	Slide guide	Stem	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	POM	1.4305	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	POM	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

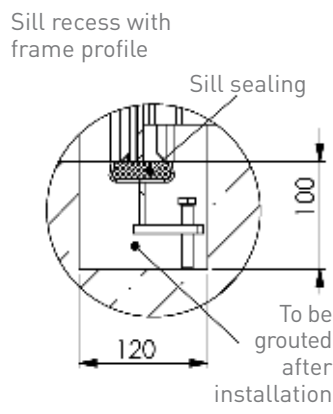
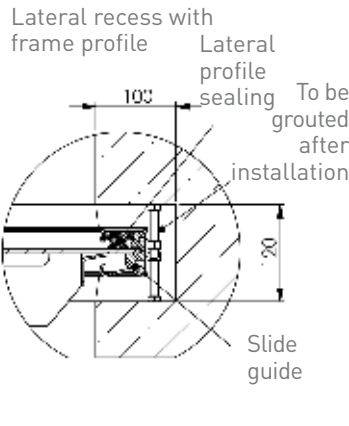
PRO Channel Penstock for grouting, with straight sill for grouting.

Cat.-sheet 03.110, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Frame:	Channel width W: mm
Door:	Door height HS: mm
Sealing:	Channel depth T: mm
Slide guide:	Travel H: mm
Stem:	
Connecting parts:	

* Please specify in the enquiry/ order.

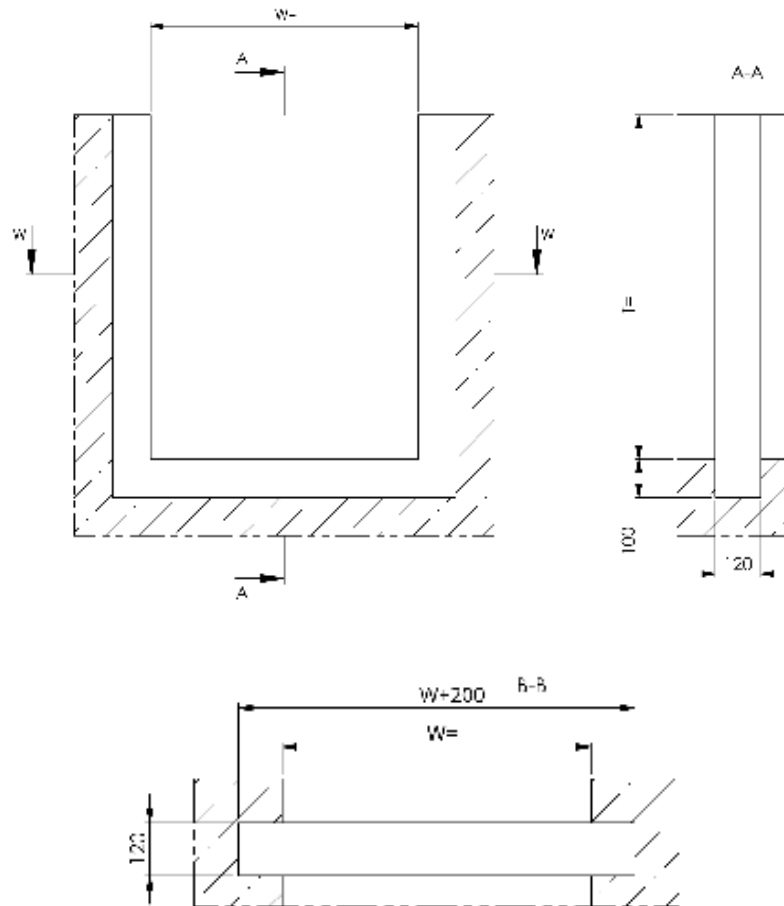
Details



WAGU®-PRO-Channel Penstock for grouting

With straight sill for grouting

Wall recess



Installation Guide

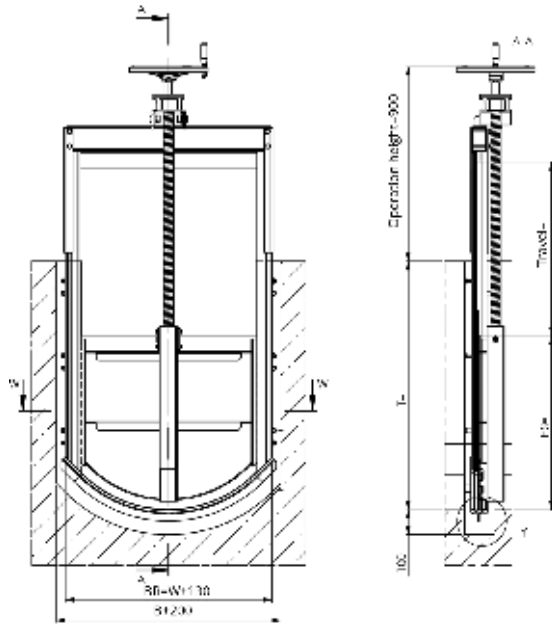
- ➔ Screw adjusting and tensioning screws into the lateral nuts.
- ➔ Insert frame including door into recess.
- ➔ Align frame:
 - Screw lateral adjusting screws into the recess until the frame is vertical and fixed without tension.
- ➔ Before grouting, check penstock for perfect (flawless) performance and tightness, as it is not possible to change the position of the frame after grouting.
- ➔ Install casing on recess and grout with grouting mortar.¹⁾ When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.

¹⁾ We recommend a cement-based grout.

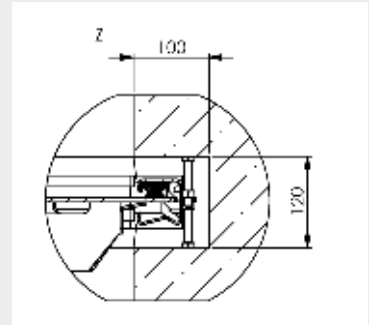
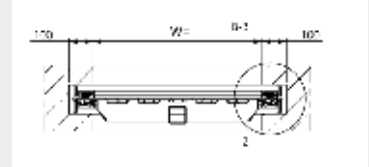
WAGU®-PRO-Channel Penstock for grouting

With round sill for grouting

W x HS 1000 x 1000 up to 2000 x 2000



Details



Materials

Frame	Door	Sealing	Slide guide	Stem	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	POM	1.4305	A4
1.4404/ 1.4571 <input type="checkbox"/>	1.4404/ 1.4571 <input type="checkbox"/>	Neoprene	POM	1.4404/ 1.4571	A4

Other materials or combinations available on request.

Order text

PRO Channel Penstock, for grouting, with round sill for grouting.

Cat.-sheet 03.112, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Frame:	Channel width W: mm
Door:	Door height HS: mm
Sealing:	Channel depth T: mm
Slide guide:	Travel H: mm
Stem:	
Connecting parts:	

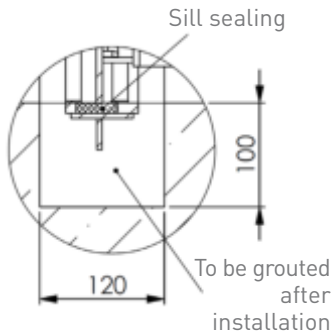
* Please specify in the enquiry/ order.

WAGU®-PRO-Channel Penstock for grouting

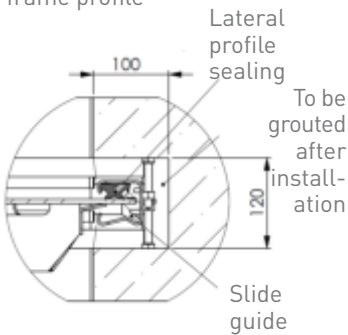
With round sill for grouting

Details

Sill recess with frame profile

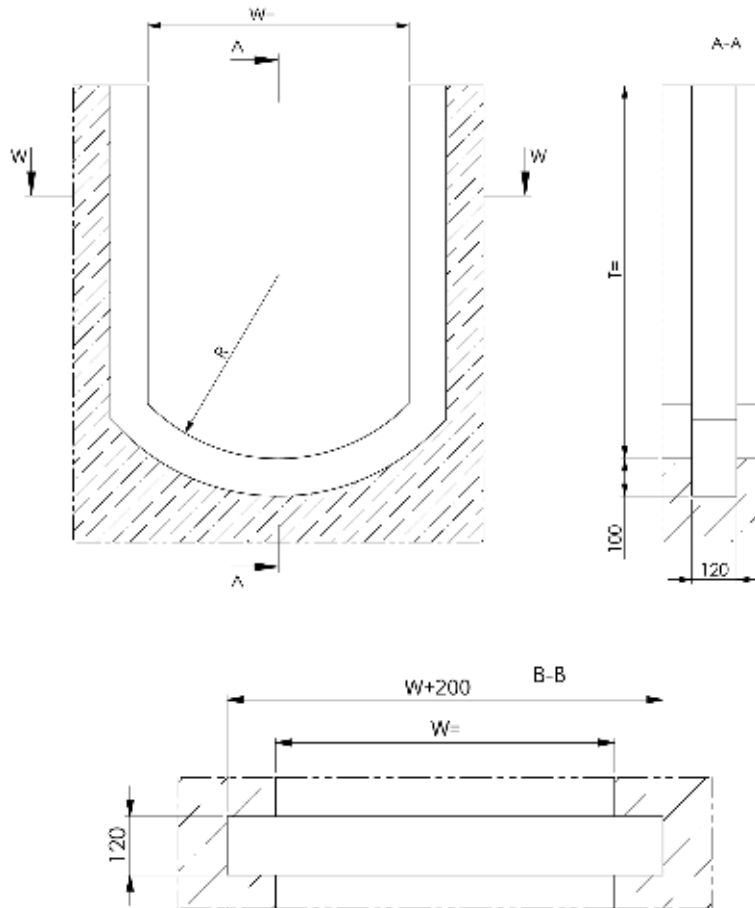


Lateral recess with frame profile



DN (mm)	R (mm)
1000	700
1100	770
1200	840
1300	910
1400	980
1500	1050
1600	1120
1700	1190
1800	1260
1900	1330
2000	1400

Wall recess



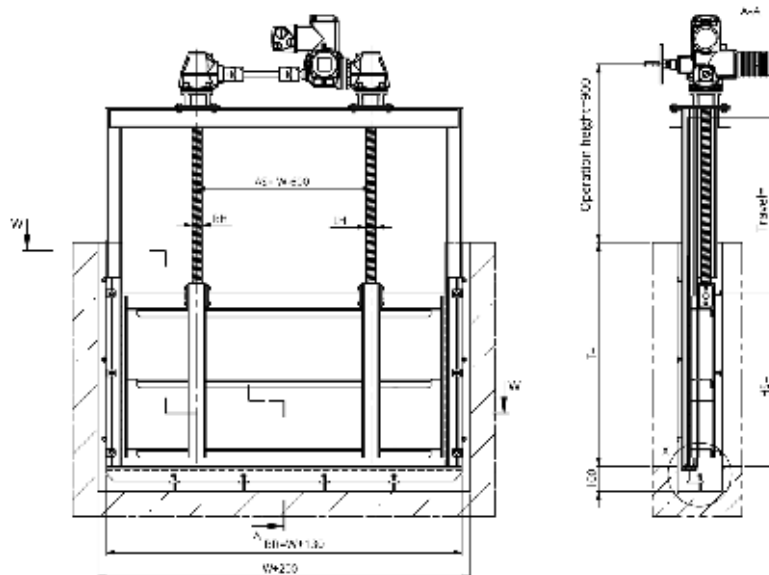
Installation Guide

- ➔ Screw adjusting and tensioning screws into the lateral nuts.
- ➔ Insert frame including door into recess.
- ➔ Align frame:
Screw lateral adjusting screws into the recess until the frame is vertical and fixed without tension.
- ➔ Before grouting, check penstock for perfect (flawless) performance and tightness, as it is not possible to change the position of the frame after grouting.
- ➔ Install casing on recess and grout with grouting mortar.¹⁾ When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.

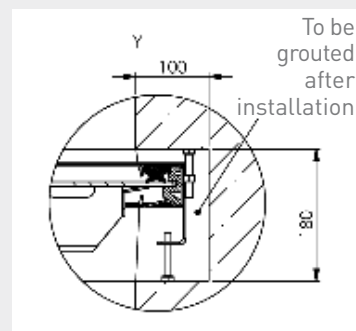
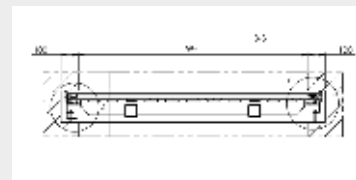
¹⁾ We recommend a cement-based grout.

WAGU®-PRO-Channel Penstock for grouting

2-stem, with straight sill for grouting
W x HS 1300 x 1300 up to 2000 x 2000



Details



Materials

Frame	Door	Sealing	Slide guide	Stem	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	POM	1.4305	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	POM	1.4404 / 1.4571	A4

Other materials or combinations available on request.

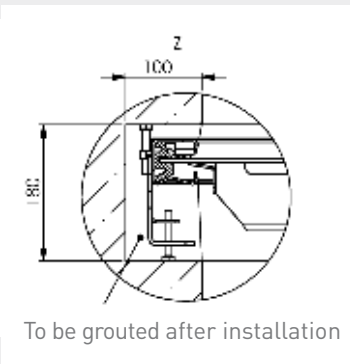
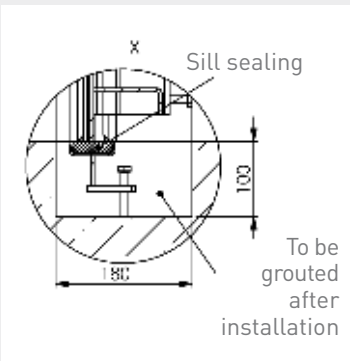
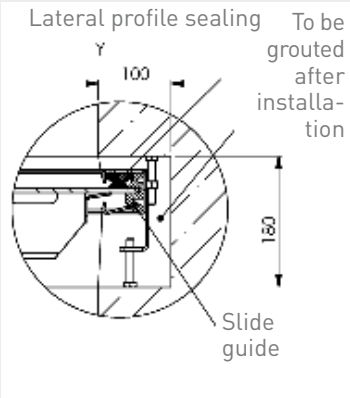
Order text

PRO Channel Penstock, 2-stem, for grouting, with straight sill for grouting.
Cat.-sheet 03.114, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Frame:	Channel width W: mm
Door:	Door height HS: mm
Sealing:	Channel depth T: mm
Slide guide:	Travel H: mm
Stem:	
Connecting parts:	

* Please specify in the enquiry/ order.

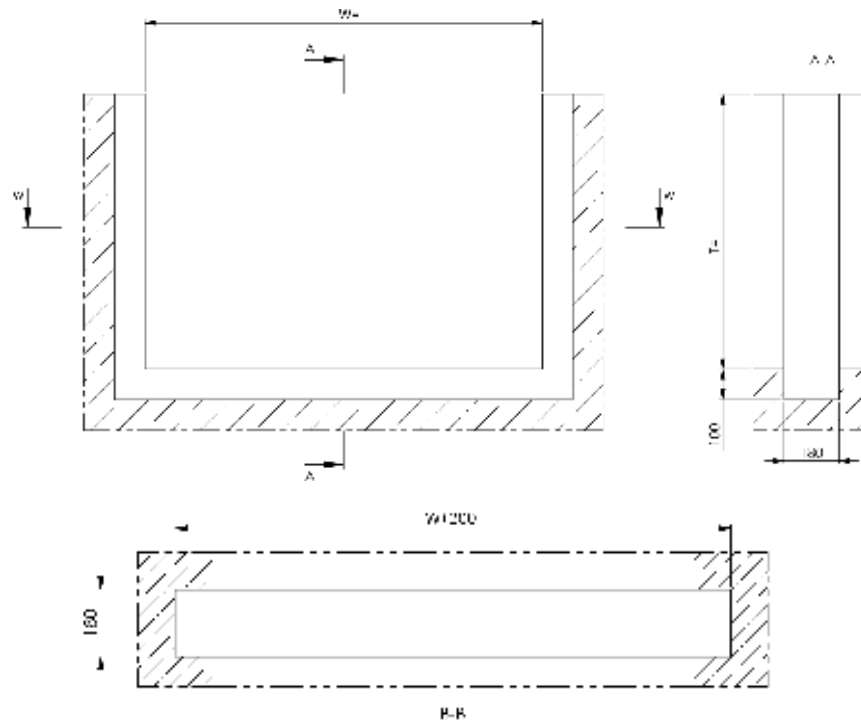
Details



WAGU®-PRO-Channel Penstock for grouting

2-stem, with straight sill for grouting

Wall recess



Installation Guide

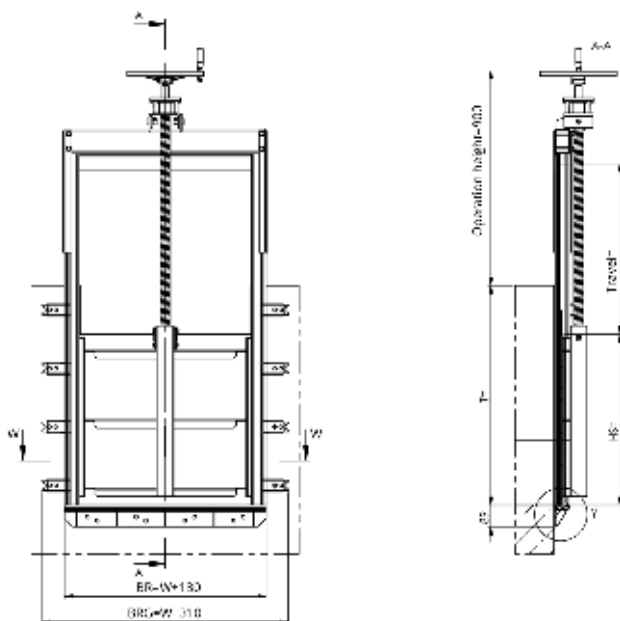
- ➔ Screw adjusting and tensioning screws into the lateral nuts.
- ➔ Insert frame including door into recess.
- ➔ Align frame:
Screw lateral adjusting screws into the recess until the frame is vertical and fixed without tension.
- ➔ Before grouting, check penstock for perfect (flawless) performance and tightness, as it is not possible to change the position of the frame after grouting.
- ➔ Install casing on recess and grout with grouting mortar.¹⁾ When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.

¹⁾ We recommend a cement-based grout.

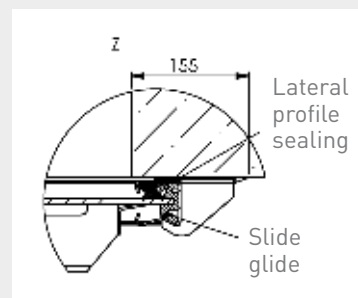
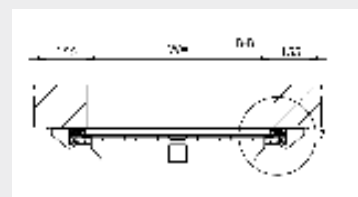
WAGU®-PRO-Channel Penstock for anchor bolting

With straight sill for anchor bolting

W x HS 1000 x 1000 up to 2000 x 2000



Details



Materials

Frame	Door	Sealing	Slide guide	Stem	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	POM	1.4305	A4
1.4404/ 1.4571 <input type="checkbox"/>	1.4404/ 1.4571 <input type="checkbox"/>	Neoprene	POM	1.4404/ 1.4571	A4

Other materials or combinations available on request.

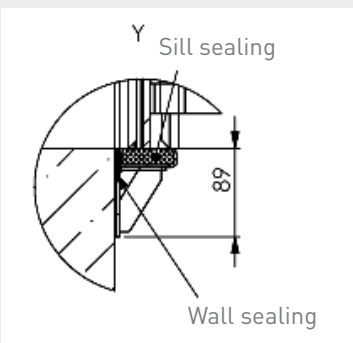
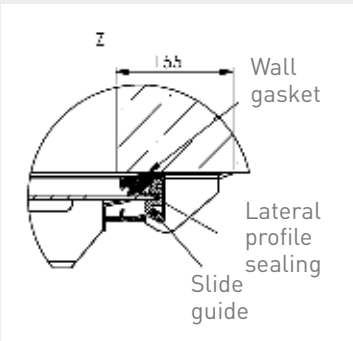
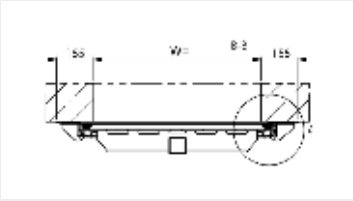
Order text

PRO Channel Penstock for anchor bolting, with straight sill for anchor bolting.
Cat.-sheet 03.120, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Frame:	Channel width W: mm
Door:	Door height HS: mm
Sealing:	Channel depth T: mm
Slide guide:	Travel H: mm
Stem:	
Connecting parts:	

* Please specify in the enquiry/ order.

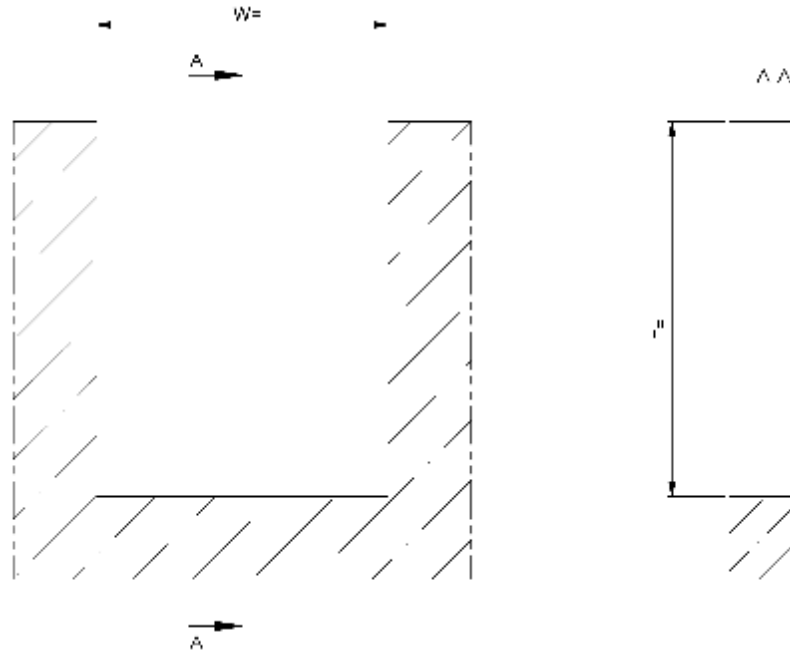
Details



WAGU®-PRO-Channel Penstock for anchor bolting

With straight sill for anchor bolting

Wall recess



Installation Guide

- ➔ Place frame with door in the designated position and align.
- ➔ For anchor bolting, holes are double and diagonal displaced in the frame or flange.
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling. The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Compound anchor bolts are to be used for fastening.

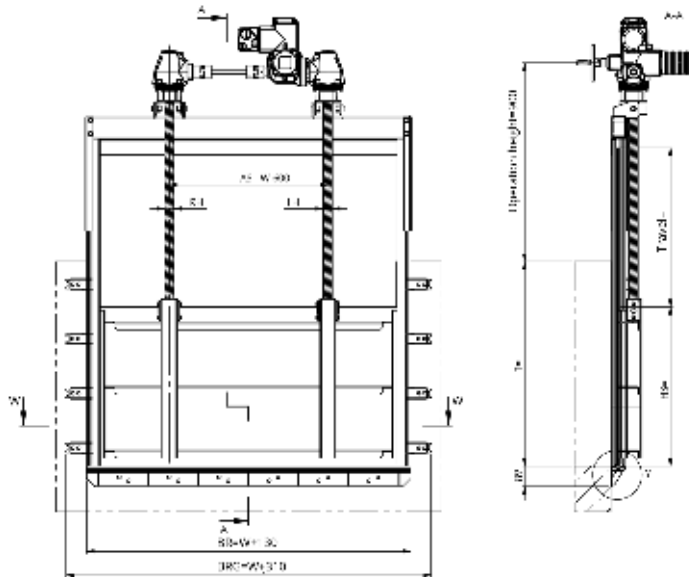
Sealing frame/wall

- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the frame.
- ➔ Fastening material and wall gasket are included.
- ➔ The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.
- ➔ Clean frame, sealing and door after fastening; check for tightness and performance.

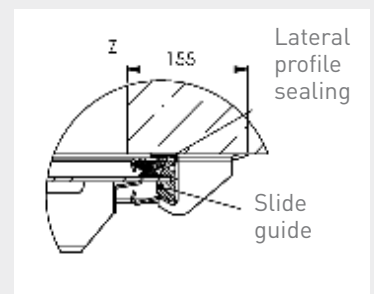
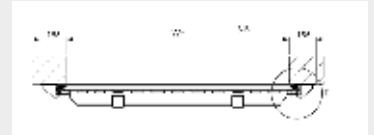
WAGU®-PRO-Channel Penstock for anchor bolting

2-stem, with straight sill for anchor bolting

W x HS 1300 x 1300 up to 2000 x 2000



Details



Materials

Frame	Door	Sealing	Slide guide	Stem	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	POM	1.4305	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	POM	1.4404 / 1.4571	A4

Other materials or combinations available on request.

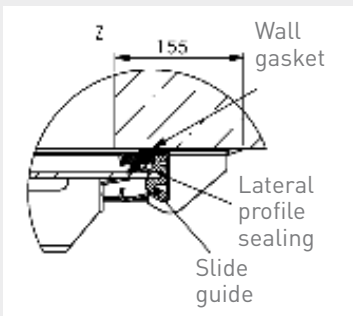
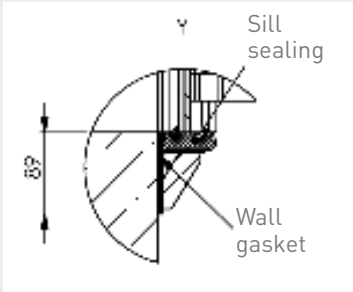
Order text

PRO Channel Penstock, 2-stem, for anchor bolting, with straight sill for anchor bolting. Cat.-sheet 03.122, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Frame:	Channel width W: mm
Door:	Door height HS: mm
Sealing:	Channel depth T: mm
Slide guide:	Travel H: mm
Stem:	
Connecting parts:	

* Please specify in the enquiry/ order.

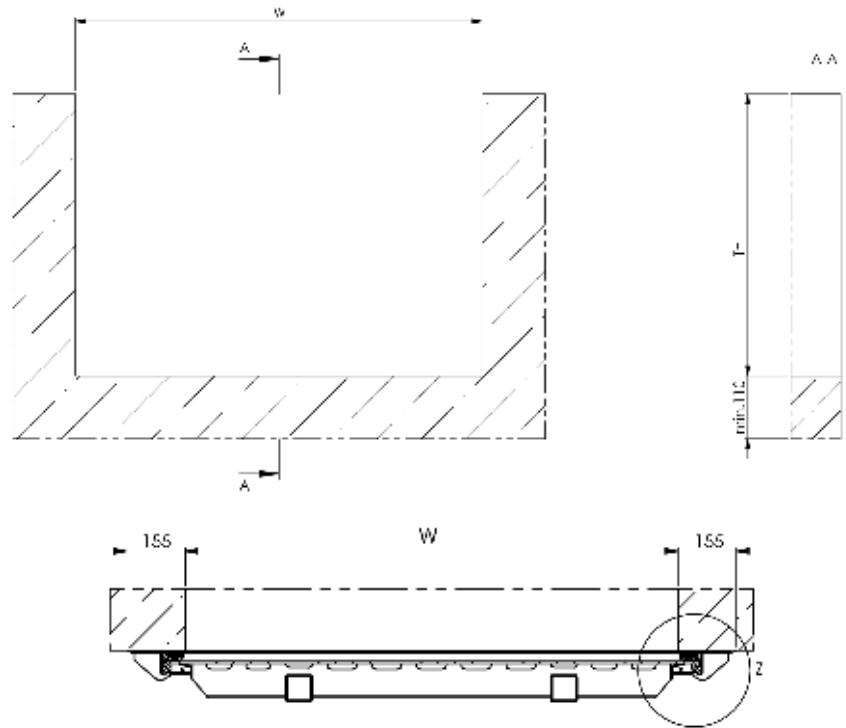
Details



WAGU®-PRO-Channel Penstock for anchor bolting

2-stem, with straight sill for anchor bolting

Wall recess



Installation Guide

- ➔ Place frame with door in the designated position and align.
- ➔ For anchor bolting, holes are double and diagonal displaced in the frame or flange.
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling. The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Compound anchor bolts are to be used for fastening.

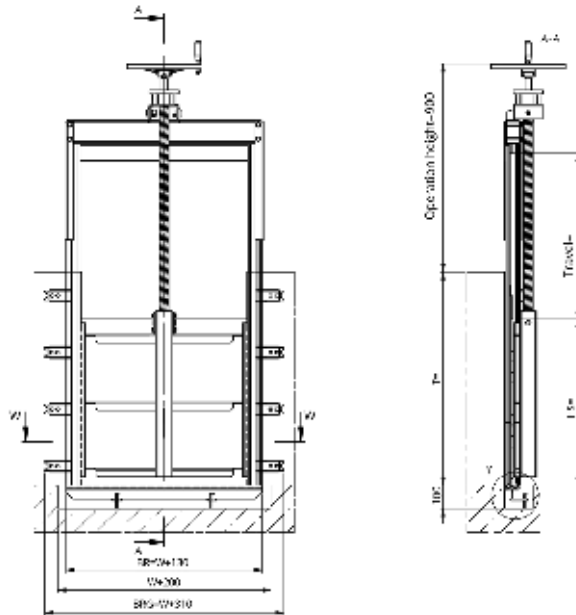
Sealing frame/wall

- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the frame.
- ➔ Fastening material and wall gasket are included.
- ➔ The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.
- ➔ Clean frame, sealing and door after fastening; check for tightness and performance.

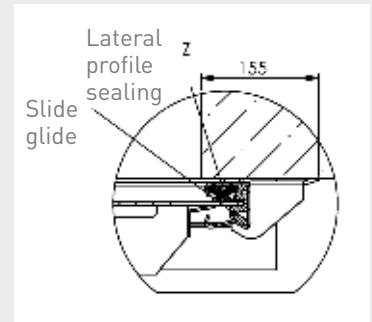
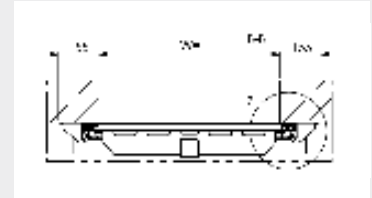
WAGU®-PRO-Channel Penstock for anchor bolting

With straight sill for grouting

W x HS 1000 x 1000 up to 2000 x 2000



Details



Materials

Frame	Door	Sealing	Slide guide	Stem	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	POM	1.4305	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	POM	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

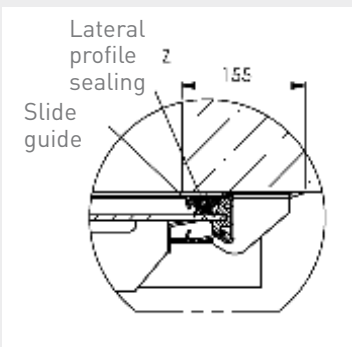
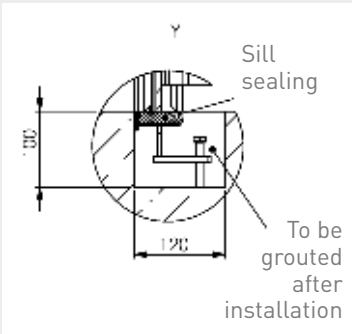
PRO Channel Penstock, for anchor bolting, with straight sill for grouting.

Cat.-sheet 03.130, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Frame:	Channel width W: mm
Door:	Door height HS: mm
Sealing:	Channel depth T: mm
Slide guide:	Travel H: mm
Stem:	
Connecting parts:	

* Please specify in the enquiry/ order.

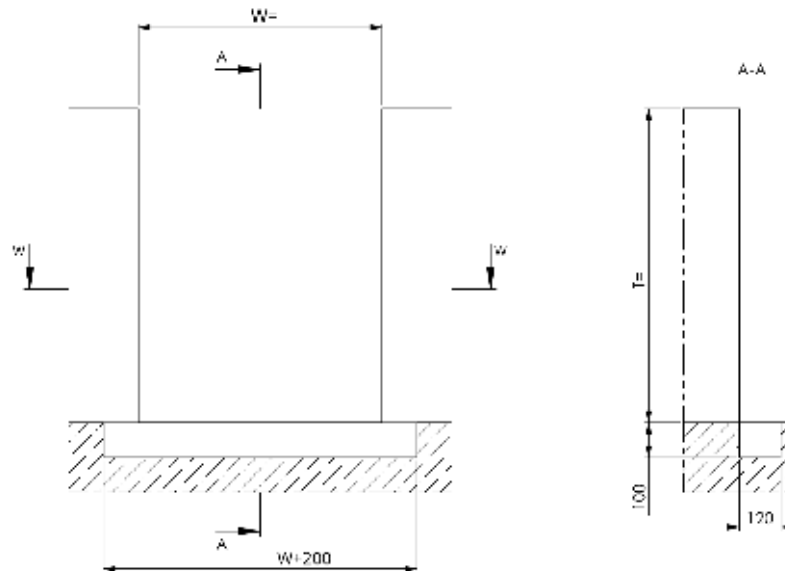
Details



WAGU®-PRO-Channel Penstock for anchor bolting

With straight sill for grouting

Wall recess



Installation Guide

- ➔ Place frame with door in the designated position and align.
- ➔ For anchor bolting, holes are double and diagonal displaced in the frame or flange.
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling. The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Compound anchor bolts are to be used for fastening.

Sealing frame/wall

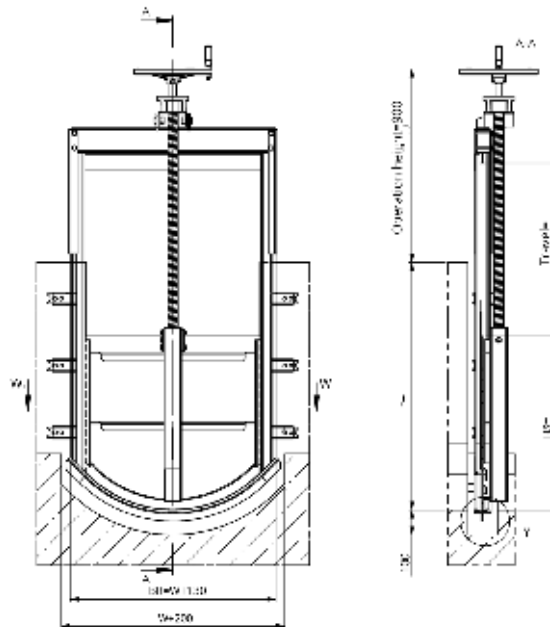
- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the frame.
- ➔ Fastening material and wall gasket are included.
- ➔ The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.
- ➔ Grout sill with grouting mortar.¹⁾ When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.
- ➔ Clean frame, sealing and door after fastening; check for tightness and performance.

1) We recommend a cement-based grout.

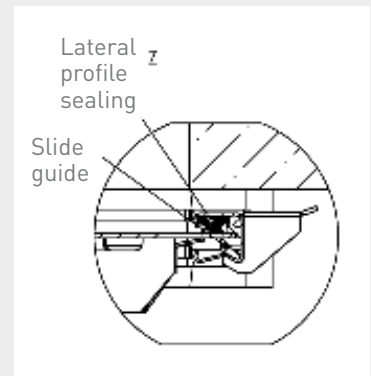
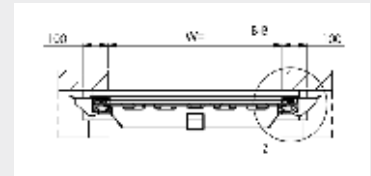
WAGU®-PRO-Channel Penstock for anchor bolting

With round sill for grouting

W x HS 1000 x 1000 up to 2000 x 2000



Details



Materials

Frame	Door	Sealing	Slide guide	Stem	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	POM	1.4305	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	POM	1.4404 / 1.4571	A4

Other materials or combinations available on request.

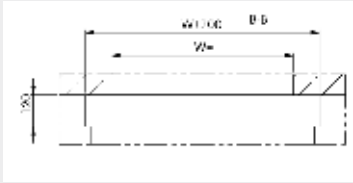
Order text

PRO Channel Penstock, for anchor bolting, with round sill for grouting. Cat.-sheet 03.132, operating gear see at the corresponding cat.-sheet.

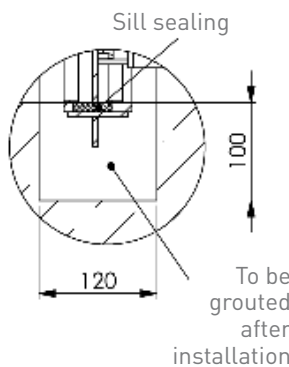
Materials*	Dimensions*
Frame:	Channel width W: mm
Door:	Door height HS: mm
Sealing:	Channel depth T: mm
Slide guide:	Travel H: mm
Stem:	
Connecting parts:	

* Please specify in the enquiry/ order.

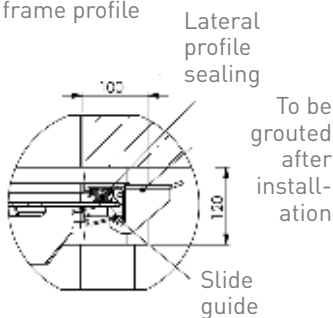
Details



Sill recess with frame profile



Lateral recess with frame profile

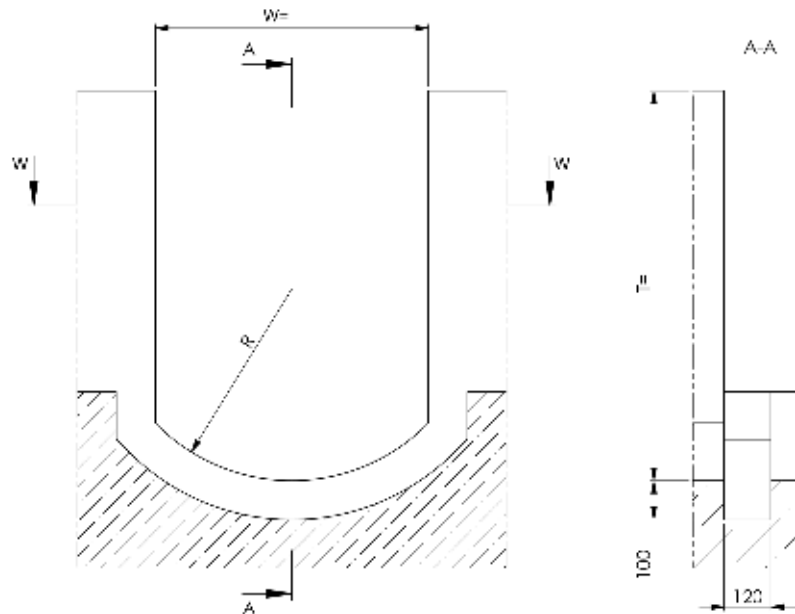


DN (mm)	R (mm)
1000	700
1100	770
1200	840
1300	910
1400	980
1500	1050
1600	1120
1700	1190
1800	1260
1900	1330
2000	1400

WAGU®-PRO-Channel Penstock for anchor bolting

With round sill for grouting

Wall recess



Installation Guide

- ➔ Place frame with door in the designated position and align.
- ➔ For anchor bolting, holes are double and diagonal displaced in the frame or flange.
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling. The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Compound anchor bolts are to be used for fastening.

Sealing frame/wall

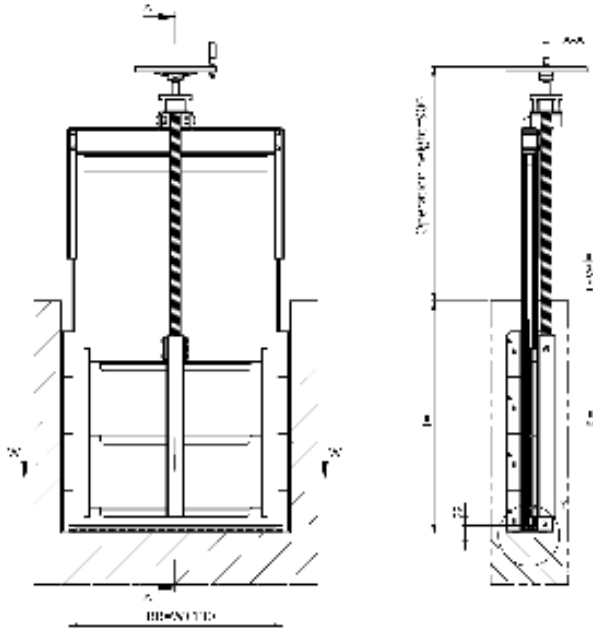
- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the frame.
- ➔ Fastening material and wall gasket are included.
- ➔ The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.
- ➔ Grout sill with grouting mortar.¹⁾ When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.
- ➔ Clean frame, sealing and door after fastening; check for tightness and performance.

1) We recommend a cement-based grout.

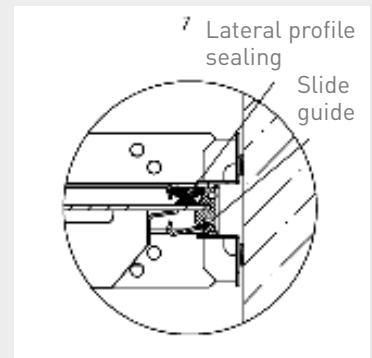
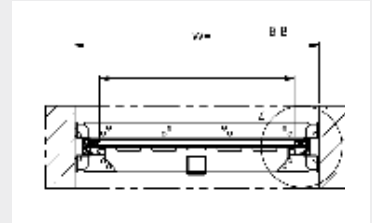
WAGU®-PRO-Channel Penstock for anchor bolting in channel

With straight sill for anchor bolting in channel invert

W x HS 1000 x 1000 up to 1200 x 1200



Details



Materials

Frame	Door	Sealing	Slide guide	Stem	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	POM	1.4305	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	POM	1.4404 / 1.4571	A4

Other materials or combinations available on request.

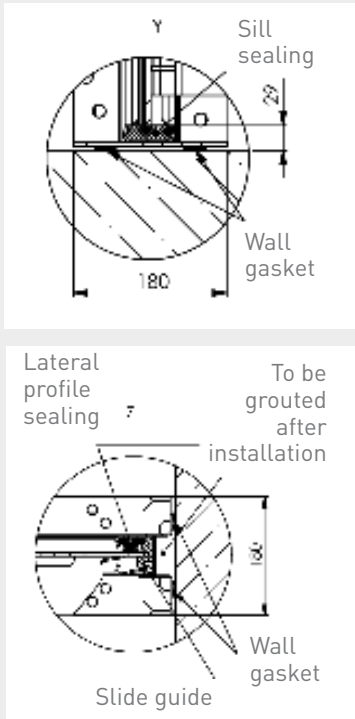
Order text

PRO Channel Penstock, for anchor bolting in channel, with straight sill for anchor bolting in channel invert. Cat.-sheet 03.140, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Frame:	Channel width W: mm
Door:	Door height HS: mm
Sealing:	Channel depth T: mm
Slide guide:	Travel H: mm
Stem:	
Connecting parts:	

* Please specify in the enquiry/ order.

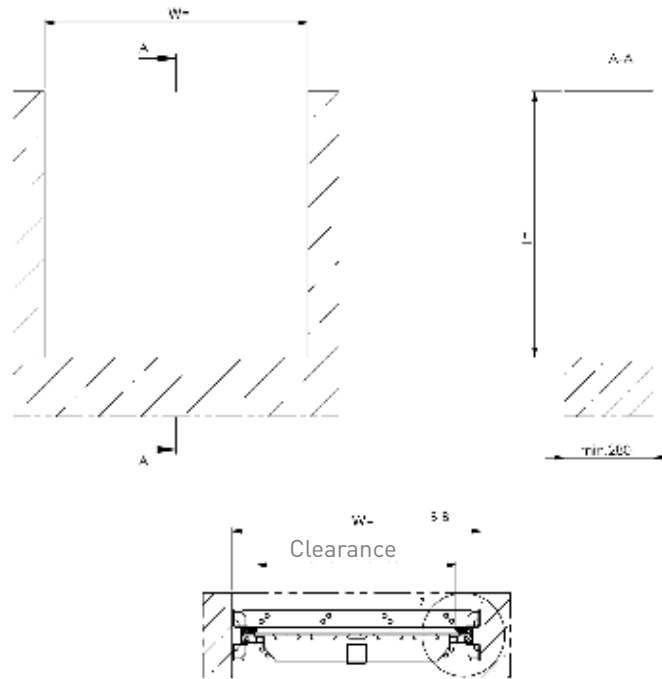
Details



WAGU®-PRO-Channel Penstock for anchor bolting in channel

With straight sill for anchor bolting in channel invert

Wall recess



Installation Guide

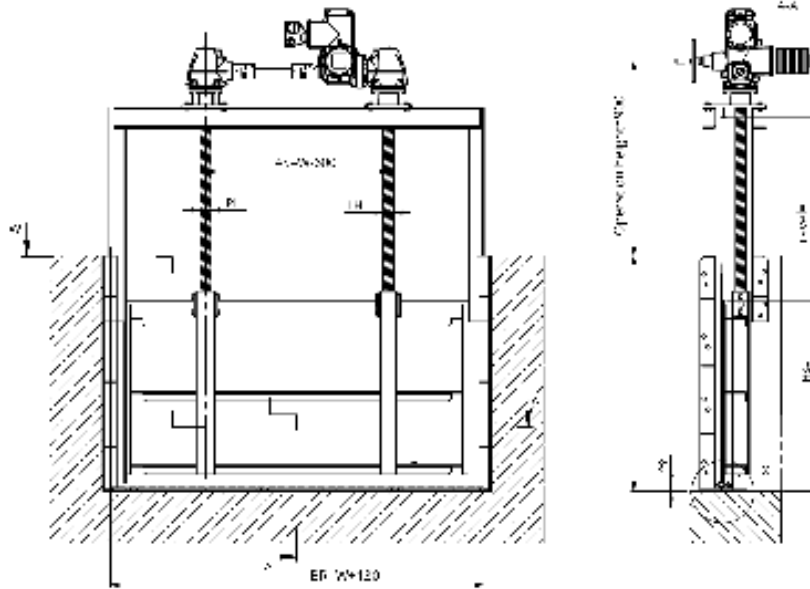
- ➔ The frame is supplied with welded-on support brackets on one side and a fastening strip at the sill. The support brackets on the other side is supplied loose for adjustment in the channel.
- ➔ Place the wall gasket in the center at the bottom of the fastening strip of the sill and at the welded-on support brackets. Insert frame including door in the intended position and align.
- ➔ For anchor bolting, holes are double and diagonal displaced in the support brackets and fastening strips of the sill.
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling. The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Compound anchor bolts are to be used for fastening.
- ➔ Fastening material and wall gasket are included.
- ➔ First attach the frame on the side with the welded-on support brackets to the channel wall. Then attach the loosely supplied support brackets to the channel wall and fasten them so that the frame is firmly clamped between the support brackets. Hollow spaces must then be grouted with grouting mortar.¹⁾ When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.
- ➔ Clean frame, sealing and door after fastening; check for tightness and performance.

¹⁾ We recommend a cement-based grout.

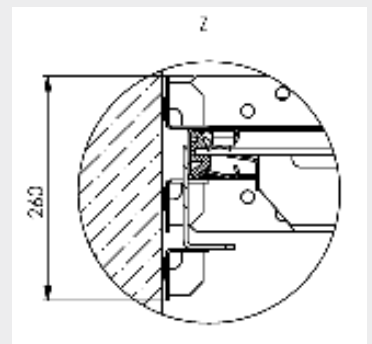
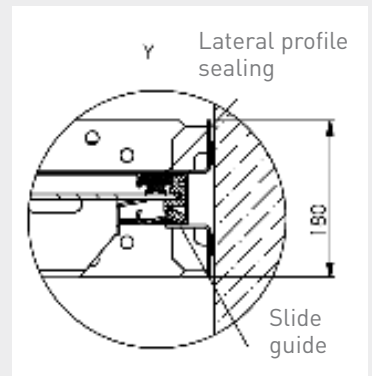
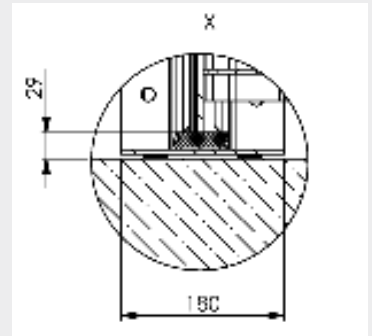
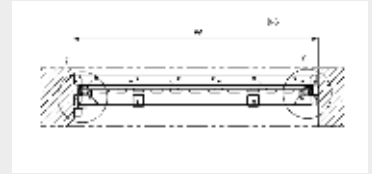
WAGU®-PRO-Channel Penstock for anchor bolting in channel

2-stem, with straight sill for anchor bolting in channel invert

W x HS 1000 x 1000 up to 1200 x 1200



Details



Materials

Frame	Door	Sealing	Slide guide	Stem	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	POM	1.4305	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	POM	1.4404 / 1.4571	A4

Other materials or combinations available on request.

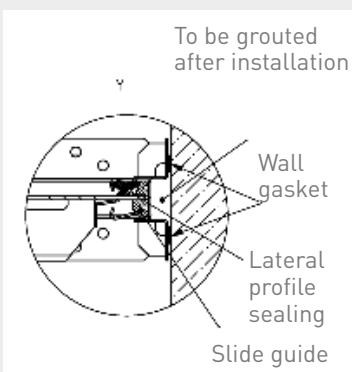
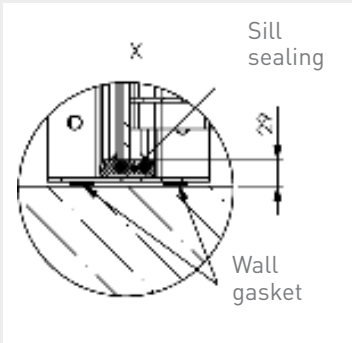
Order text

PRO Channel Penstock, 2-stem, for anchor bolting in channel, with straight sill for anchor bolting in channel invert. Cat.-sheet 03.142, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Frame:	Channel width W: mm
Door:	Door height HS: mm
Sealing:	Channel depth T: mm
Slide guide:	Travel H: mm
Stem:	
Connecting parts:	

* Please specify in the enquiry/ order.

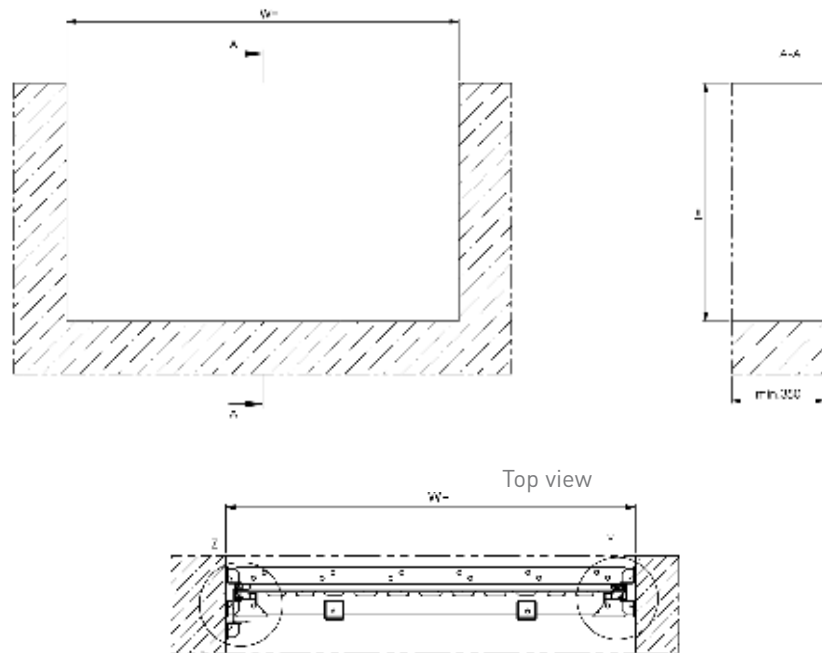
Details



WAGU®-PRO-Channel Penstock for anchor bolting in channel

2-stem, with straight sill for anchor bolting in channel invert

Wall recess

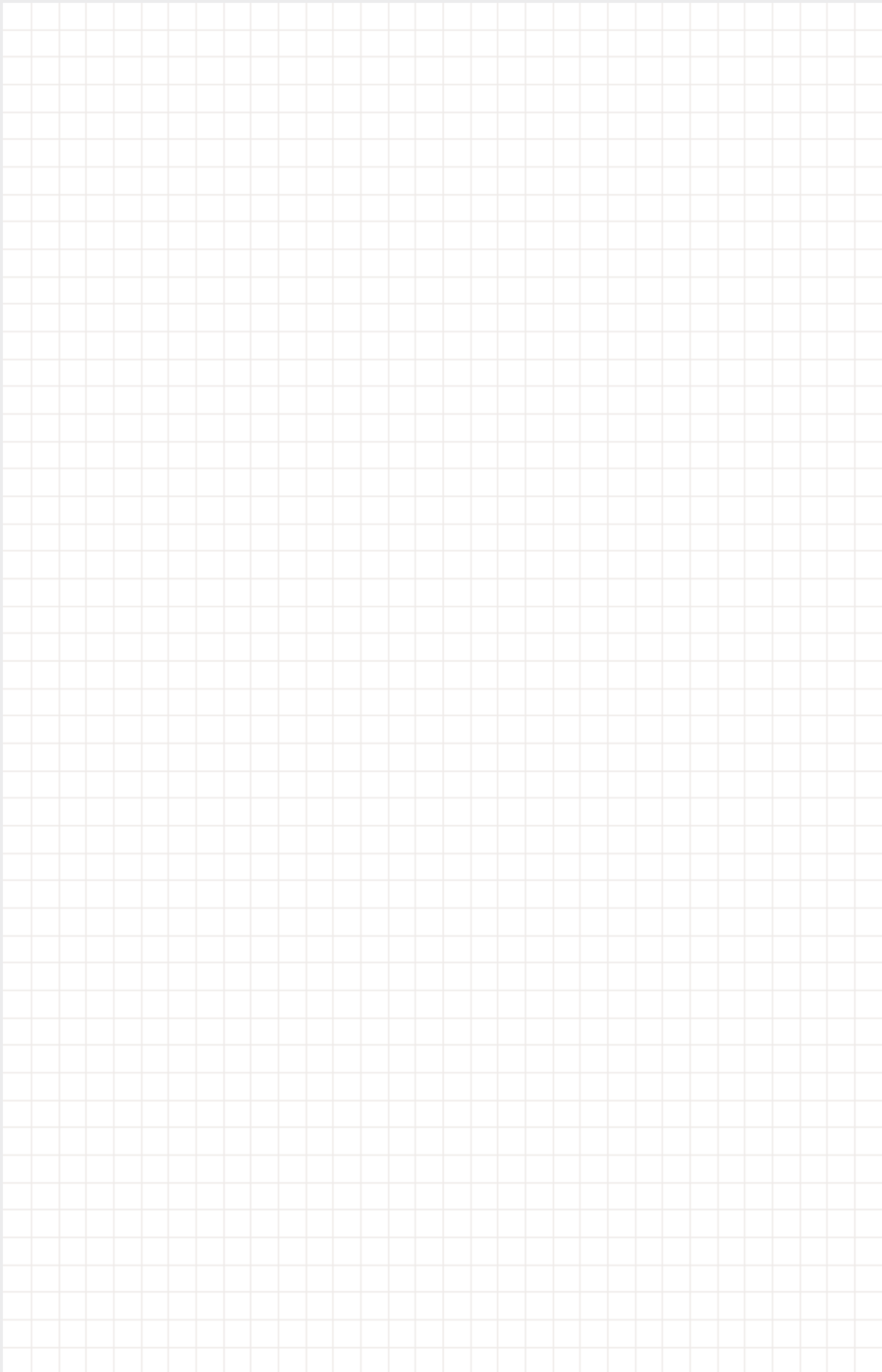


Installation Guide

- ➔ The frame is supplied with welded-on support brackets on one side and a fastening strip at the sill. The support brackets on the other side is supplied loose for adjustment in the channel.
- ➔ Place the wall gasket in the center at the bottom of the fastening strip of the sill and at the welded-on support brackets. Insert frame including door in the intended position and align.
- ➔ For anchor bolting, holes are double and diagonal displaced in the support brackets and fastening strips of the sill.
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling. The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Compound anchor bolts are to be used for fastening.
- ➔ Fastening material and wall gasket are included.
- ➔ First attach the frame on the side with the welded-on support brackets to the channel wall. Then attach the loosely supplied support brackets to the channel wall and fasten them so that the frame is firmly clamped between the support brackets. Hollow spaces must then be grouted with grouting mortar.¹⁾ When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.
- ➔ Clean frame, sealing and door after fastening; check for tightness and performance.

¹⁾ We recommend a cement-based grout.

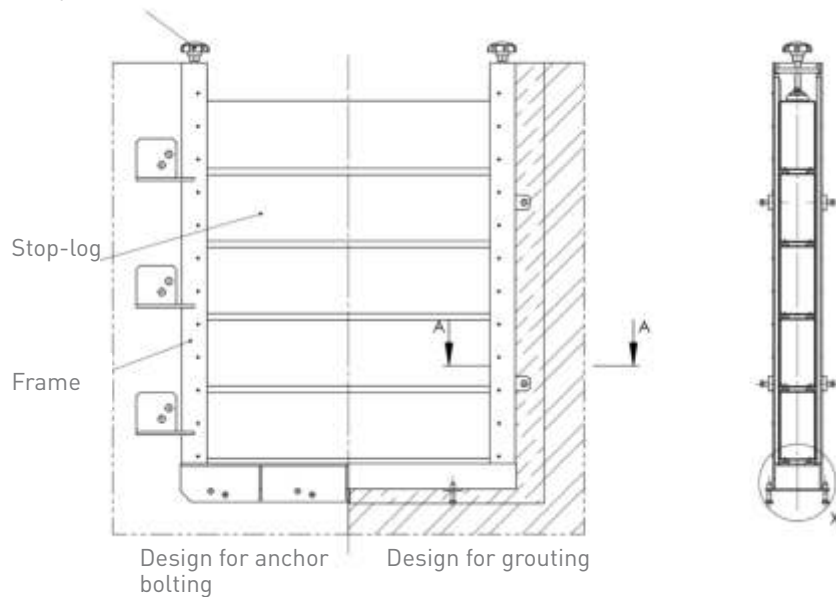
01	WAGU®-Handstops	01
02	WAGU®-Channel Penstocks (Leightweight)	02
03	WAGU®-Channel Penstocks	03
04	WAGU®-Stoplogs	04
05	WAGU®-Stop Plates	05
06	WAGU®-Weir Type Channel Penstocks (3 Facings)	06
07	WAGU®-Slide Penstocks	07
08		08
09		09
10	WAGU®-Weir Type Penstocks (4 Facings)	10
11		11
12	WAGU®-Flap Valves	12
13	WAGU®-Tidal Flaps	13
14	WAGU®-Tilting Flap Spillways	14
15		15
16		16
17	WAGU®-Isolating and Flushing Valves	17
18	WAGU®-Reversing Flaps	18
19		19
20	WAGU®-Telescopic Valves	20
21	WAGU®-Basin Inlets	21
22	WAGU®-Operating Gears	22



WAGU® - Stop-logs

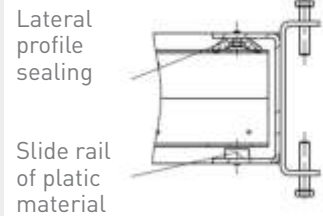
3 facing, for open channels, for on-seating or off-seating pressure, for grouting in channel recess or for anchor bolting to channel outlet or in channel.

Compression device

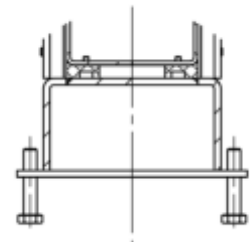


Details

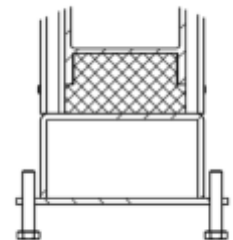
Section A-A



Detail X
Design stainless steel



Detail X
Design aluminium



Design Detail X

- ➔ Straight sill
- ➔ Sill to be flush mounted into channel invert
- ➔ On request with compression device

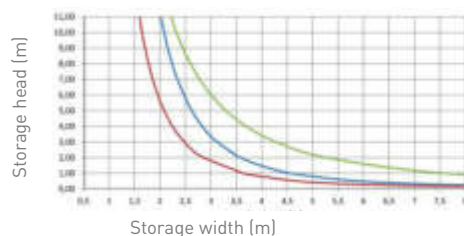
Design Features

- ➔ Welded frame of U-profile with replaceable lateral profile sealing and enclosed invert sealing and slide rails of plastic material
- ➔ Stop-logs of hollow profiles with inserted profil sealings at the upper edges and hook-in holes on both sides for manual lifting rods

Dimensions

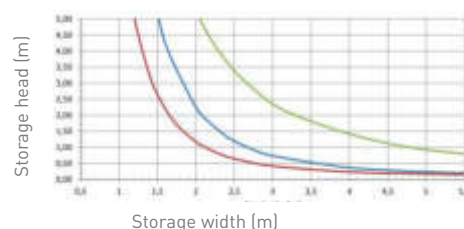
- ➔ Profil size 150x100 for storage section according to characteristic 1

Stop-log 150/100 | hydrostatic load



- ➔ Profil size 200x50 for storage section according to characteristic 1

Stop-log 200/50 | hydrostatic load

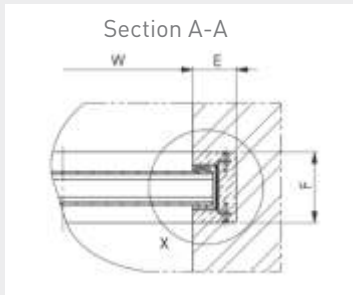


WAGU®-Stop-log for grouting

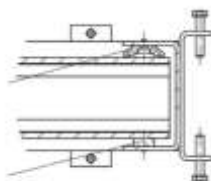
With straight sill for grouting

W x HS according to storage section characteristic

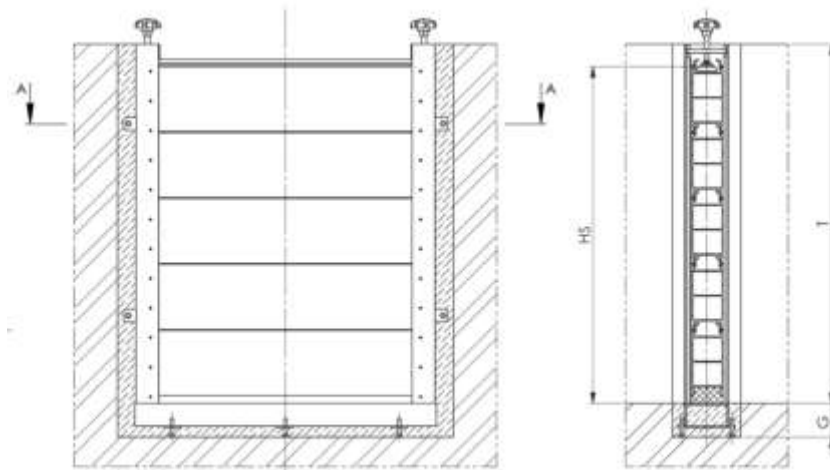
Details



Lateral profile sealing



Slide rail of plastic material



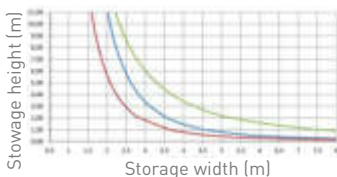
Recess

Alu-Stop-logs (mm)

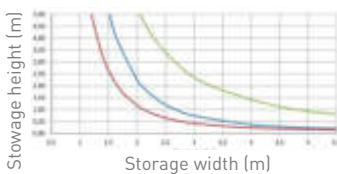
DB	100x150	50x 200
E	130	130
F	210	160
G	100	100



Profil size 150x100 for storage section acc. to characteristic



Profil size 200x50 for storage section acc. to characteristic



Materials

Frame	Stop-log	Sealing	Slide rail	Connecting parts
1.4301 <input type="checkbox"/>	AlMgSi05	Neoprene	POM	A4
1.4404 / <input type="checkbox"/> 1.4571	AlMgSi05	Neoprene	POM	A4

Other materials or combinations available on request.

Order text

Stop-log for grouting, with straight sill for grouting. Cat.-sheet 04.21, manuel lifting rod see corresponding cat.-sheet actuator.

Materials*	Dimensions*
Frame:	Channel width W: mm
Stop-log:	Stowage height HS: mm
Sealing:	Channel depth T: mm
Slide rail:	Profile size: mm
Connecting parts:	

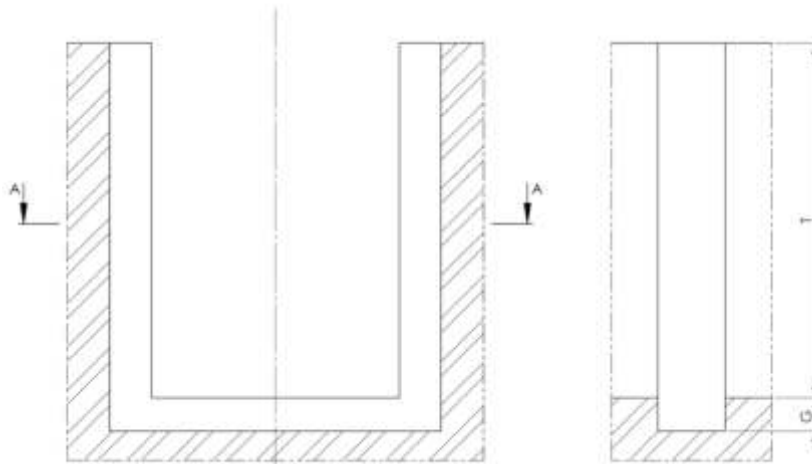
Compression device ... with ... without

* Please specify in the enquiry/order.

WAGU®-Stop-log for grouting

With straight sill for grouting

Wall recess

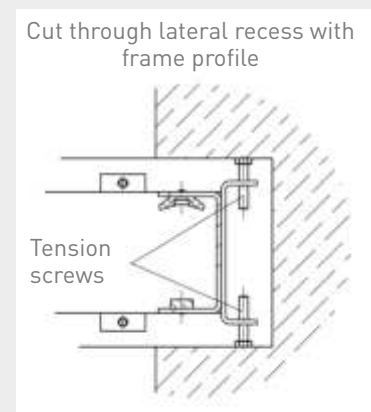
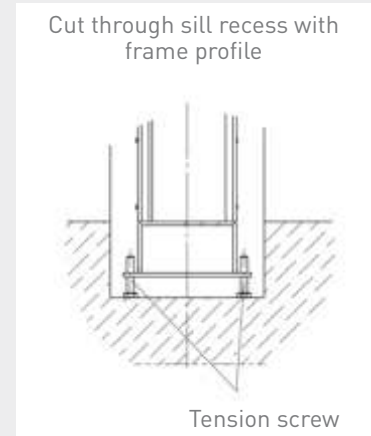
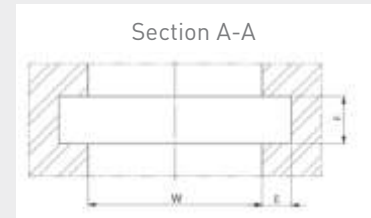


Installation Guide

- ➔ Screw adjusting and tensioning screws into the frame.
- ➔ Insert frame including stop-logs into recess.
- ➔ Align frame:
 - Screw lateral adjusting screws into the recess until the frame is vertical and fixed without tension.
- ➔ Before grouting, check penstock for perfect (flawless) performance and tightness, as it is not possible to change the position of the frame after grouting.
- ➔ Install casing on recess and grout with grouting mortar.¹⁾ When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.

¹⁾ We recommend a cement-based grout.

Details



Recess

Alu-Stop-logs (mm)

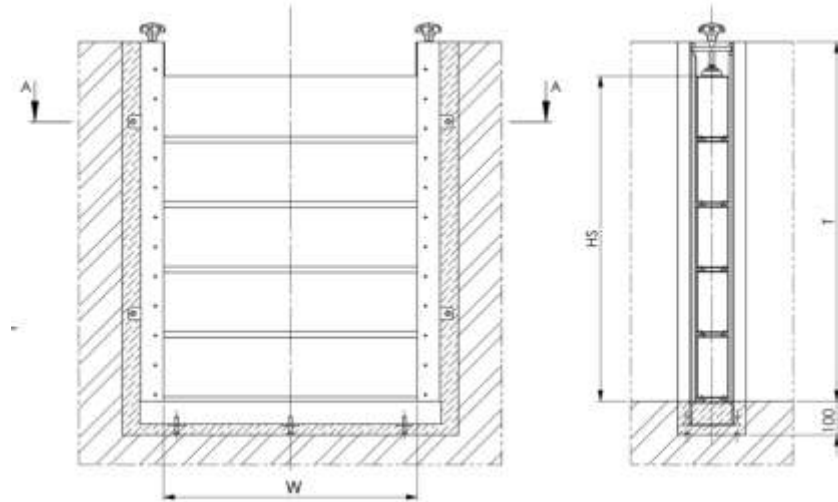
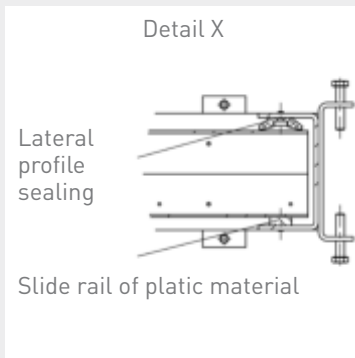
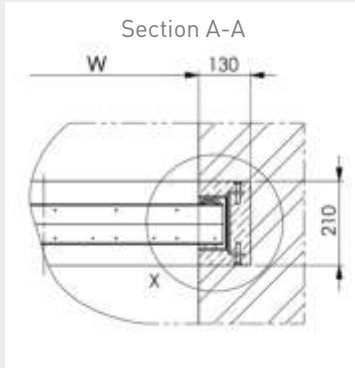
DB	100x150	50x 200
E	130	130
F	210	160
G	100	100

WAGU® - Stop-log for grouting

With straight sill for grouting

W x HS according to storage section characteristic

Details



Materials

Frame	Stop-log	Sealing	Slide rail	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	POM	A4
1.4404 / <input type="checkbox"/>	1.4404 / <input type="checkbox"/>	Neoprene	POM	A4
1.4571	1.4571			

Other materials or combinations available on request.

Order text

Stop-log for grouting, with straight sill for grouting. Cat.-sheet 04.23, manual lifting rod see corresponding cat.-sheet actuator.

Materials*	Dimensions*
Frame:	Channel width W: mm
Stop-log:	Storage height HS: mm
Sealing:	Channel depth T: mm
Slide rail:	Profile size: mm
Connecting parts:	

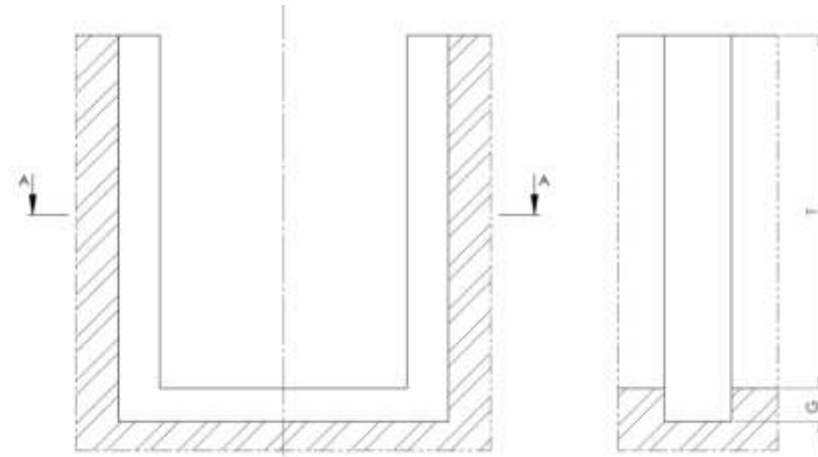
Compression device ... with ... without

* Please specify in the enquiry/order.

WAGU®-Stop-log for grouting

With straight sill for anchor bolting

Wall recess

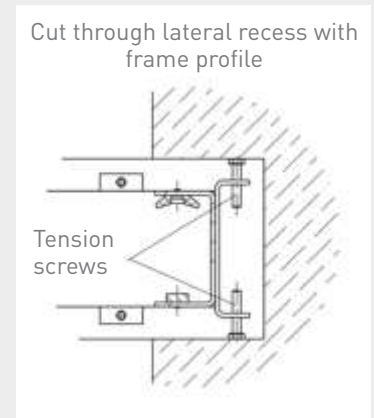
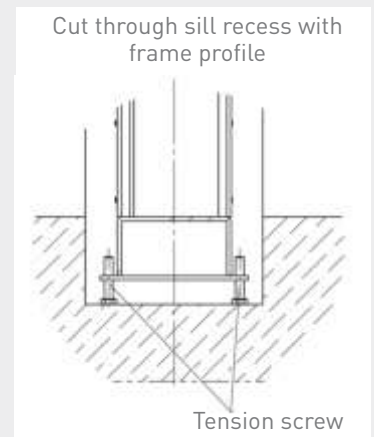
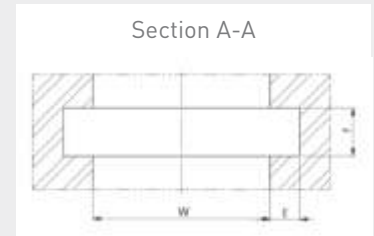


Installation Guide

- ➔ Screw adjusting and tensioning screws into the frame.
- ➔ Insert frame including stop-logs into recess.
- ➔ Align frame:
 - Screw lateral adjusting screws into the recess until the frame is vertical and fixed without tension.
- ➔ Before grouting, check penstock for perfect (flawless) performance and tightness, as it is not possible to change the position of the frame after grouting.
- ➔ Install casing on recess and grout with grouting mortar.¹⁾ When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.

¹⁾ We recommend a cement-based grout.

Details

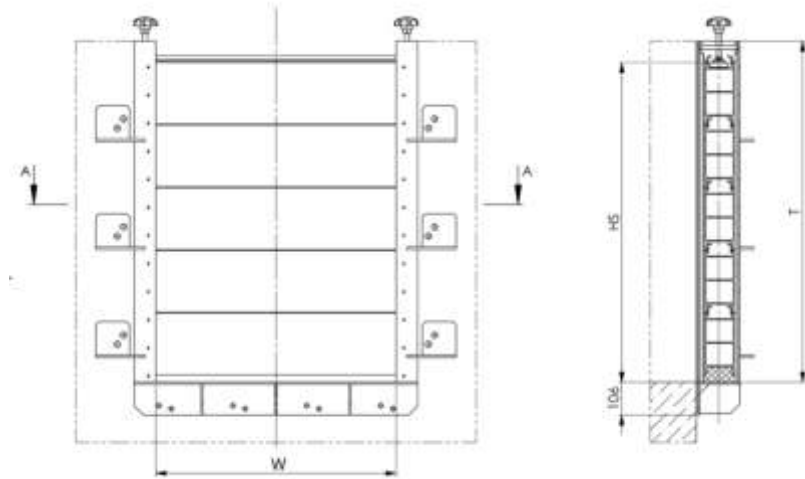
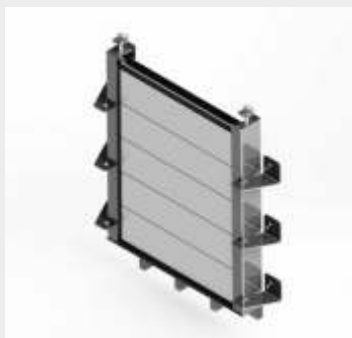
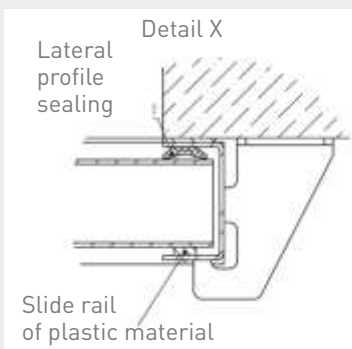
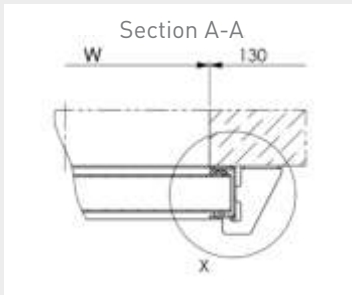


WAGU®-Stop-logs for anchor bolting

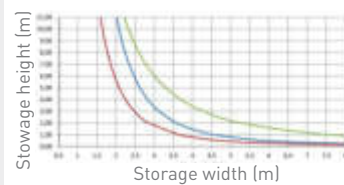
With straight sill for anchor bolting

W x HS according to storage section characteristic

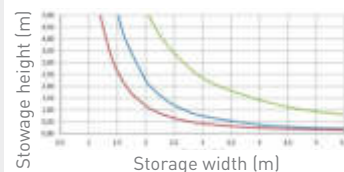
Details



Profil size 150x100 for storage section acc. to characteristic



Profil size 200x50 for storage section acc. to characteristic



Materials

Frame	Stop-log	Sealing	Slide rail	Connecting parts
1.4301 □	AlMgSi05	Neoprene	POM	A4
1.4404 / □ 1.4571	AlMgSi05	Neoprene	POM	A4

Other materials or combinations available on request.

Order text

Stop-logs for anchor bolting, with straight sill for anchor bolting.

Cat.-sheet 04.41, manual lifting rod see corresponding cat.-sheet actuator.

Materials*	Dimensions*
Frame:	Channel width W: mm
Stop-log:	Stowage height HS: mm
Sealing:	Channel depth T: mm
Slide rail:	Profile size: mm
Connecting parts:	

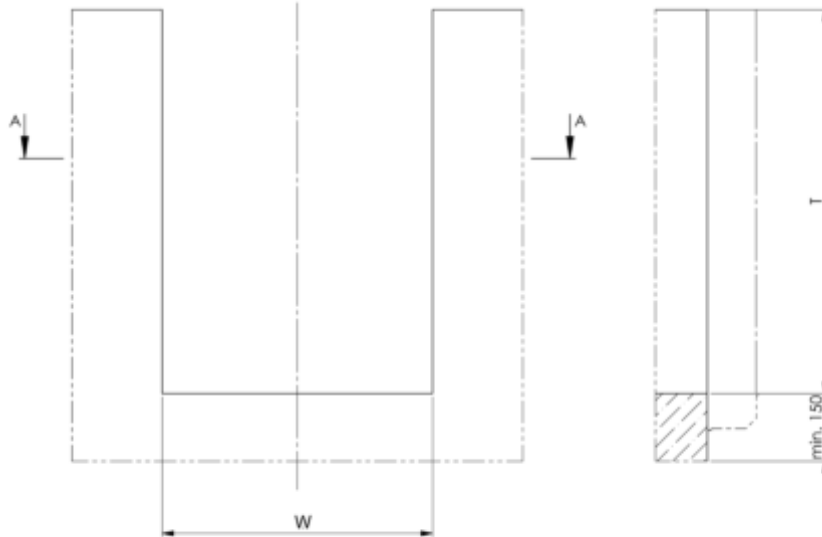
Compression device ... with ... without

* Please specify in the enquiry/order.

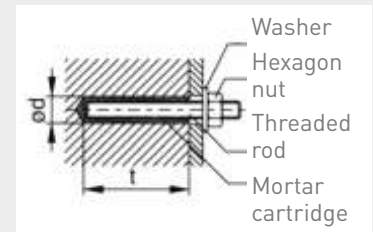
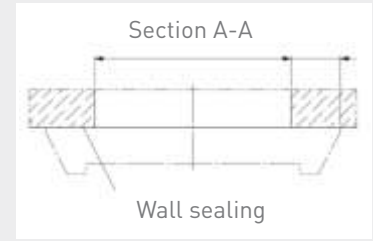
WAGU® - Stop-logs for anchor bolting

With straight sill for anchor bolting

Wall recess



Details



Installation Guide

- ➔ Place frame with stop-log in the designated position and align.
- ➔ For anchor bolting, holes are double and diagonal displaced in the frame or flange.
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling. The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Compound anchor bolts are to be used for fastening.

Sealing frame/wall

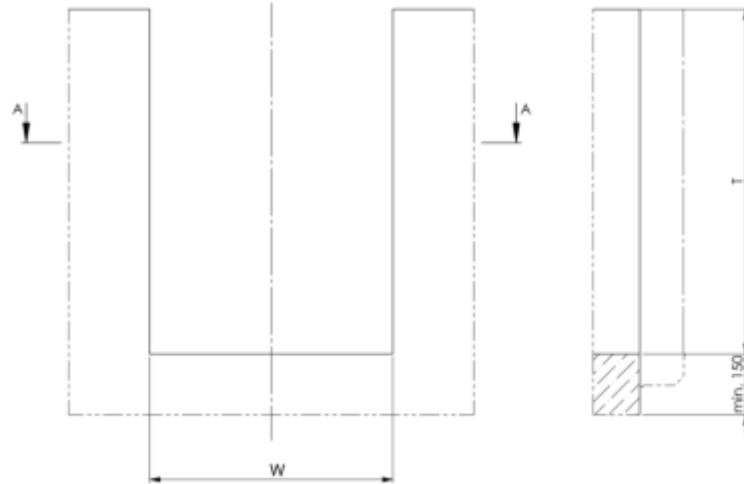
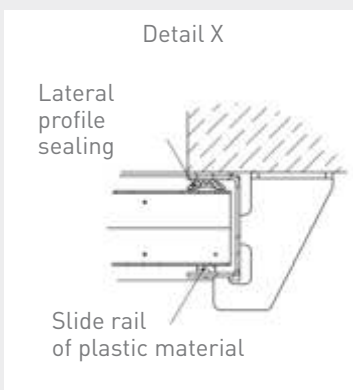
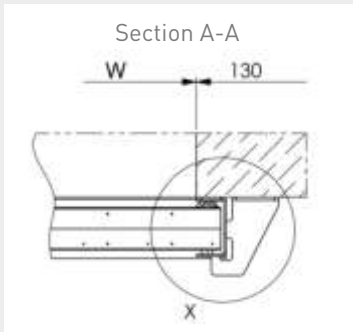
- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the frame.
- ➔ Fastening material and wall gasket are included.
- ➔ The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.
- ➔ Clean frame, sealing and door after fastening; check for tightness and performance.

WAGU®-Stop-logs for anchor bolting

With straight sill for anchor bolting

W x HS according to storage section characteristic

Details



Materials

Frame	Stop-log	Sealing	Slide rail	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	POM	A4
1.4404 / <input type="checkbox"/> 1.4571	1.4404 / <input type="checkbox"/> 1.4571	Neoprene	POM	A4

Other materials or combinations available on request.

Order text

Stop-logs for anchor bolting, With straight sill for anchor bolting.

Cat.-sheet 04.43, manual lifting rod see corresponding cat.-sheet actuator.

Materials*	Dimensions*
Frame:	Channel width W: mm
Stop-log:	Stowage height HS: mm
Sealing:	Channel depth T: mm
Slide rail:	Profile size: mm
Connecting parts:	

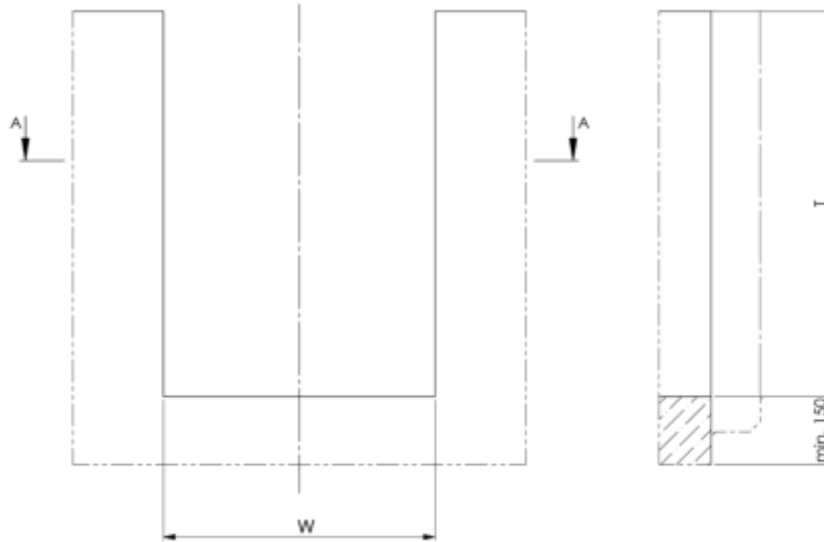
Compression device ... with ... without

* Please specify in the enquiry/order.

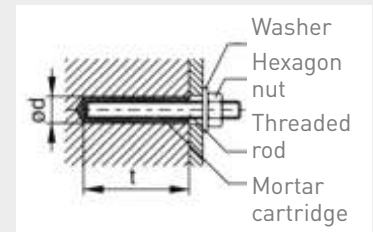
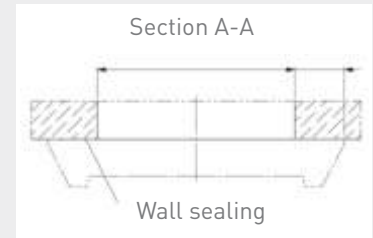
WAGU® - Stop-logs for anchor bolting

With straight sill for anchor bolting

Wall recess



Details



Installation Guide

- ➔ Place frame with stop-log in the designated position and align.
- ➔ For anchor bolting, holes are double and diagonal displaced in the frame or flange.
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling. The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Compound anchor bolts are to be used for fastening.

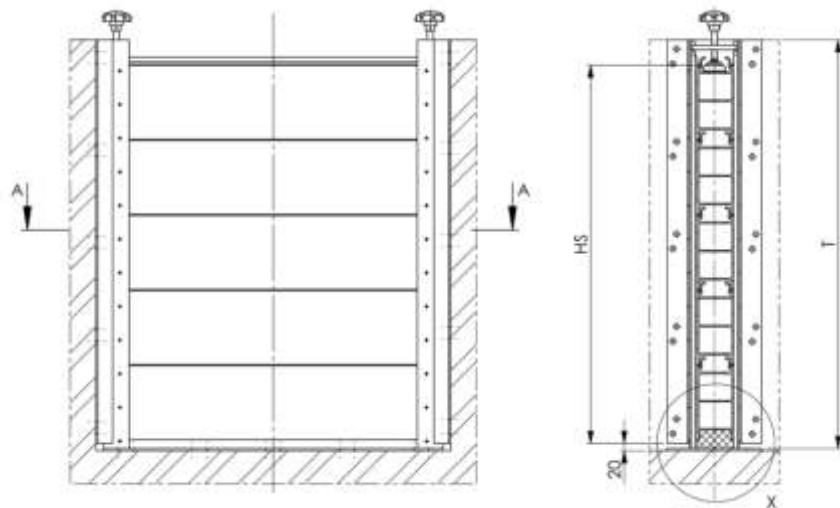
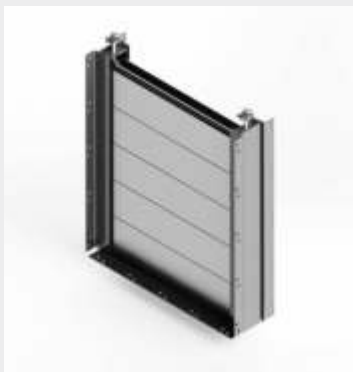
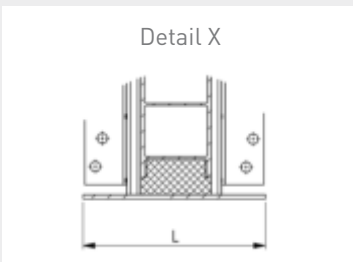
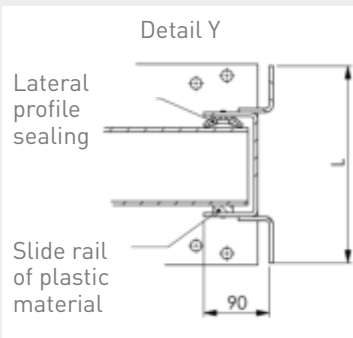
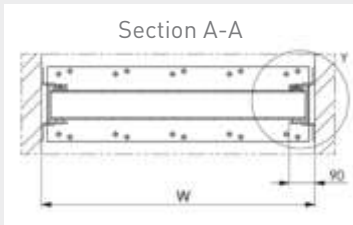
Sealing frame/wall

- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the frame.
- ➔ Fastening material and wall gasket are included.
- ➔ The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.
- ➔ Clean frame, sealing and door after fastening; check for tightness and performance.

WAGU®-Stop-logs for anchor bolting in channel

With straight sill for anchor bolting in channel
W x HS according to storage section characteristic

Details



Materials

Frame	Stop-log	Sealing	Slide rail	Connecting parts
1.4301 □	AlMgSi05	Neoprene	POM	A4
1.4404 / □ 1.4571	AlMgSi05	Neoprene	POM	A4

Other materials or combinations available on request.

Order text

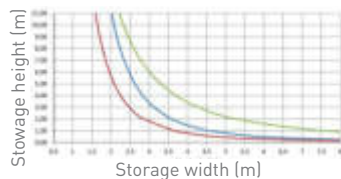
Stop-log for anchor bolting in channel, with straight sill for anchor bolting in channel. Cat.-sheet 04.61, manuel lifting rod see corresponding cat.-sheet actuator.

Materials*	Dimensions*
Frame:	Channel width W: mm
Stop-log:	Stowage height HS: mm
Sealing:	Channel depth T: mm
Slide rail:	Profile size: mm
Connecting parts:	

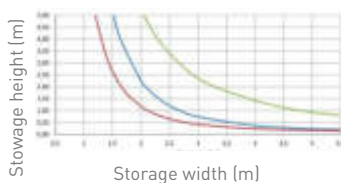
Compression device ... with ... without

* Please specify in the enquiry/order.

Profil size 150x100 for storage section acc. to characteristic



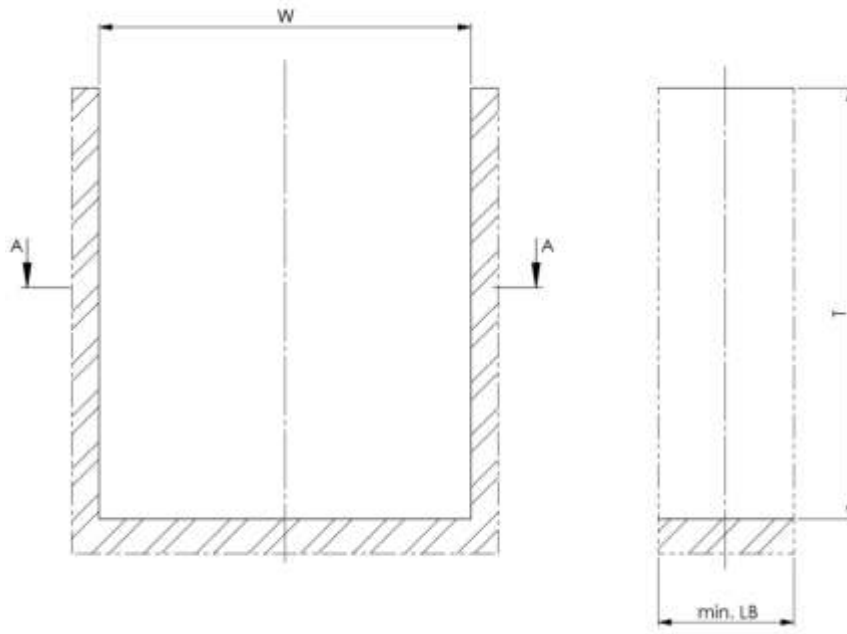
Profil size 200x50 for storage section acc. to characteristic



WAGU® - Stop-logs for anchor bolting in channel

With straight sill for anchor bolting in channel

Wall recess



Installation Guide

- ➔ The frame is supplied with welded-on support brackets on one side and a fastening strip at the sill. The support brackets on the other side is supplied loose for adjustment in the channel.
- ➔ Place the wall gasket in the center at the bottom of the fastening strip of the sill and at the welded-on support brackets. Insert frame including door in the intended position and align.
- ➔ For anchor bolting, holes are double and diagonal displaced in the support brackets and fastening strips of the sill.
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling. The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Compound anchor bolts are to be used for fastening.
- ➔ Fastening material and wall gasket are included.
- ➔ First attach the frame on the side with the welded-on support brackets to the channel wall. Then attach the loosely supplied support brackets to the channel wall and fasten them so that the frame is firmly clamped between the support brackets. Hollow spaces must then be grouted with grouting mortar.¹⁾ When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.
- ➔ Clean frame, sealing and door after fastening; check for tightness and performance.

¹⁾ We recommend a cement-based grout.

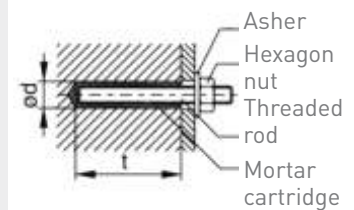
Details

Section A-A

Cavities to grouted after installation



One side support brackets loose supplied

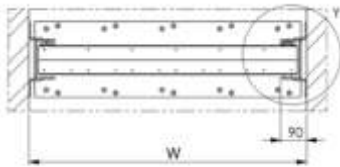


Dimensions (mm)

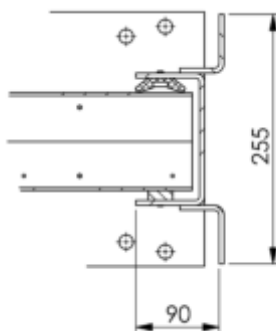
	LBE
50 x 200	400
100 x 150	500

Details

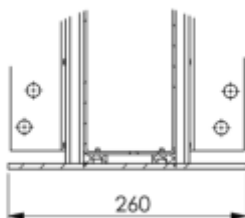
Section A-A



Detail Y

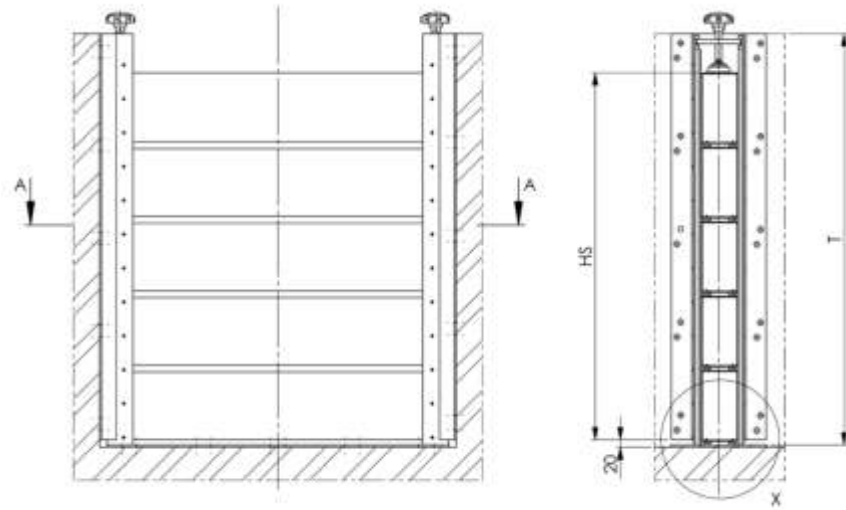


Detail X



WAGU®-Stop-logs for anchor bolting in channel

With straight sill for anchor bolting in channel
W x HS according to storage section characteristic



Materials

Frame	Stop-log	Sealing	Slide rail	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	POM	A4
1.4404 / <input type="checkbox"/> 1.4571	1.4404 / <input type="checkbox"/> 1.4571	Neoprene	POM	A4

Other materials or combinations available on request.

Order text

Stop-log for anchor bolting in channel, with straight sill for anchor bolting in channel. Cat.-sheet 04.63, manual lifting rod see corresponding cat.-sheet actuator.

Materials*	Dimensions*
Frame:	Channel width W: mm
Stop-log:	Stowage height HS: mm
Sealing:	Channel depth T: mm
Slide rail:	Profile size: mm
Connecting parts:	

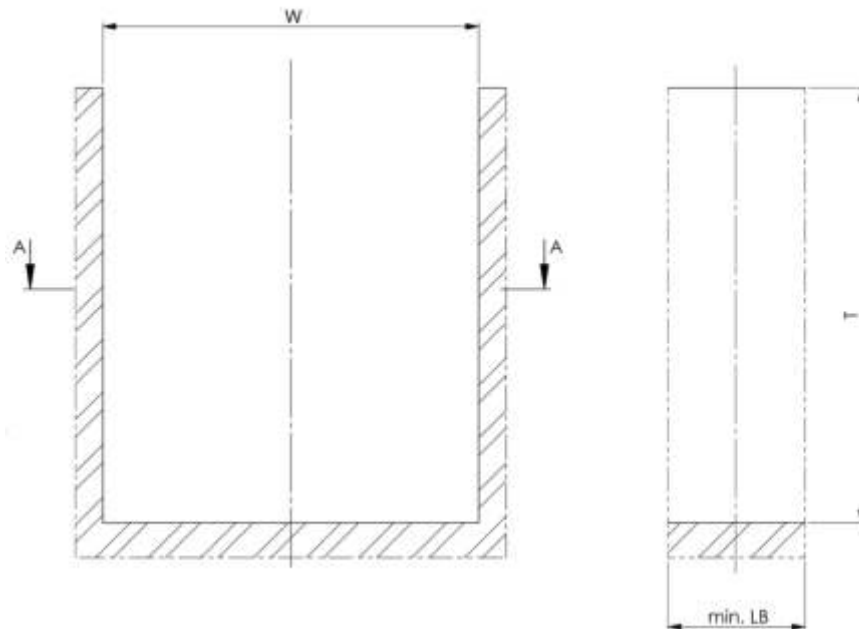
Compression device ... with ... without

* Please specify in the enquiry/order.

WAGU® - Stop-logs for anchor bolting in channel

With straight sill for anchor bolting in channel

Wall recess



Installation Guide

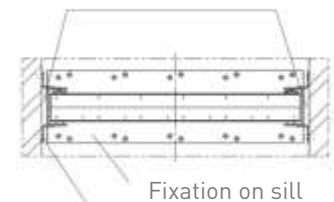
- ➔ The frame is supplied with welded-on support brackets on one side and a fastening strip at the sill. The support brackets on the other side is supplied loose for adjustment in the channel.
- ➔ Place the wall gasket in the center at the bottom of the fastening strip of the sill and at the welded-on support brackets. Insert frame including door in the intended position and align.
- ➔ For anchor bolting, holes are double and diagonal displaced in the support brackets and fastening strips of the sill.
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling. The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling. Compound anchor bolts are to be used for fastening.
- ➔ Fastening material and wall gasket are included.
- ➔ First attach the frame on the side with the welded-on support brackets to the channel wall. Then attach the loosely supplied support brackets to the channel wall and fasten them so that the frame is firmly clamped between the support brackets. Hollow spaces must then be grouted with grouting mortar.¹⁾ When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.
- ➔ Clean frame, sealing and door after fastening; check for tightness and performance.

1) We recommend a cement-based grout.

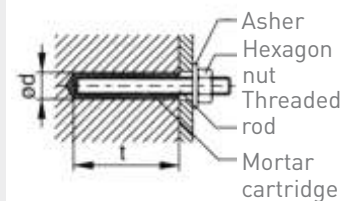
Details

Section A-A

Cavities to grouted after installation

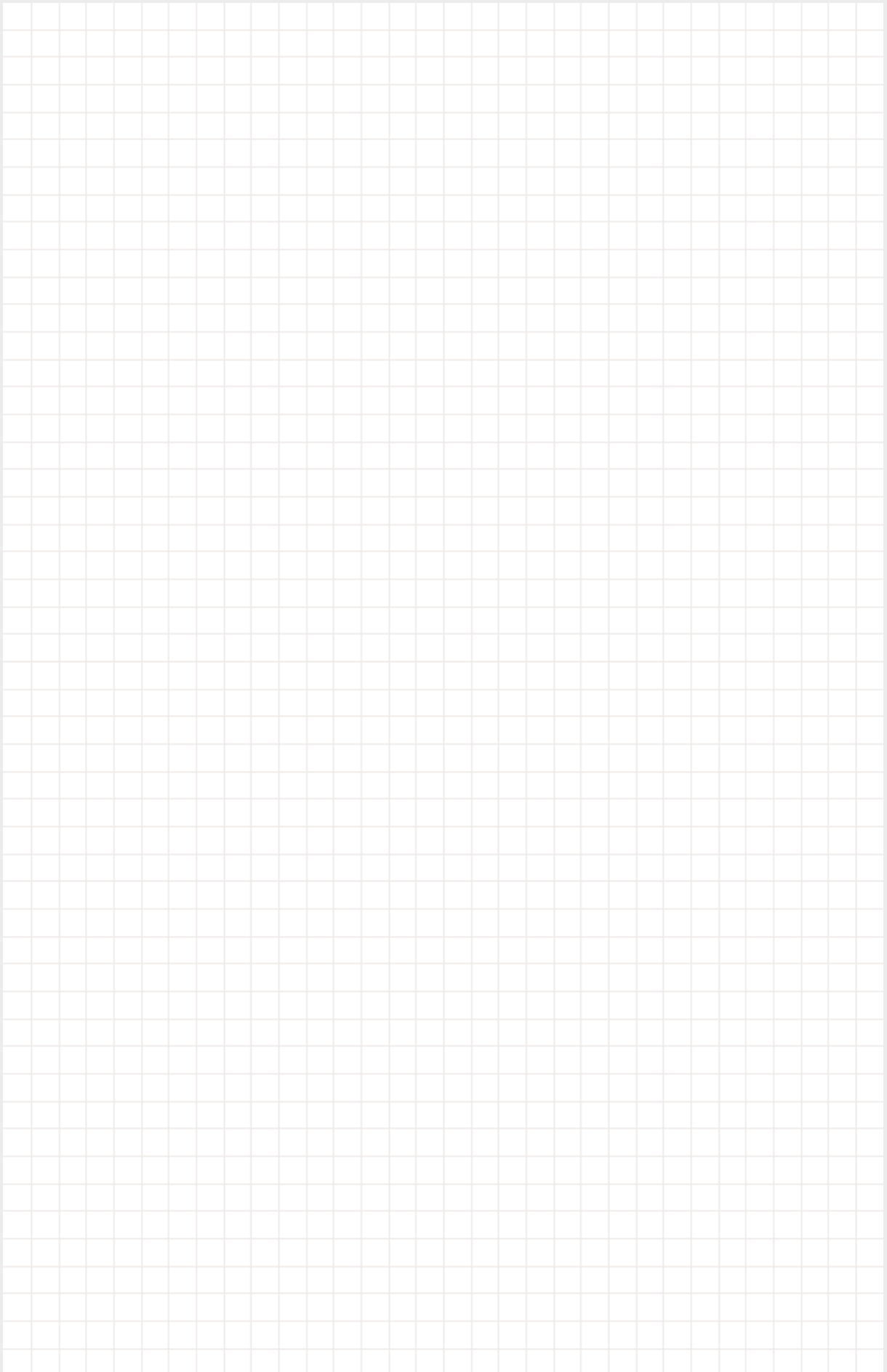


One side support brackets loose supplied

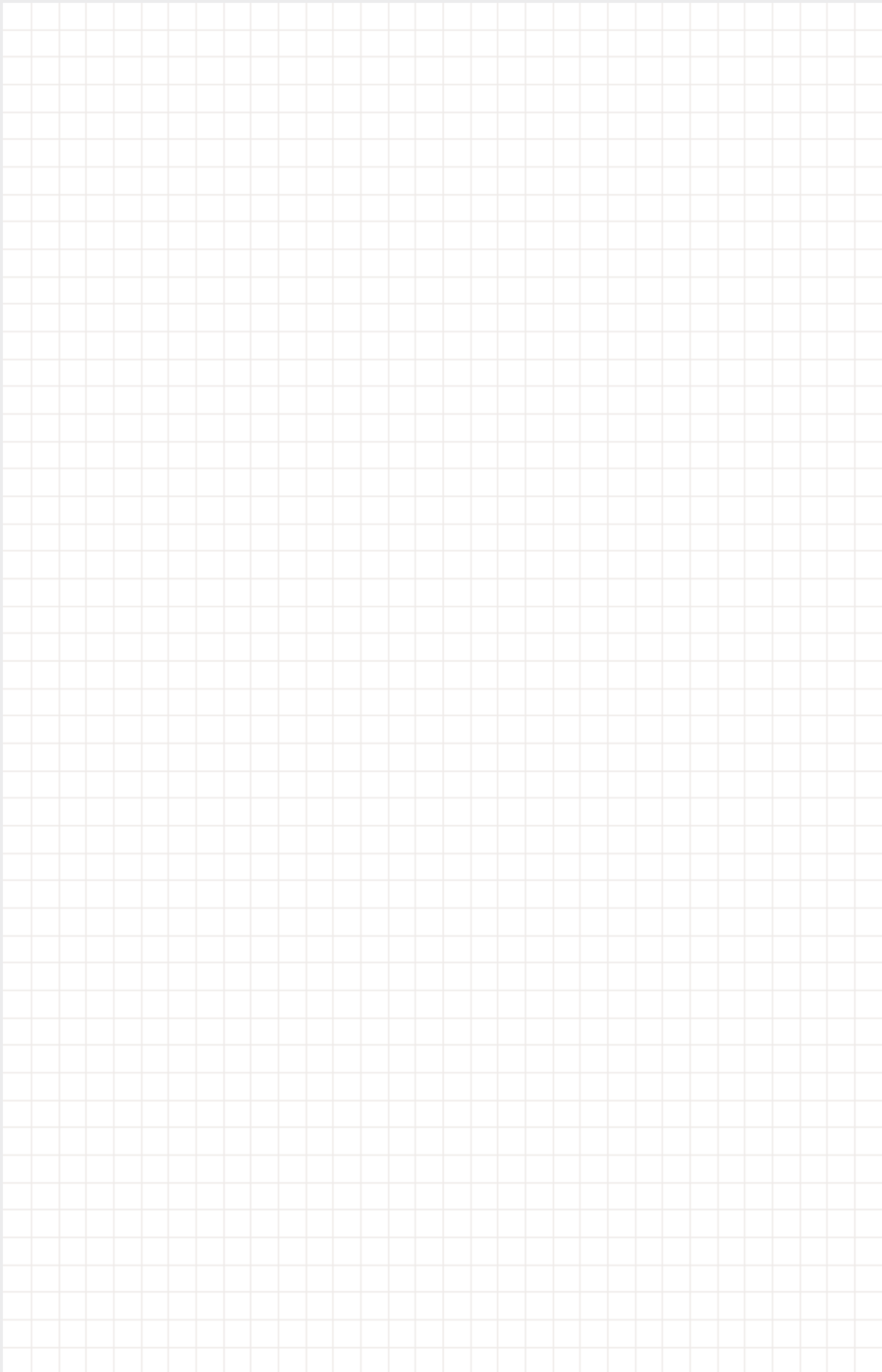


Dimensions (mm)

	LBE
50 x 200	400
100 x 150	500

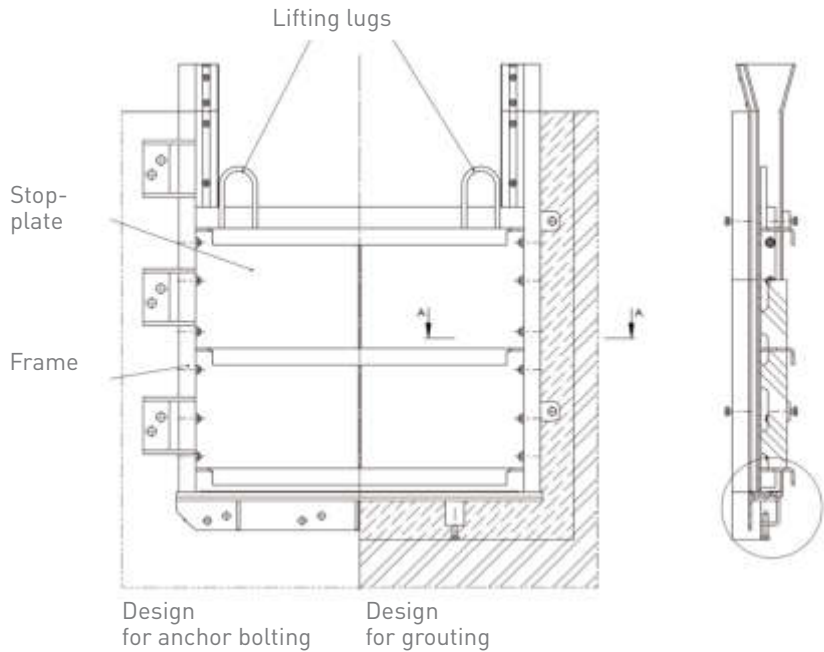


01	WAGU®-Handstops	01
02	WAGU®-Channel Penstocks (Leightweight)	02
03	WAGU®-Channel Penstocks	03
04	WAGU®-Stoplogs	04
05	WAGU®-Stop Plates	05
06	WAGU®-Weir Type Channel Penstocks (3 Facings)	06
07	WAGU®-Slide Penstocks	07
08		08
09		09
10	WAGU®-Weir Type Penstocks (4 Facings)	10
11		11
12	WAGU®-Flap Valves	12
13	WAGU®-Tidal Flaps	13
14	WAGU®-Tilting Flap Spillways	14
15		15
16		16
17	WAGU®-Isolating and Flushing Valves	17
18	WAGU®-Reversing Flaps	18
19		19
20	WAGU®-Telescopic Valves	20
21	WAGU®-Basin Inlets	21
22	WAGU®-Operating Gears	22



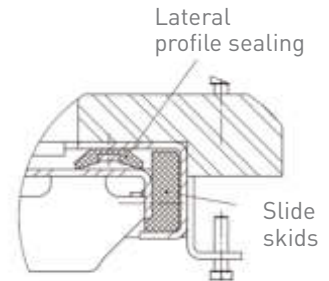
WAGU® - Stop-plate

3 facings, for open channels, for on-seating or off-seating pressure, for grouting into channel recess or for anchor bolting to channel outlet or in channel.

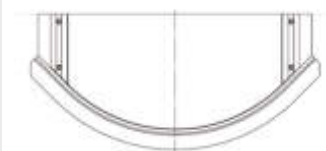
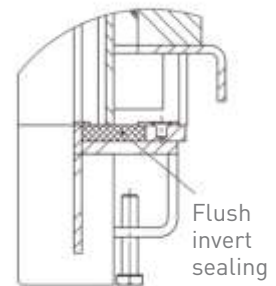


Details

Section A-A



Detail X



Design with round sill

Design

- ➔ Straight sill
- ➔ Round sill
- ➔ Sill to be flush mounted into channel invert

Design Features

- ➔ Welded frame of U-profiles, with replaceable lateral profile sealing and chambered sill sealing
- ➔ Stop-plate with inforcement ribs and screwed plastic sliding skids and lifting lugs

Dimensions

- ➔ W x HS 400 x 400 up to very large dimensions

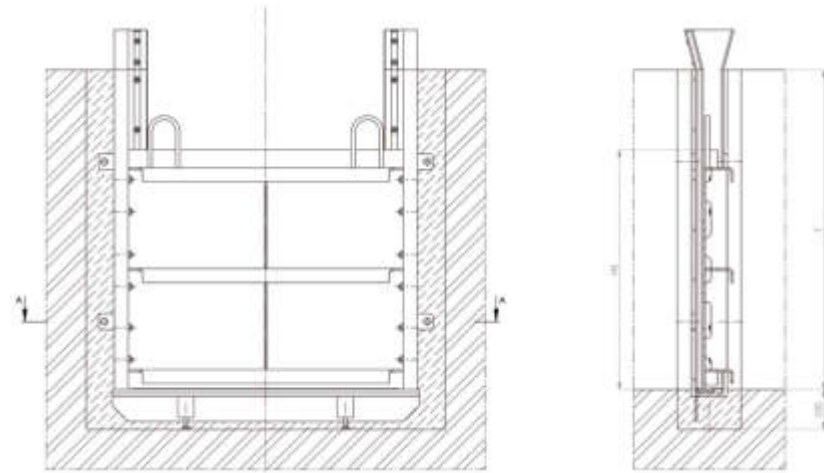
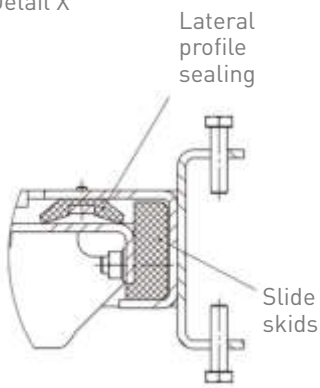
Various designs and combinations available on request.

Details

Section A-A



Detail X



Materials

Frame	Door	Sealing	Slide skids	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	EPDM / Neoprene	POM	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	EPDM / Neoprene	POM	A4

Other materials or combinations available on request.

Order text

Stop-plate for grouting, with straight sill for grouting.

Cat.-sheet 05.21

Materials*	Dimensions*
Frame:	Channel width W: mm
Door:	Stowage height HS: mm
Sealing:	Channel depth T: mm
Slide skids:	
Connecting parts:	

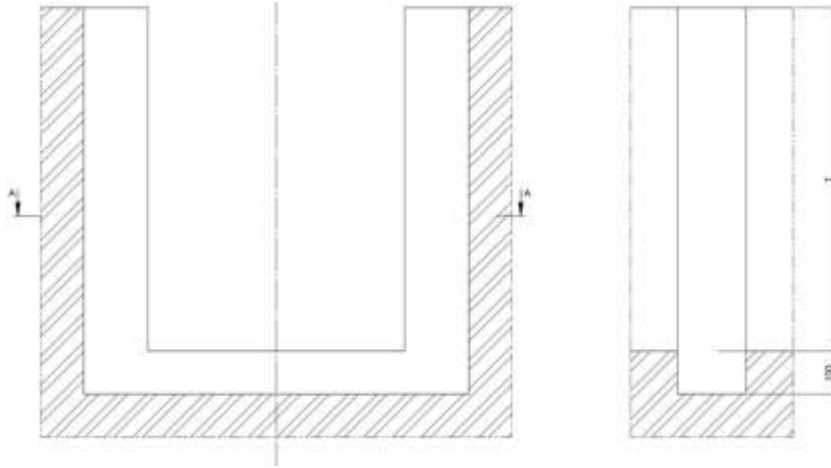
* Please specify in the enquiry/ order.



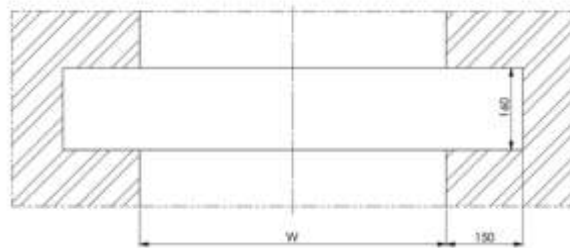
WAGU®-Stop-plate for grouting

With straight sill for grouting

Wall recess

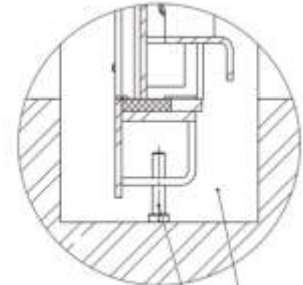


Section A-A



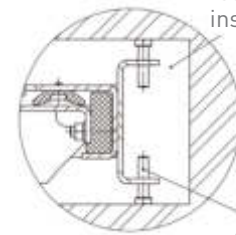
Details

Cut through sill recess with frame profile



Adjusting screws
To be grouted after installation

Cut through lateral recess with frame profile



To be grouted after installation

Adjusting screws

Installation Guide

- ➔ Screw adjusting and tensioning screws into the frame.
- ➔ Insert frame including Stop-plate into recess.
- ➔ Align frame:
Screw lateral adjusting screws into the recess until the frame is vertical and fixed without tension.
- ➔ Before grouting, check penstock for perfect (flawless) performance and tightness, as it is not possible to change the position of the frame after grouting.
- ➔ Install casing on recess and grout with grouting mortar¹⁾. When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.

1) We recommend a cement-based grout.

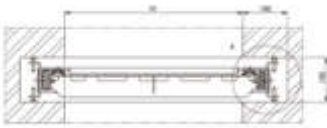
WAGU®-Stop-plate for grouting

With round sill for grouting

W x HS 400 x 400 up to very large dimensions

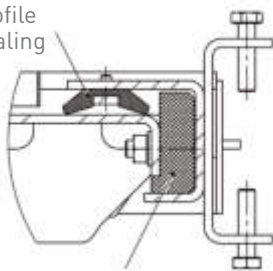
Details

Section A-A

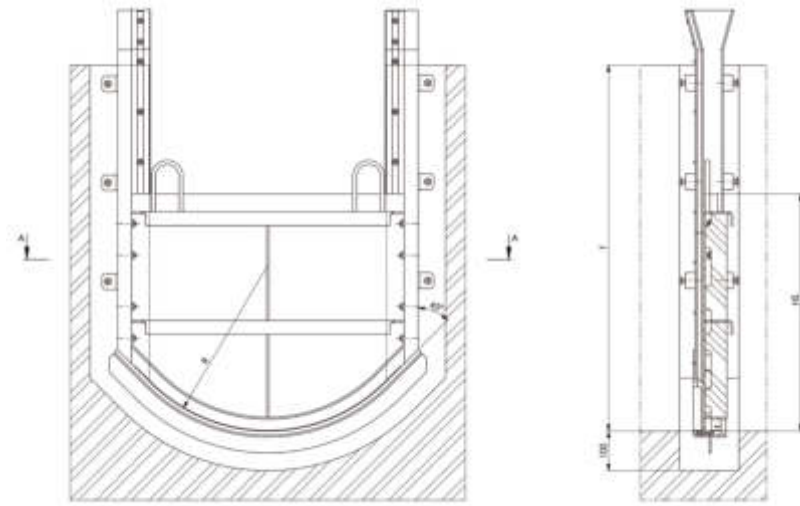


Detail X

Lateral profile sealing



Slide skids



DN (mm)	R (mm)
400	280
450	315
500	350
600	420
700	490
800	560
900	630
1200	700
1100	770
1200	840
1300	910
1400	980
1500	1050
1600	1120
1700	1190
1800	1260
1900	1330
2000	1400

Materials

Frame	Door	Sealing	Slide skids	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	EPDM / Neoprene	POM	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	EPDM / Neoprene	POM	A4

Other materials or combinations available on request.

Order text

Stop-plate for grouting, with round sill for grouting.

Cat.-sheet 05.31

Materials*	Dimensions*
Frame:	Channel width W: mm
Door:	Stowage height HS: mm
Sealing:	Channel depth T: mm
Slide skids:	
Connecting parts:	

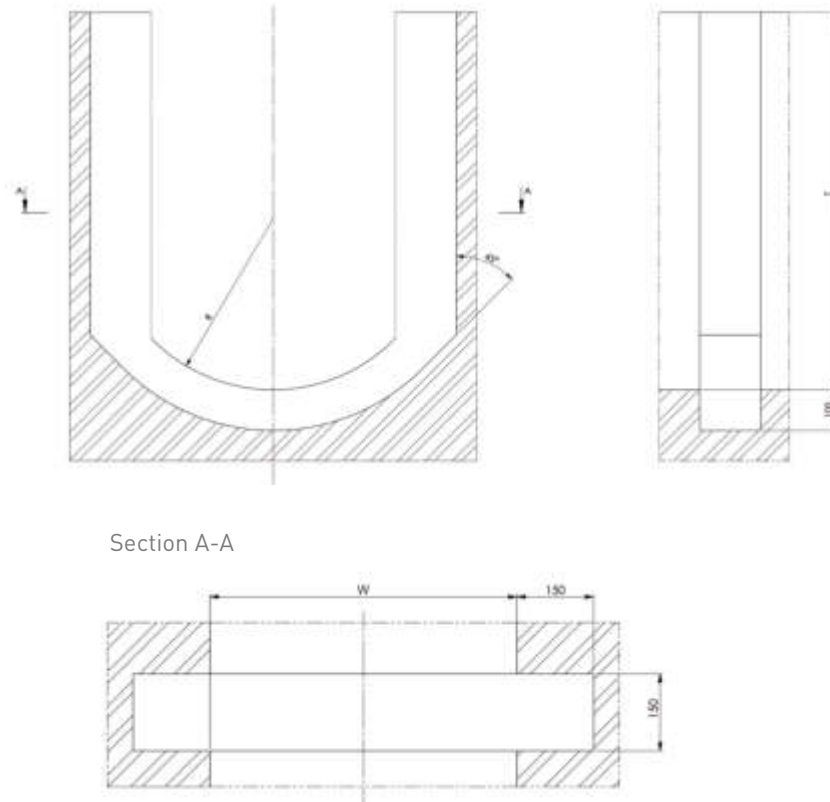
* Please specify in the enquiry/ order.



WAGU® -Stop-plate for grouting

With round sill for grouting

Wall recess



Section A-A

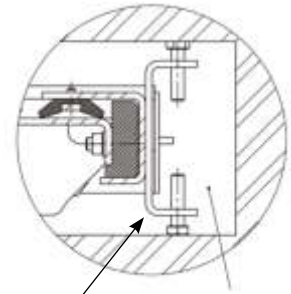
Installation Guide

- ➔ Screw adjusting and tensioning screws into the frame.
- ➔ Insert frame including Stop-plate into recess.
- ➔ Align frame:
 - Screw lateral adjusting screws into the recess until the frame is vertical and fixed without tension.
- ➔ Before grouting, check penstock for perfect (flawless) performance and tightness, as it is not possible to change the position of the frame after grouting.
- ➔ Install casing on recess and grout with grouting mortar¹⁾. When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.

1) We recommend a cement-based grout.

Details

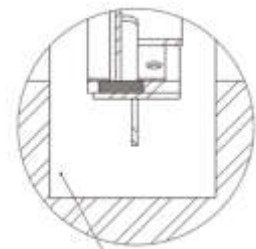
Cut through sill recess with frame profile



To be grouted after installation

Adjusting screws

Cut through sill recess with frame profile



To be grouted after installation

DN (mm)	R (mm)
400	280
450	315
500	350
600	420
700	490
800	560
900	630
1200	700
1100	770
1200	840
1300	910
1400	980
1500	1050
1600	1120
1700	1190
1800	1260
1900	1330
2000	1400

WAGU®-Stop-plate for anchor bolting

With straight sill for anchor bolting

W x HS 400 x 400 up to very large dimensions

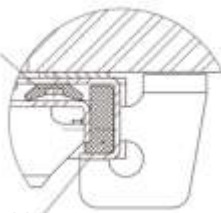
Details

Section A-A

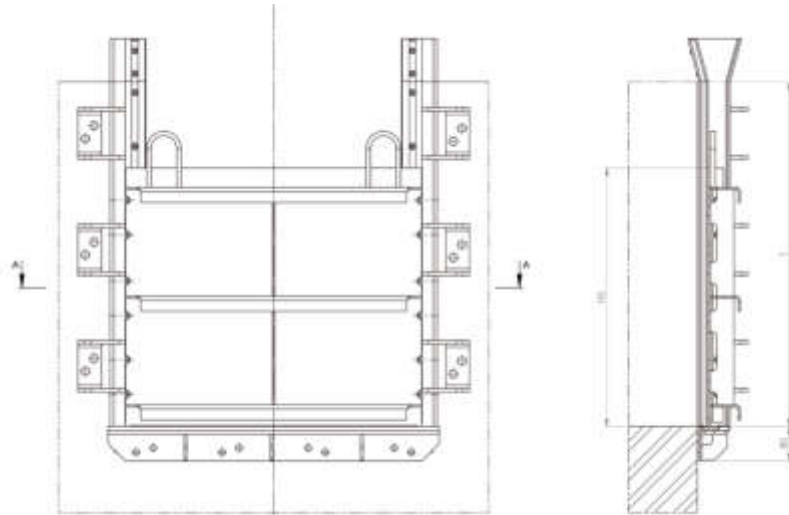


Detail X

Lateral profile sealing



Slide skids



Materials

Frame	Door	Sealing	Slide skids	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	EPDM / Neoprene	POM	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	EPDM / Neoprene	POM	A4

Other materials or combinations available on request.

Order text

Stop-plate for anchor bolting, with straight sill for anchor bolting.

Cat.-sheet 05.41

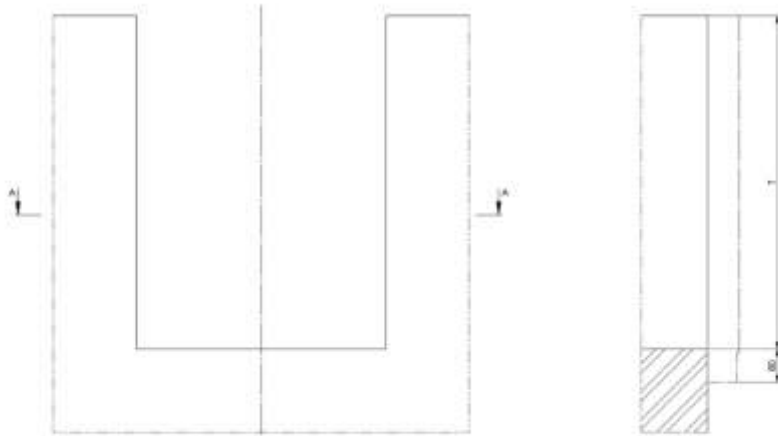
Materials*	Dimensions*
Frame:	Channel width W: mm
Door:	Stowage height HS: mm
Sealing:	Channel depth T: mm
Slide skids:	
Connecting parts:	

* Please specify in the enquiry/ order.

WAGU® -Stop-plate for anchor bolting

With straight sill for anchor bolting

Wall recess



Details

Section A-A



Installation Guide

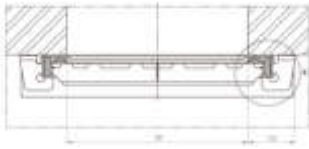
- ➔ Place frame with stop-plate in the designated position and align.
- ➔ For anchor bolting, holes are double and diagonal displaced in the frame and the support brackets.
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling. The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Compound anchor bolts are to be used for fastening.

Sealing frame/wall

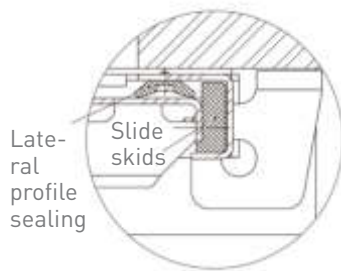
- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the frame.
- ➔ Fastening material and wall gasket are included.
- ➔ The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.
- ➔ Clean frame, sealing and door after fastening; check for tightness and performance.

Details

Section A-A



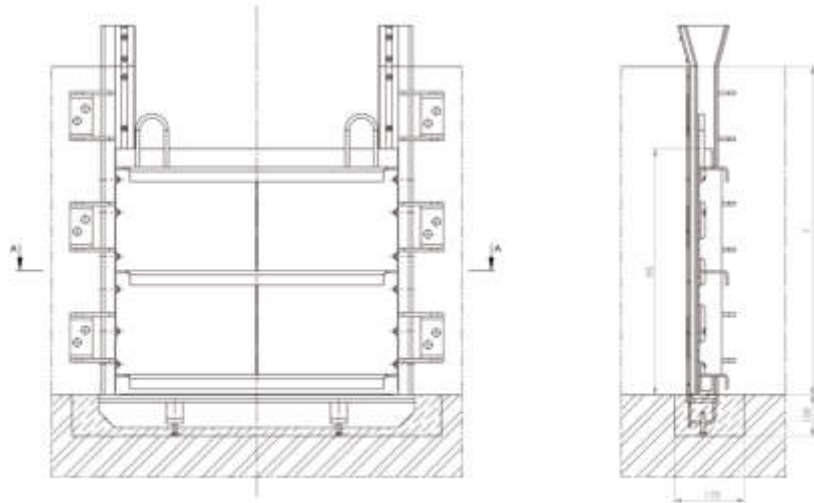
Detail X



WAGU®-Stop-plate for anchor bolting

With straight sill for grouting

W x HS 400 x 400 up to very large dimensions



Materials

Frame	Door	Sealing	Slide skids	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	EPDM / Neoprene	POM	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	EPDM / Neoprene	POM	A4

Other materials or combinations available on request.

Order text

Stop-plate for anchor bolting, with straight sill for grouting.

Cat.-sheet 05.43

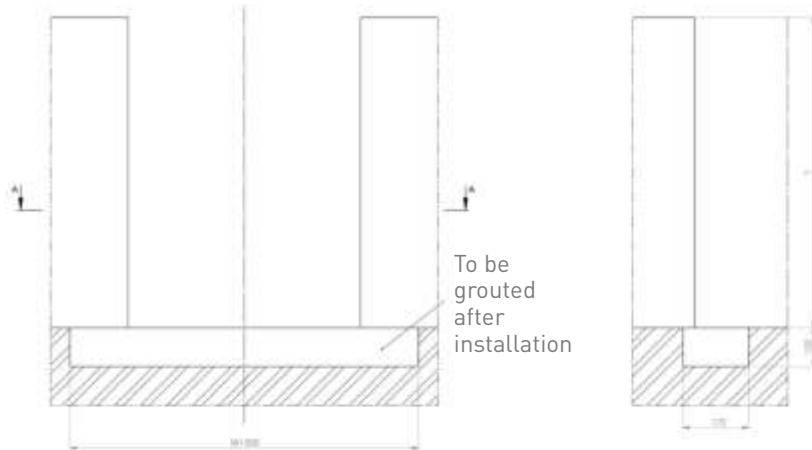
Materials*	Dimensions*
Frame:	Channel width W: mm
Door:	Stowage height HS: mm
Sealing:	Channel depth T: mm
Slide skids:	
Connecting parts:	

* Please specify in the enquiry/ order.

WAGU® -Stop-plate for anchor bolting

With straight sill for grouting

Wall recess



Details

Section A-A



Installation Guide

- ➔ Place frame with stop-plate in the designated position and align.
- ➔ For anchor bolting, holes are double and diagonal displaced in the frame and the support brackets.
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling. The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Compound anchor bolts are to be used for fastening.

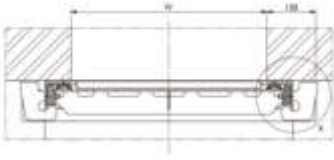
Sealing frame/wall

- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the frame.
- ➔ Fastening material and wall gasket are included.
- ➔ The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.
- ➔ Grout sill with grouting mortar¹⁾. When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.
- ➔ Clean frame, sealing and door after fastening; check for tightness and performance.

1) We recommend a cement-based grout.

Details

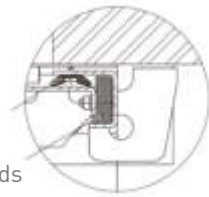
Section A-A



Detail X

Lateral profile sealing

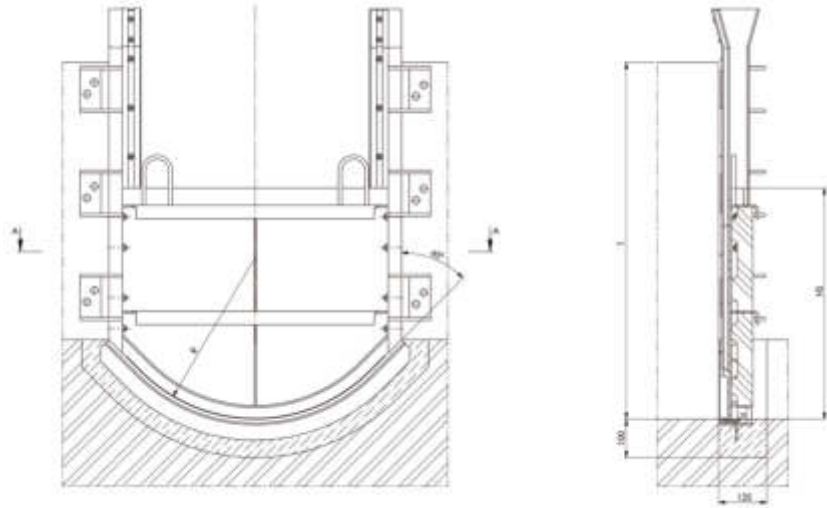
Slide skids



WAGU®-Stop-plate for anchor bolting

With round sill for grouting

W x HS 400 x 400 up to very large dimensions



Materials

Frame	Door	Sealing	Slide skids	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	EPDM / Neoprene	POM	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	EPDM / Neoprene	POM	A4

Other materials or combinations available on request.

Order text

Stop-plate for anchor bolting, with round sill for grouting.

Cat.-sheet 05.51

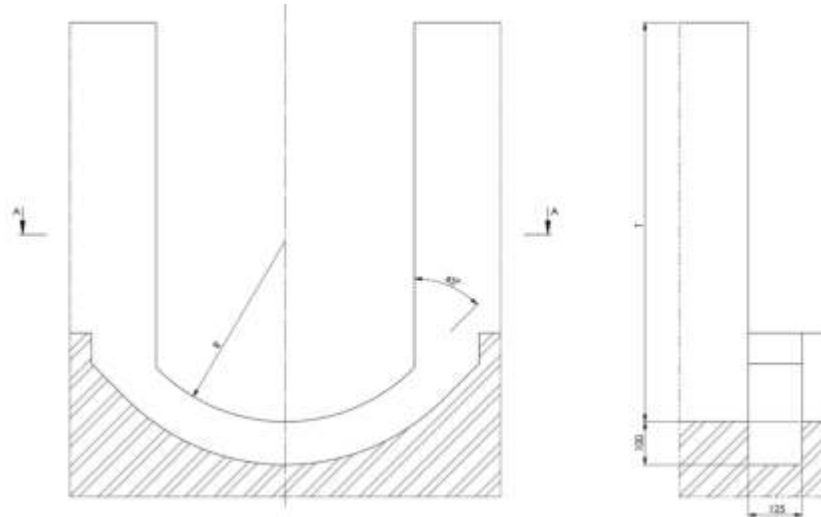
Materials*	Dimensions*
Frame:	Channel width W: mm
Door:	Stowage height HS: mm
Sealing:	Channel depth T: mm
Slide skids:	
Connecting parts:	

* Please specify in the enquiry/ order.

WAGU® -Stop-plate for anchor bolting

With round sill for grouting

Wall recess



Installation Guide

- ➔ Place frame with door in the designated position and align.
- ➔ For anchor bolting, holes are double and diagonal displaced in the frame and the support brackets.
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling. The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Compound anchor bolts are to be used for fastening.

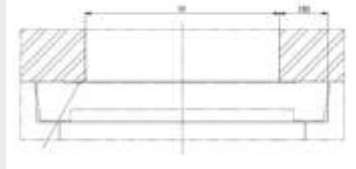
Sealing frame/wall

- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the frame.
- ➔ Fastening material and wall gasket are included.
- ➔ The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.
- ➔ Grout sill with grouting mortar¹⁾. When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.
- ➔ Clean frame, sealing and door after fastening; check for tightness and performance.

1) We recommend a cement-based grout.

Details

Section A-A



DN (mm)	R (mm)
400	280
450	315
500	350
600	420
700	490
800	560
900	630
1200	700
1100	770
1200	840
1300	910
1400	980
1500	1050
1600	1120
1700	1190
1800	1260
1900	1330
2000	1400

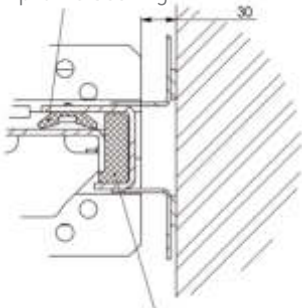
Details

Section A-A



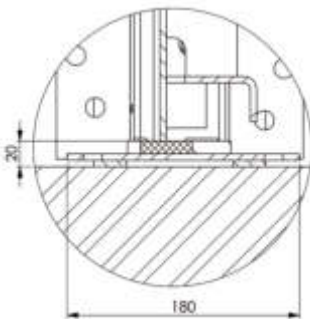
Detail Y

Lateral profile sealing



Slide skids

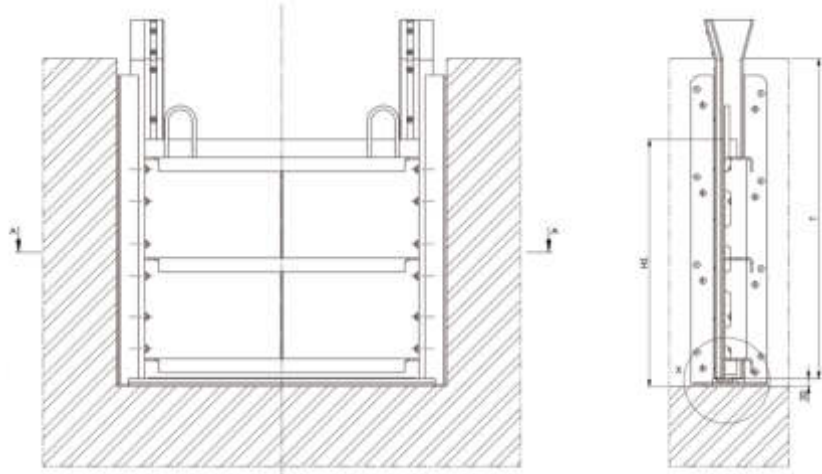
Detail X



WAGU®-Stop-plate for anchor bolting in channel

With straight sill for anchor bolting in channel

W x HS 400 x 400 up to very large dimensions



Materials

Frame	Door	Sealing	Slide skids	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	EPDM / Neoprene	POM	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	EPDM / Neoprene	POM	A4

Other materials or combinations available on request.

Order text

Stop-plate for anchor bolting in channel, with straight sill for anchor bolting in channel. Cat.-sheet 05.61

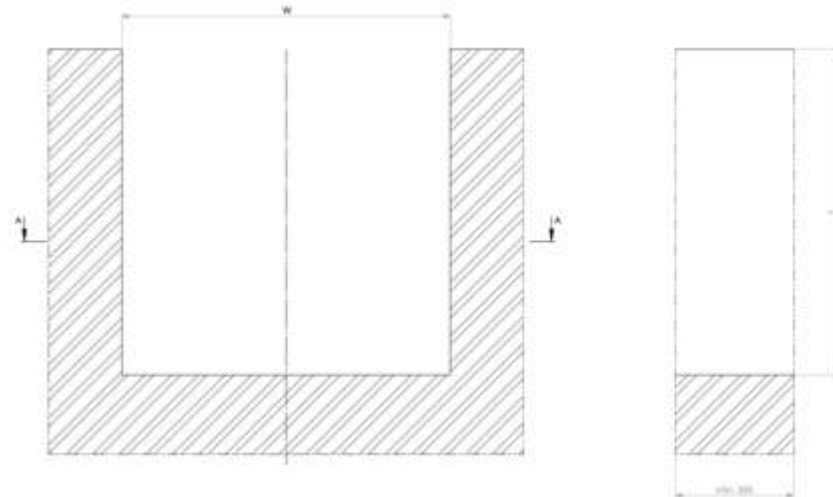
Materials*	Dimensions*
Frame:	Channel width W: mm
Door:	Stowage height HS: mm
Sealing:	Channel depth T: mm
Slide skids:	
Connecting parts:	

* Please specify in the enquiry/ order.

WAGU® -Stop-plate for anchor bolting in channel

With straight sill for anchor bolting in channel

Wall recess



Installation Guide

- ➔ The frame is supplied with welded-on support brackets on one side and a fastening strip at the sill. The support brackets on the other side is supplied loose for adjustment in the channel.
- ➔ Place the wall gasket in the center at the bottom of the fastening strip of the sill and at the welded-on support brackets. Insert frame with stop-plate in the designated position and align.
- ➔ For anchor bolting, holes are double and diagonal displaced in the support brackets and fastening strips of the sill.
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling. The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Compound anchor bolts are to be used for fastening.
- ➔ Fastening material and wall gasket are included.
- ➔ First attach the frame on the side with the welded-on support brackets to the channel wall. Then attach the loosely supplied support brackets to the channel wall and fasten them so that the frame is firmly clamped between the support brackets. Hollow spaces must then be grouted with grouting mortar¹⁾.
- ➔ Clean frame, sealing and door after grouting; check for tightness and performance.

1) We recommend a cement-based grout.

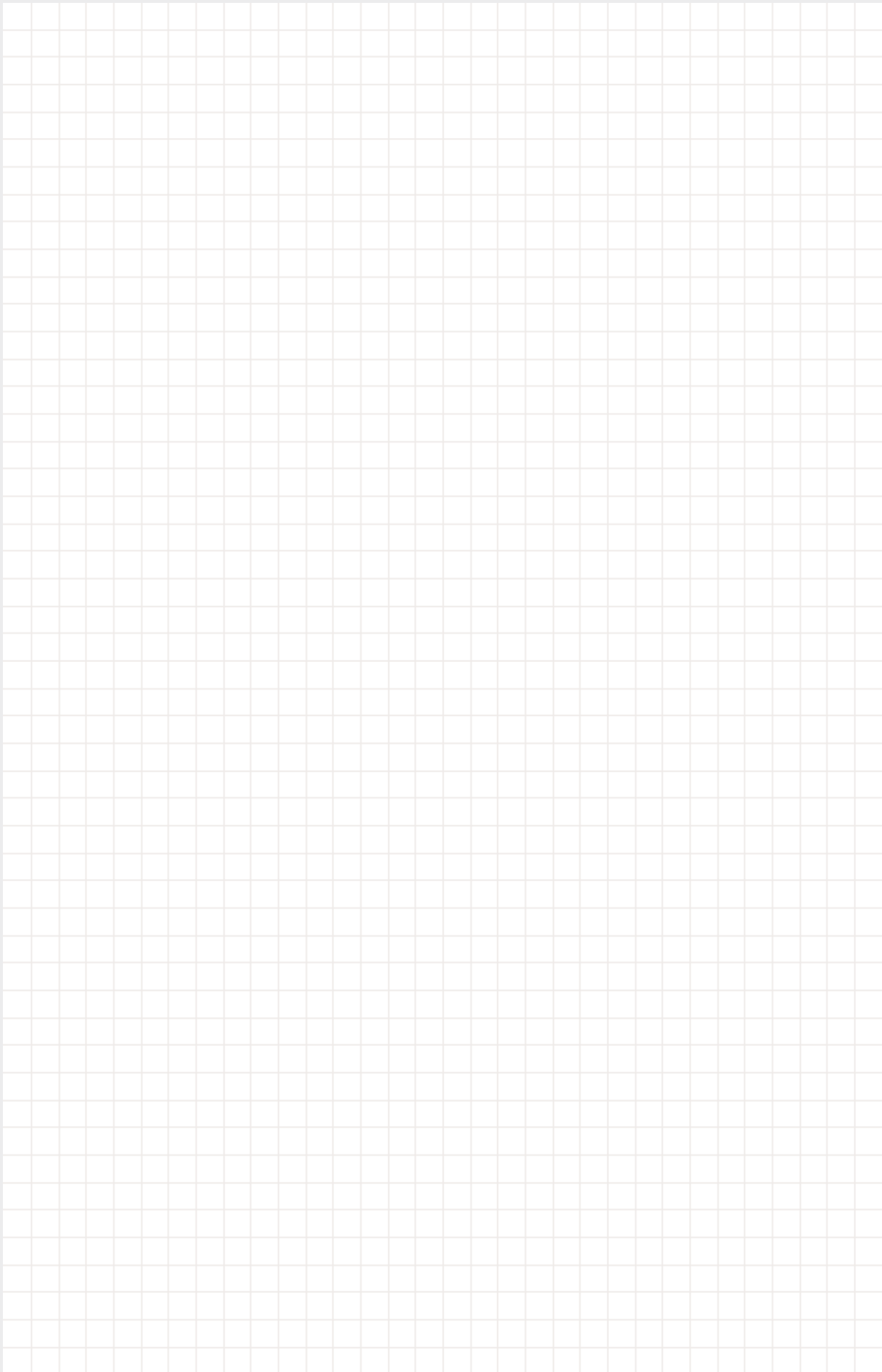
Details

Section A-A

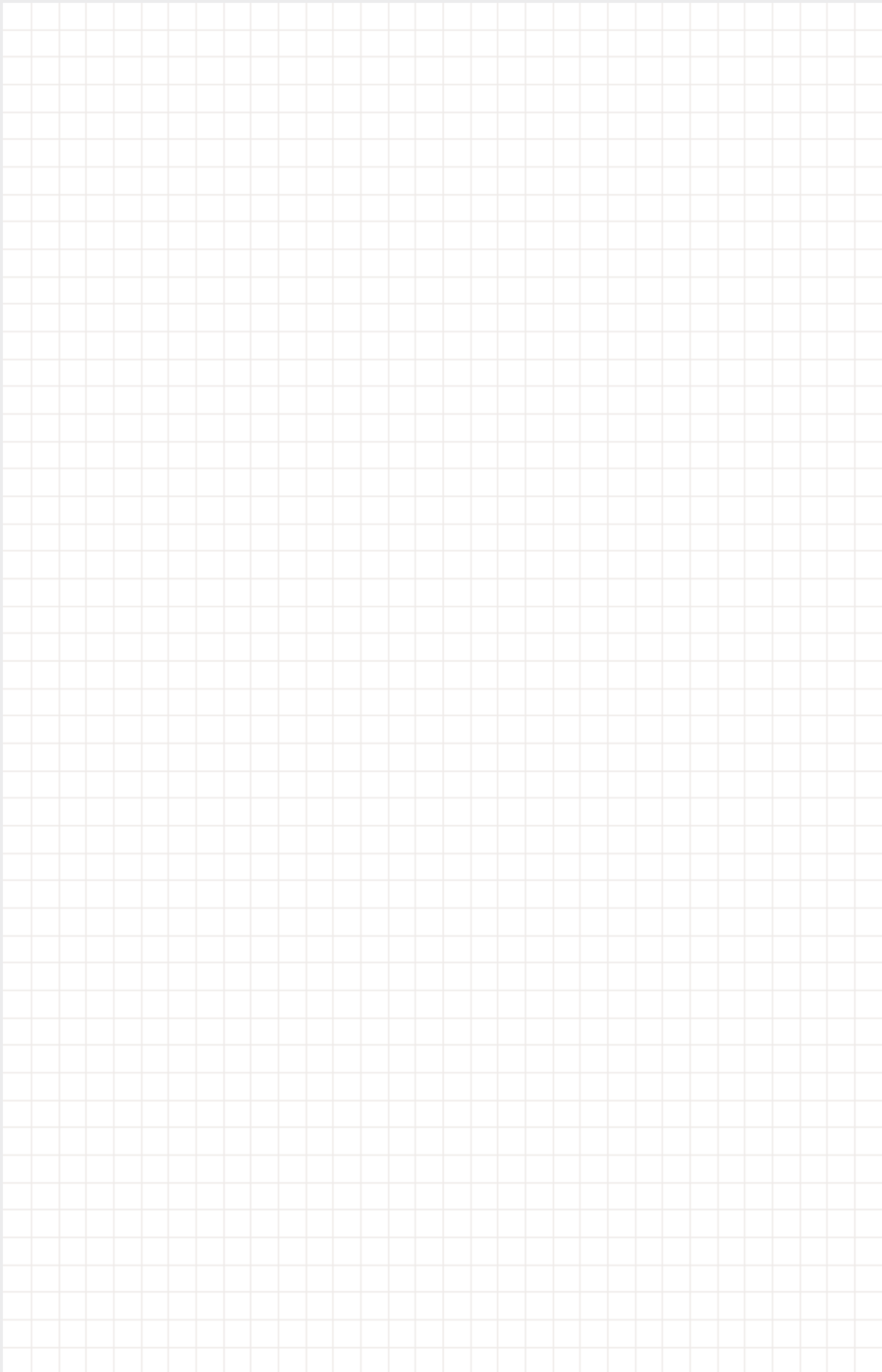
Cavities to be grouted after installation



One side support brackets loose supplied
Fixation at sill

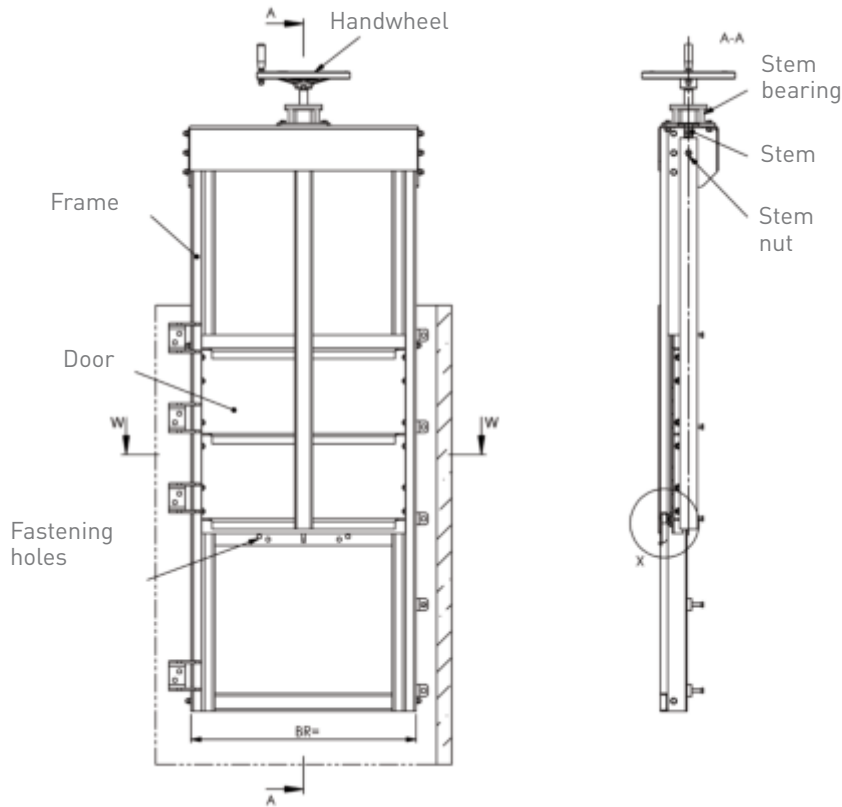


01	WAGU®-Handstops	01
02	WAGU®-Channel Penstocks (Leightweight)	02
03	WAGU®-Channel Penstocks	03
04	WAGU®-Stoplogs	04
05	WAGU®-Stop Plates	05
06	WAGU®-Weir Type Channel Penstocks (3 Facings)	06
07	WAGU®-Slide Penstocks	07
08		08
09		09
10	WAGU®-Weir Type Penstocks (4 Facings)	10
11		11
12	WAGU®-Flap Valves	12
13	WAGU®-Tidal Flaps	13
14	WAGU®-Tilting Flap Spillways	14
15		15
16		16
17	WAGU®-Isolating and Flushing Valves	17
18	WAGU®-Reversing Flaps	18
19		19
20	WAGU®-Telescopic Valves	20
21	WAGU®-Basin Inlets	21
22	WAGU®-Operating Gears	22



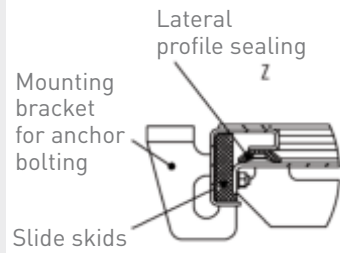
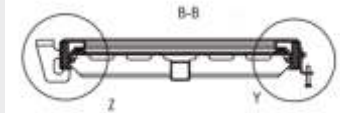
WAGU® - Weir Channel Penstock GK

3 facings, for open channel, for discharge and level control, for onseating or off-seating pressure, for anchor bolting to basin or channel outlets.

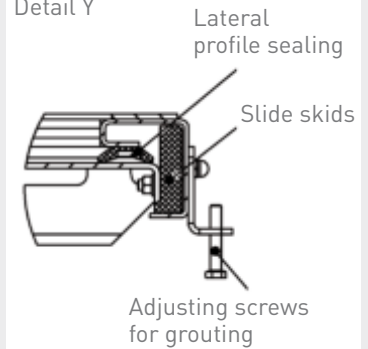


Details

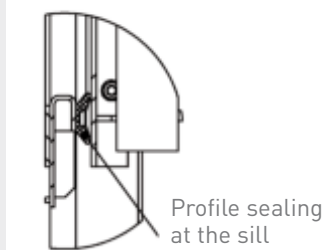
Section B-B



Detail Y



Detail X



Design

- ➔ Straight sill
- ➔ Single-stem type
- ➔ Double-stem type
- ➔ On request for grouting
- ➔ On request for anchor bolting in channel

Design Features

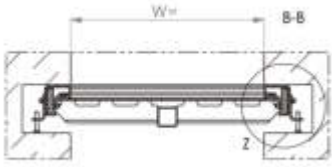
- ➔ Welded frame of profiles with replaceable invert and lateral profile sealings
- ➔ Door with reinforcing ribs and screwed plastic slide skids
- ➔ Stem nut inserted and secured in extension rod or for low installation depths in door
- ➔ Operating gear mounted on thrust bridge with stem bearing and handwheel or other types of operating gears

Dimensions

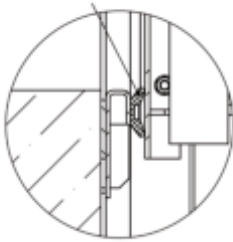
- ➔ W x HS 2000 x 2000 up to very large dimensions.

Details

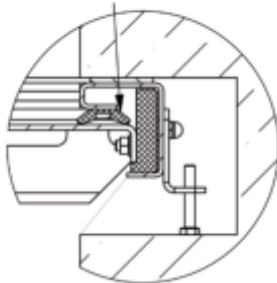
Section B-B



Profile sealing Y at the sill



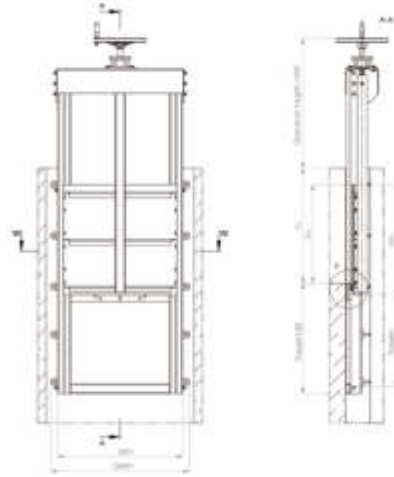
Lateral profile sealing Z



WAGU® - Weir Channel Penstock GK for grouting

With straight sill for anchor bolting

W x HS 2000 x 2000 up to very large dimensions



Materials

Frame	Door	Sealing	Slide skids	Stem	Connecting-parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	EPDM / Neoprene	POM	1.4305	A4
1.4404 / <input type="checkbox"/> 1.4571	1.4404 / <input type="checkbox"/> 1.4571	EPDM / Neoprene	POM	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Weir type Channel Penstock GK for grouting, with straight sill for anchor bolting. Cat.-sheet 06.21, operating gear see at the corresponding cat.-sheet.

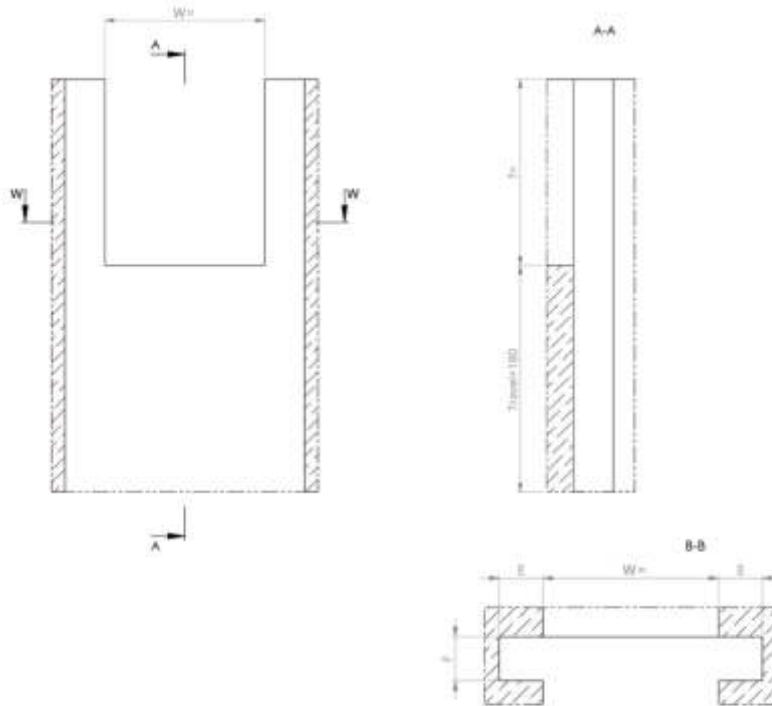
Materials*	Dimensions*
Frame:	Channel width W: mm
Door:	Door height HS: mm
Sealing:	Channel depth T: mm
Slide skids:	Downward travel: mm
Stem:	
Connecting parts:	

* Please specify in the enquiry/ order.

WAGU®-Weir Channel Penstock GK for grouting

With straight sill for anchor bolting

Wall recess



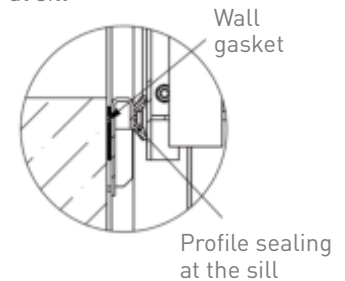
Installation Guide

- ➔ Apply the wall gasket on the back of the frame (lateral inside edge and sill).
- ➔ Fastening material and wall gasket are included.
- ➔ Screw adjusting and tensioning screws into the frame.
- ➔ Insert frame including door into recess.
- ➔ Align frame:
 - Screw lateral adjusting screws into the recess until the frame is vertical and fixed without tension.
- ➔ Before grouting, check penstock for perfect (flawless) performance and tightness, as it is not possible to change the position of the frame after grouting.
- ➔ Install casing on recess and grout with grouting mortar.¹⁾ When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.
- ➔ Anchor bolting at the sill:
 - For anchor bolting, holes are double and diagonal displaced at the sill.
 - Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling.
 - The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.

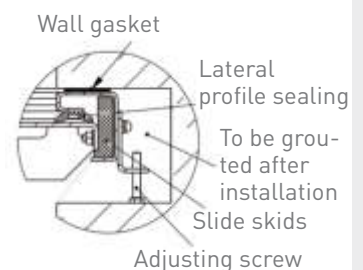
1) We recommend a cement-based grout.

Details

Arrangement wall gasket at sill

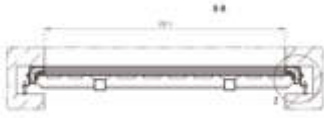


Z Arrangement wall gasket



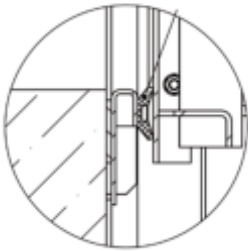
Details

Section B-B



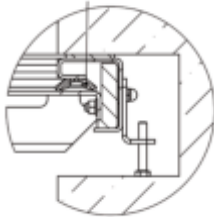
Y

Profile sealing at the sill



Lateral profile sealing

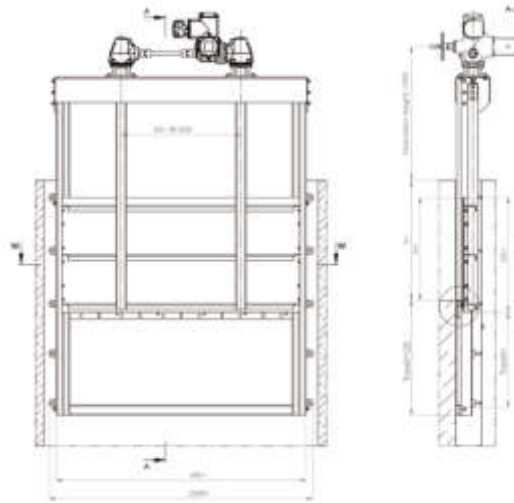
Z



WAGU®-Weir Channel Penstock GK for grouting

2 stem, with straight sill for anchor bolting

W x HS 2000 x 2000 up to very large dimensions



Materials

Frame	Door	Sealing	Slide skids	Stem	Connecting-parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	EPDM / Neoprene	POM	1.4305	A4
1.4404 / <input type="checkbox"/> 1.4571	1.4404 / <input type="checkbox"/> 1.4571	EPDM / Neoprene	POM	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Weir Channel Penstock for grouting, with straight sill for anchor bolting.

Cat.-sheet 06.23, operating gear see at the corresponding cat.-sheet.

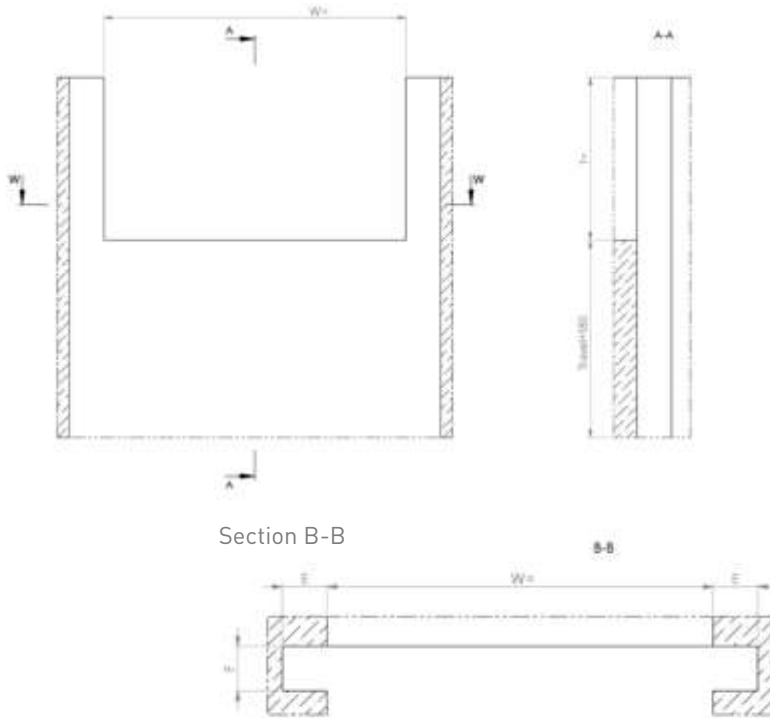
Materials*	Dimensions*
Frame:	Channel width W: mm
Door:	Door height HS: mm
Sealing:	Channel depth T: mm
Slide skids:	Downward travel: mm
Stem:	
Connecting parts:	

* Please specify in the enquiry/ order.

WAGU® - Weir Channel Penstock GK for grouting

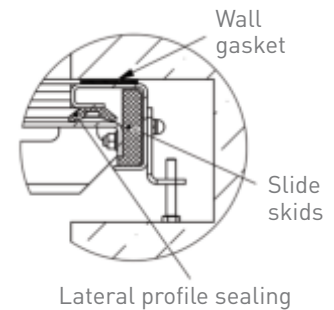
2 stem, with straight sill for anchor bolting

Wall recess

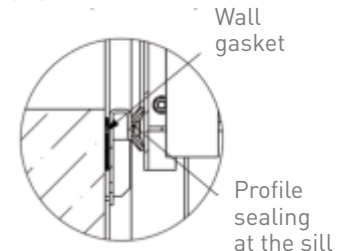


Details

Z Arrangement wall gasket



Arrangement wall gasket at sill



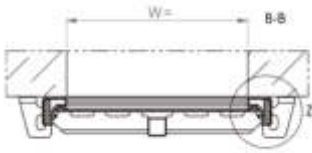
Installation Guide

- ➔ Apply the wall gasket on the back of the frame (lateral inside edge and sill).
- ➔ Fastening material and wall gasket are included.
- ➔ Screw adjusting and tensioning screws into the frame.
- ➔ Insert frame including door into recess.
- ➔ Align frame:
Screw lateral adjusting screws into the recess until the frame is vertical and fixed without tension.
- ➔ Before grouting, check penstock for perfect (flawless) performance and tightness, as it is not possible to change the position of the frame after grouting.
- ➔ Install casing on recess and grout with grouting mortar.¹⁾ When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.
- ➔ Anchor bolting at the sill:
For anchor bolting, holes are double and diagonal displaced at the sill. Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling. The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.

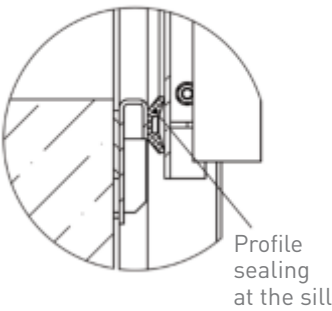
1) We recommend a cement-based grout.

Details

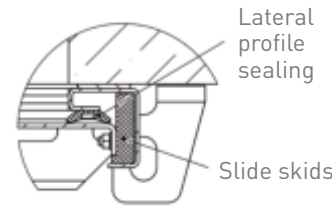
Section B-B



Y



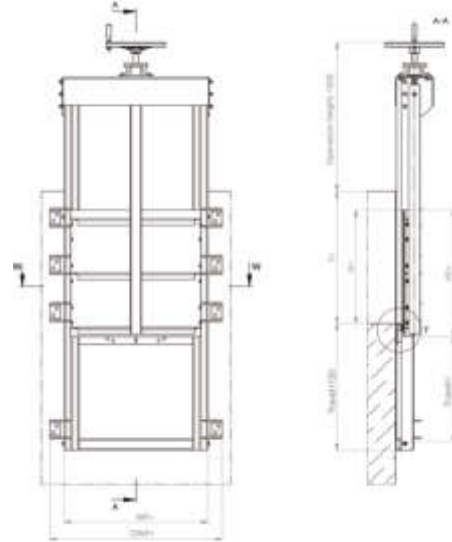
Z



WAGU®-Weir Channel Penstock GK for anchor bolting

With straight sill for anchor bolting

W x HS 2000 x 2000 up to very large dimensions



Materials

Frame	Door	Sealing	Slide skids	Stem	Connecting-parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	EPDM / Neoprene	POM	1.4305	A4
1.4404 / <input type="checkbox"/> 1.4571	1.4404 / <input type="checkbox"/> 1.4571	EPDM / Neoprene	POM	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Weir Channel Penstock for anchor bolting, with straight sill for anchor bolting.
Cat.-sheet 06.41, operating gear see at the corresponding cat.-sheet.

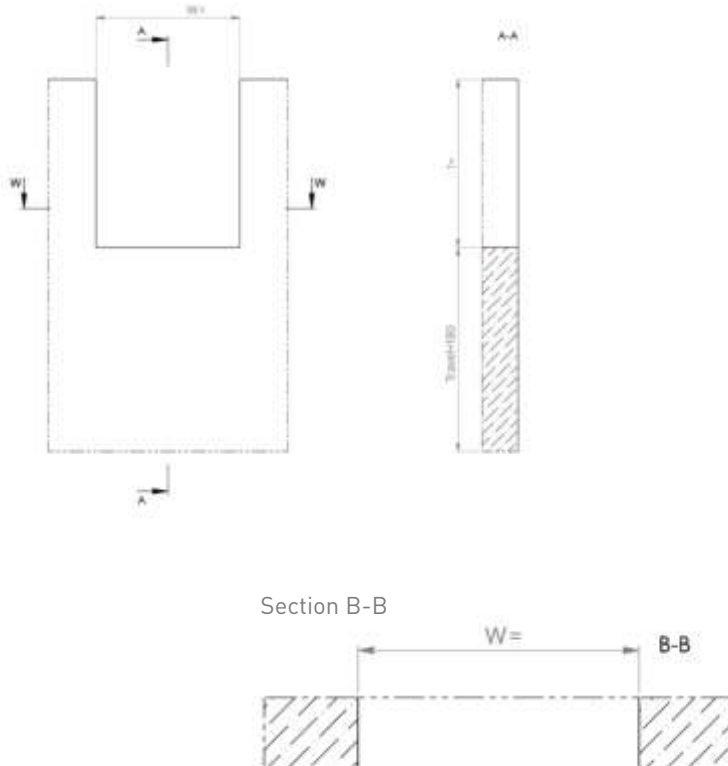
Materials*	Dimensions*
Frame:	Channel width W: mm
Door:	Door height HS: mm
Sealing:	Channel depth T: mm
Slide skids:	Downward travel: mm
Stem:	
Connecting parts:	

* Please specify in the enquiry/ order.

WAGU® - Weir Channel Penstock GK for anchor bolting

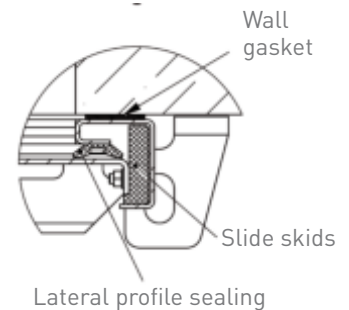
With straight sill for anchor bolting

Wall recess

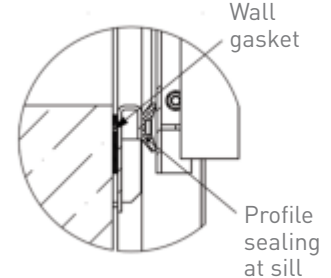


Details

Z Arrangement wall gasket



Arrangement wall gasket at sill



Installation Guide

- ➔ Place frame with door in the designated position and align.
- ➔ For anchor bolting, holes are double and diagonal displaced in the frame and the support brackets.
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling.
- ➔ The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Compound anchor bolts are to be used for fastening.

Sealing frame/wall

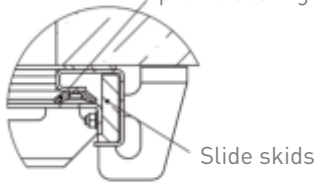
- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the frame.
- ➔ Fastening material and wall gasket are included.
- ➔ The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.

Details

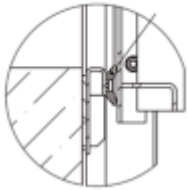
Section B-B



Z Lateral profile sealing



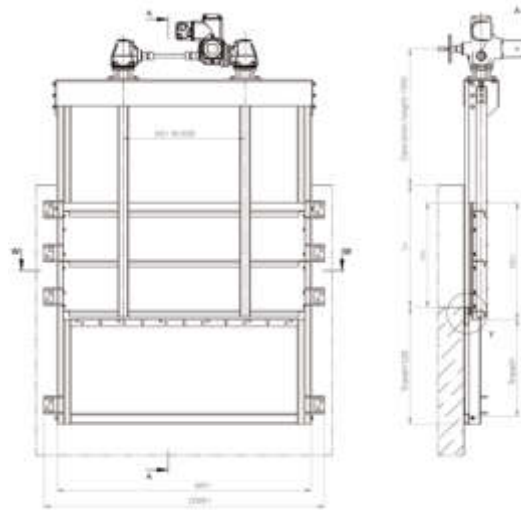
Y Profile sealing at the sill



WAGU®-Weir Channel Penstock GK for anchor bolting

2 stem, with straight sill for anchor bolting

W x HS 2000 x 2000 up to very large dimensions



Materials

Frame	Door	Sealing	Slide skids	Stem	Connecting-parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	EPDM / Neoprene	POM	1.4305	A4
1.4404 / <input type="checkbox"/> 1.4571	1.4404 / <input type="checkbox"/> 1.4571	EPDM / Neoprene	POM	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Weir Channel Penstock for anchor bolting, with straight sill for anchor bolting.
Cat.-sheet 06.45, operating gear see at the corresponding cat.-sheet.

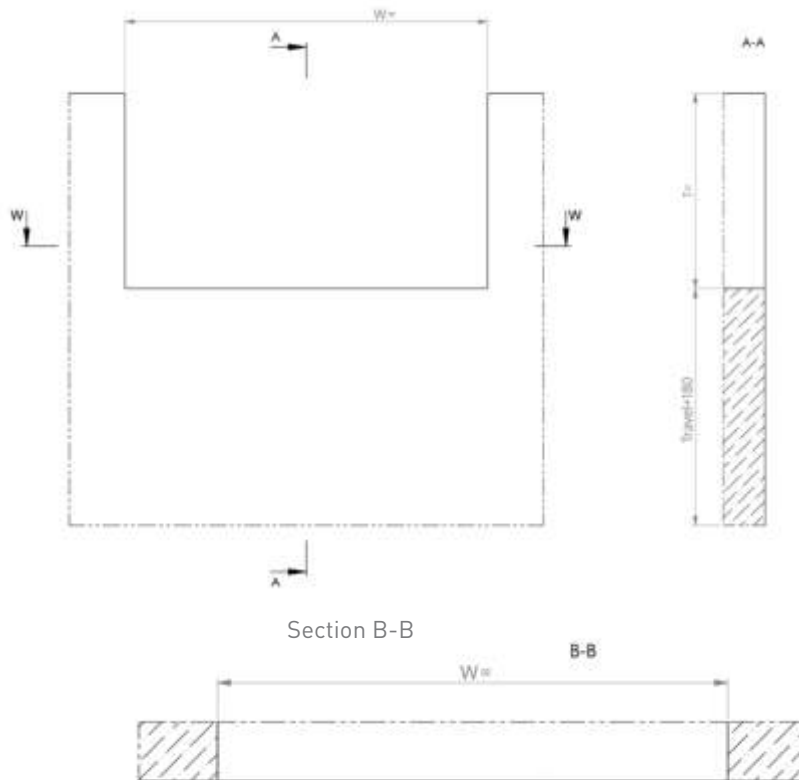
Materials*	Dimensions*
Frame:	Channel width W: mm
Door:	Door height HS: mm
Sealing:	Channel depth T: mm
Slide skids:	Downward travel: mm
Stem:	
Connecting parts:	

* Please specify in the enquiry/ order.

WAGU® - Weir Channel Penstock GK for anchor bolting

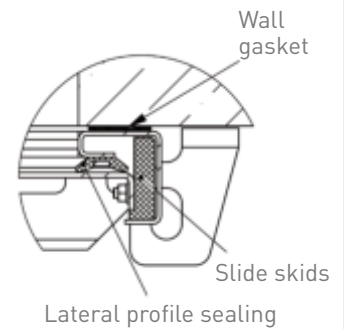
2 stem, with straight sill for anchor bolting

Wall recess

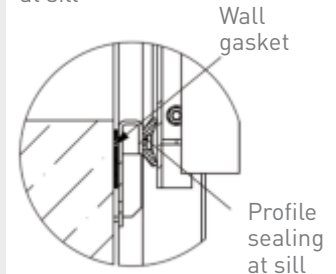


Details

Z Arrangement wall gasket



Arrangement wall gasket at sill



Installation Guide

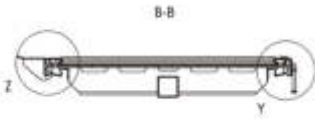
- ➔ Place frame with door in the designated position and align.
- ➔ For anchor bolting, holes are double and diagonal displaced in the frame and the support brackets.
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling.
- ➔ The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Compound anchor bolts are to be used for fastening.

Sealing frame/wall

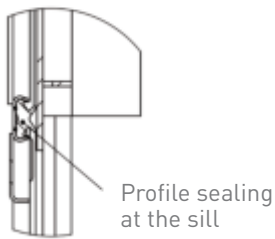
- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the frame.
- ➔ Fastening material and wall gasket are included.
- ➔ The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.

Details

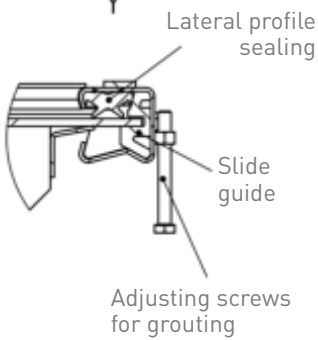
Section B-B



X

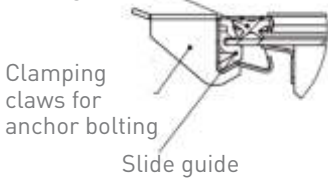


Y



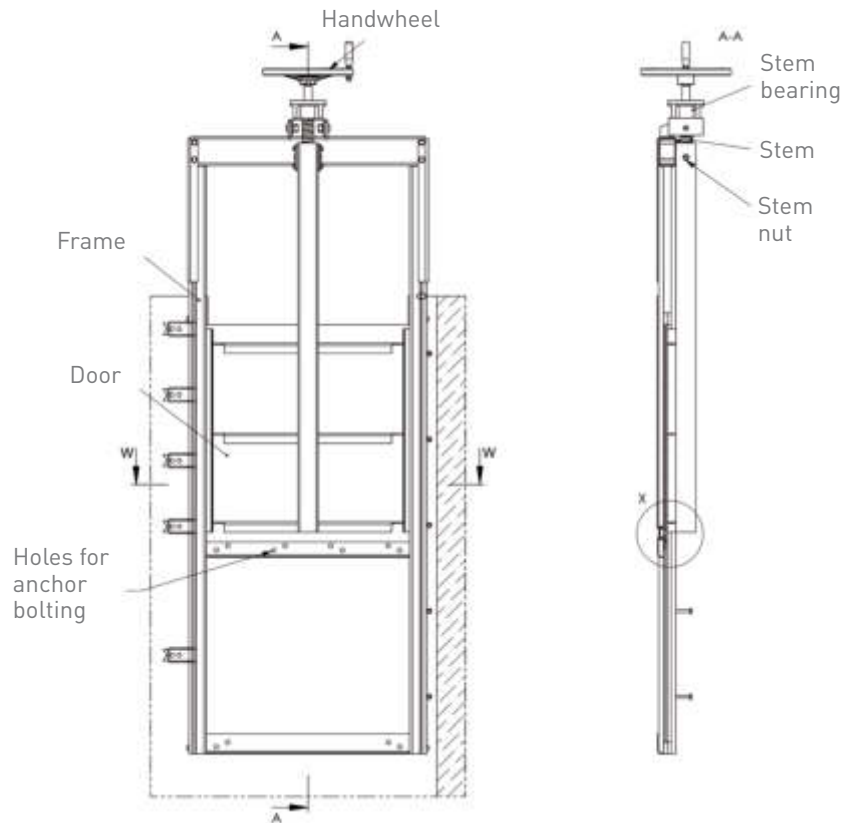
Lateral profile sealing

Z



WAGU®-PRO-Weir Channel Penstock

3 facings, for open channel, for discharge and level control, for onseating or off-seating pressure, for anchor bolting to basin or channel outlets.



Design

- Straight sill
- Single-stem type
- Double-stem type

Design Features

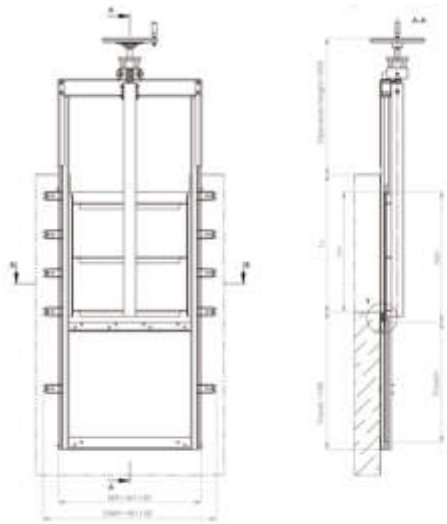
- Welded frame made of tension resistant profile
- Low-wear slide guide form-fit in frame
- Lip profile sealing clamp easy to maintain
- Universal connector for connection pushing rod and stem nut (Quick fix)
- New design for reinforcement ribs at door
- Wall sealing with self-adhesive gasket tap (no grouting required)
- Anchor bolting with variable clamping claws

Dimensions

- W x HS 150 x 150 up to 2000 x 2000 mm

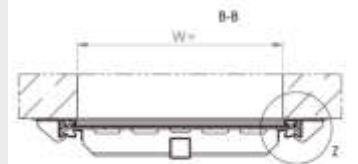
WAGU®-PRO-Weir Channel Penstock for anchor bolting

With straight sill for anchor bolting
W x HS 150 x 150 up to 2000 x 2000

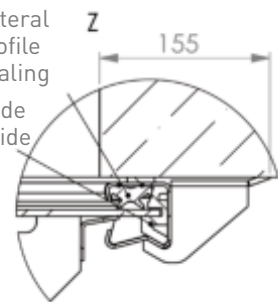


Details

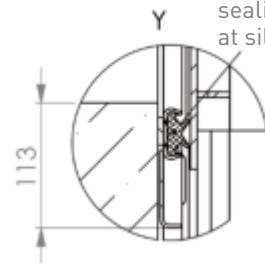
Section B-B



Lateral profile sealing
Slide guide



Profile sealing at sill



Materials

Frame	Door	Sealing	Slide guide	Stem	Connecting-parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	PET	1.4305	A4
1.4404 / <input type="checkbox"/> 1.4571	1.4404 / <input type="checkbox"/> 1.4571	Neoprene	PET	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

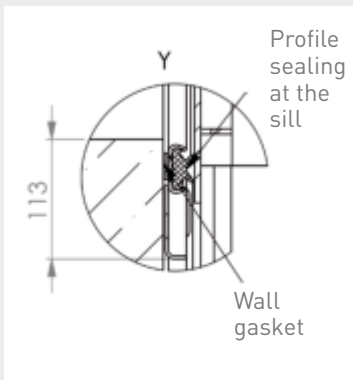
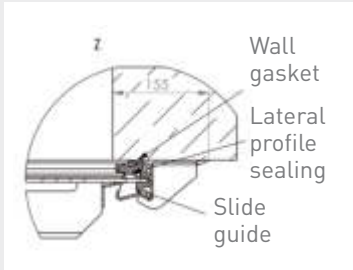
Weir Channel Penstock for anchor bolting, with straight sill for anchor bolting.
Cat.-sheet 06.110, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Frame:	Channel width W: mm
Door:	Door height HS: mm
Sealing:	Channel depth T: mm
Slide guide:	Downward travel: mm
Stem:	
Connecting parts:	

* Please specify in the enquiry/ order.



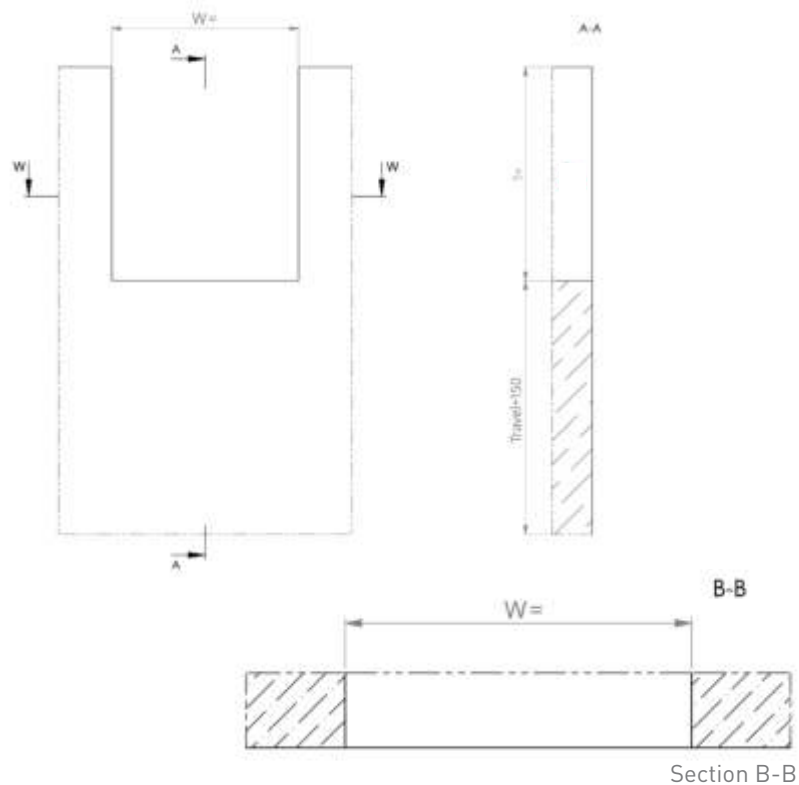
Details



WAGU®-PRO-Weir Channel Penstock for anchor bolting

With straight sill for anchor bolting

Wall recess



Installation Guide

- Place frame with door in the designated position and align.
- For anchor bolting, holes are double and diagonal displaced in the frame and the support brackets.
- Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling.
- The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.
- Compound anchor bolts are to be used for fastening.

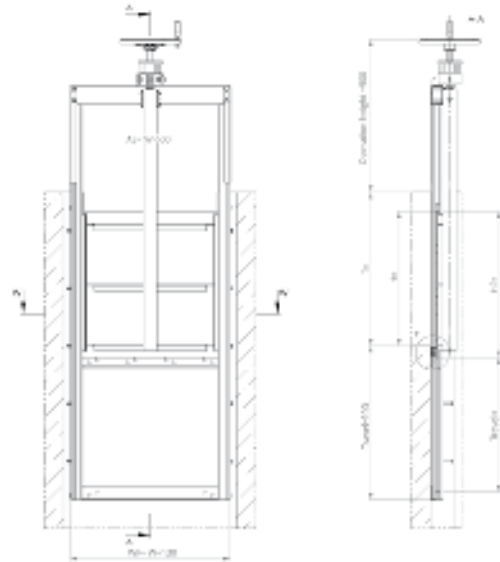
Sealing frame/wall

- Prior to the mounting on the wall, the wall gasket is to be applied on the back of the frame.
- Fastening material and wall gasket are included.
- The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.

WAGU®-PRO-Weir Channel Penstock for grouting

With straight sill for anchor bolting

W x HS 150 x 150 up to 2000 x 2000



Materials

Frame	Door	Sealing	Slide guide	Stem	Connecting-parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	PET	1.4305	A4
1.4404 / <input type="checkbox"/> 1.4571	1.4404 / <input type="checkbox"/> 1.4571	Neoprene	PET	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Weir Channel Penstock for grouting, with straight sill for anchor bolting.

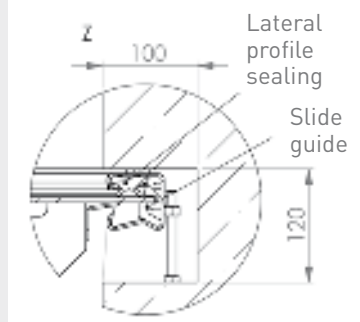
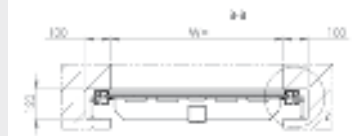
Cat.-sheet 06.112, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Frame:	Channel width W: mm
Door:	Door height HS: mm
Sealing:	Channel depth T: mm
Slide guide:	Downward travel: mm
Stem:	
Connecting parts:	

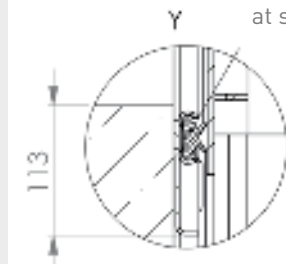
* Please specify in the enquiry/ order.

Details

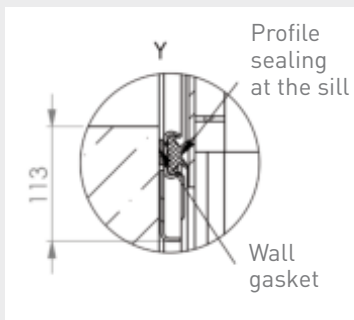
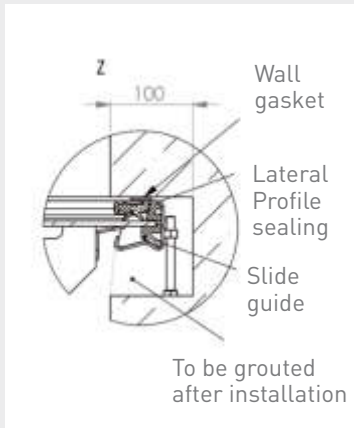
Section B-B



Profile sealing at sill



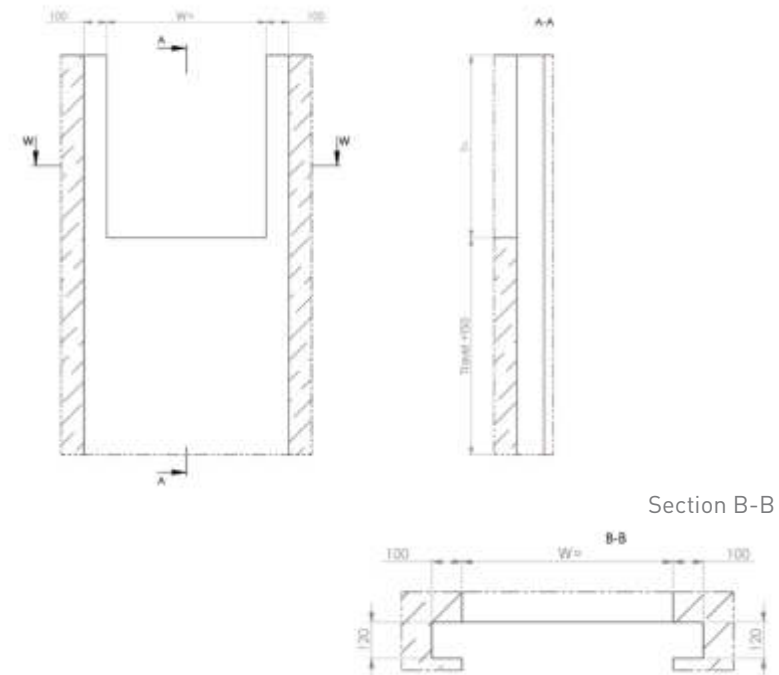
Details



WAGU®-PRO Weir Channel Penstock for grouting

With straight sill for anchor bolting

Wall recess



Installation Guide

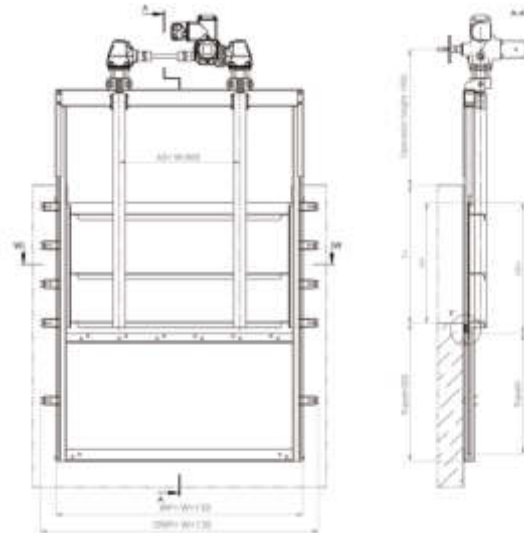
- Apply the wall gasket on the back of the frame (lateral inside edge and sill).
- Fastening material and wall gasket are included.
- Screw adjusting and tensioning screws into the frame.
- Insert frame including door into recess.
- Align frame:
 - Screw lateral adjusting screws into the recess until the frame is vertical and fixed without tension.
- Before grouting, check penstock for perfect (flawless) performance and tightness, as it is not possible to change the position of the frame after grouting.
- Install casing on recess and grout with grouting mortar.¹⁾ When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.
- Anchor bolting at the sill:
 - For anchor bolting, holes are double and diagonal displaced at the sill. Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling.
 - The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.

¹⁾ We recommend a cement-based grout.

WAGU®-PRO-Weir Channel Penstock for anchor bolting

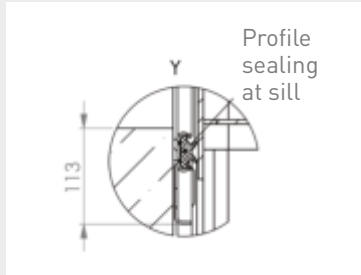
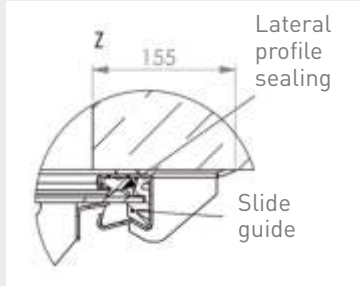
2 stem, with straight sill for anchor bolting

W x HS 1300 x 1300 up to 2000 x 2000



Details

Section B-B



Materials

Frame	Door	Sealing	Slide guide	Stem	Connecting-parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	PET	1.4305	A4
1.4404 / <input type="checkbox"/> 1.4571	1.4404 / <input type="checkbox"/> 1.4571	Neoprene	PET	1.4404 / 1.4571	A4

Other materials or combinations available on request.

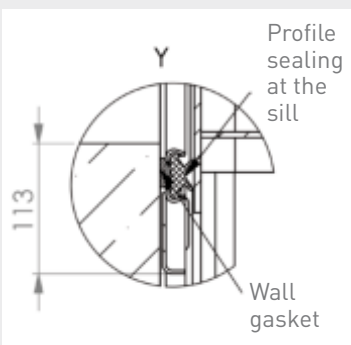
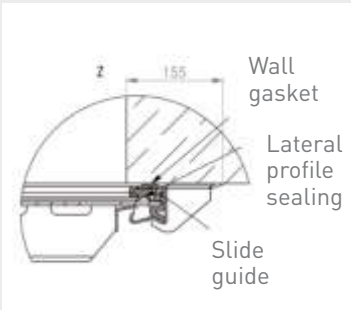
Order text

Weir Channel Penstock for anchor bolting, with straight sill for anchor bolting.
Cat.-sheet 06.120, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Frame:	Channel width W: mm
Door:	Door height HS: mm
Sealing:	Channel depth T: mm
Slide guide:	Downward travel: mm
Stem:	
Connecting parts:	

* Please specify in the enquiry/ order.

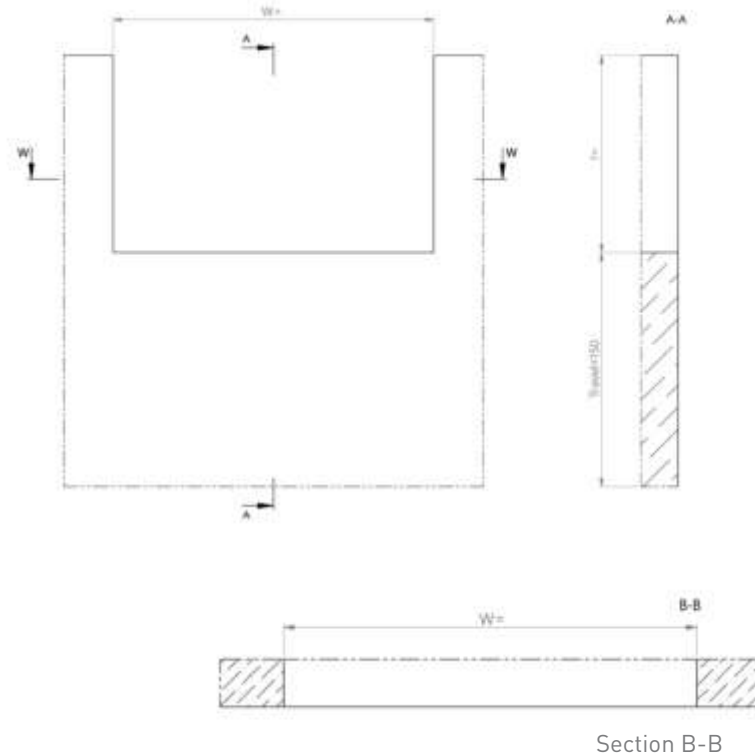
Details



WAGU®-PRO-Weir Channel Penstock for anchor bolting

2 stem, with straight sill for anchor bolting

Wall recess



Installation Guide

- Place frame with door in the designated position and align.
- For anchor bolting, holes are double and diagonal displaced in the frame and the support brackets.
- Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling.
- The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.
- Compound anchor bolts are to be used for fastening.

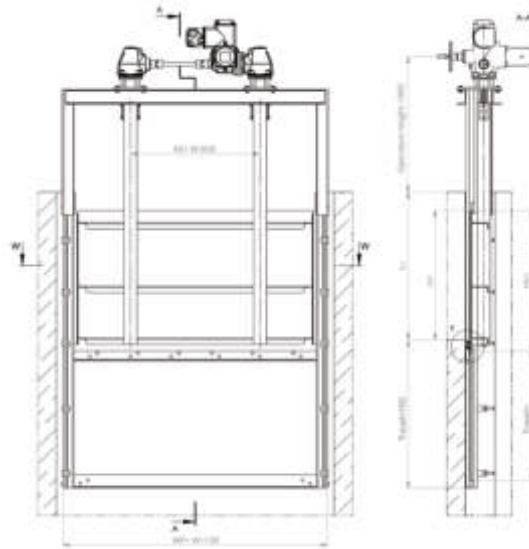
Sealing frame/wall

- Prior to the mounting on the wall, the wall gasket is to be applied on the back of the frame.
- Fastening material and wall gasket are included.
- The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.

WAGU®-PRO-Weir Channel Penstock for grouting

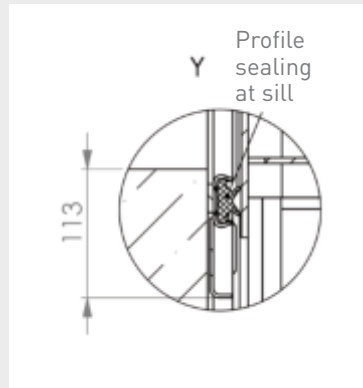
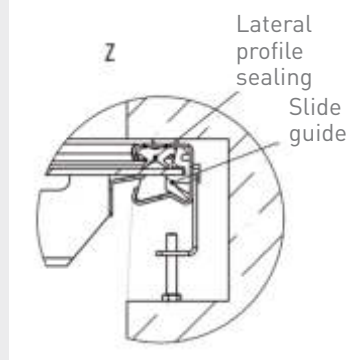
2 stem, with straight sill for anchor bolting

W x HS 1300 x 1300 up to 2000 x 2000



Details

Section B-B



Materials

Frame	Door	Sealing	Slide guide	Stem	Connecting-parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	PET	1.4305	A4
1.4404 / <input type="checkbox"/> 1.4571	1.4404 / <input type="checkbox"/> 1.4571	Neoprene	PET	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

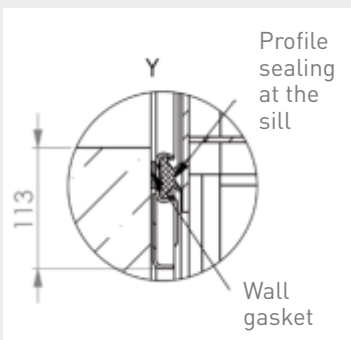
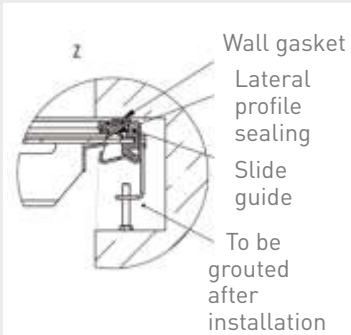
Weir Channel Penstock for grouting, with straight sill for anchor bolting.

Cat.-sheet 06.122, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Frame:	Channel width W: mm
Door:	Door height HS: mm
Sealing:	Channel depth T: mm
Slide guide:	Downward travel: mm
Stem:	
Connecting parts:	

* Please specify in the enquiry/ order.

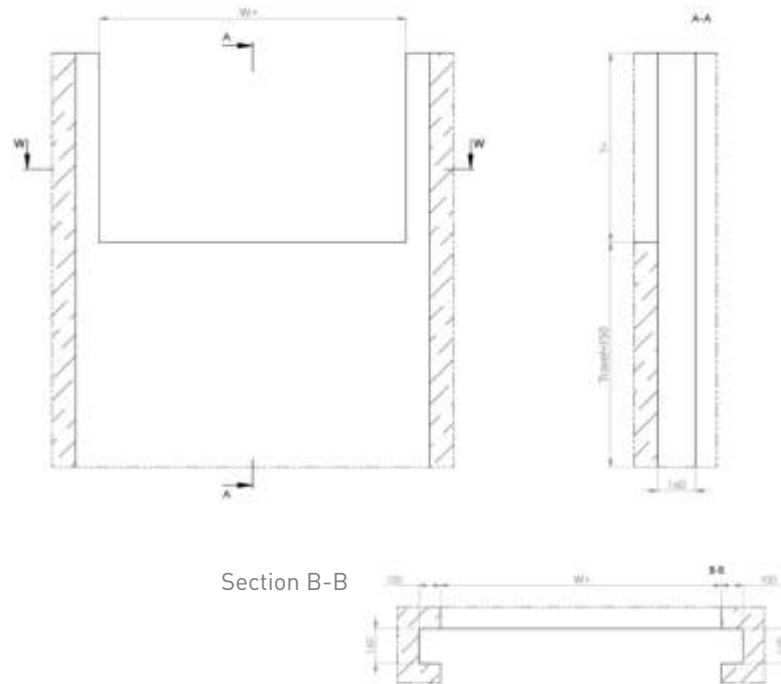
Details



WAGU®-PRO Weir Channel Penstock for grouting

2 stem, with straight sill for anchor bolting

Wall recess

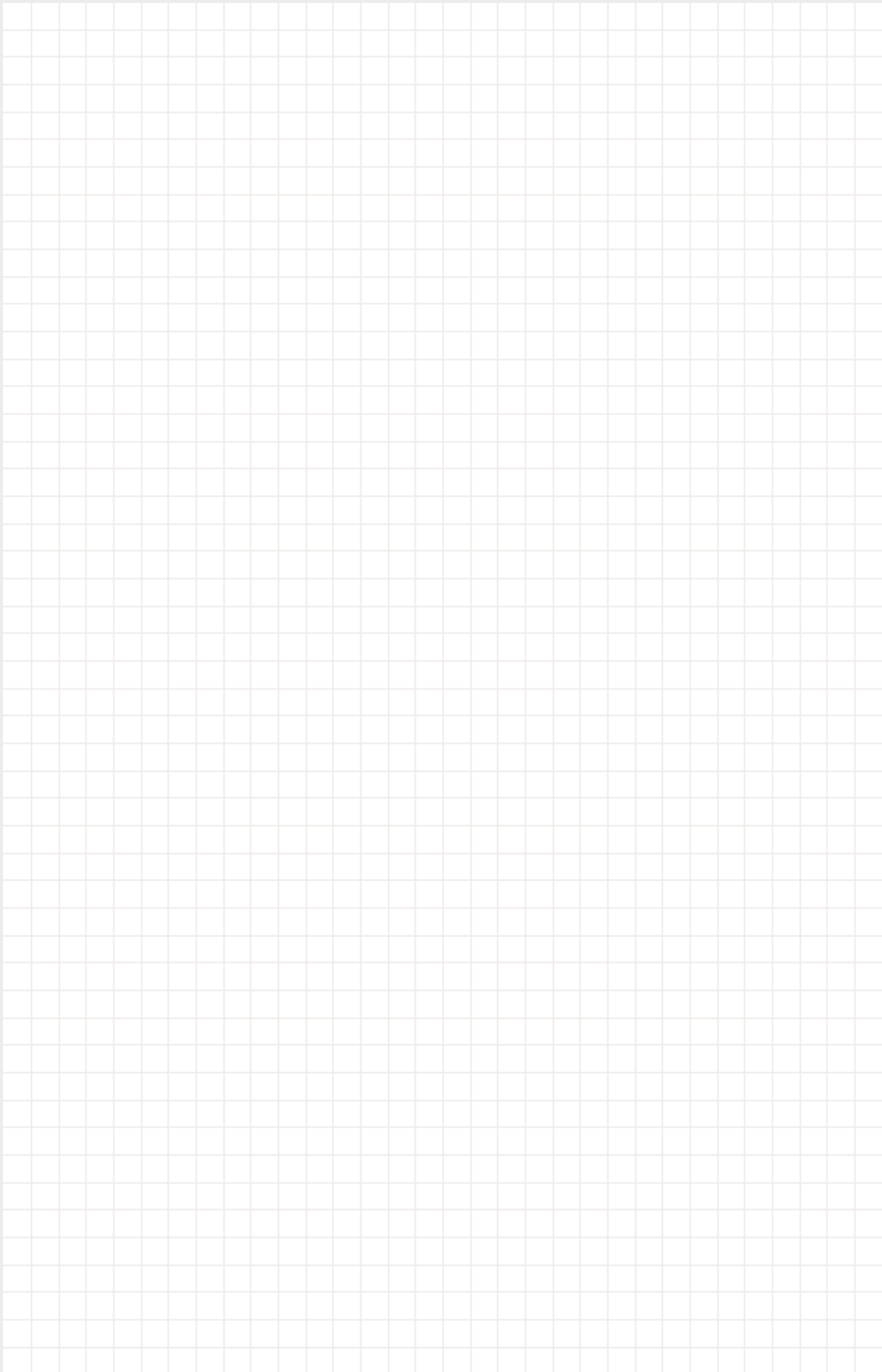


Installation Guide

- Apply the wall gasket on the back of the frame (lateral inside edge and sill).
- Fastening material and wall gasket are included.
- Screw adjusting and tensioning screws into the frame.
- Insert frame including door into recess.
- Align frame:
 - Screw lateral adjusting screws into the recess until the frame is vertical and fixed without tension.
- Before grouting, check penstock for perfect (flawless) performance and tightness, as it is not possible to change the position of the frame after grouting.
- Install casing on recess and grout with grouting mortar.¹⁾ When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.
- Anchor bolting at the sill:
 - For anchor bolting, holes are double and diagonal displaced at the sill.
 - Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling.
 - The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.

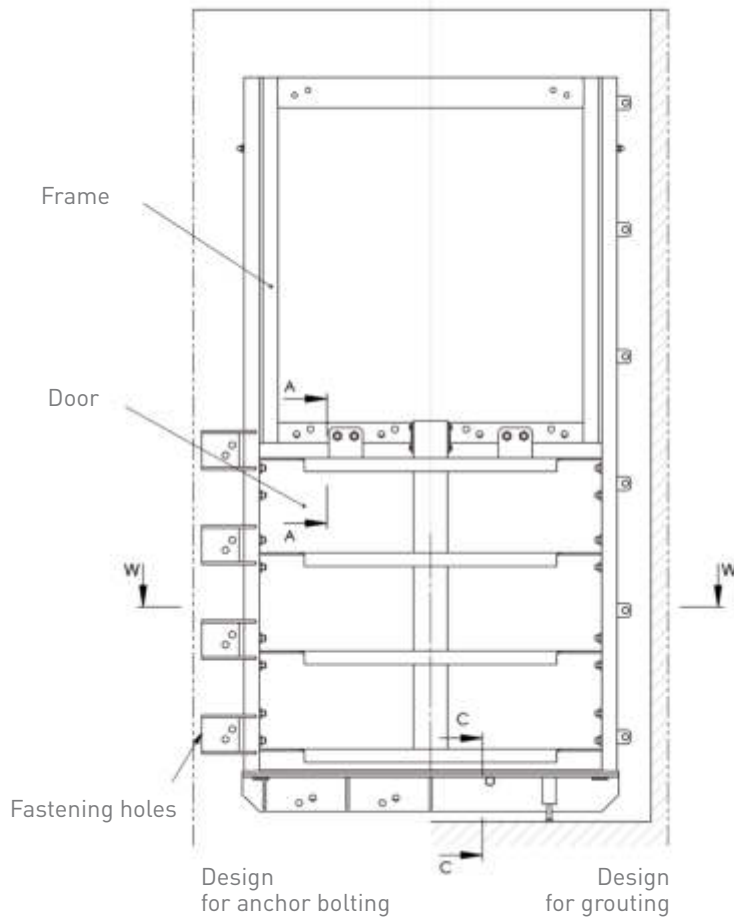
¹⁾ We recommend a cement-based grout.

01	WAGU®-Handstops	01
02	WAGU®-Channel Penstocks (Leightweight)	02
03	WAGU®-Channel Penstocks	03
04	WAGU®-Stoplogs	04
05	WAGU®-Stop Plates	05
06	WAGU®-Weir Type Channel Penstocks (3 Facings)	06
07	WAGU®-Slide Penstocks	07
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10	WAGU®-Weir Type Penstocks (4 Facings)	10
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12	WAGU®-Flap Valves	12
13	WAGU®-Tidal Flaps	13
14	WAGU®-Tilting Flap Spillways	14
15		15
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17	WAGU®-Isolating and Flushing Valves	17
18	WAGU®-Reversing Flaps	18
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20	WAGU®-Telescopic Valves	20
21	WAGU®-Basin Inlets	21
22	WAGU®-Operating Gears	22



WAGU®-Penstock GK

4 facing, for on-seating or off-seating pressure, suitable for throatle and regulation, for mounting at inlets and outlets of shafts and basins, for grouting in recess or for anchor bolting to the wall.



Design

- ➔ Straight sill
- ➔ Round sill
- ➔ Sill to be flush mounted into channel invert
- ➔ Single-stem type
- ➔ Double-stem type

Design Features

- ➔ Welded frame of G-profile with bolted and clamped profile sealings at frame and chambered sill sealing
- ➔ Door with reinforcing ribs and screw slide skids of plastic material and mounting for stem nut or pushing rod

Dimensions

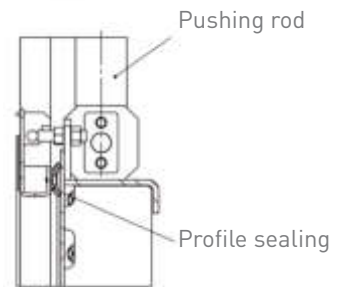
- ➔ W x H 200 x 200 up to very large dimensions

Details

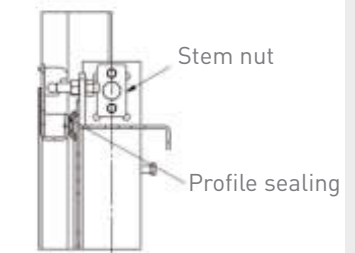
Section B-B



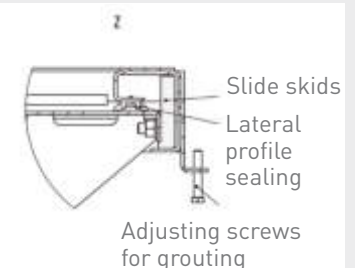
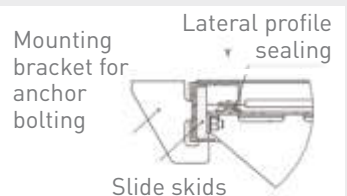
A-A



A-A



C-C



WAGU®-Penstock GK for grouting

With straight sill for grouting

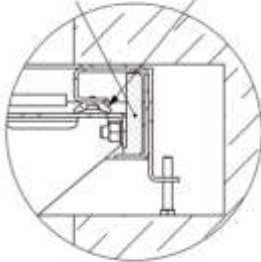
DN or W x H 200 x 200 up to 3000 x 3000

Details

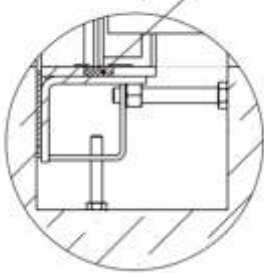
Section B-B



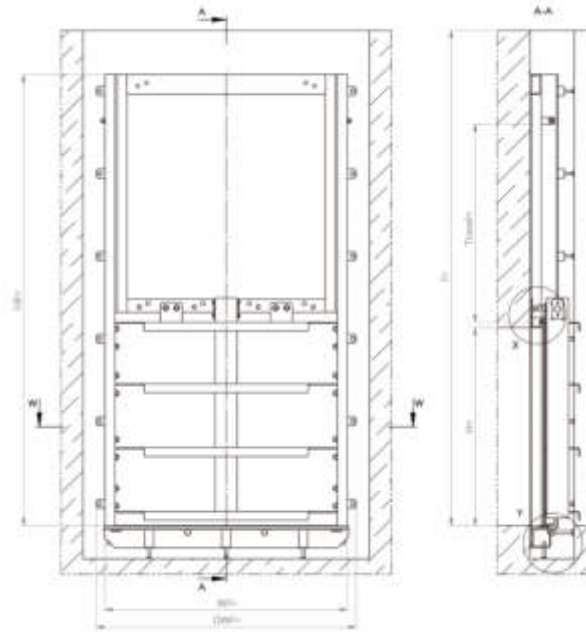
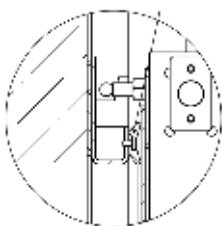
Slide skids
Lateral profile sealing



Sill sealing



Profile sealing



Materials

Frame	Door	Sealing	Slide skids	Stem	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	EPDM / Neoprene	POM	1.4305	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	EPDM / Neoprene	POM	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Penstock GK for grouting, with straight sill for grouting.

Cat.-sheet 07.23, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Frame:	DN or W x H: mm
Door:	Installation depth T: mm ¹⁾
Sealing:	Operating pressure: bar
Slide skids:	Flow direction V: /R
Connecting parts:	

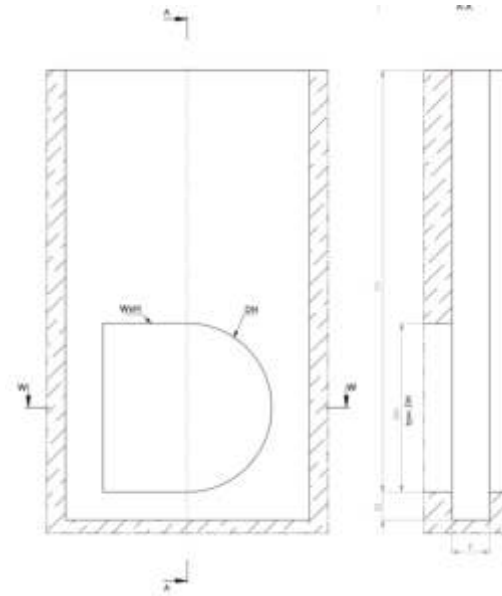
1) Measured from invert penstock to top edge structure.

* Please specify in the enquiry/ order.

WAGU®-Penstock GK for grouting

With straight sill for grouting

Wall recess



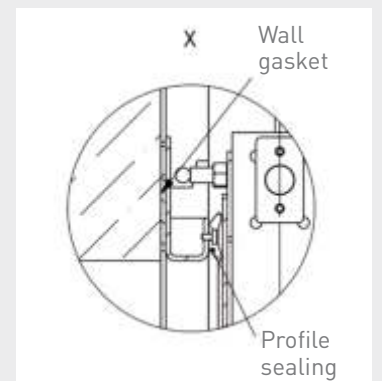
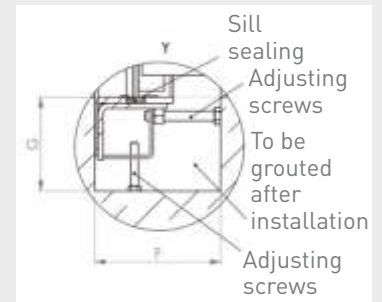
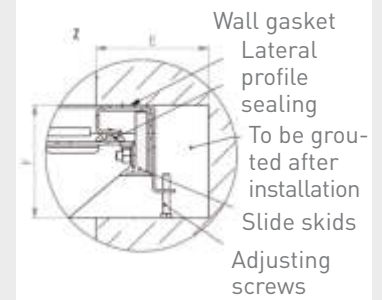
Installation Guide

- ➔ Apply the wall gasket on the back of the frame (lateral inside edge).
- ➔ Fastening material and wall gasket are included.
- ➔ Screw adjusting and tensioning screws into the frame.
- ➔ Place frame with door into the wall recess in the designated position and align.
- ➔ Align frame:
 - Screw lateral adjusting screws into the recess until the frame is vertical even flat on the wall and fixed without tension.
- ➔ Fix the frame at the vertex to the concert wall with anchor bolts. For anchor bolting, holes are double and diagonal displaced in the frame and the support brackets. Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling.
- ➔ The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Compound anchor bolts are to be used for fastening.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall.
- ➔ Before grouting, check penstock for perfect (flawless) performance and tightness, as it is not possible to change the position of the frame after grouting.
- ➔ Install casing on recess and grout the cavities with grouting mortar¹⁾. When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.

1) We recommend a cement-based grout.

Details

Section B-B



Dimensions (mm)

	E	F	G
150-1200	150	150	100
1300-2000	200	200	150
2100-3000	250	250	200

WAGU®-Penstock GK for grouting

2 stem, with straight sill for grouting

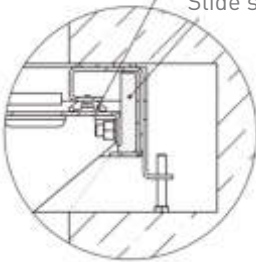
DN or W x H 2000 x 2000 up to 3000 x 3000

Details

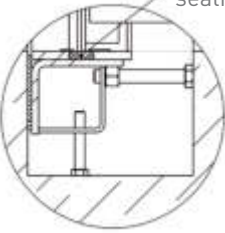
Section B-B



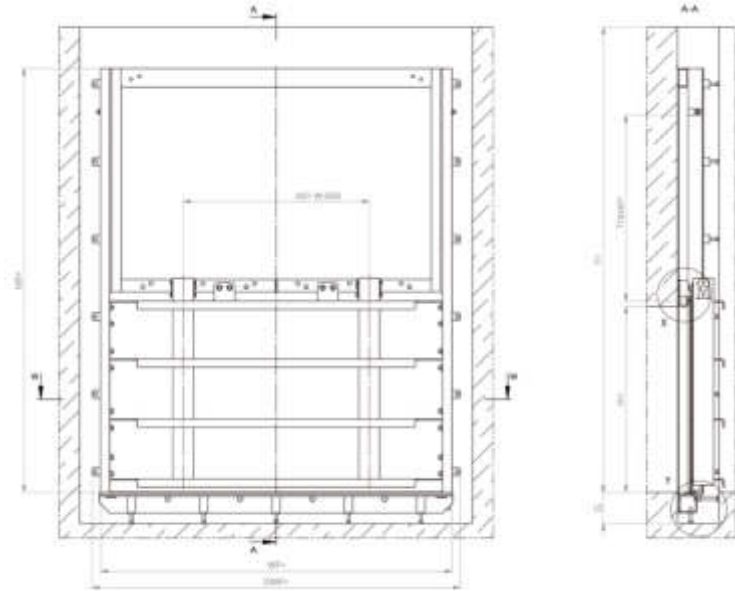
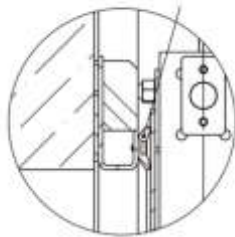
Lateral profile sealing
2
Slide skirts



Sill sealing
Y



Profile sealing
X



Materials

Frame	Door	Sealing	Slide skirts	Stem	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	EPDM / Neoprene	POM	1.4305	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	EPDM / Neoprene	POM	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Penstock GK for grouting, with straight sill for grouting.

Cat.-sheet 07.25, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*	
Frame:	DN or W x H:	mm
Door:	Installation depth T:	mm ¹⁾
Sealing:	Operating pressure:	bar
Slide skirts:	Flow direction V:	/R
Connecting parts:		

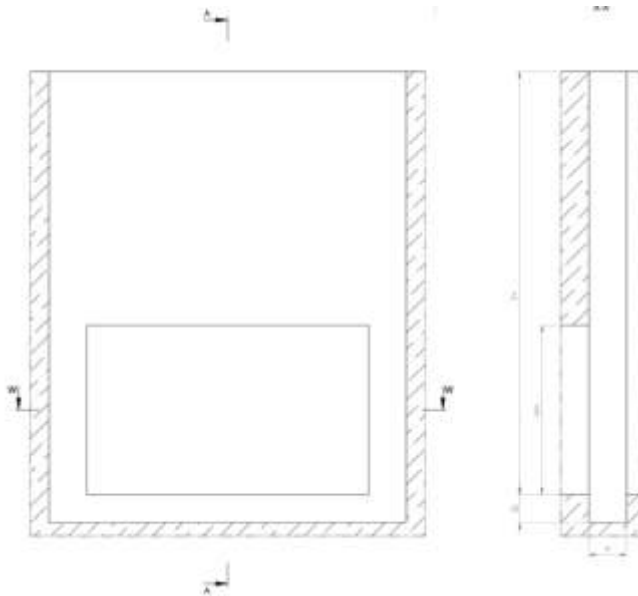
1) Measured from invert penstock to top edge structure.

* Please specify in the enquiry/order.

WAGU®-Penstock GK for grouting

2 stem, with straight sill for grouting

Wall recess



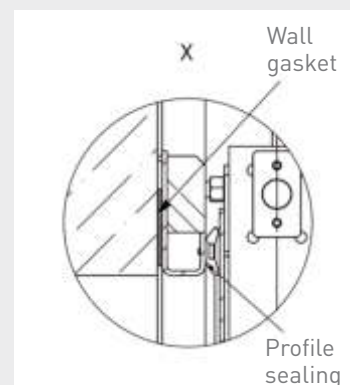
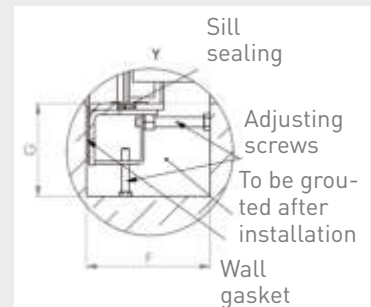
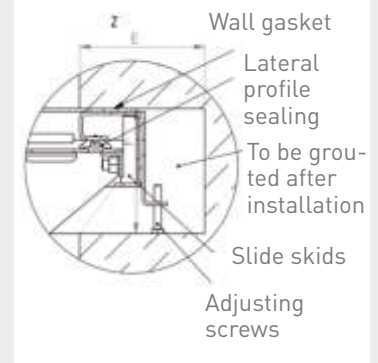
Installation Guide

- ➔ Apply the wall gasket on the back of the frame (lateral inside edge).
- ➔ Fastening material and wall gasket are included.
- ➔ Screw adjusting and tensioning screws into the frame.
- ➔ Place frame with door into the wall recess in the designated position and align.
- ➔ Align frame:
 - Screw lateral adjusting screws into the recess until the frame is vertical even flat on the wall and fixed without tension.
- ➔ Fix the frame at the vertex to the concert wall with anchor bolts. For anchor bolting, holes are double and diagonal displaced in the frame and the support brackets. Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling.
- ➔ The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Compound anchor bolts are to be used for fastening.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall.
- ➔ Before grouting, check penstock for perfect (flawless) performance and tightness, as it is not possible to change the position of the frame after grouting.
- ➔ Install casing on recess and grout the cavities with grouting mortar¹⁾. When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.

1) We recommend a cement-based grout.

Details

Section B-B



Dimensions (mm)

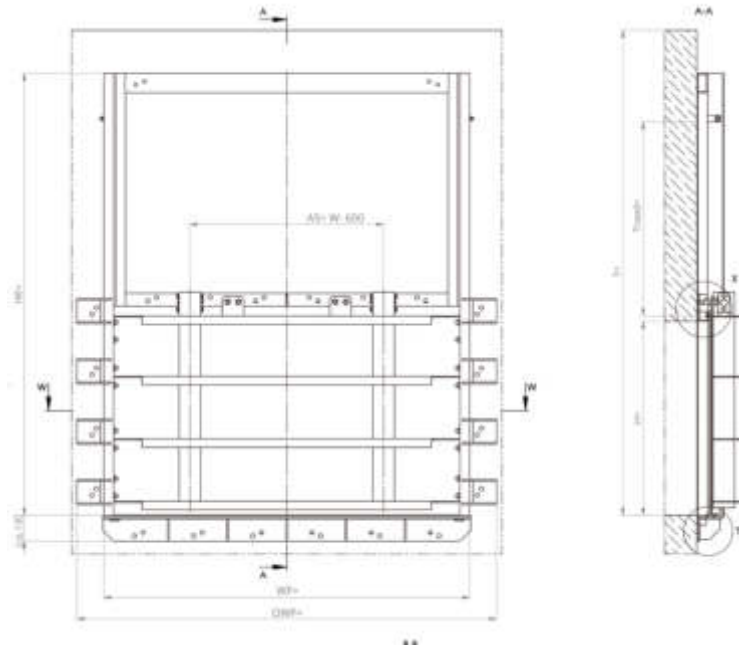
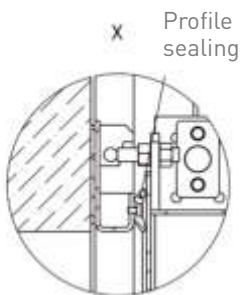
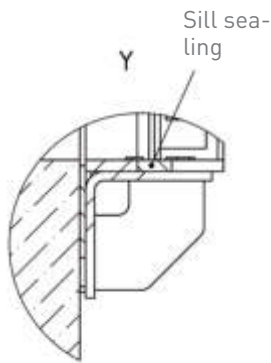
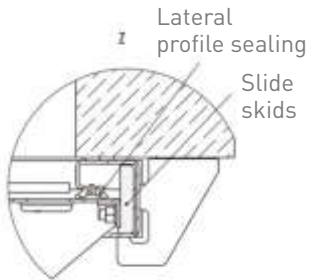
	E	F	G
150-1200	150	150	100
1300-2000	200	200	150
2100-3000	250	250	200

WAGU®-Penstock GK for anchor bolting

2 stem, with straight sill for anchor bolting
DN or W x H 2000 x 2000 up to 3000 x 3000

Details

Section B-B



Materials

Frame	Door	Sealing	Slide skids	Stem	Connecting parts
1.4301 □	1.4301 □	EPDM / Neoprene	POM	1.4305	A4
1.4404 / 1.4571 □	1.4404 / 1.4571 □	EPDM / Neoprene	POM	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Penstock GK for anchor bolting, with straight sill for anchor bolting.
Cat.-sheet 07.27, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Frame:	DN or W x H: mm
Door:	Installation depth T: mm ¹⁾
Sealing:	Operating pressure: bar
Slide skids:	Flow direction V: /R
Connecting parts:	

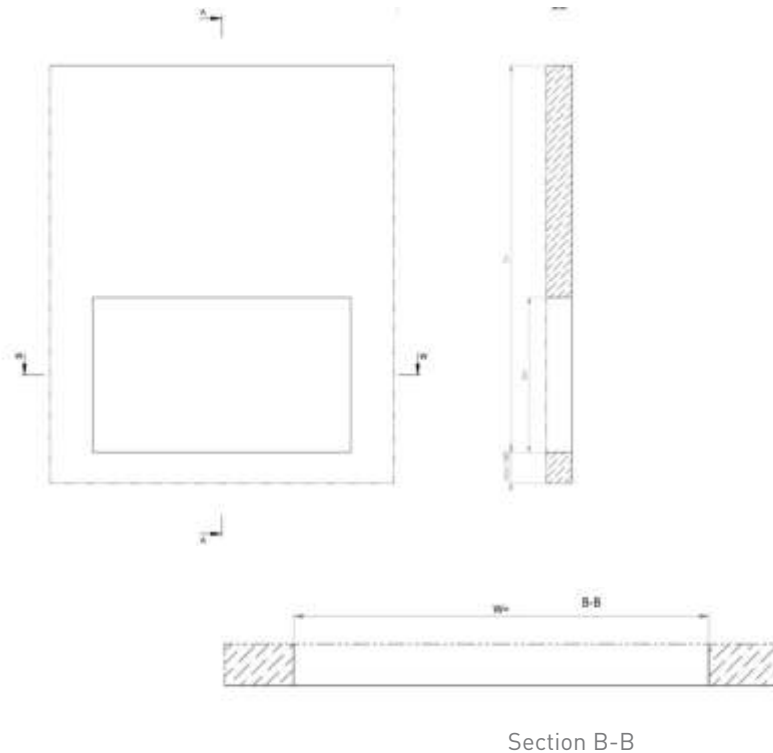
1) Measured from invert penstock to top edge structure.

* Please specify in the enquiry/ order.

WAGU®-Penstock GK for anchor bolting

2 stem, with straight sill for anchor bolting

Wall recess



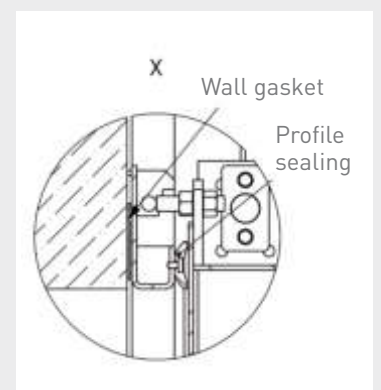
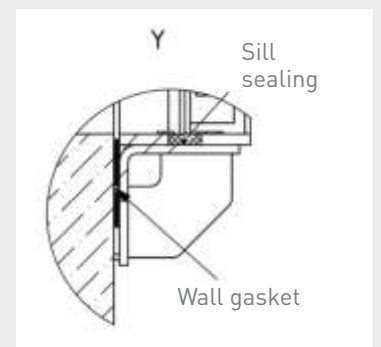
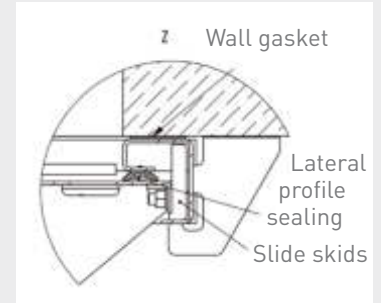
Installation Guide

- ➔ Place frame with door into the wall recess in the designated position and align.
- ➔ For anchor bolting, holes are double and diagonal displaced in the frame and the support brackets.
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling. The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Compound anchor bolts are to be used for fastening.

Sealing frame/wall

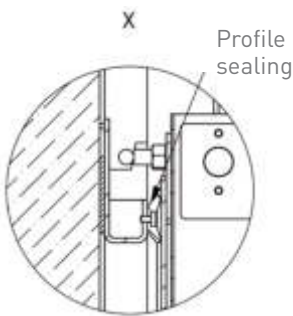
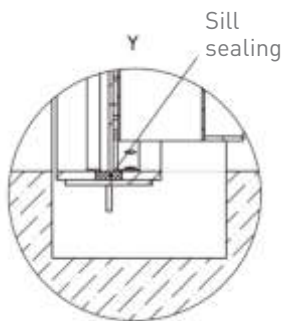
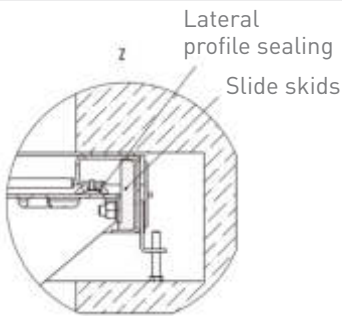
- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the frame. The sill must be sealed with wall gasket.
- ➔ Fastening material and wall gasket are included.
- ➔ The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.

Details



Details

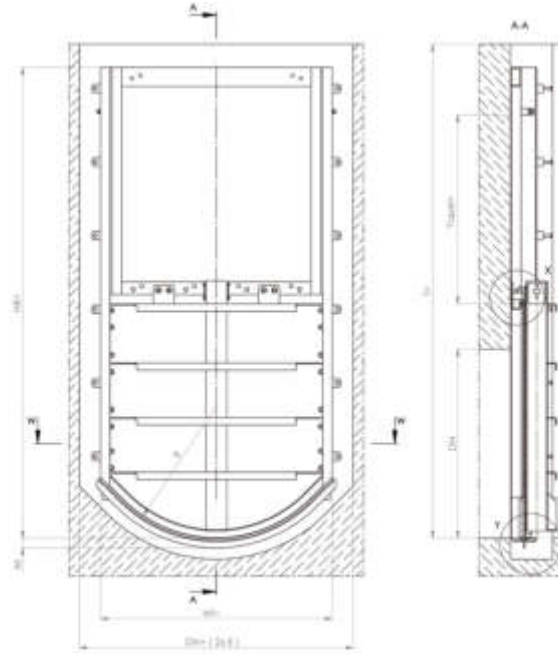
Section B-B



WAGU®-Penstock GK for grouting

2 stem with round sill for grouting

DN or W x H 2000 x 2000 up to 3000 x 3000



Materials

Frame	Door	Sealing	Slide skirts	Stem	Connecting parts
1.4301 □	1.4301 □	EPDM / Neoprene	POM	1.4305	A4
1.4404 / 1.4571 □	1.4404 / 1.4571 □	EPDM / Neoprene	POM	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Penstock GK for grouting, with round sill for grouting.

Cat.-sheet 07.33, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Frame:	DN or W x H: mm
Door:	Installation depth T: mm ¹⁾
Sealing:	Operating pressure: bar
Slide skirts:	Flow direction V: /R
Connecting parts:	

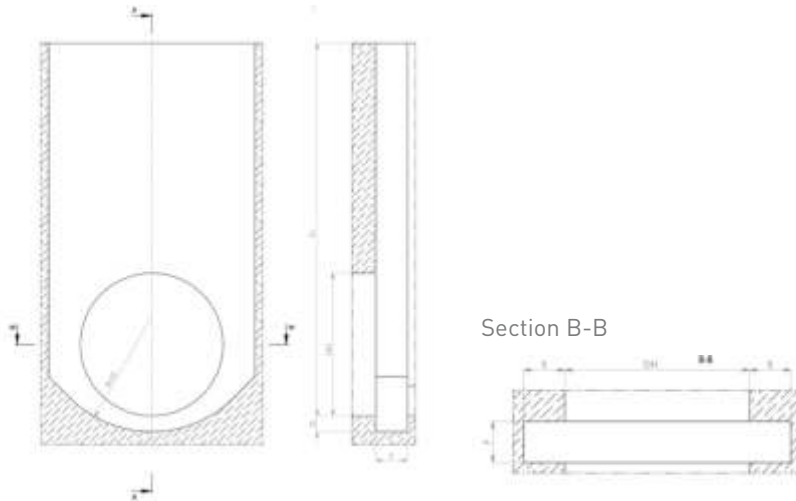
1) Measured from invert penstock to top edge structure.

* Please specify in the enquiry/ order.

WAGU®-Penstock GK for grouting

With round sill for grouting

Wall recess

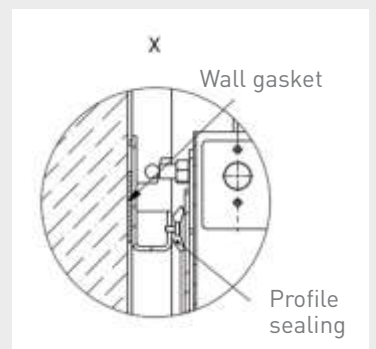
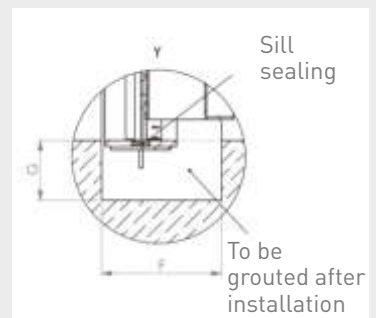
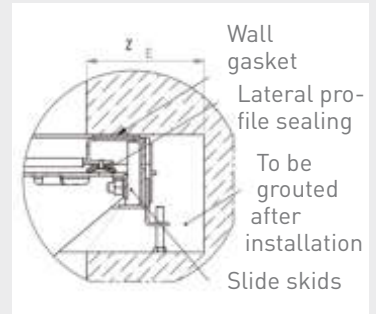


Installation Guide

- ➔ Apply the wall gasket on the back of the frame (lateral inside edge).
- ➔ Fastening material and wall gasket are included.
- ➔ Screw adjusting and tensioning screws into the frame.
- ➔ Place frame with door into the wall recess in the designated position and align.
- ➔ Align frame:
Screw lateral adjusting screws into the recess until the frame is vertical even flat on the wall and fixed without tension.
- ➔ For anchor bolting, holes are double and diagonal displaced in the frame and the support brackets.
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling.
- ➔ The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Compound anchor bolts are to be used for fastening.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall.
- ➔ Before grouting, check penstock for perfect (flawless) performance and tightness, as it is not possible to change the position of the frame after grouting.
- ➔ Install casing on recess and grout the cavities with grouting mortar¹⁾. When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.

1) We recommend a cement-based grout.

Details



Dimensions (mm)

	E	F	G
150-1200	150	150	100
1300-2000	200	200	150
2100-3000	250	250	200

DN (mm) R (mm)

2000	1400
2100	1480
2200	1540
2300	1610
2400	1680
2500	1750
2600	1820
2700	1890
2800	1960
2900	2030
3000	2100

WAGU®-Penstock GK for anchor bolting

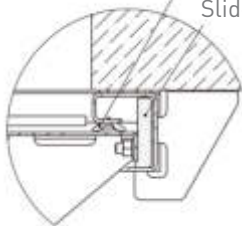
With straight sill for anchor bolting
DN or W x H 150 x 150 up to 3000 x 3000

Details

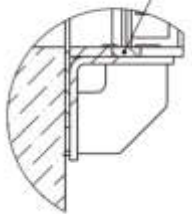
Section B-B



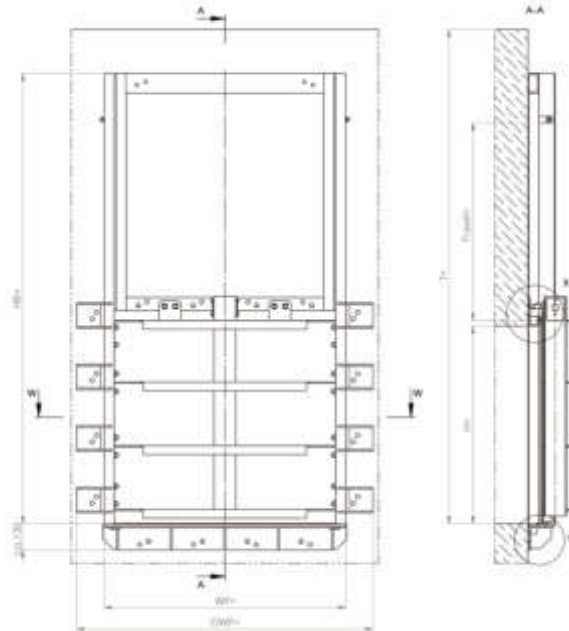
Lateral profile sealing
Slide skids



Sill sealing



Profile sealing



Materials

Frame	Door	Sealing	Slide skids	Stem	Connecting parts
1.4301 □	1.4301 □	EPDM / Neoprene	POM	1.4305	A4
1.4404 / 1.4571 □	1.4404 / 1.4571 □	EPDM / Neoprene	POM	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Penstock GK for anchor bolting, with straight sill for anchor bolting.
Cat.-sheet 07.45, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Frame:	DN or W x H: mm
Door:	Installation depth T: mm ¹⁾
Sealing:	Operating pressure: bar
Slide skids:	Flow direction V: /R
Connecting parts:	

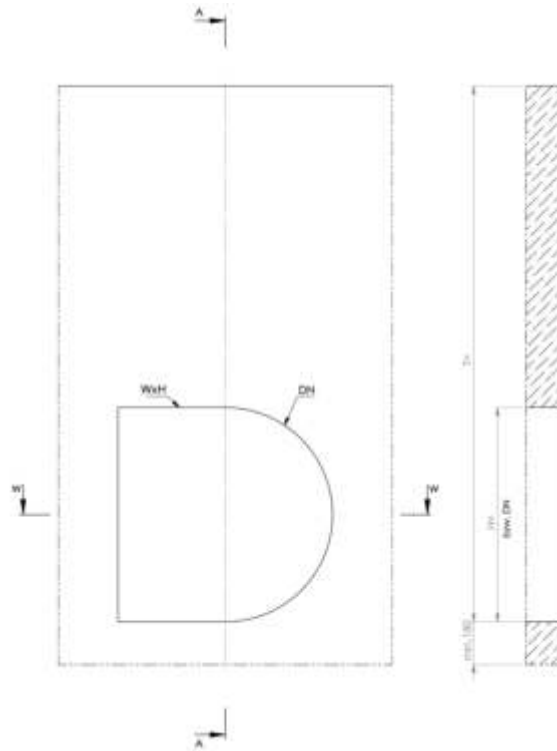
1) Measured from invert penstock to top edge structure.

* Please specify in the enquiry/ order.

WAGU®-Penstock GK for anchor bolting

With straight sill for anchor bolting

Wall recess



Installation Guide

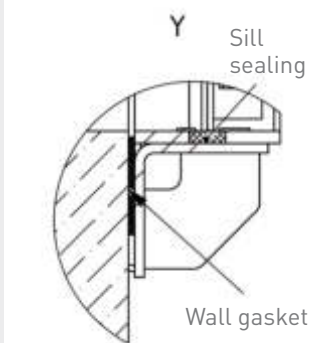
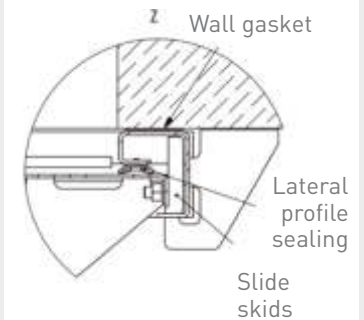
- ➔ Place frame with door into the wall recess in the designated position and align.
- ➔ For anchor bolting, holes are double and diagonal displaced in the frame and the support brackets.
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling. The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Compound anchor bolts are to be used for fastening.

Sealing frame/wall

- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the frame. The sill must be sealed with wall gasket
- ➔ Fastening material and wall gasket are included.
- ➔ The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.

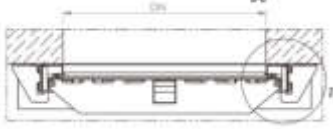
Details

Section B-B

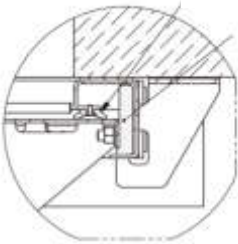


Details

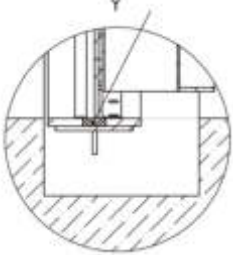
Section B-B



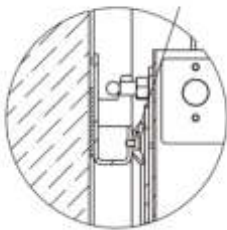
Lateral profile sealing
z
Slide skids



Sill sealing
y



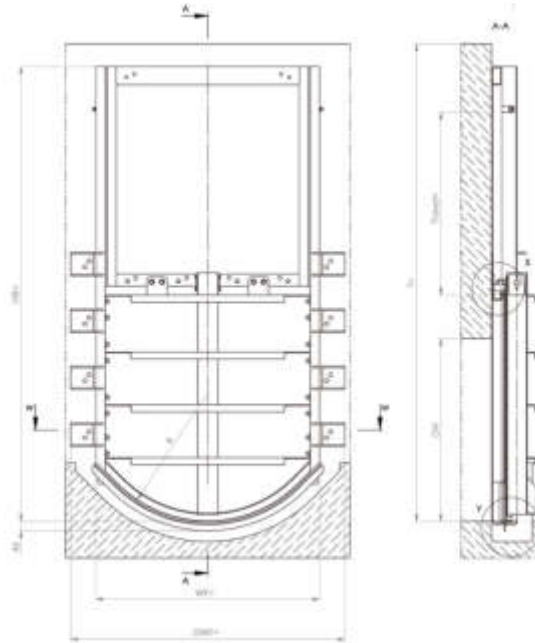
x
Profile sealing



WAGU®-Penstock GK
for anchor bolting

With round sill for grouting

DN or W x H 150 x 150 up to 3000 x 3000



Materials

Frame	Door	Sealing	Slide skids	Stem	Connecting parts
1.4301 □	1.4301 □	EPDM / Neoprene	POM	1.4305	A4
1.4404 / 1.4571 □	1.4404 / 1.4571 □	EPDM / Neoprene	POM	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Penstock GK for anchor bolting, with round sill for grouting.

Cat.-sheet 07.53, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Frame:	DN or W x H: mm
Door:	Installation depth T: mm ¹⁾
Sealing:	Operating pressure: bar
Slide skids:	Flow direction V: /R
Connecting parts:	

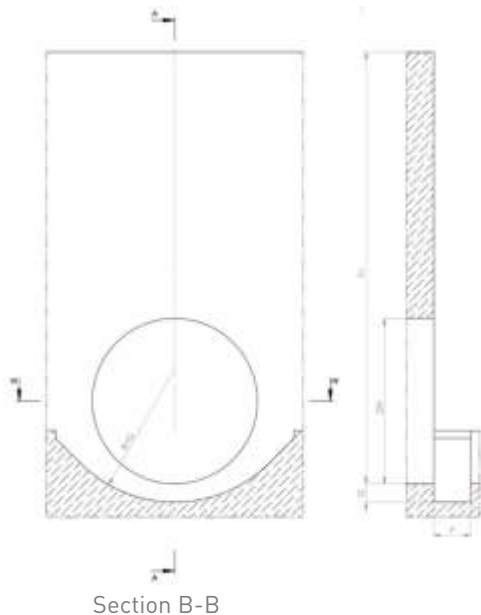
1) Measured from invert penstock to top edge structure.

* Please specify in the enquiry/ order.

WAGU®-Penstock GK for anchor bolting

With round sill for grouting

Wall recess



Section B-B

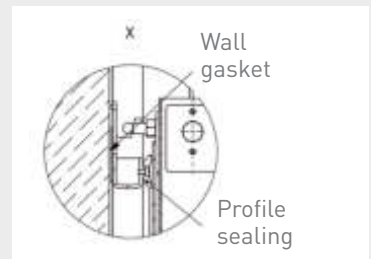
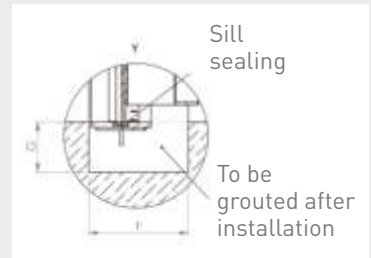
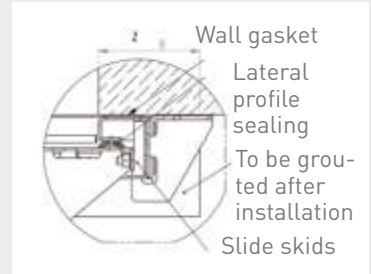
Installation Guide

- ➔ Place frame with door into the wall recess in the designated position and align.
- ➔ For anchor bolting, holes are double and diagonal displaced in the frame and the support brackets.
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling.
- ➔ The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Compound anchor bolts are to be used for fastening.

Sealing frame/wall

- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the frame.
- ➔ Fastening material and wall gasket are included.
- ➔ The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.
- ➔ Grout sill with grouting mortar. When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.

Details



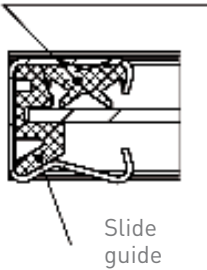
Dimensions (mm)

	E	F	G
150-1200	150	150	100
1300-2000	200	200	150
2100-3000	250	250	200

DN (mm)	R (mm)	DN (mm)	R (mm)
150	105	1500	1050
200	140	1600	1120
250	175	1700	1190
300	210	1800	1260
350	245	1900	1330
400	280	2000	1400
500	350	2100	1470
600	420	2200	1540
700	490	2300	1610
800	560	2400	1680
900	630	2500	1750
1000	700	2600	1820
1100	770	2700	1890
1200	840	2800	1960
1300	910	2900	2030
1400	980	3000	2100

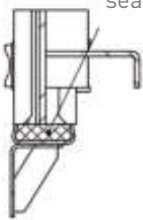
Details

Lateral profile sealing

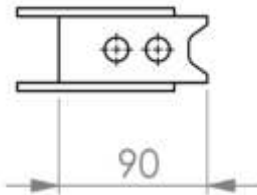


C-C

Sill sealing



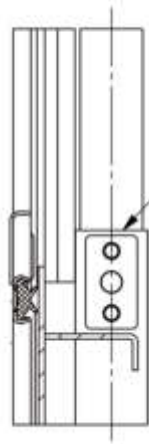
Clamping claws



WAGU®-PRO-Penstock

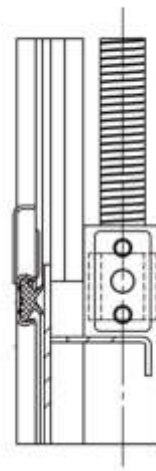
4 facing, for on-seating or off-seating pressure, suitable for throttle and regulation, for mounting at inlets and outlets of shafts and basins, for grouting in recess or for anchor bolting to the wall.

A-A



Design with Pushing rod

A-A



Design with Stem nut



Design

- Straight sill
- Round sill
- Sill flush with invert
- With slide guide
- Single-stem type

Design Features

- Welded frame made of tension resistant profile
- Low-wear slide guide form-fit in frame
- Lip profile sealing clamp easy to maintain
- Universal connector for connection pushing rod and stem nut (Quick fix)
- New design for reinforcement ribs at door
- Wall sealing with self-adhesive gasket tap (no grouting required)
- Anchor bolting with variable clamping claws

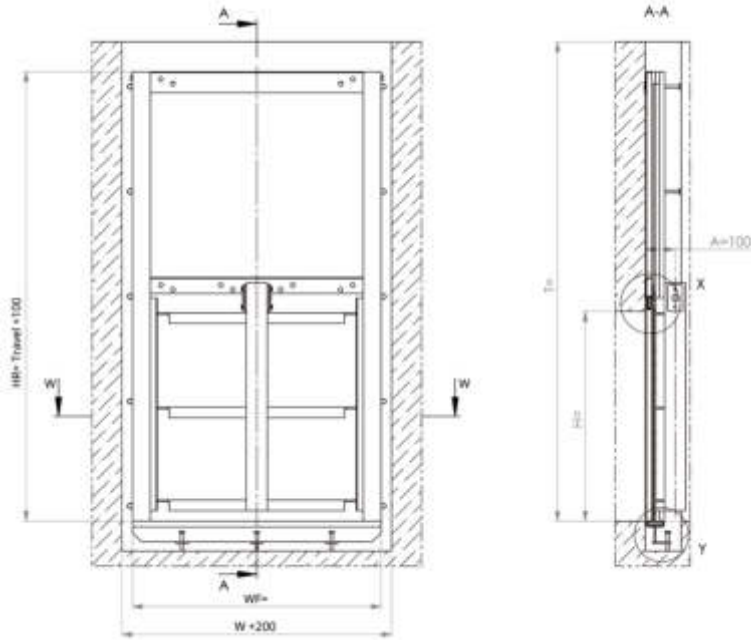
Dimensions

- W x H 150 x 150 up to 1200 x 1200 mm

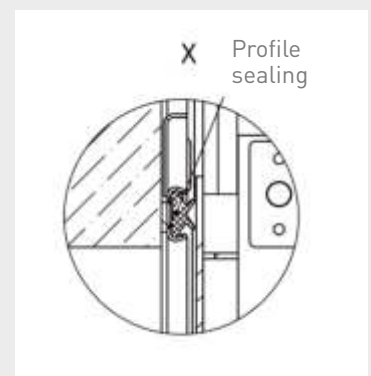
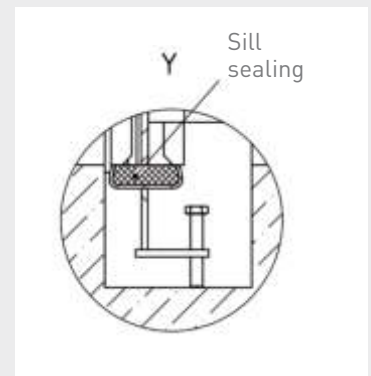
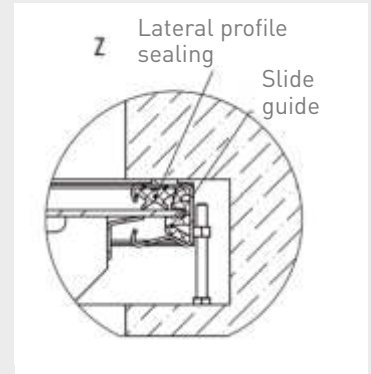
WAGU®-PRO-Penstock for grouting

With straight sill for grouting

DN or W x H 150 x 150 up to 1200 x 1200 to 6 mWS



Details



Materials

Frame	Door	Sealing	Slide guide	Stem	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	PET	1.4305	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	PET	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

PRO-Penstock for grouting, with straight sill for grouting.

Cat.-sheet 07.110, operating gear see at the corresponding cat.-sheet.

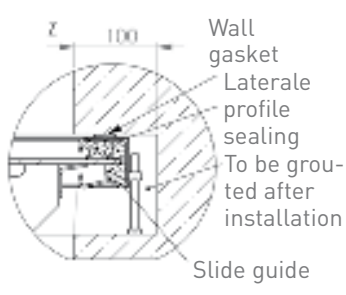
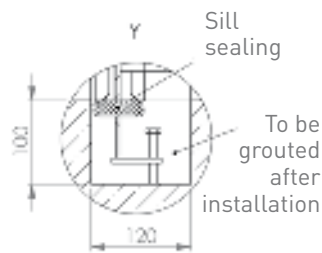
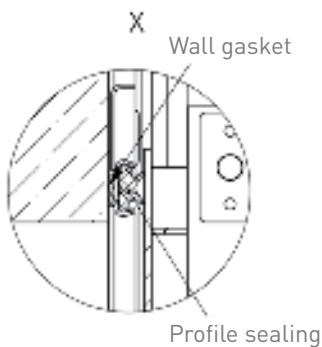
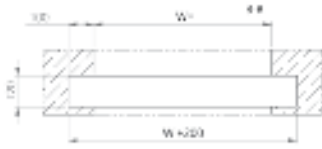
Materials*	Dimensions*
Frame:	DN or W x H: mm
Door:	Installation depth T: mm ¹⁾
Sealing:	Operating pressure: m WS
Slide guide:	Flow direction V: /R
Connecting parts:	

1) Measured from invert penstock to top edge structure.

* Please specify in the enquiry/ order.

Details

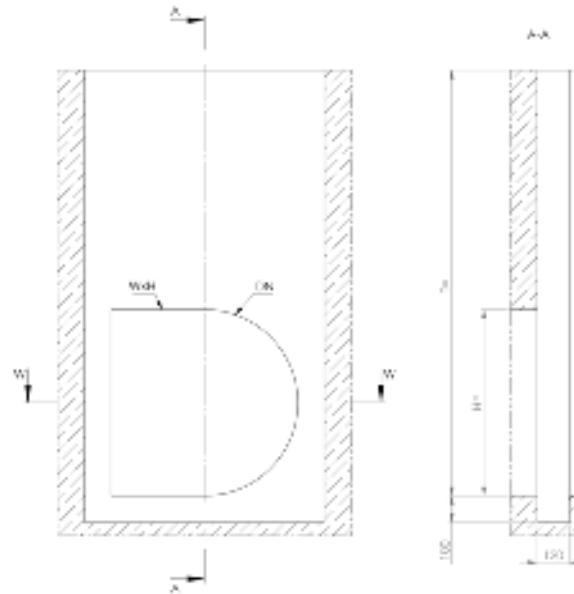
Section B-B



WAGU®-PRO-Penstock for grouting

With straight sill for grouting

Wall recess



Installation Guide

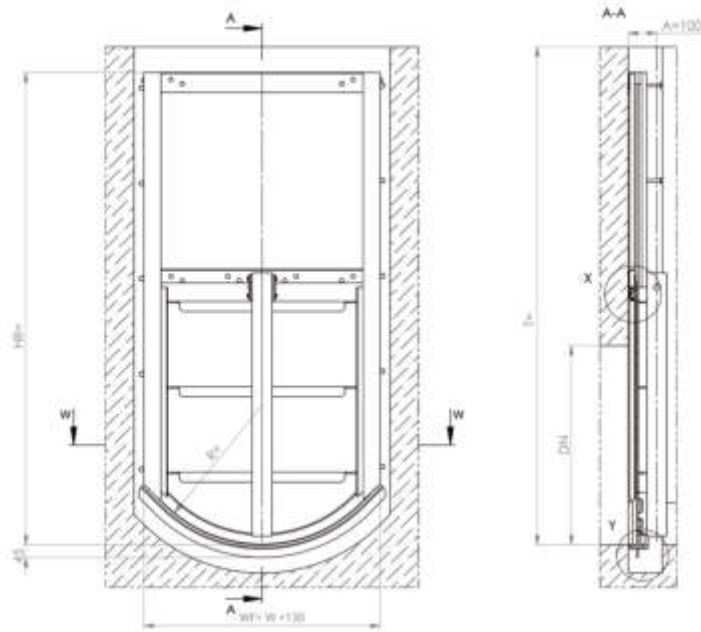
- Place the wall gasket on the across profiles in the middle on top of the frame.
- Place WAGU-PRO penstock in the designated position and align.
- Press the frame free of distortion to the wall until the wall gasket is compressed to ca. 5mm. Take care that the penstock sill is flush with the invert.
- The holes in upper across support bracket serve for the first fixation.
- Recheck the compression of the wall gasket at the middle across profile bracket. Adjust if necessary.
- Bigger WAGU-PRO penstocks have an additional support bracket on the middle across profile.
- Compound anchor bolts are to be used for fastening.
- During align make sure WAGU-PRO penstocks sits free of distortion on the wall.
- Apply the mounting torque on the nuts crosswise and evenly.
- Before grouting, check WAGU-PRO penstock for perfect (flawless) performance and tightness, as it is not possible to change the position of the frame after grouting.
- Install casing, no mortar¹⁾ must touch sealing or frame outside the casing. Wash off immediately if necessary.

1) We recommend a cement-based grout.

WAGU®-PRO-Penstock for grouting

With round sill for grouting

DN or W x H 150 x 150 up to 1200 x 1200 to 6 mWS



Materials

Frame	Door	Sealing	Slide guide	Stem	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	PET	1.4305	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	PET	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

PRO-Penstock for grouting, with round sill for grouting.

Cat.-sheet 07.112, operating gear see at the corresponding cat.-sheet.

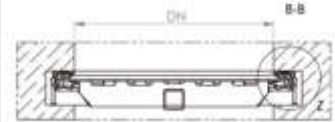
Materials*	Dimensions*
Frame:	DN or W x H: mm
Door:	Installation depth T: mm ¹⁾
Sealing:	Operating pressure: m WS
Slide guide:	Flow direction V: /R
Connecting parts:	

1) Measured from invert penstock to top edge structure.

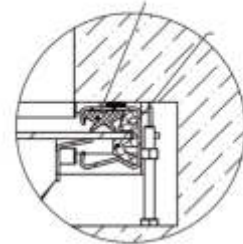
* Please specify in the enquiry/ order.

Details

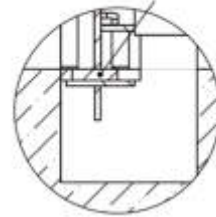
Section B-B



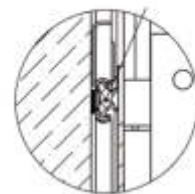
Lateral
Z profile sealing



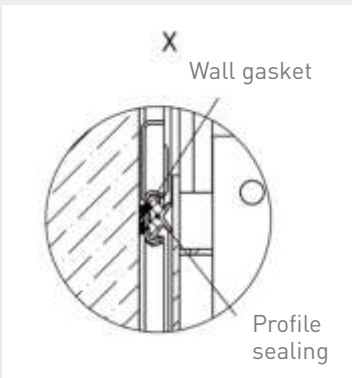
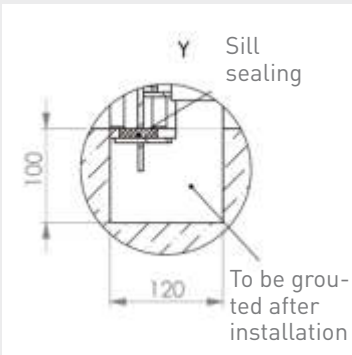
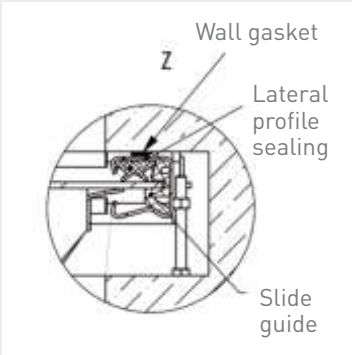
Y Sill sealing



X Profile sealing



Details

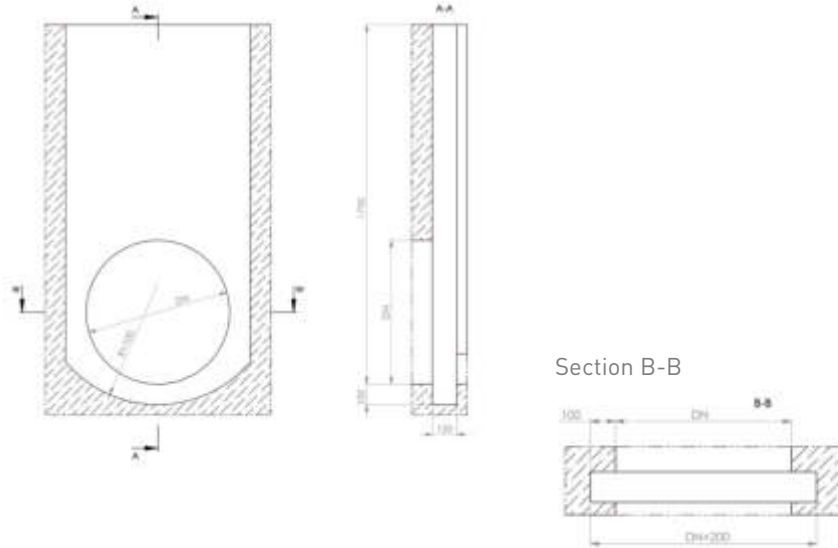


DN (mm)	R (mm)
150	105
200	140
250	175
300	210
350	245
400	280
500	350
600	420
700	490
800	560
900	630
1000	700
1100	770
1200	840

WAGU®-PRO-Penstock for grouting

With round sill for grouting

Wall recess



Installation Guide

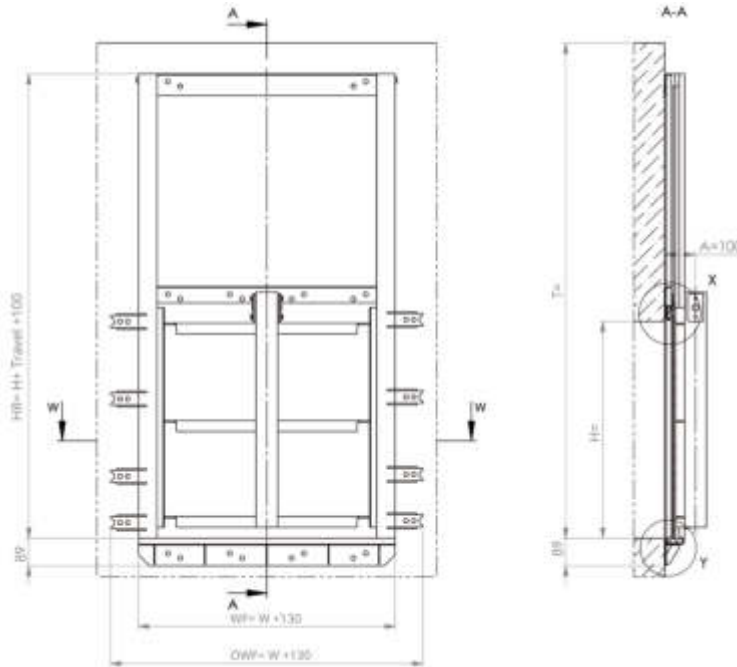
- Place the wall gasket on the across profiles in the middle on top of the frame.
- Place WAGU-PRO penstock in the designated position and align.
- Press the frame free of distortion to the wall until the wall gasket is compressed to ca. 5mm. Take care that the penstock sill is flush with the invert.
- The holes in upper across support bracket serve for the first fixation.
- Recheck the compression of the wall gasket at the middle across profile bracket. Adjust if necessary.
- Bigger WAGU-PRO penstocks have an additional support bracket on the middle across profile.
- Compound anchor bolts are to be used for fastening.
- During align make sure WAGU-PRO penstocks sits free of distortion on the wall.
- Apply the mounting torque on the nuts crosswise and evenly.
- Before grouting, check WAGU-PRO penstock for perfect (flawless) performance and tightness, as it is not possible to change the position of the frame after grouting.
- Install casing, no mortar¹⁾ must touch sealing or frame outside the casing. Wash off immediately if necessary.

1) We recommend a cement-based grout.

WAGU®-PRO-Penstock for anchor bolting

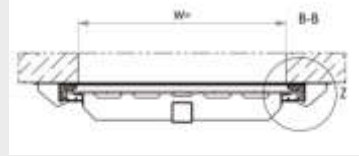
With straight sill for anchor bolting

DN or W x H 150 x 150 up to 1200 x 1200 to 6 mWS

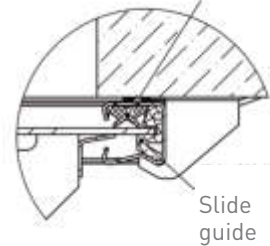


Details

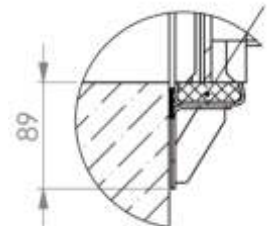
Section B-B



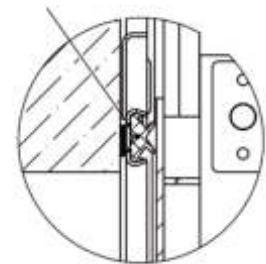
Lateral profile sealing



Sill sealing



Profile sealing



Materials

Frame	Door	Sealing	Slide guide	Stem	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	PET	1.4305	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	PET	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

PRO-Penstock for anchor bolting, with straight sill for anchor bolting.
Cat.-sheet 07.130, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Frame:	DN or W x H: mm
Door:	Installation depth T: mm ¹⁾
Sealing:	Operating pressure: m WS
Slide guide:	Flow direction V: /R
Connecting parts:	

1) Measured from invert penstock to top edge structure.

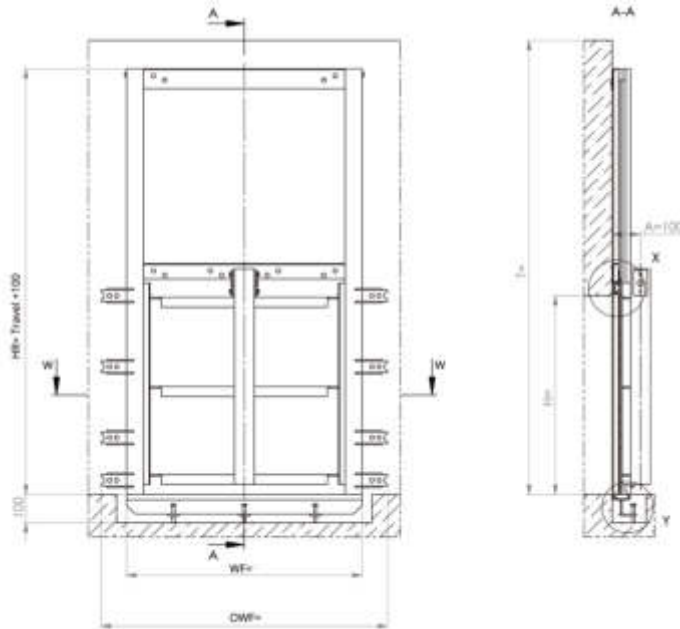
* Please specify in the enquiry/ order.



WAGU®-PRO-Penstock for anchor bolting

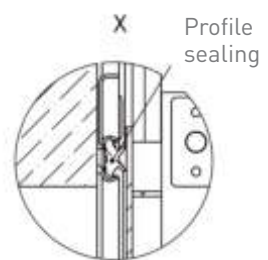
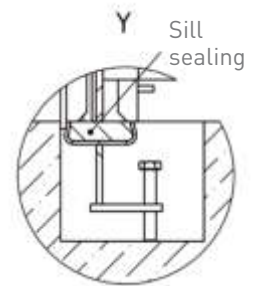
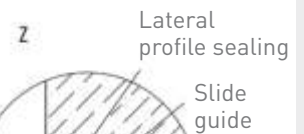
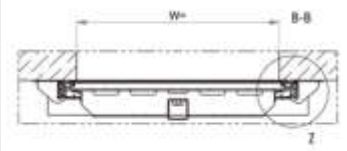
With straight sill for grouting

DN or W x H 150 x 150 up to 1200 x 1200 to 6 mWS



Details

Section B-B



Materials

Frame	Door	Sealing	Slide guide	Stem	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	PET	1.4305	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	PET	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

PRO-Penstock for anchor bolting, with straight sill for grouting.

Cat.-sheet 07.140, operating gear see at the corresponding cat.-sheet.

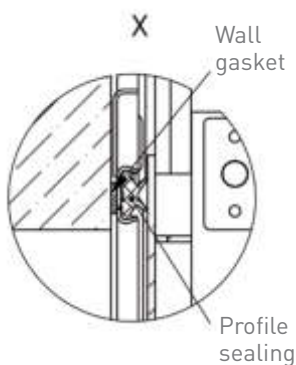
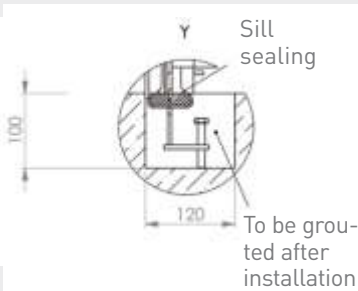
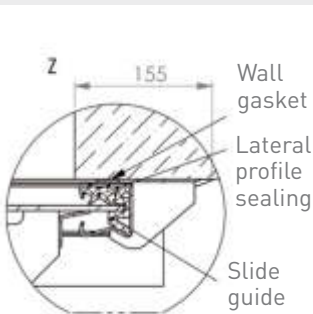
Materials*	Dimensions*
Frame:	DN or W x H: mm
Door:	Installation depth T: mm ¹⁾
Sealing:	Operating pressure: m WS
Slide guide:	Flow direction V: /R
Connecting parts:	

1) Measured from invert penstock to top edge structure.

* Please specify in the enquiry/ order.

Details

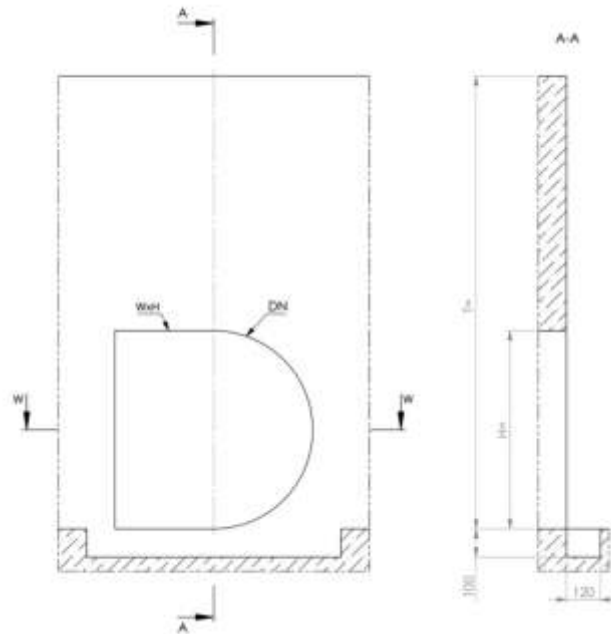
Section B-B



WAGU®-PRO-Penstock for anchor bolting

With straight sill for grouting

Wall recess



Installation Guide

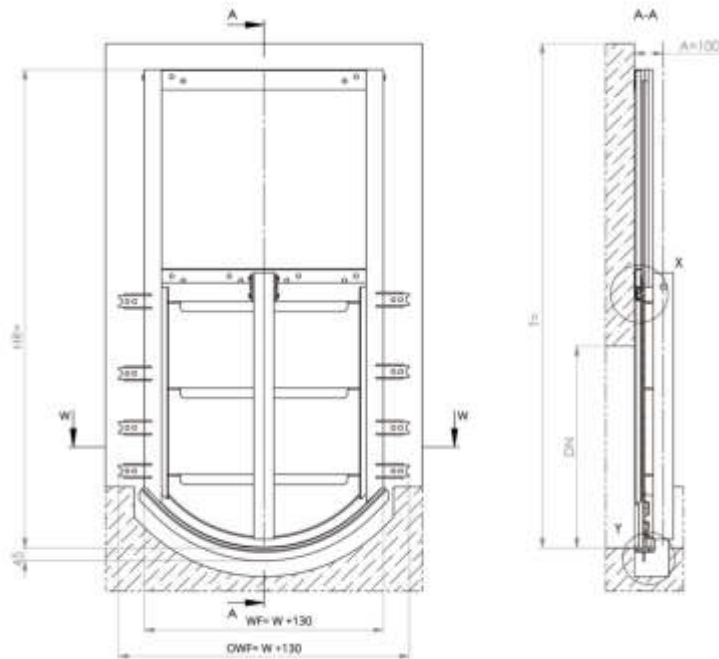
- Apply wall gasket on the back of the frame.
- Place WAGU-PRO penstock in the designated position and align in order that the penstock sill is flush with the invert.
- The holes in upper across support bracket serve for the first fixation.
- Place clamping claws at designated position.
- Bigger WAGU-PRO penstocks have an additional support bracket on the middle across profile.
- Compound anchor bolts are to be used for fastening.
- During tightening the fixation nuts WAGU-PRO penstock must be free of distortion.
- Structure tolerance accordingly to DIN 18202 will be compensated by the wall gasket.
- Apply the mounting torque on the nuts crosswise and evenly.
- Before grouting, check WAGU-PRO penstock for perfect (flawless) performance and tightness, as it is not possible to change the position of the frame after grouting.
- Install casing on sill and grout with grouting mortar.¹⁾ When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.

1) We recommend a cement-based grout.

WAGU®-PRO-Penstock for anchor bolting

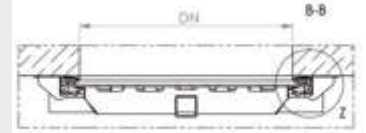
With round sill for grouting

DN or W x H 150 x 150 up to 1200 x 1200 to 6 mWS



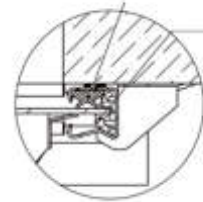
Details

Section B-B

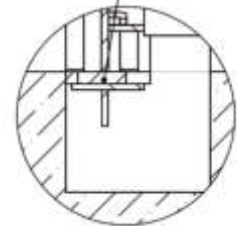


Lateral
Z profile sealing

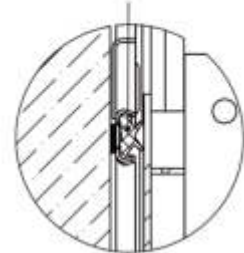
Slide
guide



Y
Sill sealing



X
Profile sealing



Materials

Frame	Door	Sealing	Slide guide	Stem	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	PET	1.4305	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	PET	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

PRO-Penstock for anchor bolting, with round sill for grouting.

Cat.-sheet 07.142, operating gear see at the corresponding cat.-sheet.

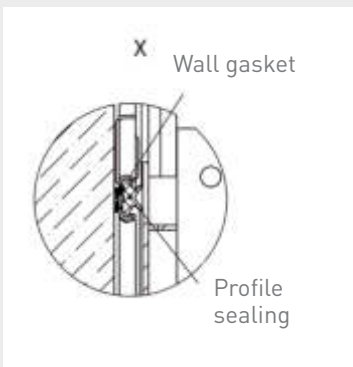
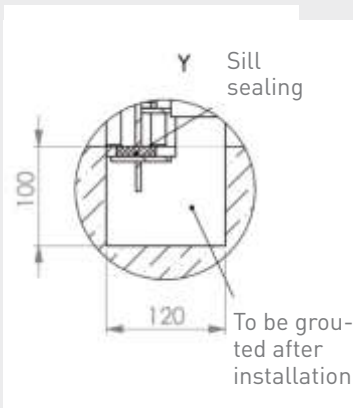
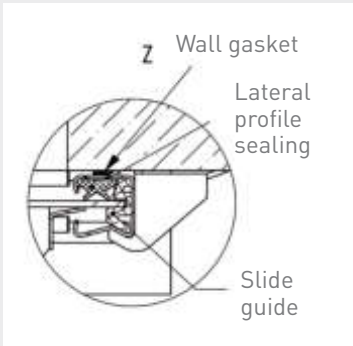
Materials*	Dimensions*
Frame:	DN or W x H: mm
Door:	Installation depth T: mm ¹⁾
Sealing:	Operating pressure: m WS
Slide guide:	Flow direction V: /R
Connecting parts:	

1) Measured from invert penstock to top edge structure.

* Please specify in the enquiry/ order.



Details

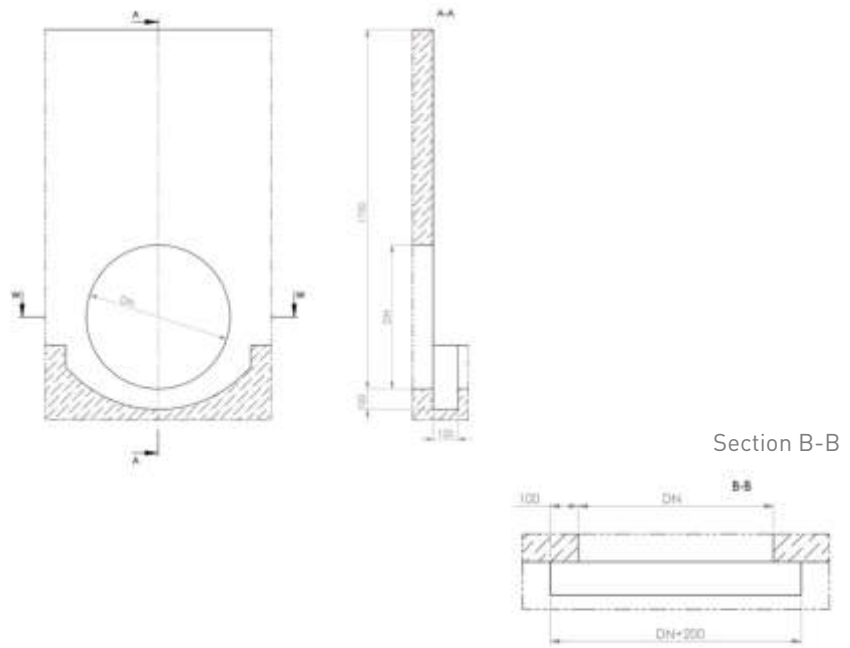


DN (mm)	R (mm)
150	105
200	140
250	175
300	210
350	245
400	280
500	350
600	420
700	490
800	560
900	630
1000	700
1100	770
1200	840

WAGU®-PRO-Penstock for anchor bolting

With round sill for grouting

Wall recess



Installation Guide

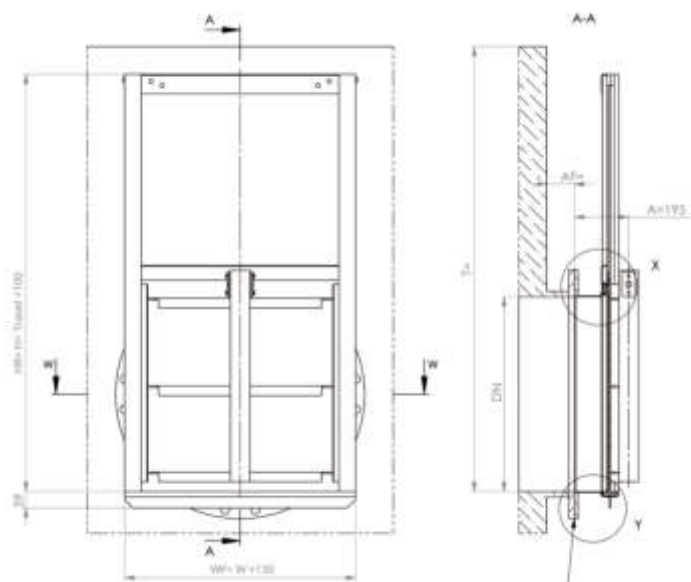
- Apply wall gasket on the back of the frame.
- Place WAGU-PRO penstock in the designated position and align in order that the penstock sill is flush with the invert.
- The holes in upper across support bracket serve for the first fixation.
- Place clamping claws at designated position.
- Bigger WAGU-PRO penstocks have an additional support bracket on the middle across profile.
- Compound anchor bolts are to be used for fastening.
- During tightening the fixation nuts WAGU-PRO penstock must be free of distortion.
- Structure tolerance accordingly to DIN 18202 will be compensated by the wall gasket.
- Apply the mounting torque on the nuts crosswise and evenly.
- Before grouting, check WAGU-PRO penstock for perfect (flawless) performance and tightness, as it is not possible to change the position of the frame after grouting.
- Install casing on sill and grout with grouting mortar.¹⁾ When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.

1) We recommend a cement-based grout.

WAGU®-PRO-Penstock with flange connection

With straight sill

DN or W x H 150 x 150 up to 1200 x 1200 to 6 mWS



Flange connection
according to DIN2501

Materials

Frame	Door	Sealing	Slide guide	Stem	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	PET	1.4305	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	PET	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

PRO-Penstock with flange connection with straight sill.

Cat.-sheet 07.150, operating gear see at the corresponding cat.-sheet.

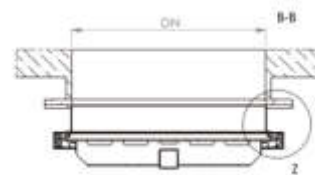
Materials*	Dimensions*
Frame:	DN: mm
Door:	Installation depth T: mm ¹⁾
Sealing:	Operating pressure: m WS
Slide guide:	Flange connection V:
Connecting parts:	

1) Measured from invert penstock to top edge structure.

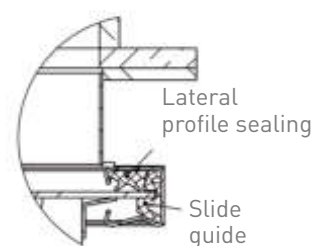
* Please specify in the enquiry/ order.

Details

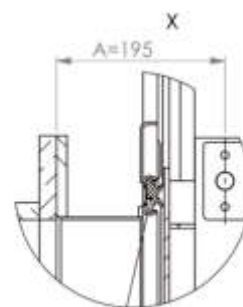
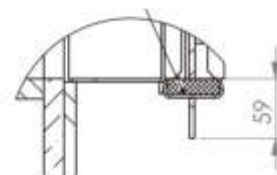
Section B-B



Z



Y Sill sealing



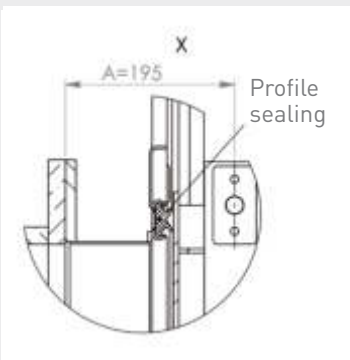
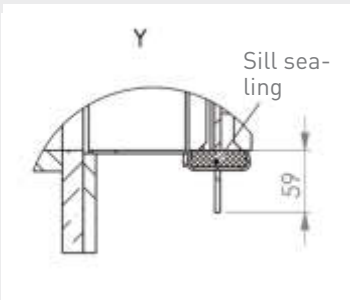
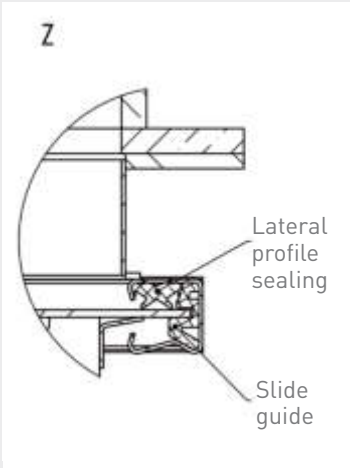
Profile sealing



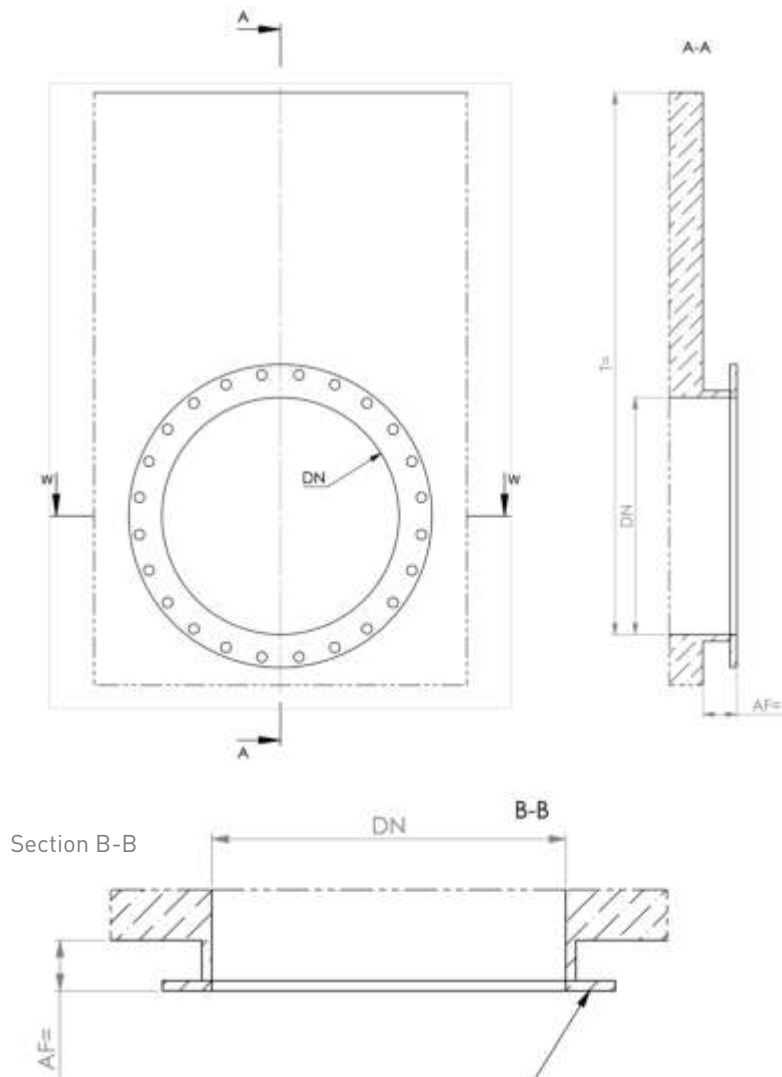
WAGU®-PRO-Penstock with flange connection

With straight sill

Details



Wall recess



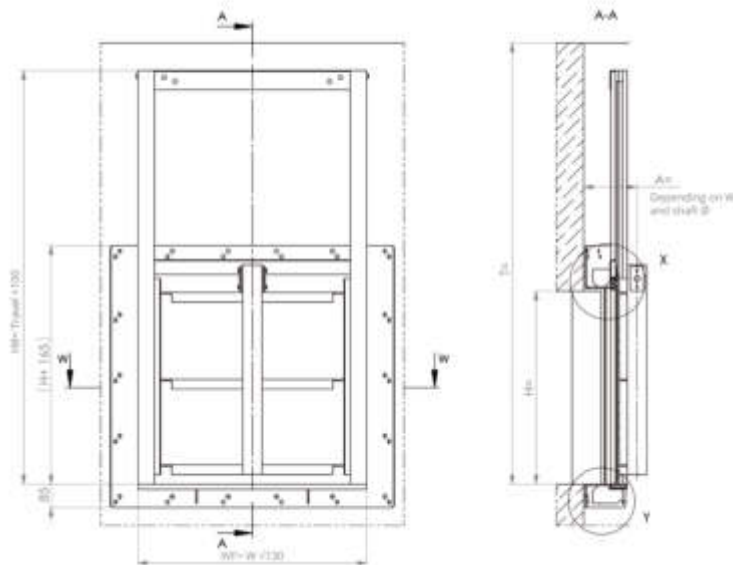
Installation Guide

- Flange gasket is not included.
- The connecting bolts have to be tightened crosswise and evenly.

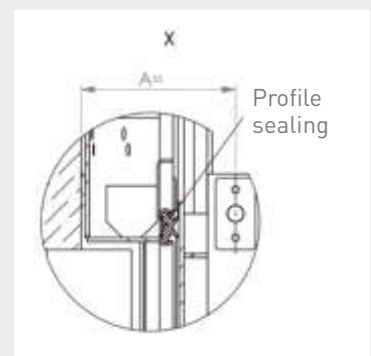
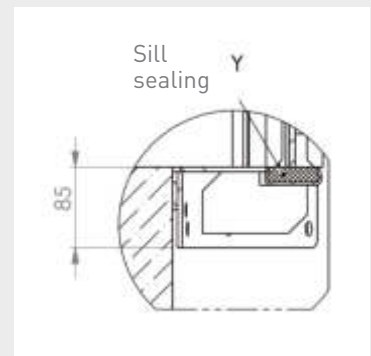
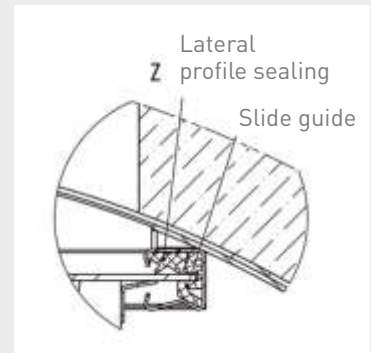
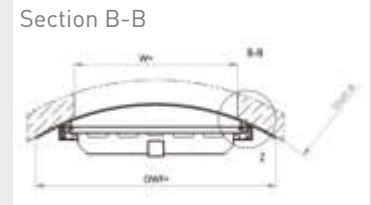
WAGU®-PRO-Penstock for anchor bolting in round shaft

With straight sill for anchor bolting

DN or W x H 150 x 150 up to 1200 x 1200 to 6 mWS



Details



Materials

Frame	Door	Sealing	Slide guide	Stem	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	PET	1.4305	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	PET	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

PRO-Penstock for anchor bolting in round shaft,
with straight sill for anchor bolting.

Cat.-sheet 07.152, operating gear see at the corresponding cat.-sheet.

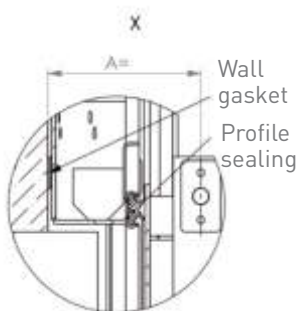
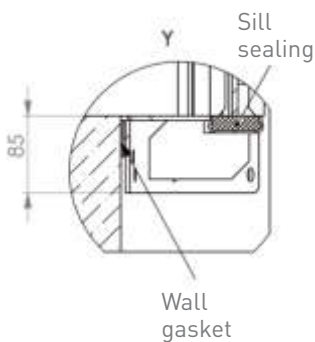
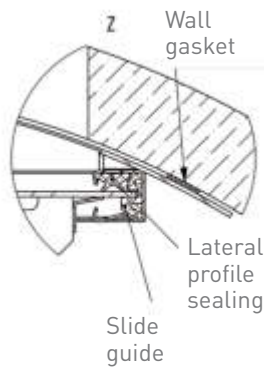
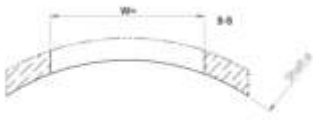
Materials*	Dimensions*
Frame:	DN or W x H: mm
Door:	Installation depth T: mm ¹⁾
Sealing:	Operating pressure: m WS
Slide guide:	Flow direction V: /R
Connecting parts:	Shaft Ø: mm

1) Measured from invert penstock to top edge structure.

* Please specify in the enquiry/ order.

Details

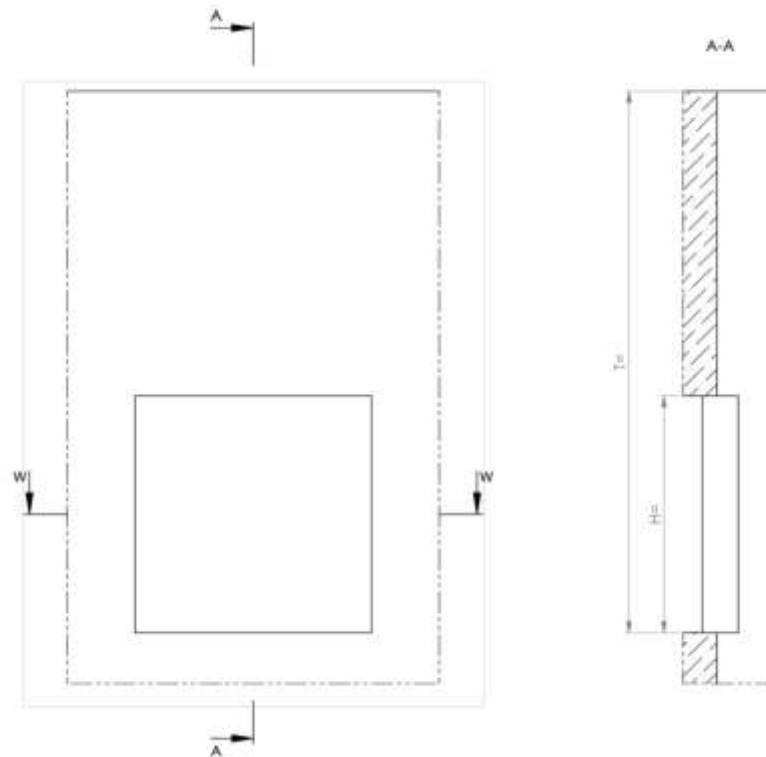
Section B-B



WAGU®-PRO-Penstock for anchor bolting in round shaft

With straight sill for anchor bolting

Wall recess



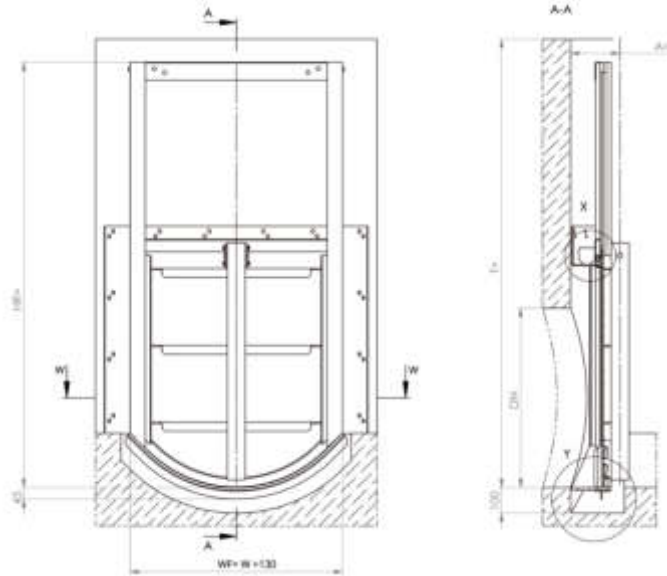
Installation Guide

- Apply wall gasket overlapping on the back of the frame.
- Place WAGU-PRO penstock in the designated position and align.
- The holes in upper across support bracket serve for the first fixation.
- Bigger WAGU-PRO penstocks have an additional support bracket on the middle across profile.
- Compound anchor bolts are to be used for fastening.
- During tightening the fixation nuts WAGU-PRO penstock must be free of distortion.
- Structure tolerance accordingly to DIN 18202 will be compensated by the wall gasket.
- Apply the mounting torque on the nuts crosswise and evenly.

WAGU®-PRO-Penstock for anchor bolting in round shaft

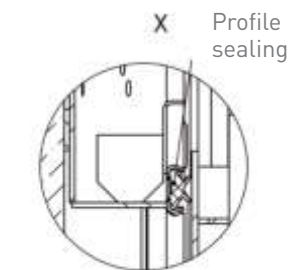
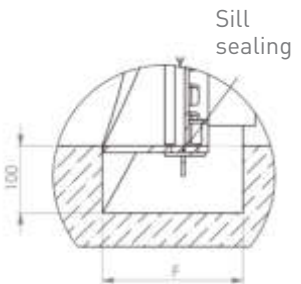
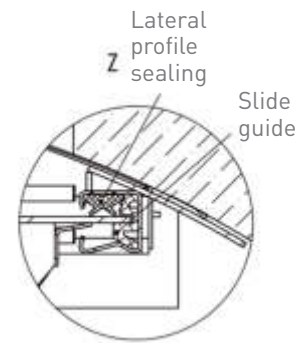
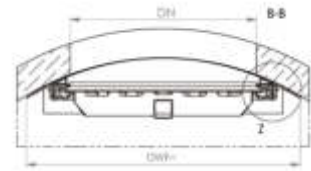
With round sill for grouting

DN or W x H 150 x 150 up to 1200 x 1200 to 6 mWS



Details

Section B-B



Materials

Frame	Door	Sealing	Slide guide	Stem	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	PET	1.4305	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	PET	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

PRO-Penstock for anchor bolting in round shaft,

with round sill for grouting.

Cat.-sheet 07.154, operating gear see at the corresponding cat.-sheet.

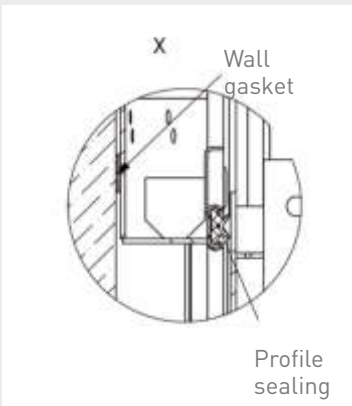
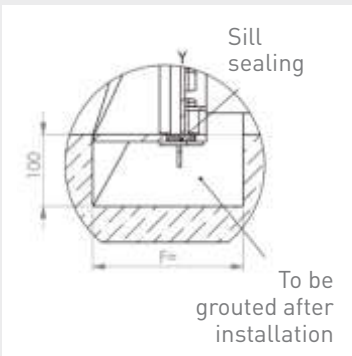
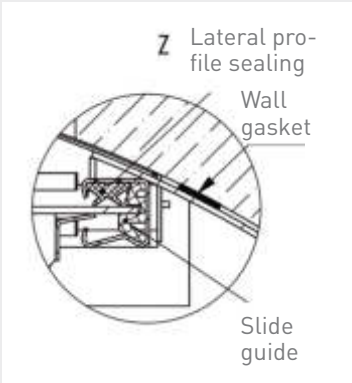
Materials*	Dimensions*
Frame:	DN or W x H: mm
Door:	Installation depth T: mm ¹⁾
Sealing:	Operating pressure: m WS
Slide guide:	Flow direction V: /R
Connecting parts:	Shaft Ø: mm

1) Measured from invert penstock to top edge structure.

* Please specify in the enquiry/ order.



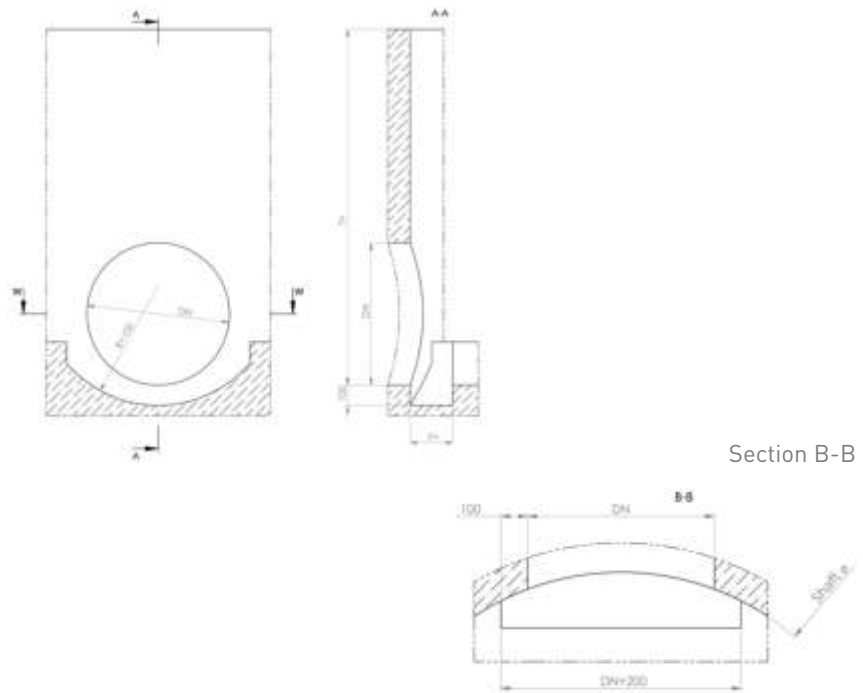
Details



WAGU®-PRO-Penstock for anchor bolting in round shaft

With round sill for grouting

Wall recess



Installation Guide

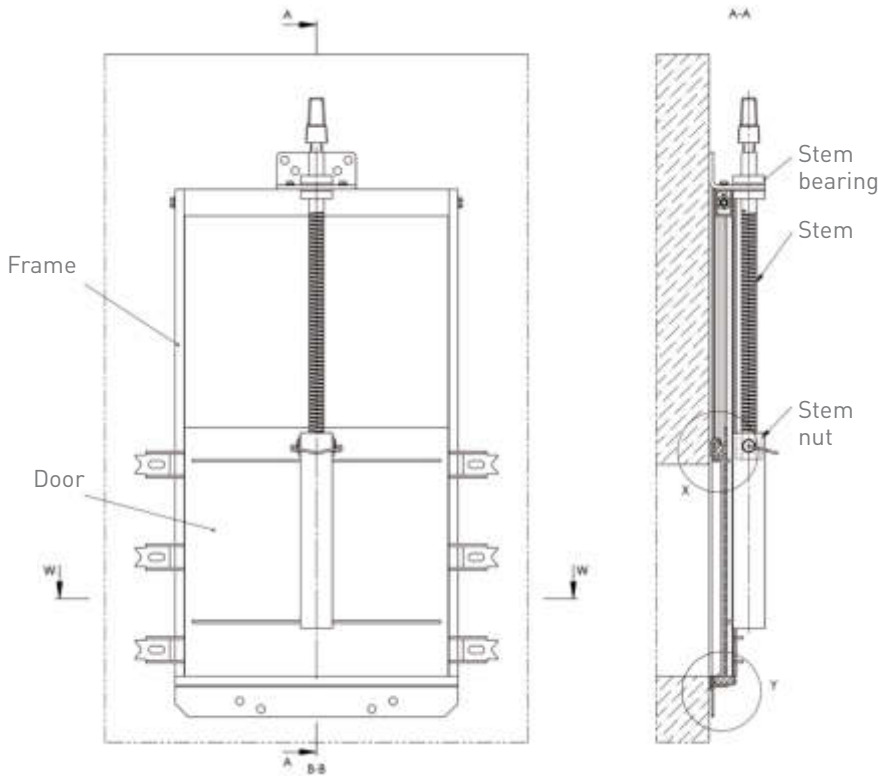
- Apply wall gasket overlapping on the back of the frame.
- Place WAGU-PRO penstock in the designated position and align.
- The holes in upper across support bracket serve for the first fixation.
- Bigger WAGU-PRO penstocks have an additional support bracket on the middle across profile.
- Compound anchor bolts are to be used for fastening.
- During tightening the fixation nuts WAGU-PRO penstock must be free of distortion.
- Structure tolerance accordingly to DIN 18202 will be compensated by the wall gasket.
- Apply the mounting torque on the nuts crosswise and evenly.
- Before grouting, check WAGU-PRO penstock for perfect (flawless) performance and tightness, as it is not possible to change the position of the frame after grouting.
- Install casing on sill and grout with grouting mortar.¹⁾ When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.

1) We recommend a cement-based grout.

DN (mm)	R (mm)
150	105
200	140
250	175
300	210
350	245
400	280
500	350
600	420
700	490
800	560
900	630
1000	700
1100	770
1200	840

WAGU®-CL Penstock for anchor bolting

4 facings, bidirectional, suitable as throttling and regulating penstock, for mounting at inlets or outlets of pits or basins, for grouting in recesses of the structure or for wall bolting.



Design

- Straight sill
- Round sill
- Sill flush with invert
- With slide guide, single-stem type

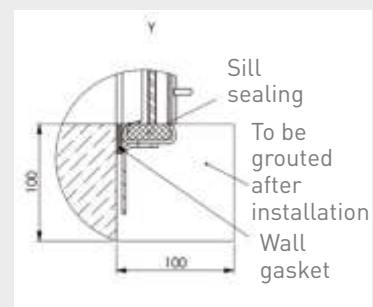
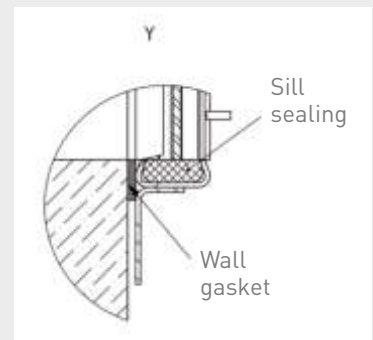
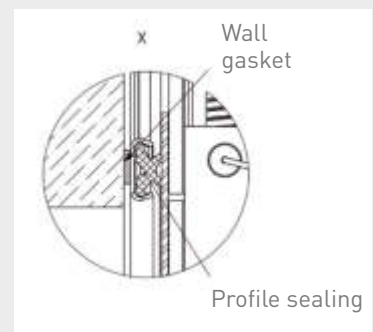
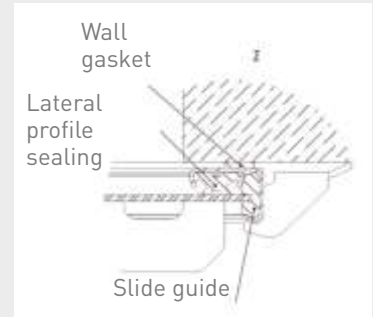
Design Features

- Welded frame of torsion-resisting profile
- Low-wear slide guide form-fit in frame
- Welded frame of torsion-resisting profile
- Universal retainer for stemnut
- New design for reinforcement ribs at door
- Wall sealing with self-adhesive sealing tape (no grouting work necessary)
- Frame for anchor bolting or grouting

Dimensions

W x H 150 x 150 up to 600 x 600 mm

Details

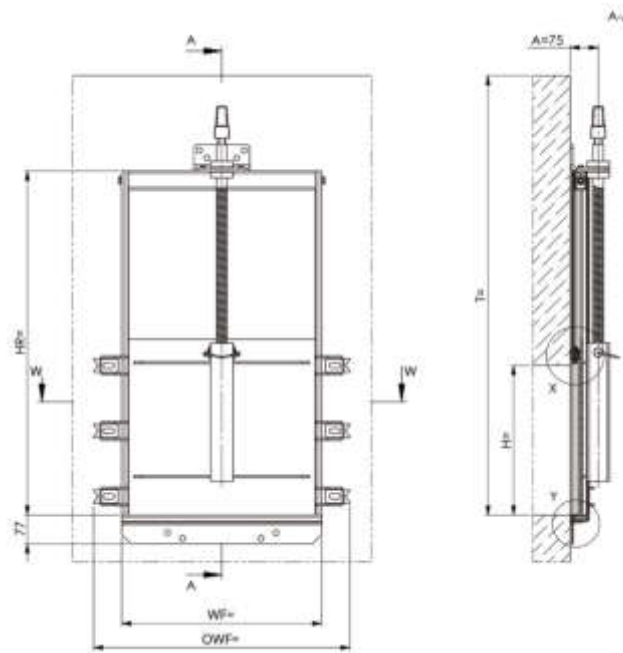
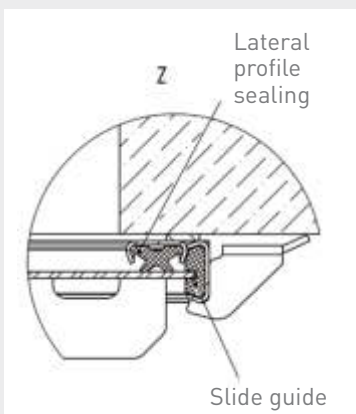
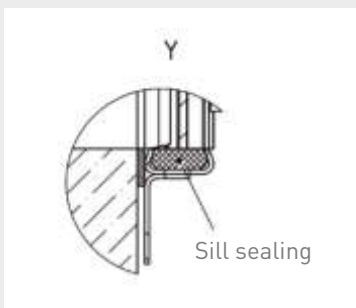
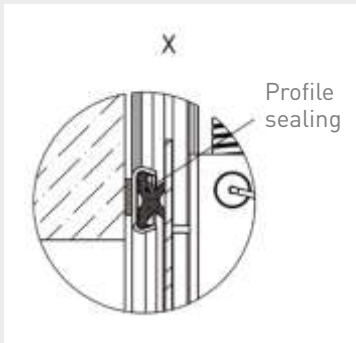
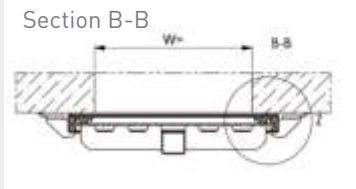


WAGU®-CL Penstock for anchor bolting

With straight sill for anchor bolting

DN or W x H 150 x 150 up to 600 x 600 to 4 mWS.

Details



Materials

Frame	Door	Sealing	Slide guide	Stem	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	PET	1.4305	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	PET	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

WAGU-CL Penstock for anchor bolting, with straight sill for anchor bolting.

Cat.-sheet 07.210, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Frame:	DN or W x H: mm
Door:	Installation depth T: mm ¹⁾
Sealing:	Operating pressure: bar
Slide guide:	Flow direction V: /R
Connecting parts:	

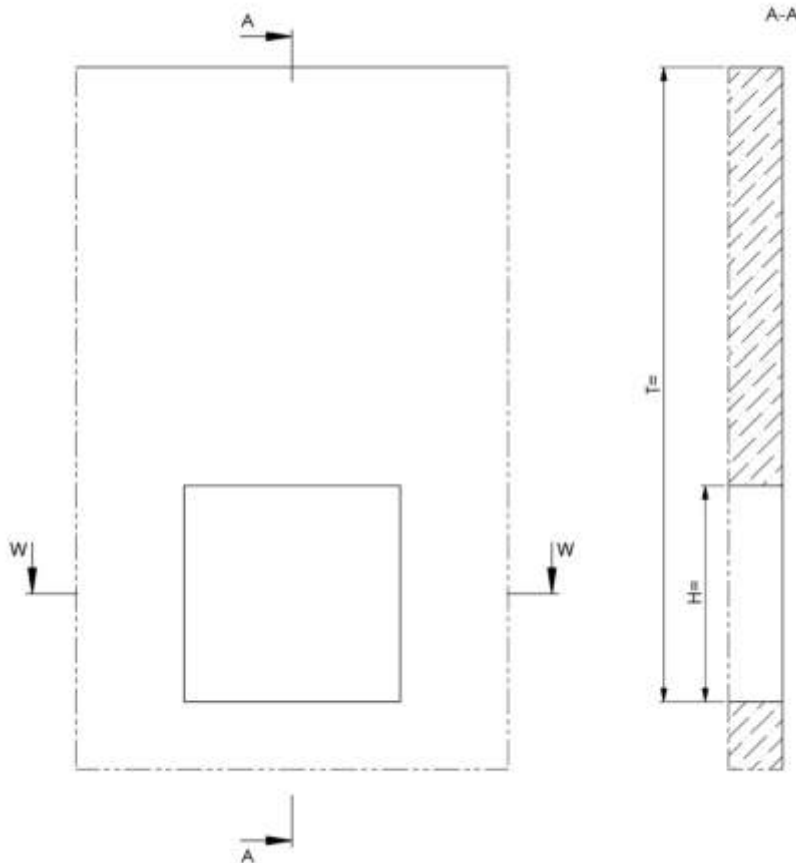
1) Measured from invert penstock to top edge structure.

* Please specify in the enquiry/order.

WAGU®-CL Penstock for anchor bolting

With straight sill for anchor bolting

Wall recess

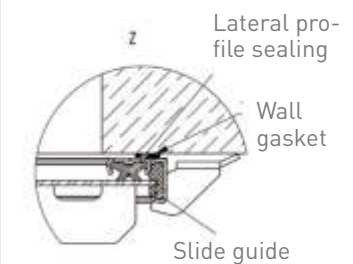
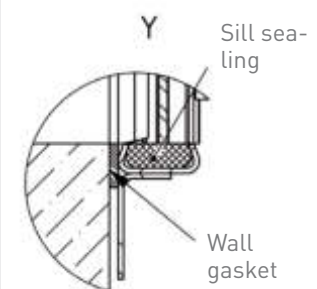
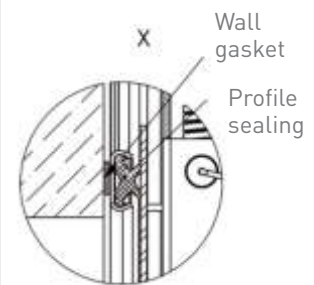


Installation Guide

- ➔ Apply wall gasket on the back of the frame.
- ➔ Place WAGU-CL penstock in the designated position and align in order that the penstock sill is flush with the invert.
- ➔ The holes in upper across support bracket serve for the first fixation.
- ➔ Place clamping claws at designated position.
- ➔ Compound anchor bolts are to be used for fastening.
- ➔ During tightening the fixation nuts WAGU-CL penstock must be free of distortion.
- ➔ Structure tolerance accordingly to DIN 18202 will be compensated by the wall gasket.
- ➔ Apply the mounting torque on the nuts crosswise and evenly.

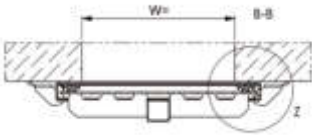
Details

Section B-B



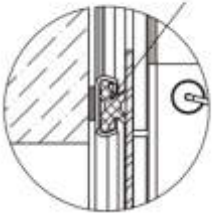
Details

Section B-B



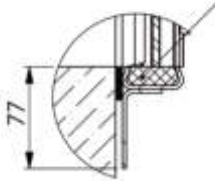
X

Profile sealing



Y

Sill sealing



Z

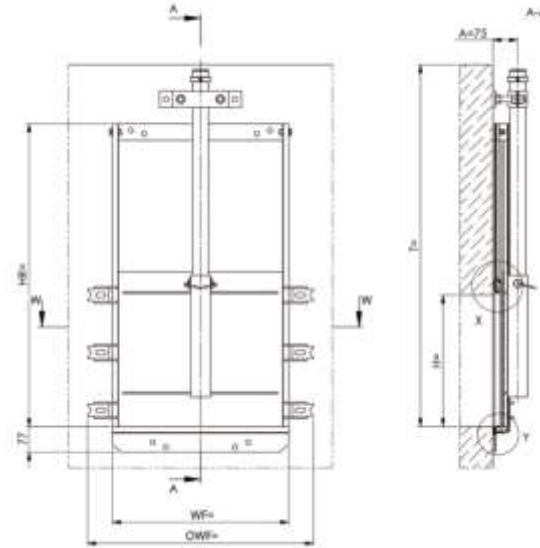
143



WAGU®-CL Penstock for anchor bolting

With straight sill for anchor bolting

DN or W x H 150 x 150 up to 600 x 600 to 4 mWS.



Materials

Frame	Door	Sealing	Slide guide	Stem	Connecting parts
1.4301 □	1.4301 □	Neoprene	PET	1.4305	A4
1.4404 / 1.4571 □	1.4404 / 1.4571 □	Neoprene	PET	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

WAGU-CL Penstock for anchor bolting, with straight sill for anchor bolting.

Cat.-sheet 07.212, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Frame:	DN or W x H: mm
Door:	Installation depth T: mm ¹⁾
Sealing:	Operating pressure: bar
Slide guide:	Flow direction V: /R
Connecting parts:	

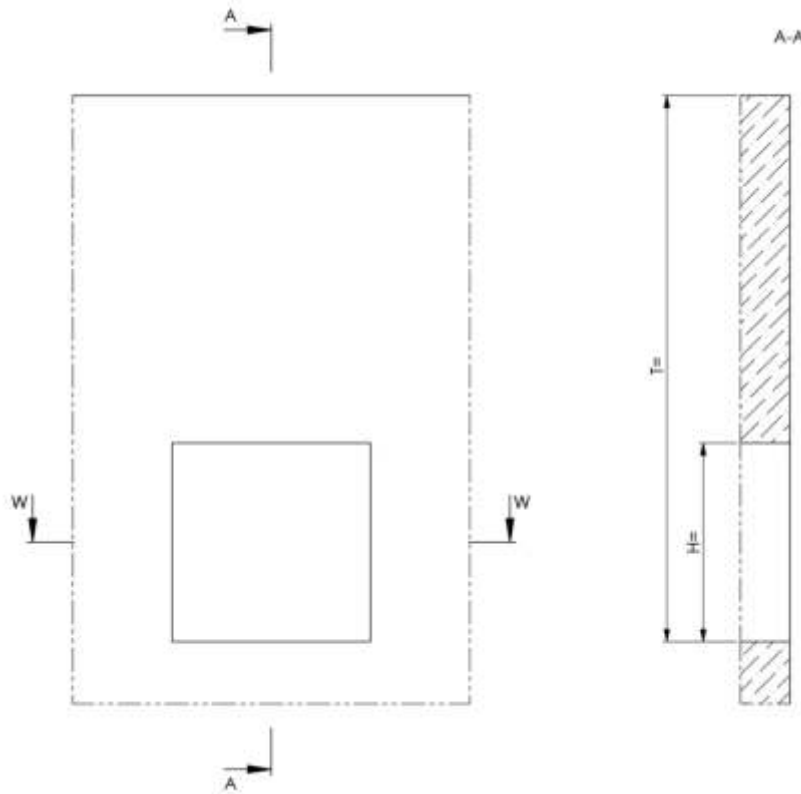
1) Measured from invert penstock to top edge structure.

* Please specify in the enquiry/ order.

WAGU®-CL Penstock for anchor bolting

With straight sill for anchor bolting

Wall recess

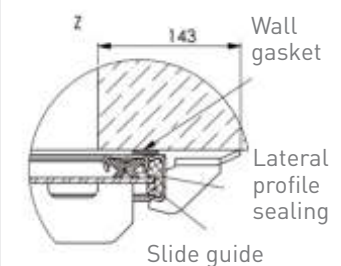
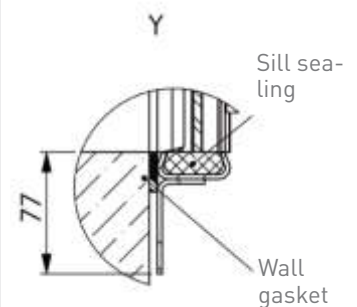
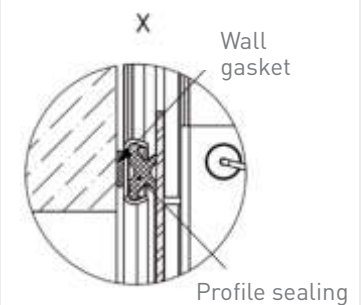


Installation Guide

- ➔ Apply wall gasket on the back of the frame.
- ➔ Place WAGU-CL penstock in the designated position and align in order that the penstock sill is flush with the invert.
- ➔ The holes in upper across support bracket serve for the first fixation.
- ➔ Place clamping claws at designated position.
- ➔ Compound anchor bolts are to be used for fastening.
- ➔ During tightening the fixation nuts WAGU-CL penstock must be free of distortion.
- ➔ Structure tolerance accordingly to DIN 18202 will be compensated by the wall gasket.
- ➔ Apply the mounting torque on the nuts crosswise and evenly.

Details

Section B-B



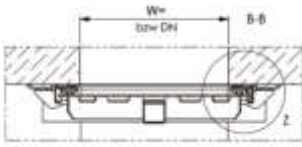
WAGU®-CL Penstock for anchor bolting

With round sill for grouting

DN or W x H 150 x 150 up to 600 x 600 to 4 mWS.

Details

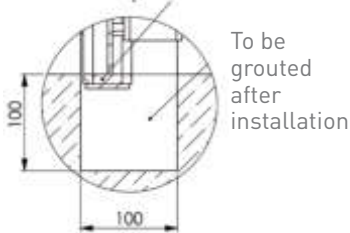
Section B-B



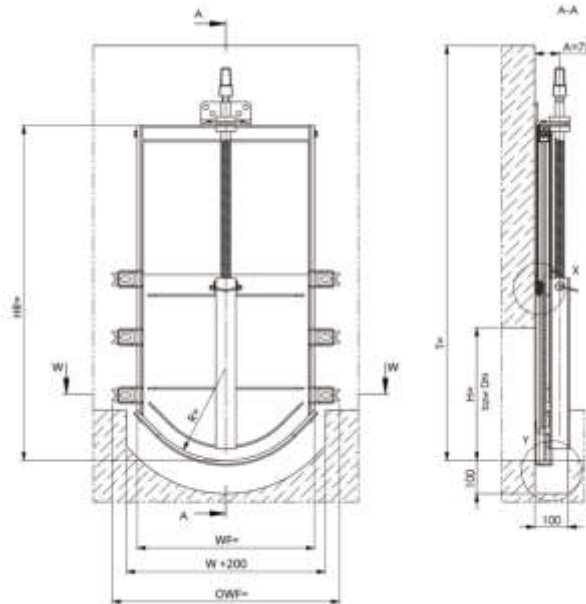
Profile sealing X



Sill sealing Y



Lateral profile sealing Z



Materials

Frame	Door	Sealing	Slide guide	Stem	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	PET	1.4305	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	PET	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

WAGU-CL Penstock for anchor bolting, with round sill for grouting.

Cat.-sheet 07.220, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Frame:	DN or W x H: mm
Door:	Installation depth T: mm ¹⁾
Sealing:	Operating pressure: bar
Slide guide:	Flow direction V: /R
Connecting parts:	

1) Measured from invert penstock to top edge structure.

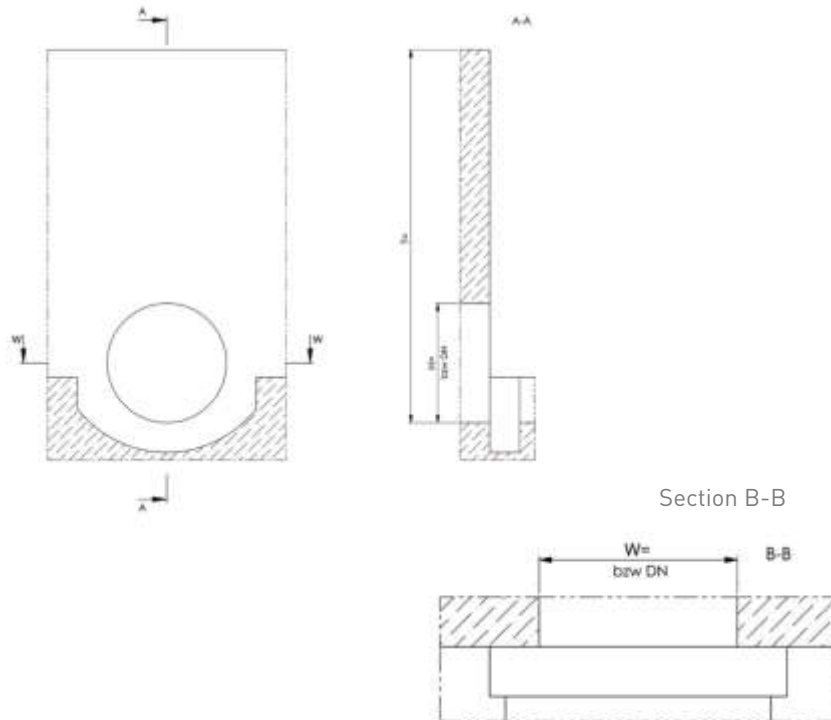
* Please specify in the enquiry/ order.



WAGU®-CL Penstock for anchor bolting

With round sill for grouting

Wall recess

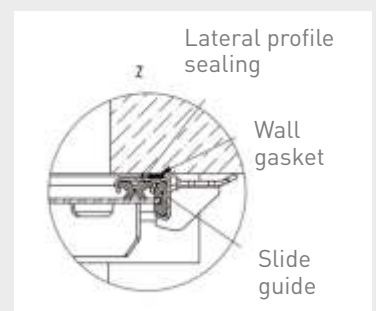
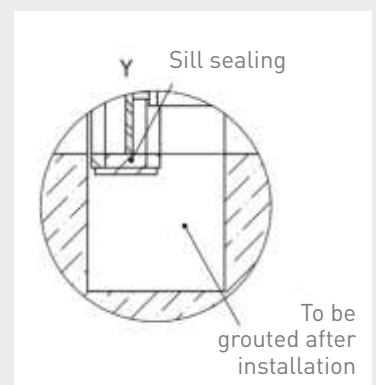
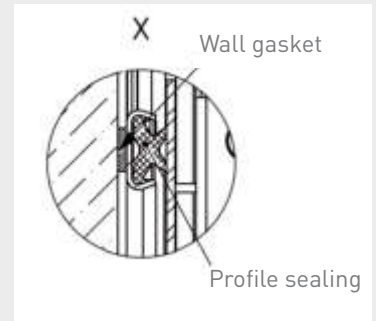


Installation Guide

- Apply wall gasket on the back of the frame.
- Place WAGU-CL penstock in the designated position and align in order that the penstock sill is flush with the invert.
- The holes in upper across support bracket serve for the first fixation.
- Place clamping claws at designated position.
- Compound anchor bolts are to be used for fastening.
- During tightening the fixation nuts WAGU-CL penstock must be free of distortion.
- Structure tolerance accordingly to DIN 18202 will be compensated by the wall gasket.
- Apply the mounting torque on the nuts crosswise and evenly.
- Before grouting, check WAGU-CL penstock for perfect (flawless) performance and tightness, as it is not possible to change the position of the frame after grouting.
- Install casing on sill and grout with grouting mortar.¹⁾ When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.

1) We recommend a cement-based grout.

Details



DN (mm)	R (mm)
150	105
200	140
250	175
300	210
350	245
400	280
500	350
600	420

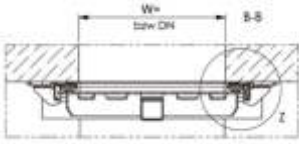
WAGU®-CL Penstock for anchor bolting

With round sill for grouting

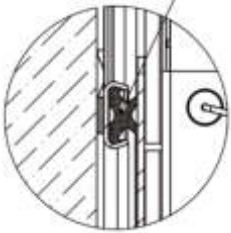
DN or W x H 150 x 150 up to 600 x 600 to 4 mWS.

Details

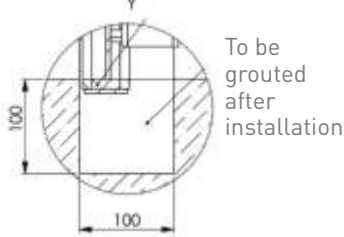
Section B-B



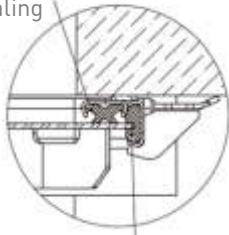
X Profile sealing



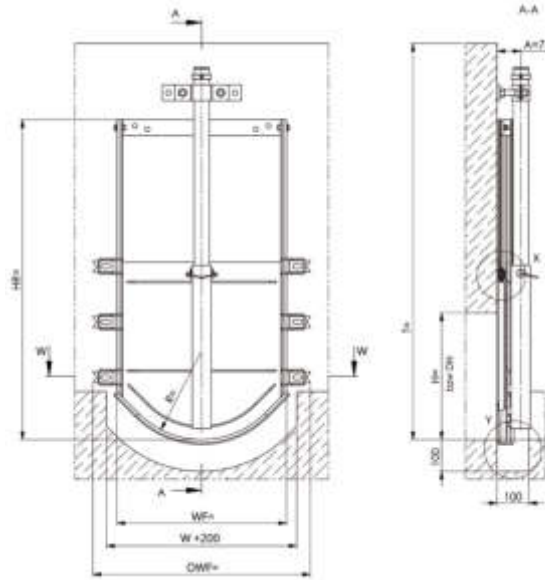
Y Sill sealing



Z Lateral profile sealing



Slide guide



Materials

Frame	Door	Sealing	Slide guide	Stem	Connecting parts
1.4301 □	1.4301 □	Neoprene	PET	1.4305	A4
1.4404 / 1.4571 □	1.4404 / 1.4571 □	Neoprene	PET	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

WAGU-CL Penstock for anchor bolting, with round sill for grouting.

Cat.-sheet 07.222, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Frame:	DN or W x H: mm
Door:	Installation depth T: mm ¹⁾
Sealing:	Operating pressure: bar
Slide guide:	Flow direction V: /R
Connecting parts:	

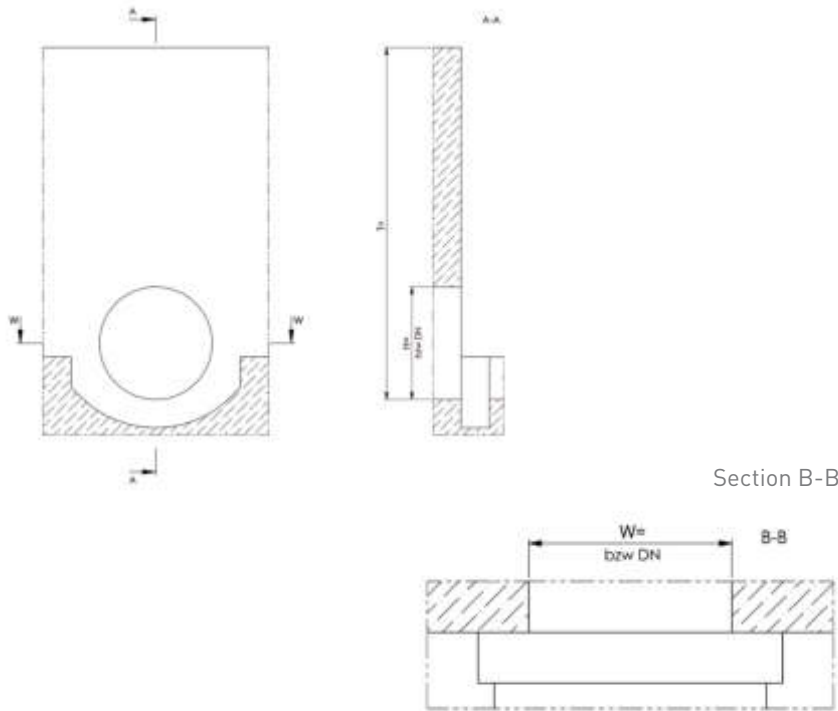
1) Measured from invert penstock to top edge structure.

* Please specify in the enquiry/order.

WAGU®-CL Penstock for anchor bolting

With round sill for grouting

Wall recess

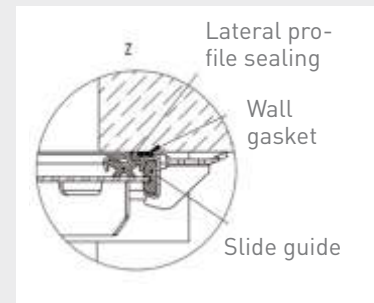
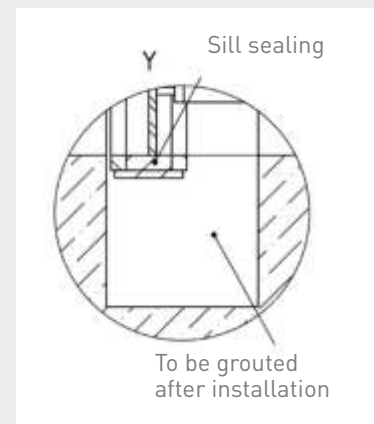


Installation Guide

- ➔ Apply wall gasket on the back of the frame.
- ➔ Place WAGU-CL penstock in the designated position and align in order that the penstock sill is flush with the invert.
- ➔ The holes in upper across support bracket serve for the first fixation.
- ➔ Place clamping claws at designated position.
- ➔ Compound anchor bolts are to be used for fastening.
- ➔ During tightening the fixation nuts WAGU-CL penstock must be free of distortion.
- ➔ Structure tolerance accordingly to DIN 18202 will be compensated by the wall gasket.
- ➔ Apply the mounting torque on the nuts crosswise and evenly.
- ➔ Before grouting, check WAGU-CL penstock for perfect (flawless) performance and tightness, as it is not possible to change the position of the frame after grouting.
- ➔ Install casing on sill and grout with grouting mortar.¹⁾ When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.

1) We recommend a cement-based grout.

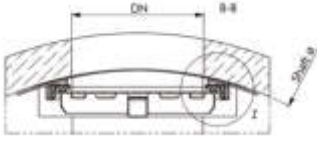
Details



DN (mm)	R (mm)
150	105
200	140
250	175
300	210
350	245
400	280
500	350
600	420

Details

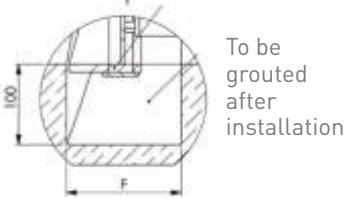
Section B-B



X Lateral profile sealing



Sill sealing



Lateral profile sealing



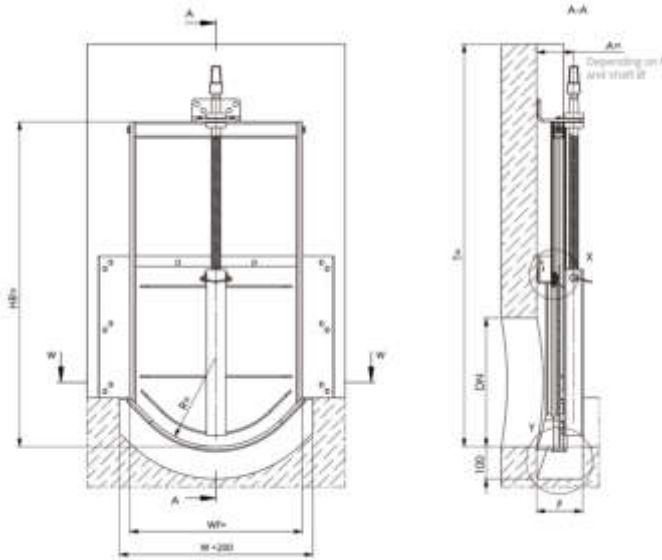
Slide guide



WAGU®-CL Penstock for anchor bolting in round shaft

With round sill for grouting

DN or W x H 150 x 150 up to 600 x 600 to 4 mWS.



Materials

Frame	Door	Sealing	Slide guide	Stem	Connecting parts
1.4301 □	1.4301 □	Neoprene	PET	1.4305	A4
1.4404 / 1.4571 □	1.4404 / 1.4571 □	Neoprene	PET	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

WAGU-CL Penstock for anchor bolting in round shaft, with round sill for grouting. Cat.-sheet 07.230, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Frame:	DN or W x H: mm
Door:	Installation depth T: mm ¹⁾
Sealing:	Operating pressure: bar
Slide guide:	Flow direction V: /R
Connecting parts:	

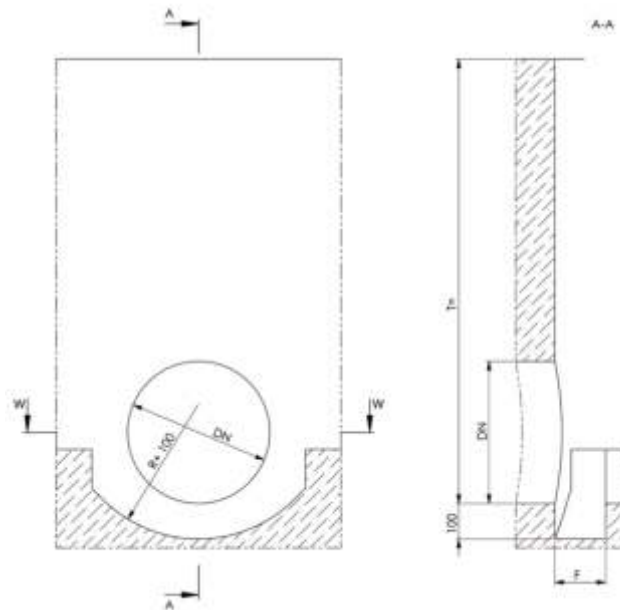
1) Measured from invert penstock to top edge structure.

* Please specify in the enquiry/ order.

WAGU®-CL Penstock for anchor bolting in round shaft

With round sill for grouting

Wall recess



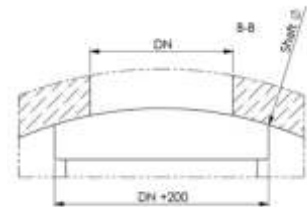
Installation Guide

- ➔ Apply wall gasket on the back of the frame.
- ➔ Place WAGU-CL penstock in the designated position and align in order that the penstock sill is flush with the invert.
- ➔ The holes in upper across support bracket serve for the first fixation.
- ➔ Compound anchor bolts are to be used for fastening.
- ➔ During tightening the fixation nuts WAGU-CL penstock must be free of distortion.
- ➔ Structure tolerance accordingly to DIN 18202 will be compensated by the wall gasket.
- ➔ Apply the mounting torque on the nuts crosswise and evenly.
- ➔ Before grouting, check WAGU-CL penstock for perfect (flawless) performance and tightness, as it is not possible to change the position of the frame after grouting.
- ➔ Install casing on sill and grout with grouting mortar.¹⁾ When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.

1) We recommend a cement-based grout.

Details

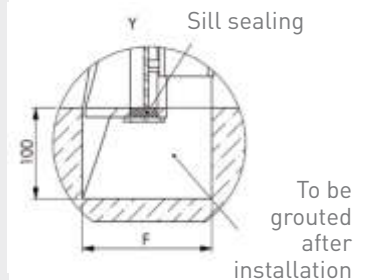
Section B-B



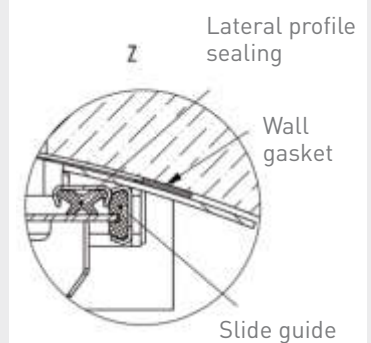
X



Y



Z



DN (mm)	R (mm)
150	105
200	140
250	175
300	210
350	245
400	280
500	350
600	420

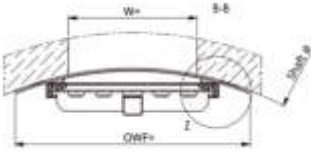
WAGU®-CL Penstock for anchor bolting in round shaft

With straight sill for anchor bolting

DN or W x H 150 x 150 up to 600 x 600 to 4 mWS.

Details

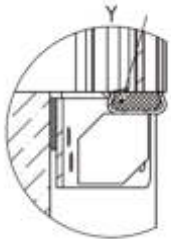
Section B-B



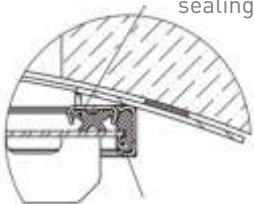
X Profile sealing



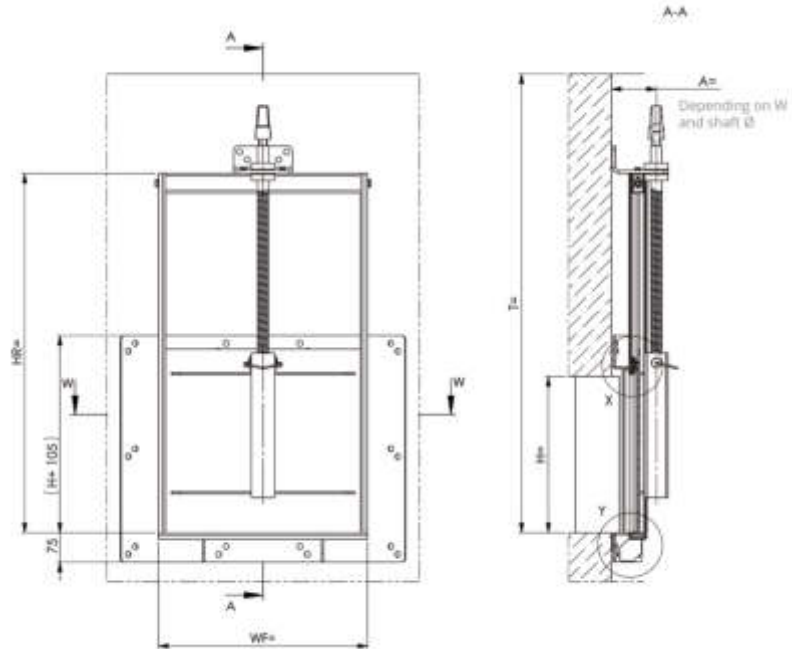
Sill sealing



Z Lateral profile sealing



Slide guide



Materials

Frame	Door	Sealing	Slide guide	Stem	Connecting parts
1.4301 □	1.4301 □	Neoprene	PET	1.4305	A4
1.4404 / 1.4571 □	1.4404 / 1.4571 □	Neoprene	PET	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

WAGU-CL Penstock for anchor bolting in round shaft, with straight sill for anchor bolting. Cat.-sheet 07.232, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Frame:	DN or W x H: mm
Door:	Installation depth T: mm ¹⁾
Sealing:	Operating pressure: bar
Slide guide:	Flow direction V: /R
Connecting parts:	

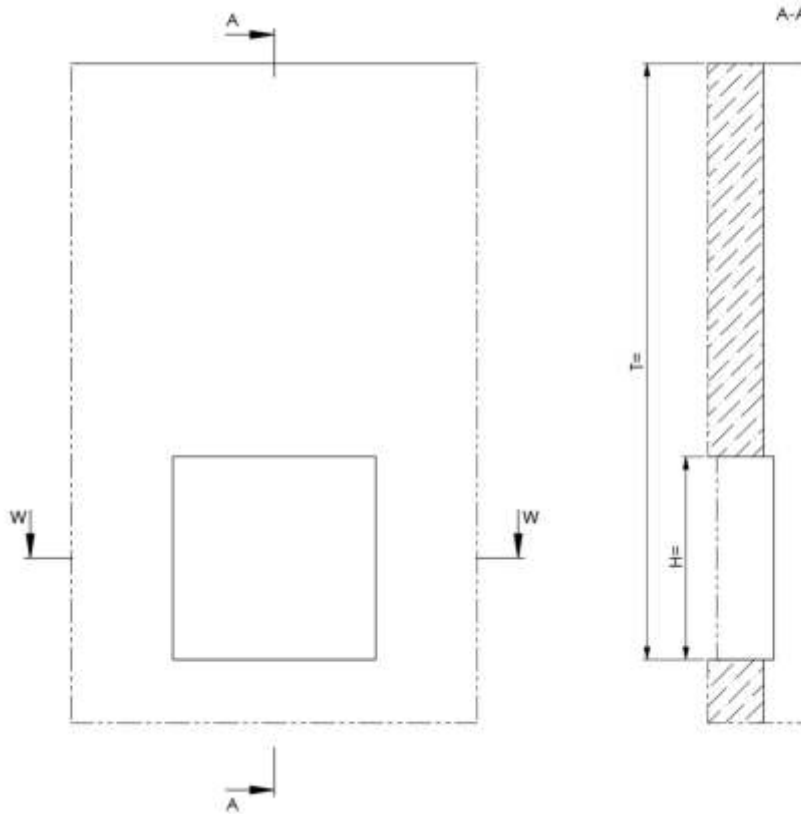
1) Measured from invert penstock to top edge structure.

* Please specify in the enquiry/ order.

WAGU®-CL Penstock for anchor bolting in round shaft

With straight sill for anchor bolting

Wall recess

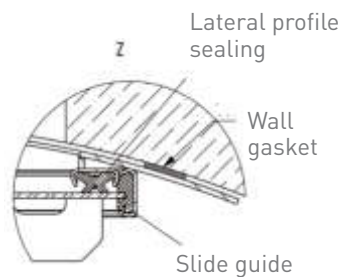
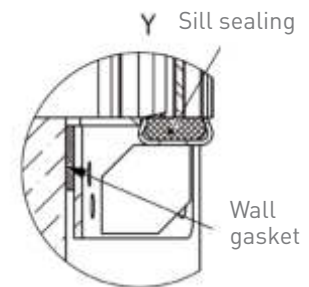
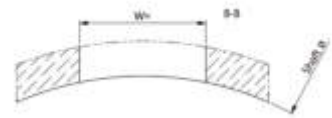


Installation Guide

- Apply wall gasket on the back of the frame.
- Place WAGU-CL penstock in the designated position and align in order that the penstock sill is flush with the invert.
- The holes in upper across support bracket serve for the first fixation.
- Compound anchor bolts are to be used for fastening.
- During tightening the fixation nuts WAGU-CL penstock must be free of distortion.
- Structure tolerance accordingly to DIN 18202 will be compensated by the wall gasket.
- Apply the mounting torque on the nuts crosswise and evenly.

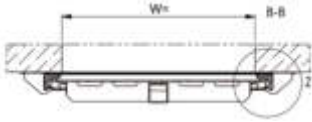
Details

Section B-B

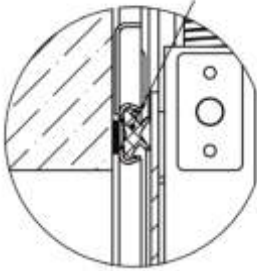


Details

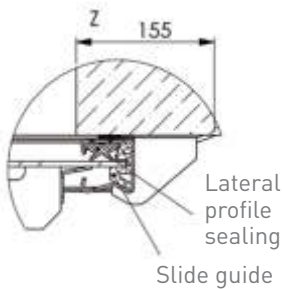
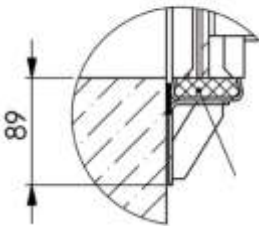
Section B-B



X Profile sealing



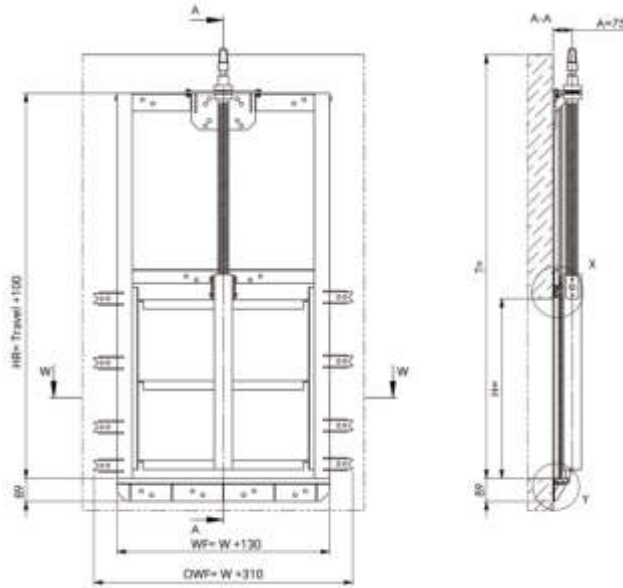
Y



WAGU®-CL Penstock for anchor bolting

With straight sill for anchor bolting

DN or W x H 700 x 700 up to 1200 x 1200 to 4 mWS.



Materials

Frame	Door	Sealing	Slide guide	Stem	Connecting parts
1.4301 □	1.4301 □	Neoprene	PET	1.4305	A4
1.4404 / 1.4571 □	1.4404 / 1.4571 □	Neoprene	PET	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

WAGU-CL Penstock for anchor bolting, with straight sill for anchor bolting.
Cat.-sheet 07.240, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Frame:	DN or W x H: mm
Door:	Installation depth T: mm ¹⁾
Sealing:	Operating pressure: bar
Slide guide:	Flow direction V: /R
Connecting parts:	

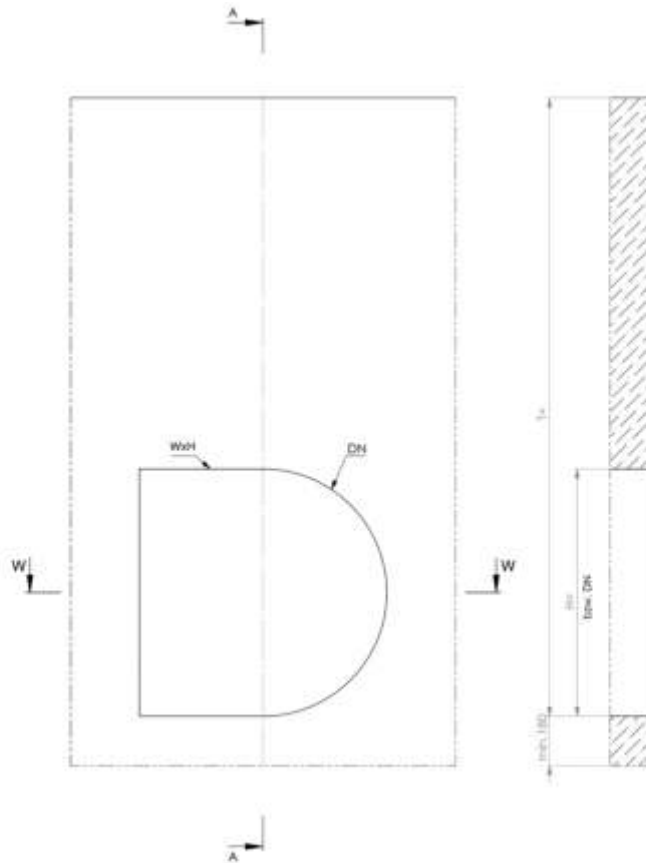
1) Measured from invert penstock to top edge structure.

* Please specify in the enquiry/ order.

WAGU®-CL Penstock for anchor bolting

With straight sill for anchor bolting

Wall recess



Installation Guide

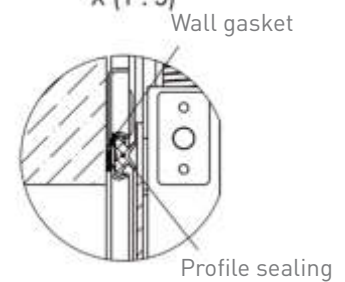
- ➔ Apply wall gasket on the back of the frame.
- ➔ Place WAGU-CL penstock in the designated position and align in order that the penstock sill is flush with the invert.
- ➔ The holes in upper across support bracket serve for the first fixation.
- ➔ Place clamping claws at designated position.
- ➔ Compound anchor bolts are to be used for fastening.
- ➔ During tightening the fixation nuts WAGU-CL penstock must be free of distortion.
- ➔ Structure tolerance accordingly to DIN 18202 will be compensated by the wall gasket.
- ➔ Apply the mounting torque on the nuts crosswise and evenly.

Details

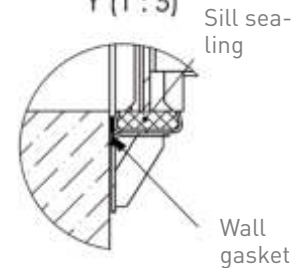
Section B-B



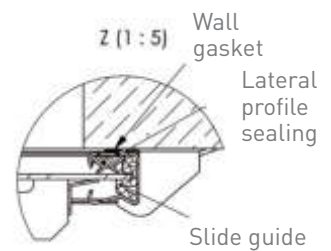
X (1 : 5)



Y (1 : 5)



Z (1 : 5)



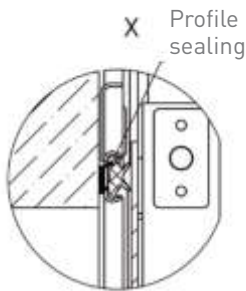
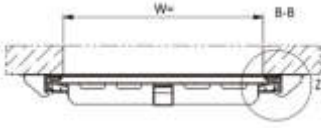
WAGU®-CL Penstock for anchor bolting

With straight sill for anchor bolting

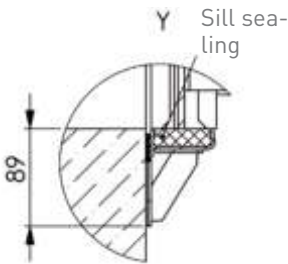
DN or W x H 700 x 700 up to 1200 x 1200 to 4 mWS.

Details

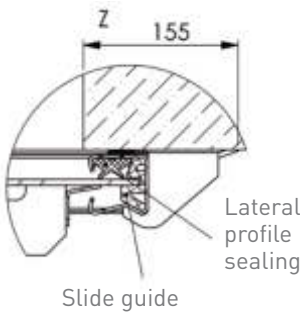
Section B-B



X Profile sealing

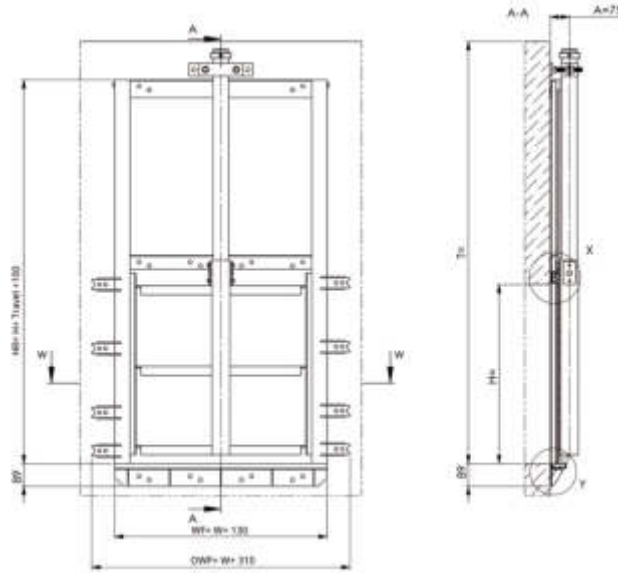


Y Sill sealing



Slide guide

Lateral profile sealing



Materials

Frame	Door	Sealing	Slide guide	Stem	Connecting parts
1.4301 □	1.4301 □	Neoprene	PET	1.4305	A4
1.4404 / 1.4571 □	1.4404 / 1.4571 □	Neoprene	PET	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

WAGU-CL Penstock for anchor bolting, with straight sill for anchor bolting.

Cat.-sheet 07.242, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Frame:	DN or W x H: mm
Door:	Installation depth T: mm ¹⁾
Sealing:	Operating pressure: bar
Slide guide:	Flow direction V: /R
Connecting parts:	

1) Measured from invert penstock to top edge structure.

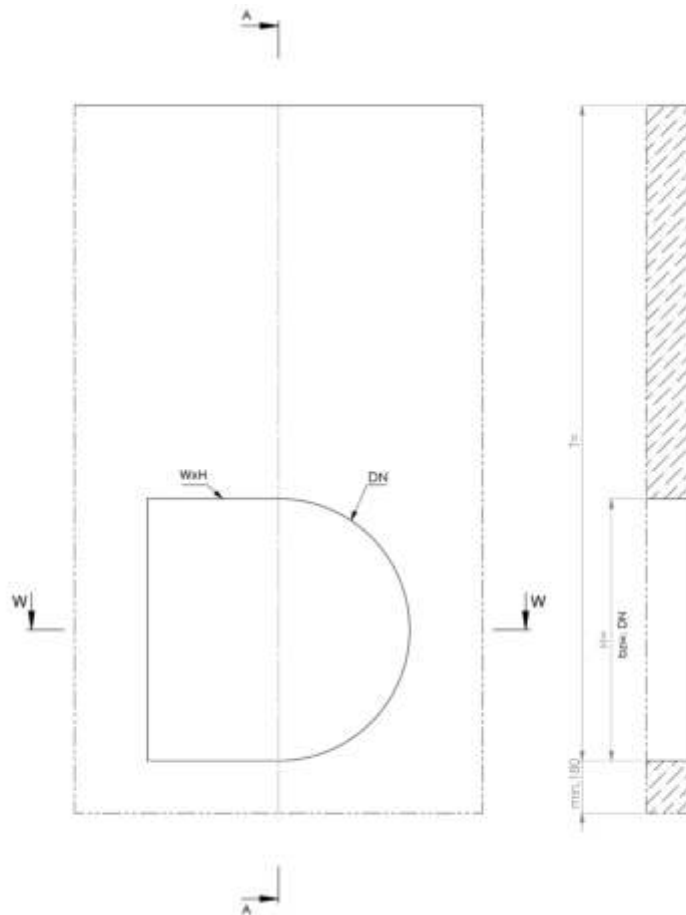
* Please specify in the enquiry/ order.



WAGU®-CL Penstock for anchor bolting

With straight sill for anchor bolting

Wall recess



Installation Guide

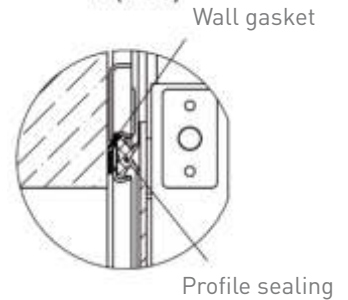
- ➔ Apply wall gasket on the back of the frame.
- ➔ Place WAGU-CL penstock in the designated position and align in order that the penstock sill is flush with the invert.
- ➔ The holes in upper across support bracket serve for the first fixation.
- ➔ Place clamping claws at designated position.
- ➔ Compound anchor bolts are to be used for fastening.
- ➔ During tightening the fixation nuts WAGU-CL penstock must be free of distortion.
- ➔ Structure tolerance accordingly to DIN 18202 will be compensated by the wall gasket.
- ➔ Apply the mounting torque on the nuts crosswise and evenly.

Details

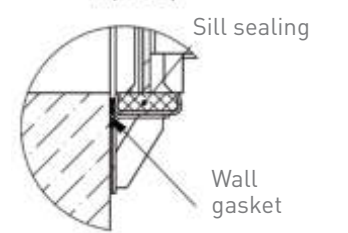
Section B-B



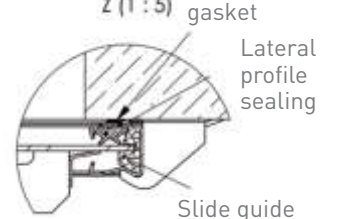
X (1 : 5)



Y (1 : 5)



Z (1 : 5)



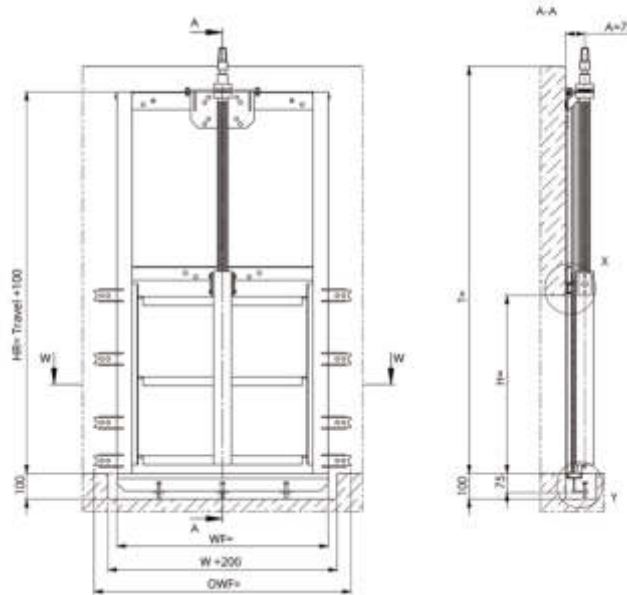
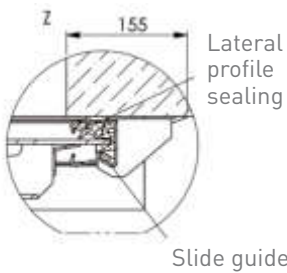
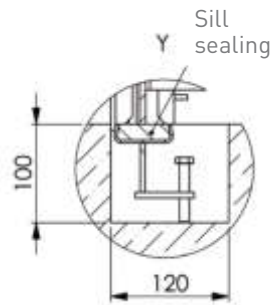
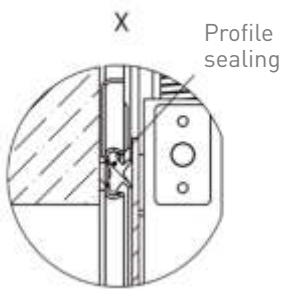
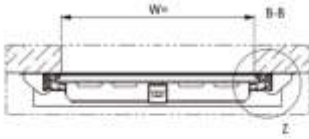
WAGU®-CL Penstock for anchor bolting

With straight sill for grouting

DN or W x H 700 x 700 up to 1200 x 1200 to 4 mWS.

Details

Section B-B



Materials

Frame	Door	Sealing	Slide guide	Stem	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	PET	1.4305	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	PET	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

WAGU-CL Penstock for anchor bolting, with straight sill for grouting.

Cat.-sheet 07.244, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Frame:	DN or W x H: mm
Door:	Installation depth T: mm ¹⁾
Sealing:	Operating pressure: bar
Slide guide:	Flow direction V: /R
Connecting parts:	

1) Measured from invert penstock to top edge structure.

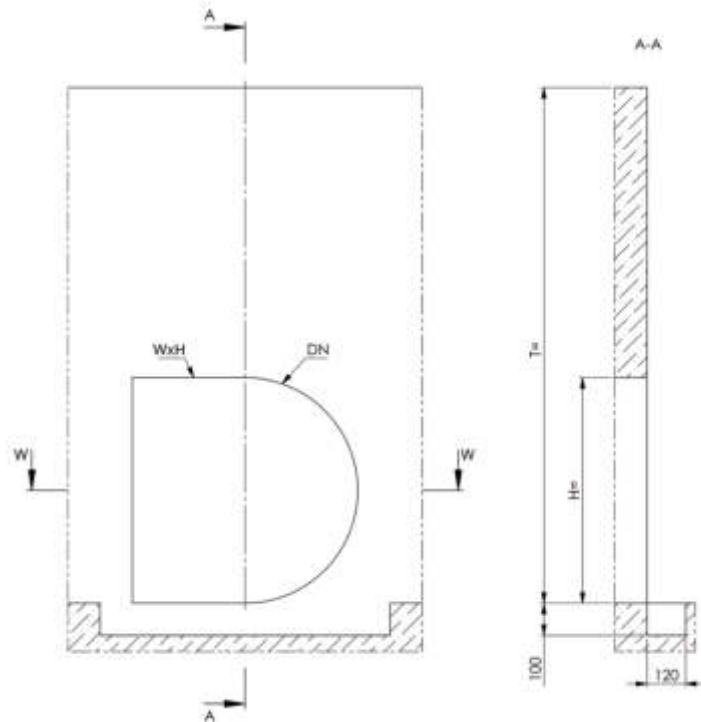
* Please specify in the enquiry/ order.



WAGU®-CL Penstock for anchor bolting

With straight sill for grouting

Wall recess

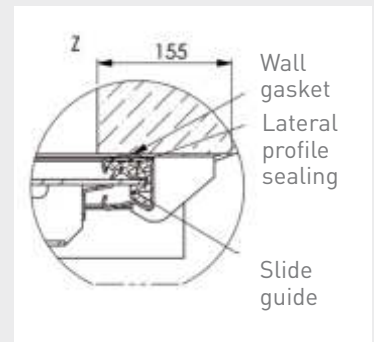
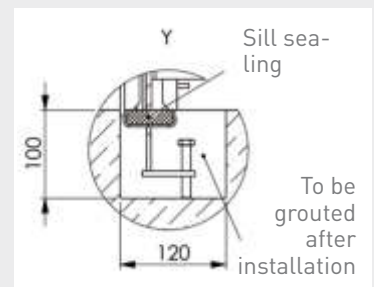
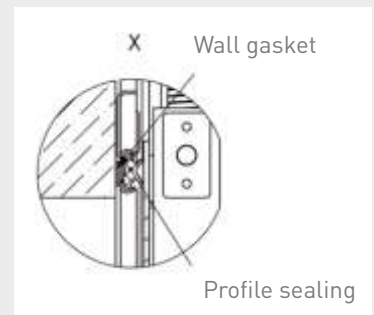
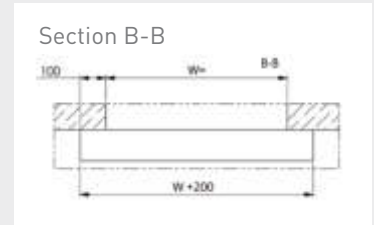


Installation Guide

- Apply wall gasket on the back of the frame.
- Place WAGU-CL penstock in the designated position and align in order that the penstock sill is flush with the invert.
- The holes in upper across support bracket serve for the first fixation.
- Place clamping claws at designated position.
- Compound anchor bolts are to be used for fastening.
- During tightening the fixation nuts WAGU-CL penstock must be free of distortion.
- Structure tolerance accordingly to DIN 18202 will be compensated by the wall gasket.
- Apply the mounting torque on the nuts crosswise and evenly.
- Before grouting, check WAGU-CL penstock for perfect (flawless) performance and tightness, as it is not possible to change the position of the frame after grouting.
- Install casing on sill and grout with grouting mortar.¹⁾ When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.

¹⁾ We recommend a cement-based grout.

Details



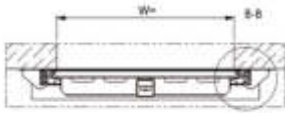
WAGU®-CL Penstock for anchor bolting

With straight sill for grouting

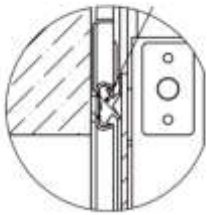
DN or W x H 700 x 700 up to 1200 x 1200 to 4 mWS.

Details

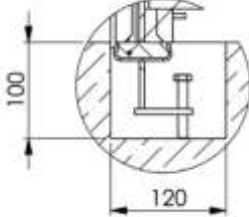
Section B-B



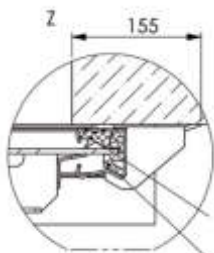
X Profile sealing



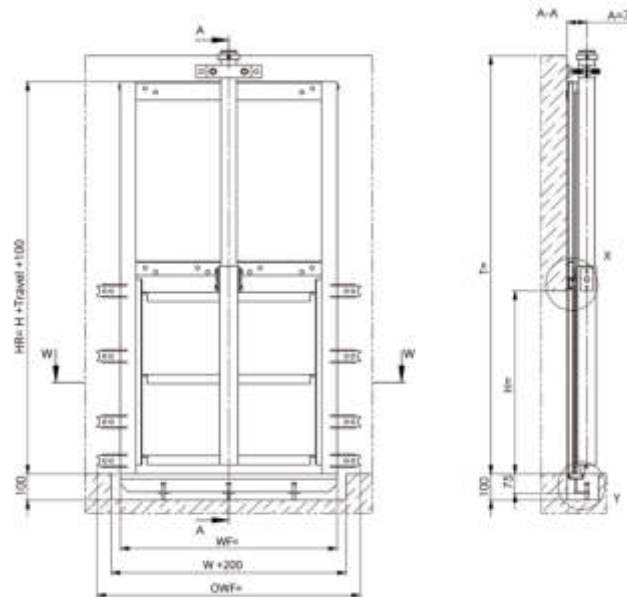
Y Sill sealing



Lateral profile sealing



Slide guide



Materials

Frame	Door	Sealing	Slide guide	Stem	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	PET	1.4305	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	PET	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

WAGU-CL Penstock for anchor bolting, with straight sill for grouting.

Cat.-sheet 07.246, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Frame:	DN or W x H: mm
Door:	Installation depth T: mm ¹⁾
Sealing:	Operating pressure: bar
Slide guide:	Flow direction V: /R
Connecting parts:	

1) Measured from invert penstock to top edge structure.

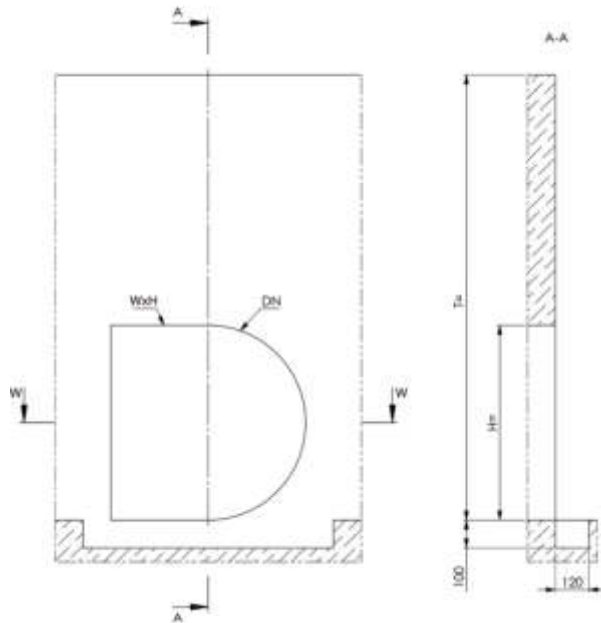
* Please specify in the enquiry/ order.



WAGU®-CL Penstock for anchor bolting

With straight sill for grouting

Wall recess



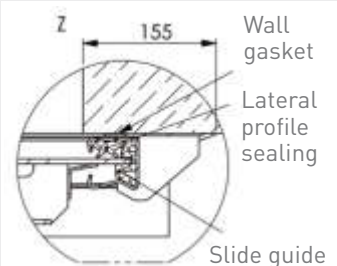
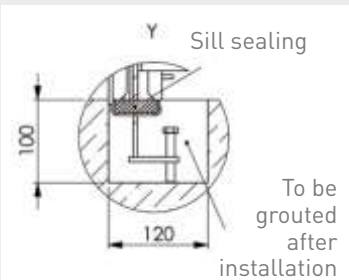
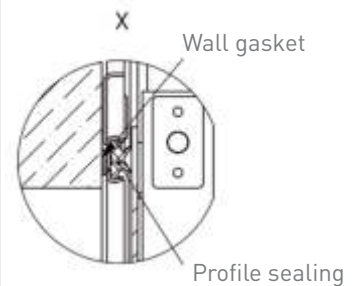
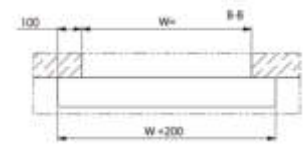
Installation Guide

- ➔ Apply wall gasket on the back of the frame.
- ➔ Place WAGU-CL penstock in the designated position and align in order that the penstock sill is flush with the invert.
- ➔ The holes in upper across support bracket serve for the first fixation.
- ➔ Place clamping claws at designated position.
- ➔ Compound anchor bolts are to be used for fastening.
- ➔ During tightening the fixation nuts WAGU-CL penstock must be free of distortion.
- ➔ Structure tolerance accordingly to DIN 18202 will be compensated by the wall gasket.
- ➔ Apply the mounting torque on the nuts crosswise and evenly.
- ➔ Before grouting, check WAGU-CL penstock for perfect (flawless) performance and tightness, as it is not possible to change the position of the frame after grouting.
- ➔ Install casing on sill and grout with grouting mortar.¹⁾ When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.

1) We recommend a cement-based grout.

Details

Section B-B



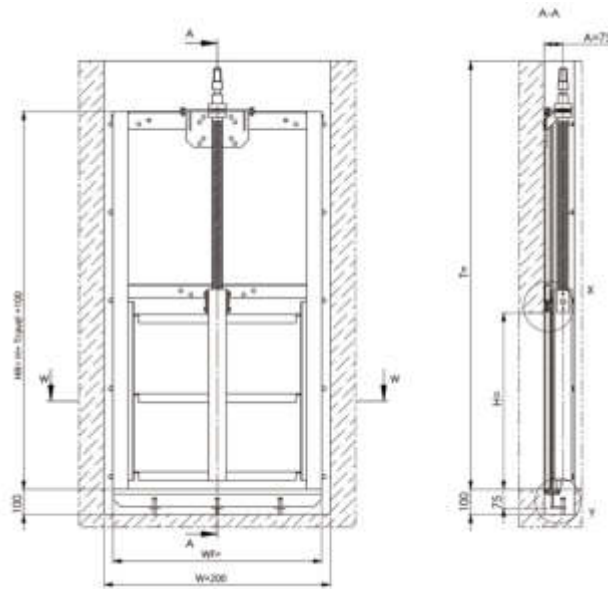
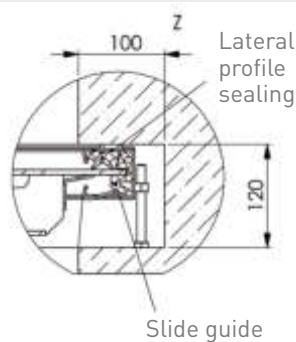
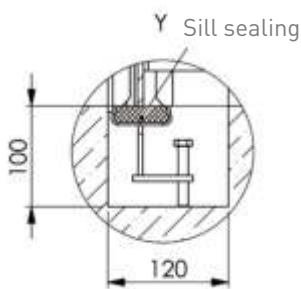
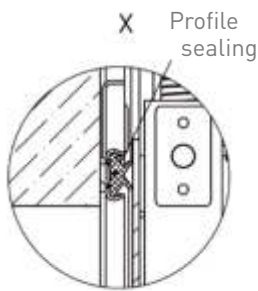
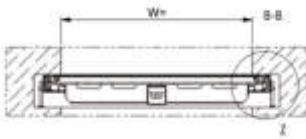
WAGU®-CL Penstock for grouting

With straight sill for grouting

DN or W x H 700 x 700 up to 1200 x 1200 to 4 mWS.

Details

Section B-B



Materials

Frame	Door	Sealing	Slide guide	Stem	Connecting parts
1.4301 □	1.4301 □	Neoprene	PET	1.4305	A4
1.4404 / 1.4571 □	1.4404 / 1.4571 □	Neoprene	PET	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

WAGU-CL Penstock for grouting, with straight sill for grouting. Cat.-sheet 07.248, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Frame:	DN or W x H: mm
Door:	Installation depth T: mm ¹⁾
Sealing:	Operating pressure: bar
Slide guide:	Flow direction V: /R
Connecting parts:	

1) Measured from invert penstock to top edge structure.

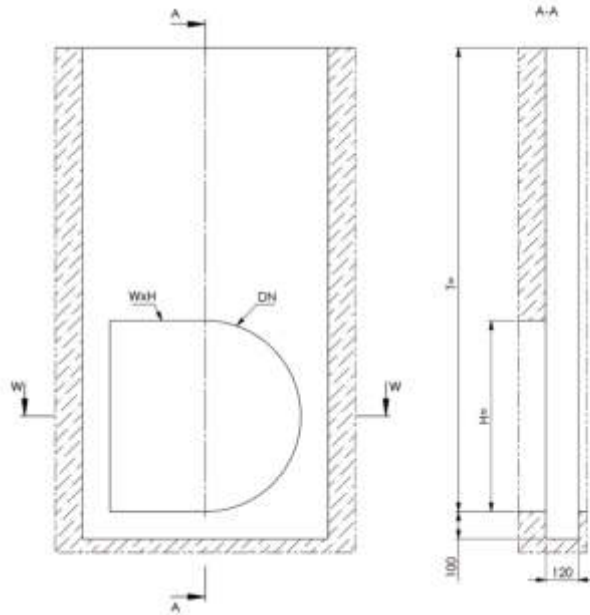
* Please specify in the enquiry/ order.



WAGU®-CL Penstock for grouting

With straight sill for grouting

Wall recess



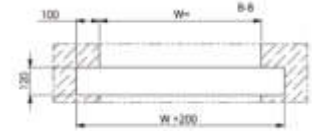
Installation Guide

- ➔ Apply wall gasket on the back of the frame.
- ➔ Place WAGU-CL penstock in the designated position and align in order that the penstock sill is flush with the invert.
- ➔ The holes in upper across support bracket serve for the first fixation.
- ➔ Compound anchor bolts are to be used for fastening.
- ➔ During tightening the fixation nuts WAGU-CL penstock must be free of distortion.
- ➔ Structure tolerance accordingly to DIN 18202 will be compensated by the wall gasket.
- ➔ Apply the mounting torque on the nuts crosswise and evenly.
- ➔ Before grouting, check WAGU-CL penstock for perfect (flawless) performance and tightness, as it is not possible to change the position of the frame after grouting.
- ➔ Install casing on sill and grout with grouting mortar.¹⁾ When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.

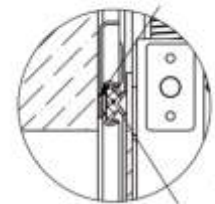
¹⁾ We recommend a cement-based grout.

Details

Section B-B

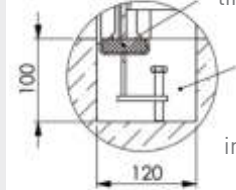


X Wall gasket



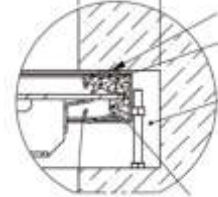
Profile sealing

Y Sill sealing



To be grouted after installation

z Wall gasket



Lateral profile sealing
To be grouted after installation

Slide guide

WAGU®-CL Penstock for grouting

With straight sill for grouting

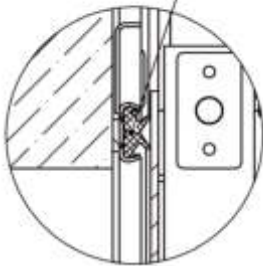
DN or W x H 700 x 700 up to 1200 x 1200 to 4 mWS.

Details

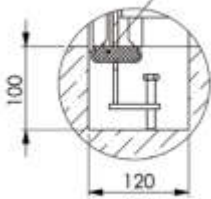
Section B-B



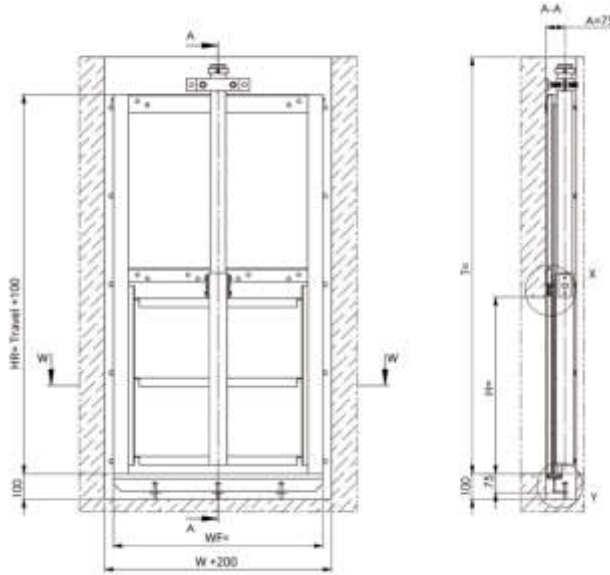
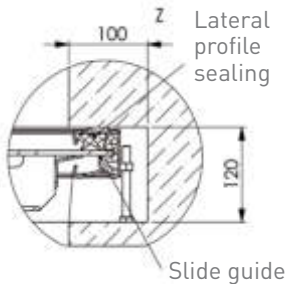
X Profile sealing



γ Sill sealing



z Lateral profile sealing



Materials

Frame	Door	Sealing	Slide guide	Stem	Connecting parts
1.4301 □	1.4301 □	Neoprene	PET	1.4305	A4
1.4404 / 1.4571 □	1.4404 / 1.4571 □	Neoprene	PET	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

WAGU-CL Penstock for grouting, with straight sill for grouting. Cat.-sheet 07.250, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Frame:	DN or W x H: mm
Door:	Installation depth T: mm ¹⁾
Sealing:	Operating pressure: bar
Slide guide:	Flow direction V: /R
Connecting parts:	

1) Measured from invert penstock to top edge structure.

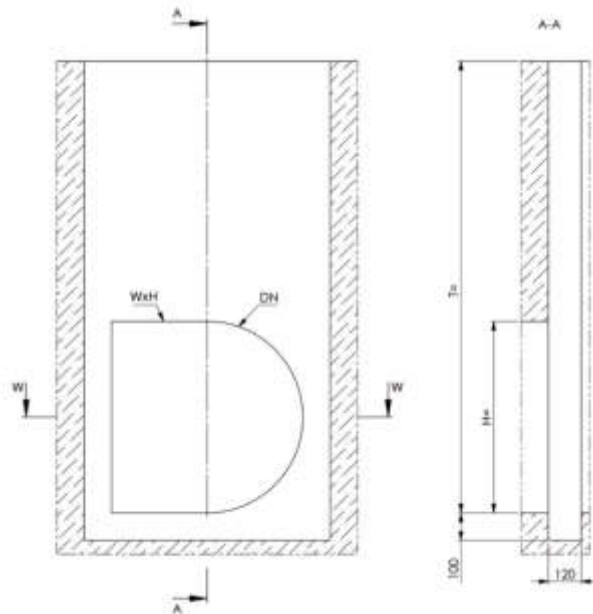
* Please specify in the enquiry/ order.



WAGU®-CL Penstock for grouting

With straight sill for grouting

Wall recess



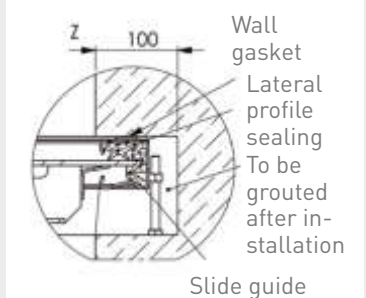
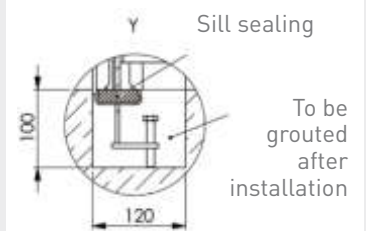
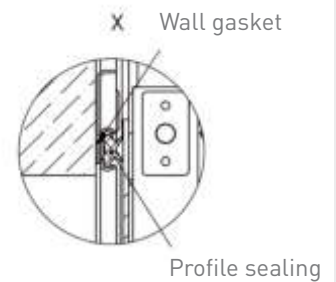
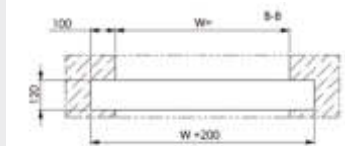
Installation Guide

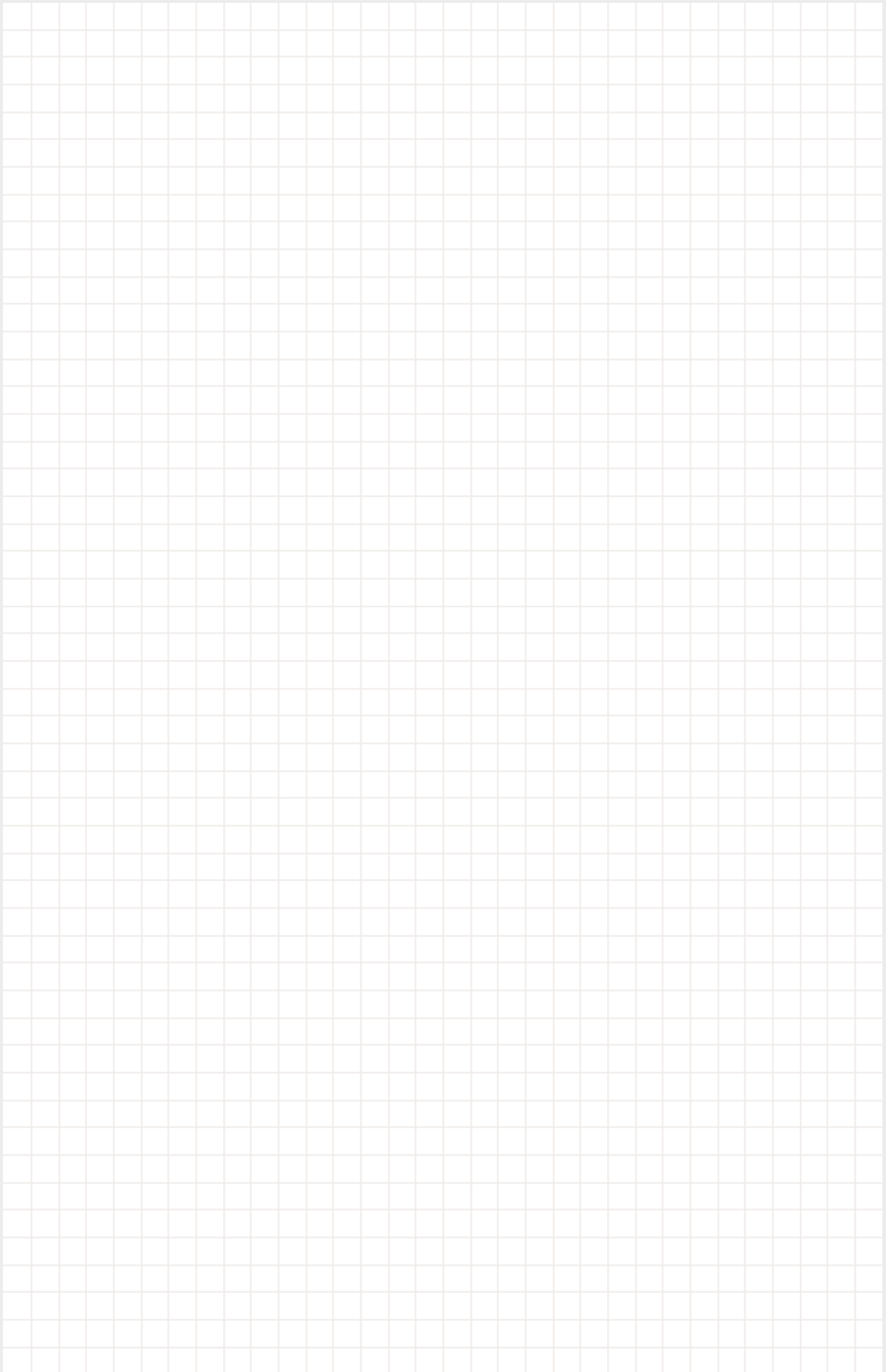
- ➔ Apply wall gasket on the back of the frame.
- ➔ Place WAGU-CL penstock in the designated position and align in order that the penstock sill is flush with the invert.
- ➔ The holes in upper across support bracket serve for the first fixation.
- ➔ Compound anchor bolts are to be used for fastening.
- ➔ During tightening the fixation nuts WAGU-CL penstock must be free of distortion.
- ➔ Structure tolerance accordingly to DIN 18202 will be compensated by the wall gasket.
- ➔ Apply the mounting torque on the nuts crosswise and evenly.
- ➔ Before grouting, check WAGU-CL penstock for perfect (flawless) performance and tightness, as it is not possible to change the position of the frame after grouting.
- ➔ Install casing on sill and grout with grouting mortar.¹⁾ When grouting, mortar must not touch the sealing or door, if necessary wash off carefully before hardening.

1) We recommend a cement-based grout.

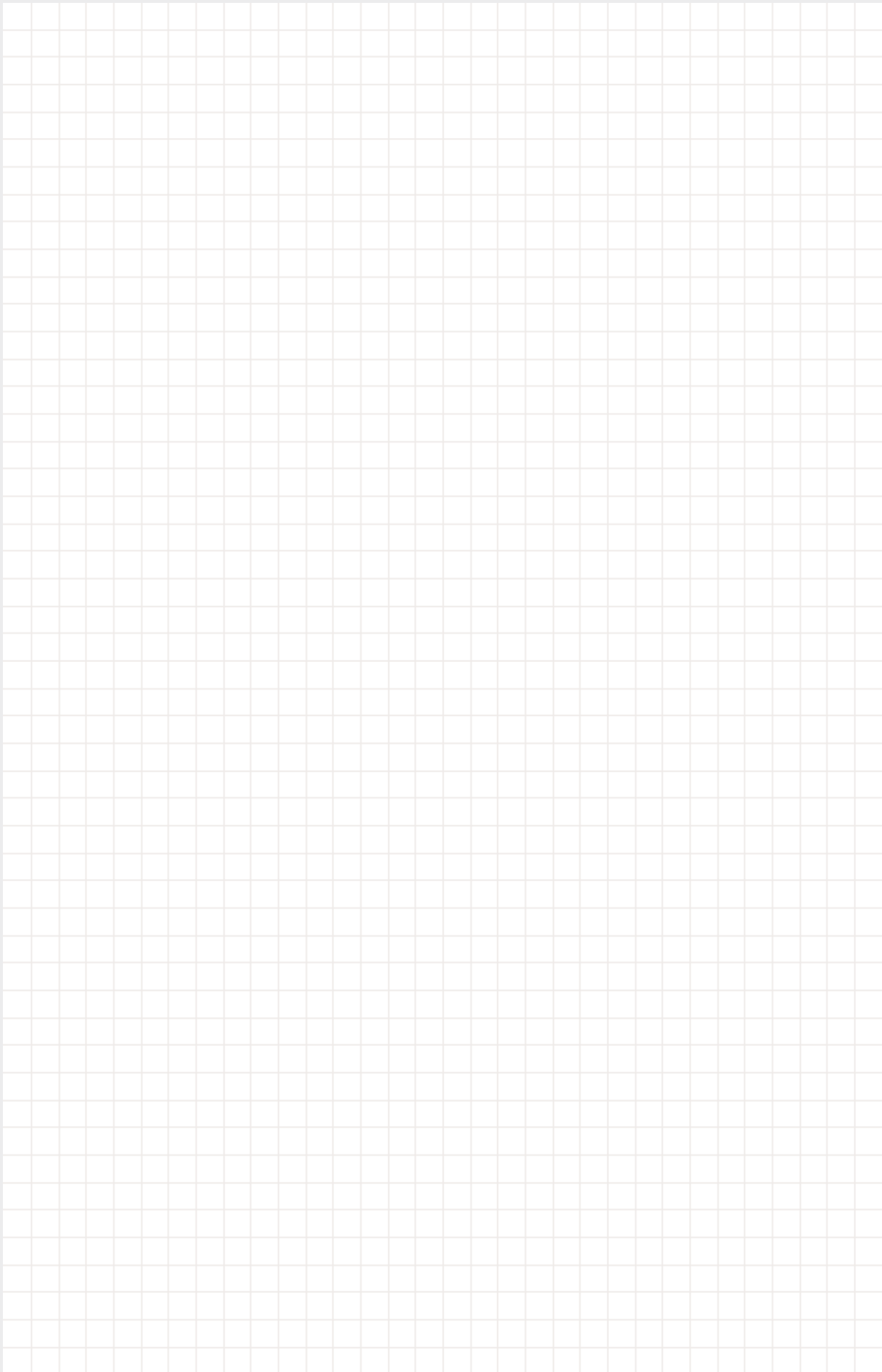
Details

Section B-B



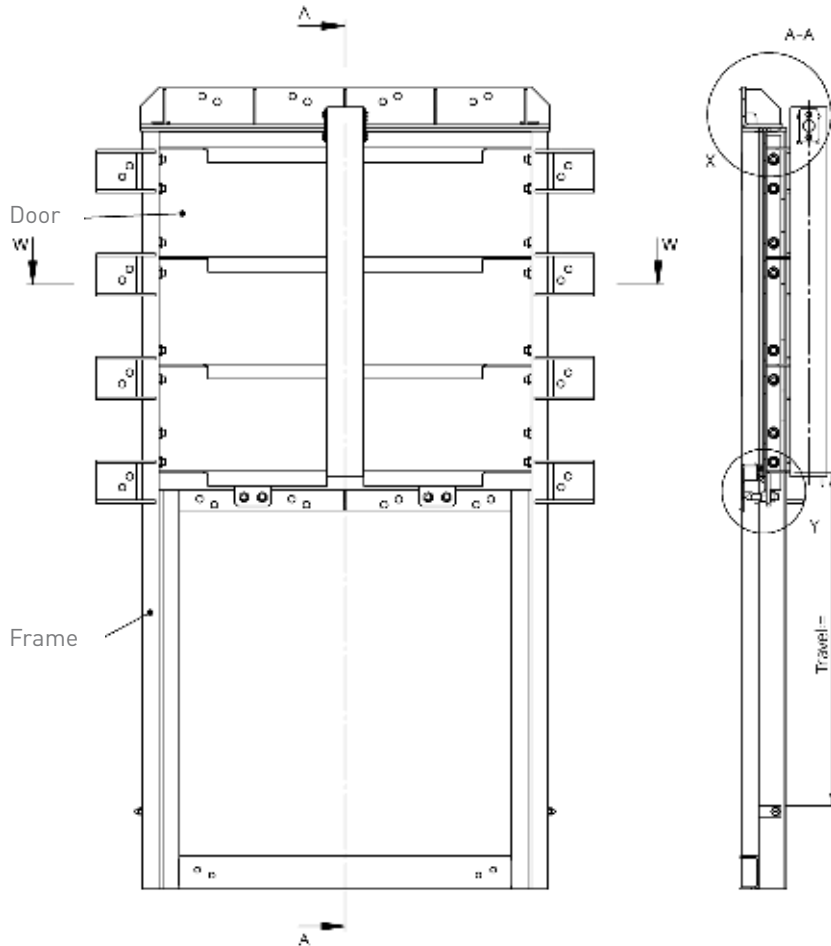


01	WAGU®-Handstops	01
02	WAGU®-Channel Penstocks (Leightweight)	02
03	WAGU®-Channel Penstocks	03
04	WAGU®-Stoplogs	04
05	WAGU®-Stop Plates	05
06	WAGU®-Weir Type Channel Penstocks (3 Facings)	06
07	WAGU®-Slide Penstocks	07
08		08
09		09
10	WAGU®-Weir Type Penstocks (4 Facings)	10
11		11
12	WAGU®-Flap Valves	12
13	WAGU®-Tidal Flaps	13
14	WAGU®-Tilting Flap Spillways	14
15		15
16		16
17	WAGU®-Isolating and Flushing Valves	17
18	WAGU®-Reversing Flaps	18
19		19
20	WAGU®-Telescopic Valves	20
21	WAGU®-Basin Inlets	21
22	WAGU®-Operating Gears	22



WAGU® -Weir type penstock GK

4 facings, for on-seating or off-seating pressure, for discharge and level control, also suitable as throttle and flow control penstock, for mounting to inlets or outlets of chambers or basins, for anchor bolting to outlets of basins or channels.



Design

- ➔ For anchor bolting with straight sill
- ➔ Single-stem type
- ➔ Double-stem type
- ➔ On request, design for grouting in lateral recess with straight sill

Design Features

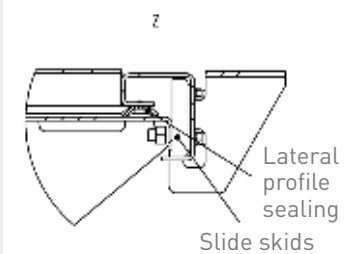
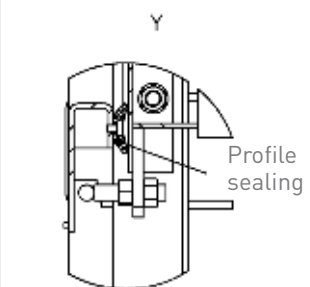
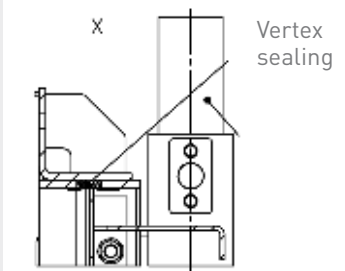
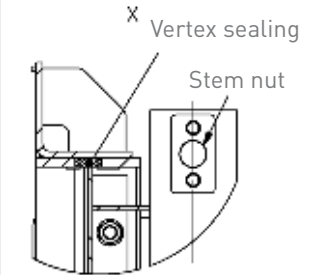
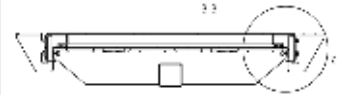
- ➔ Welded frame of G-profile with bolted and clamped profile sealings at frame and chambered vertex sealing
- ➔ Door with reinforcing ribs and screw slide skirts of plastic material and mounting for stem nut or pushing rod

Dimensions

- ➔ W x H 200 x 200 up to very large dimensions

Details

Section B-B

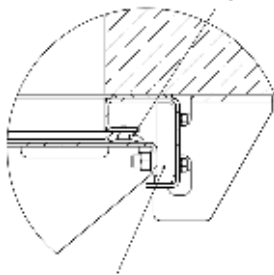


Details

Section B-B

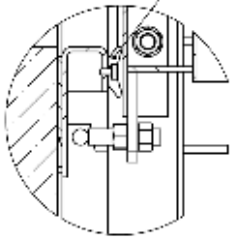


Lateral profile sealing

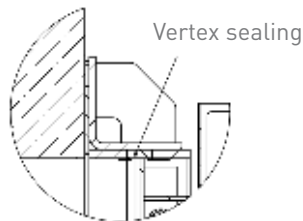


Slide skids

Profile sealing



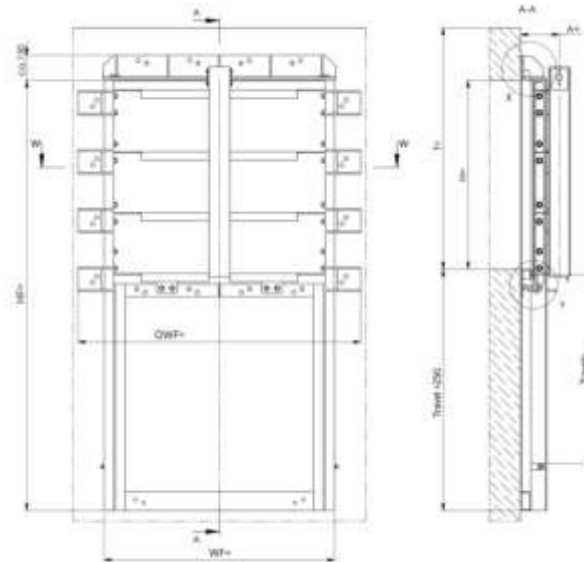
x



WAGU®-Weir type penstock GK for anchor bolting

With straight sill for anchor bolting

W x H 200 x 200 to 3000 x 3000



Materials

Frame	Door	Sealing	Slide skids	Stem	Connecting parts
1.4301 □	1.4301 □	EPDM / Neoprene	POM	1.4305	A4
1.4404 / 1.4571 □	1.4404 / 1.4571 □	EPDM / Neoprene	POM	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Weir type penstock GK for anchor bolting with straight sill for anchor bolting.

Cat.-sheet 10.43, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Frame:	W x H: mm
Door:	Installation depth T: mm ¹⁾
Sealing:	Operating pressure: bar
Slide skids:	Flow direction V: /R
Connecting parts:	

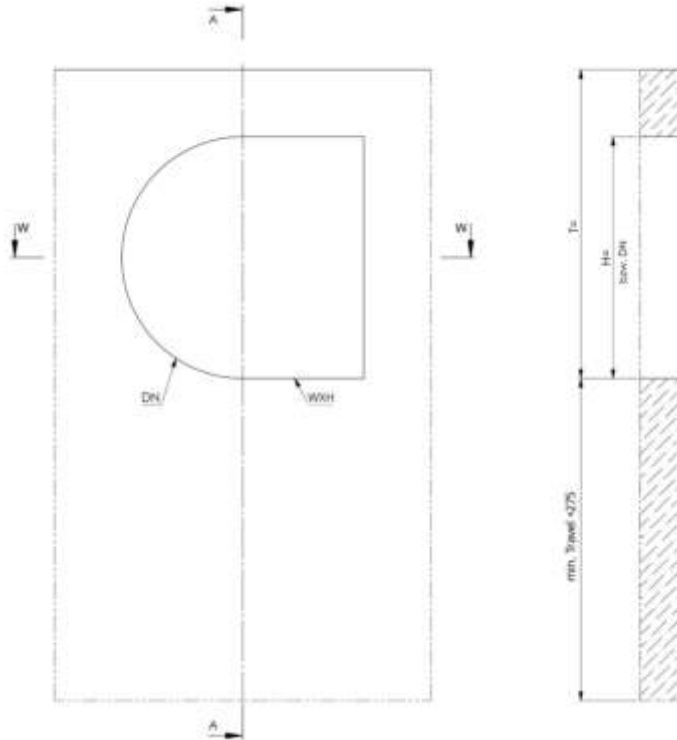
¹⁾ Measured from invert penstock to top edge structure.

* Please specify in the enquiry/ order.

WAGU® - Weir type penstock GK for anchor bolting

With straight sill for anchor bolting

Wall recess



Installation Guide

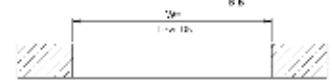
- ➔ Place frame with door in the designated position and align.
- ➔ For anchor bolting, holes are double and diagonal displaced in the frame and the support brackets.
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling.
- ➔ The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Compound anchor bolts are to be used for fastening.

Sealing frame/wall

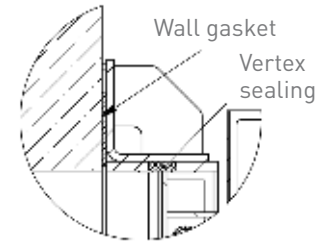
- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the frame. The frame at the vertex sealing must be sealed with wall gasket.
- ➔ Fastening material and wall gasket are included.
- ➔ The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.

Details

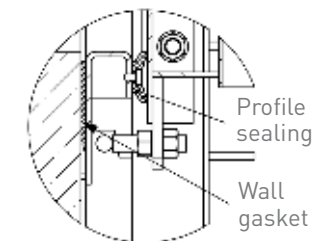
Section B-B



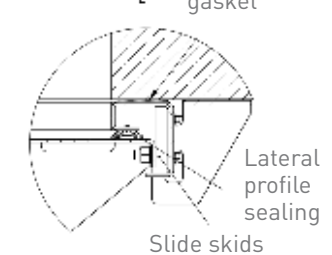
X



Y



Z

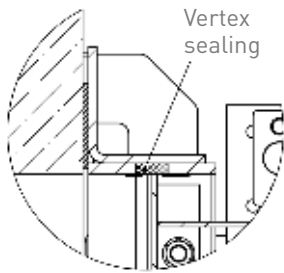


Details

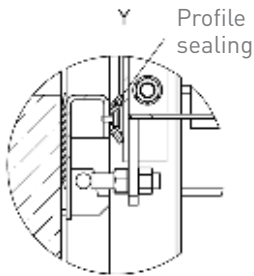
Section B-B



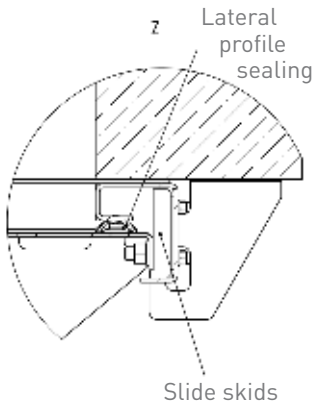
X



Y



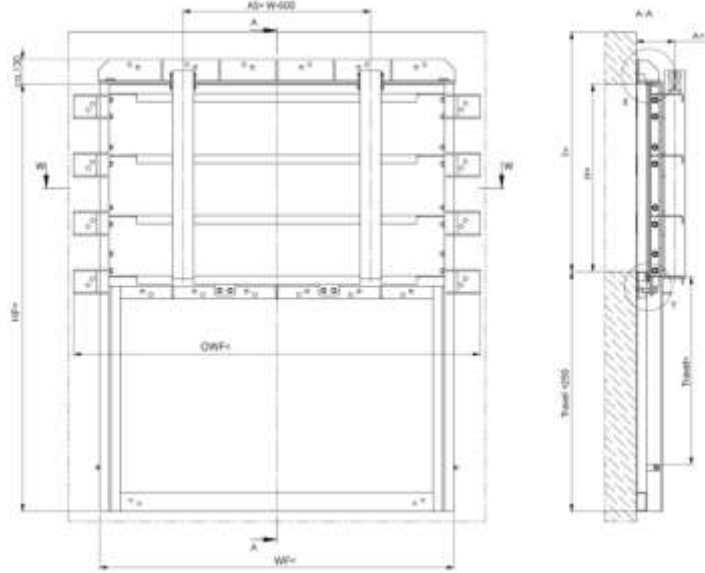
Z



WAGU®-Weir type penstock GK for anchor bolting

With straight sill for anchor bolting

W x H 2000 x 2000 up to 3000 x 3000



Materials

Frame	Door	Sealing	Slide skirts	Stem	Connecting parts
1.4301 □	1.4301 □	EPDM / Neoprene	POM	1.4305	A4
1.4404 / 1.4571 □	1.4404 / 1.4571 □	EPDM / Neoprene	POM	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Weir type penstock GK for anchor bolting with straight sill for anchor bolting.

Cat.-sheet 10.45, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Frame:	W x H: mm
Door:	Installation depth T: mm ¹⁾
Sealing:	Operating pressure: bar
Slide skirts:	Flow direction V: /R
Connecting parts:	

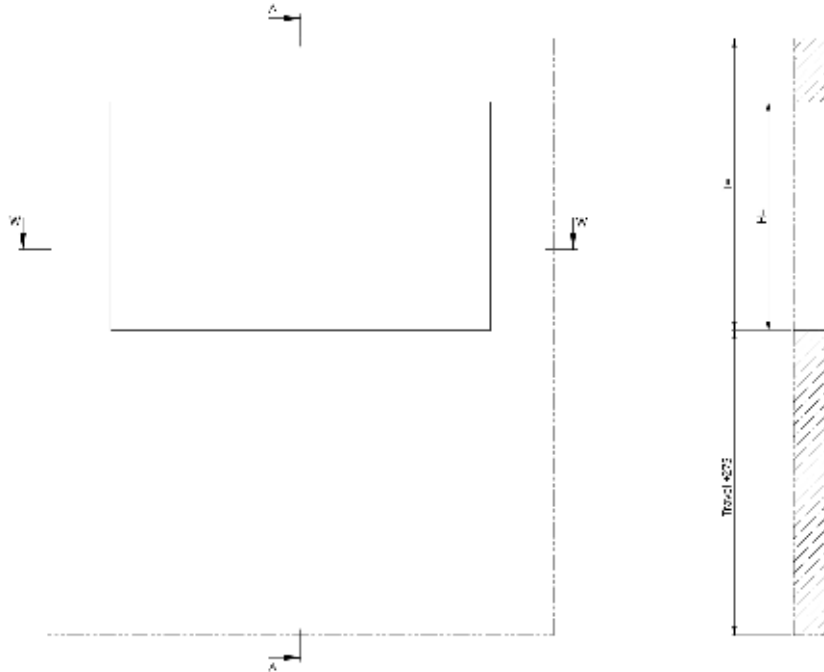
1) Measured from invert penstock to top edge structure.

* Please specify in the enquiry/ order.

WAGU® - Weir type penstock GK for anchor bolting

With straight sill for anchor bolting

Wall recess



Installation Guide

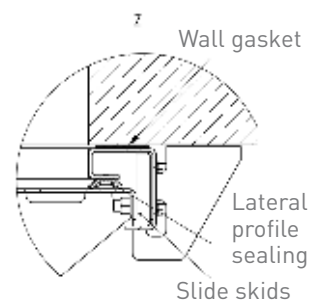
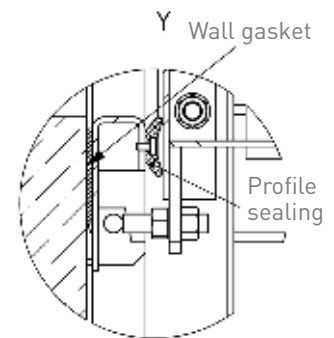
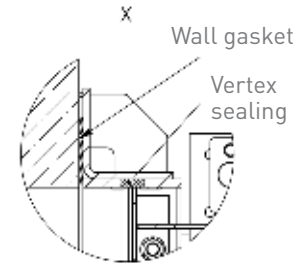
- ➔ Place frame with door in the designated position and align.
- ➔ For anchor bolting, holes are double and diagonal displaced in the frame and the support brackets.
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling.
- ➔ The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Compound anchor bolts are to be used for fastening.

Sealing frame/wall

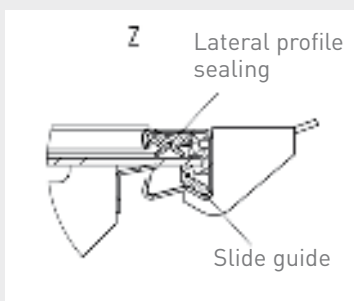
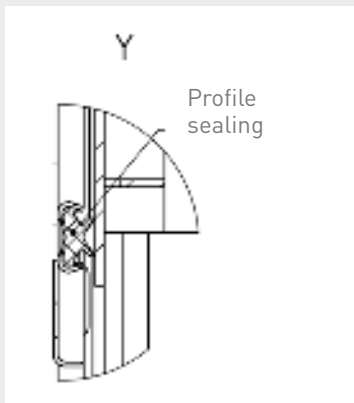
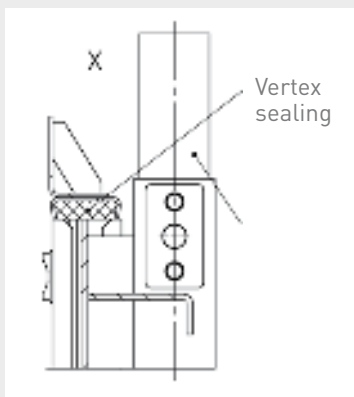
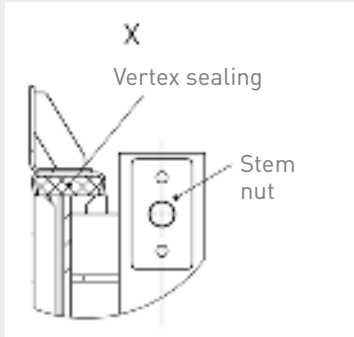
- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the frame. The frame at the vertex sealing must be sealed with wall gasket.
- ➔ Fastening material and wall gasket are included.
- ➔ The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.

Details

Section B-B



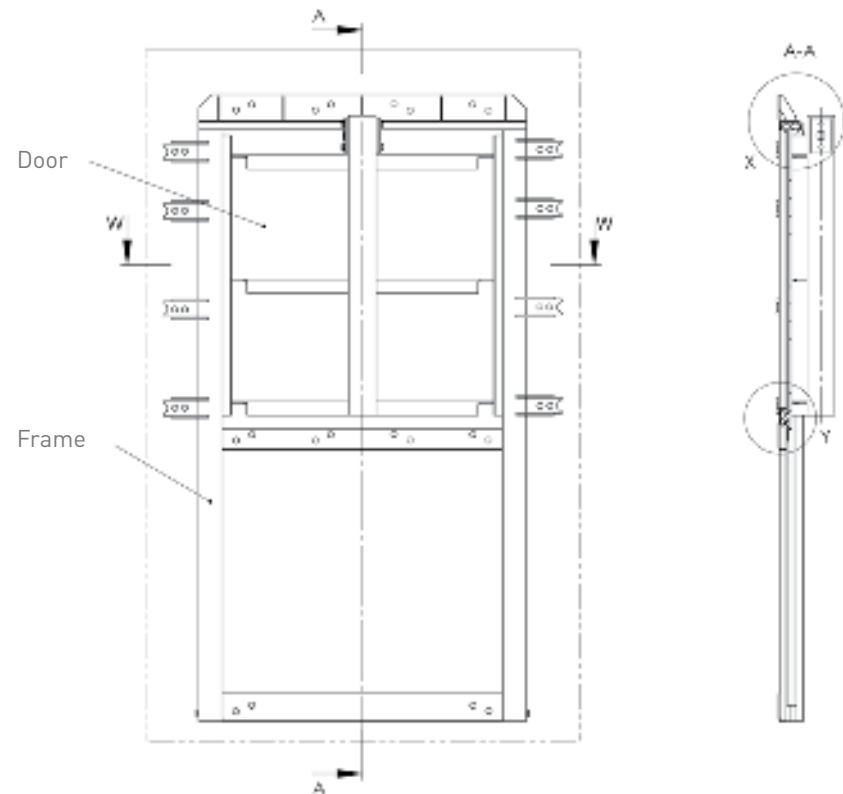
Details



WAGU®-PRO-Weir type penstock

4 facings, for on-seating or off-seating pressure, for discharge and level control, also suitable as throttle and flow control penstock, for mounting to inlets or outlets of chambers or basins, for anchor bolting to outlets of basins or channels.

Wall recess



Design

- Straight sill
- With slide guide
- Single-stem type

Design Features

- Welded frame made of tension resistant profile
- Low-wear slide guide form-fit in frame
- Lip profile sealing clamp easy to maintain
- Universal connector for connection pushing rod and stem nut (Quick fix)
- New design for reinforcement ribs at door
- Wall sealing with self-adhesive gasket tap (no grouting required)

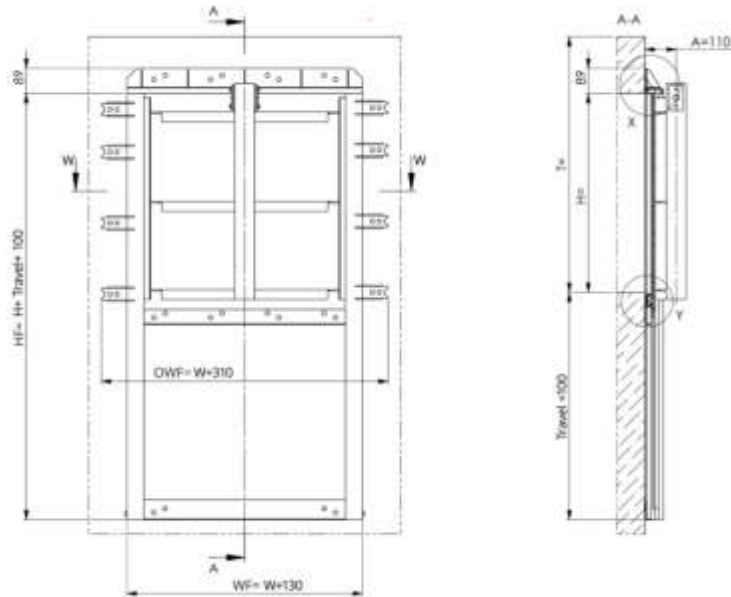
Dimensions

- W x H 150 x 150 up to 1200 x 1200 mm

WAGU®-PRO-Weir type penstock for anchor bolting

With straight sill for anchor bolting

DN or W x H 150 x 150 to 1200 x 1200 to 6 mWS.



Materials

Frame	Door	Sealing	Slide guide	Stem	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	PET	1.4305	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	PET	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

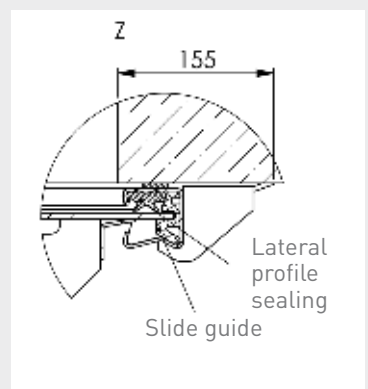
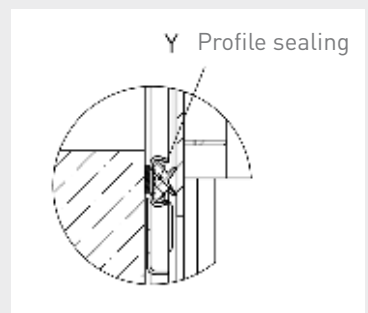
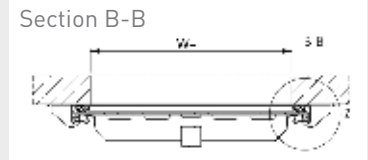
WAGU-PRO-Weir type penstock for anchor bolting, with straight sill for anchor bolting. Cat.-sheet 10.110, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Frame:	DN or W x H: mm
Door:	Installation depth T ¹⁾ : mm
Sealing:	Operating pressure: m WS
Slide guide:	Flow direction V: /R
Connecting parts:	

1) Measured from invert penstock to top edge structure.

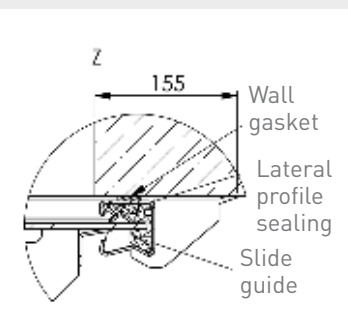
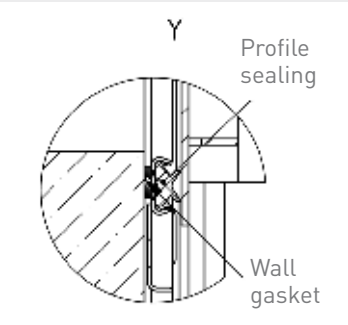
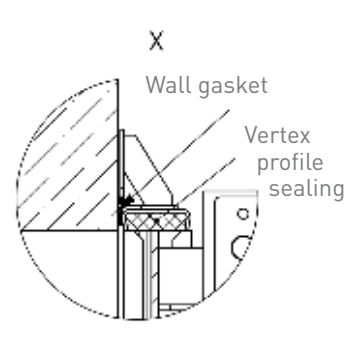
* Please specify in the enquiry/ order.

Details



Details

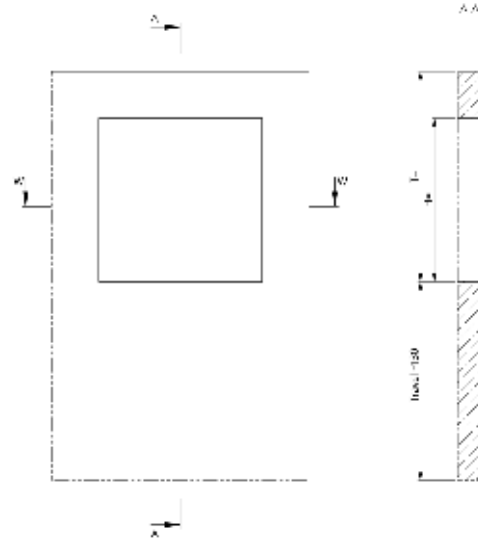
Section B-B



WAGU®-PRO-Weir type penstock for anchor bolting

With straight sill for anchor bolting

Wall recess

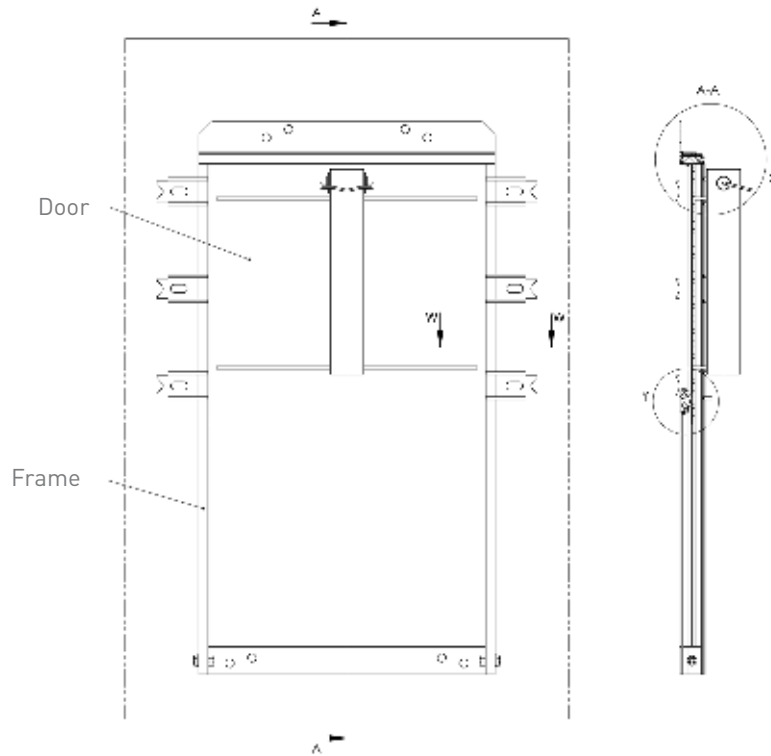


Installation Guide

- Apply wall gasket overlapping on the back of the frame.
- Place WAGU-PRO penstock with door in the designated position and align.
- The holes in upper across support bracket serve for the first fixation.
- Place clamping claws at designated position.
- Bigger WAGU-PRO penstocks have an additional support bracket on the middle across profile.
- Compound anchor bolts are to be used for fastening.
- During tightening the fixation nuts WAGU-PRO penstock must be free of distortion.
- Structure tolerance accordingly to DIN 18202 will be compensated by the wall gasket.
- Apply the mounting torque on the nuts crosswise and evenly.

WAGU®-CL Weir type penstock

4 facings, for on-seating or off-seating pressure, for discharge and level control, also suitable as throttle and flow control penstock, for mounting to inlets or outlets of chambers or basins, for anchor bolting to outlets of basins or channels up to 4mWs.



Design

- ➔ Straight sill
- ➔ With slide guide, single-stem type

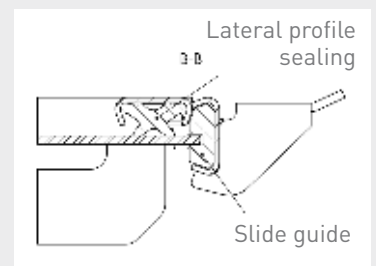
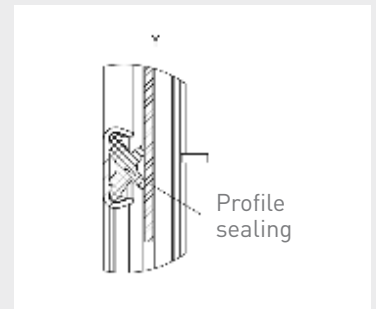
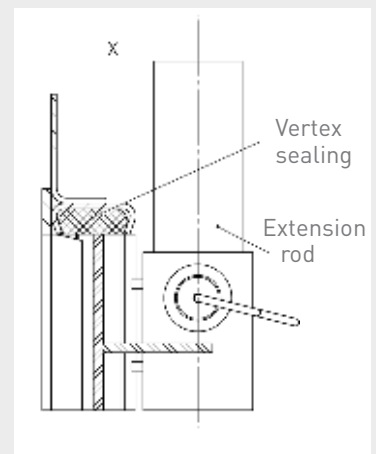
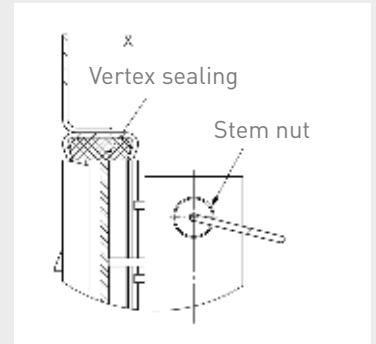
Design Features

- ➔ Welded frame of torsion-resisting profile
- ➔ Low-wear slide guide form-fit in frame
- ➔ Welded frame of torsion-resisting profile
- ➔ Universal retainer for stemmnut
- ➔ New design for reinforcement ribs at door
- ➔ Wall sealing with self-adhesive sealing tape (no grouting work necessary)
- ➔ Frame for anchor bolting or grouting

Dimensions

- ➔ W x H 150 x 150 to 600 x 600 mm

Details

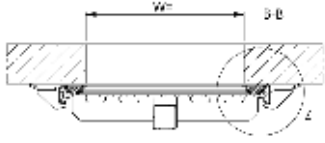


WAGU®-CL Weir type penstock for anchor bolting

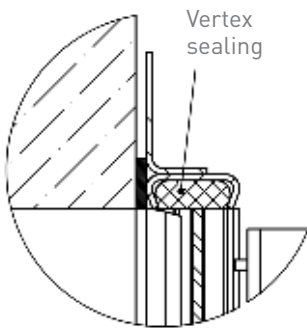
With straight sill for anchor bolting
DN or W x H 150 x 150 to 1200 x 1200 to 4 mWS.

Details

Section B-B

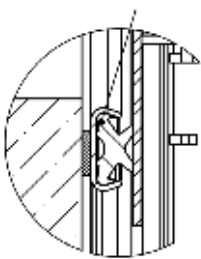


X

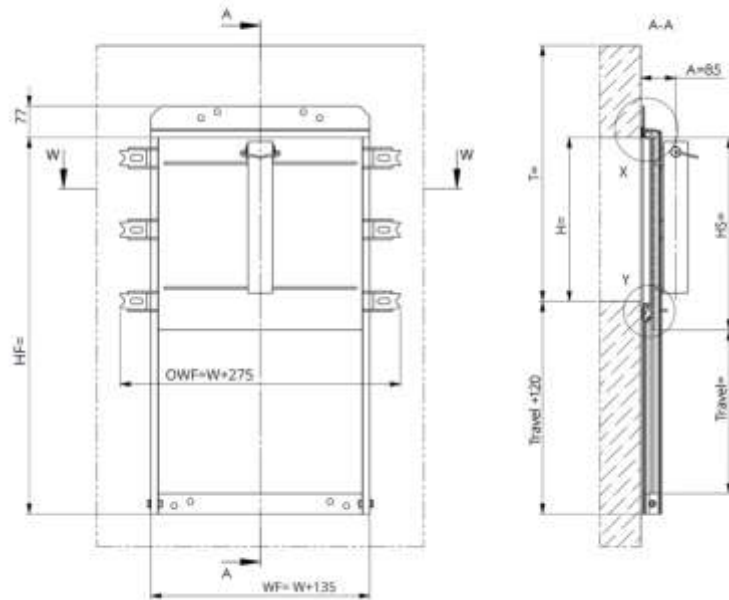
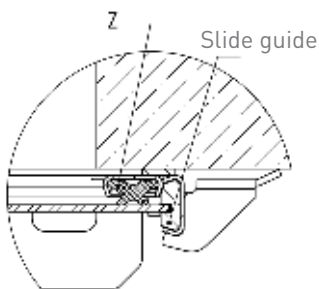


Y

Profile sealing



Lateral profile sealing



Materials

Frame	Door	Sealing	Slide guide	Stem	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	PET	1.4305	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	PET	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

WAGU-CL Weir type penstock for anchor bolting, with straight sill for anchor bolting. Cat.-sheet 10.210, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Frame:	DN or W x H: mm
Door:	Installation depth T ¹⁾ : mm
Sealing:	Operating pressure: m WS
Slide guide:	Flow direction V: /R
Connecting parts:	

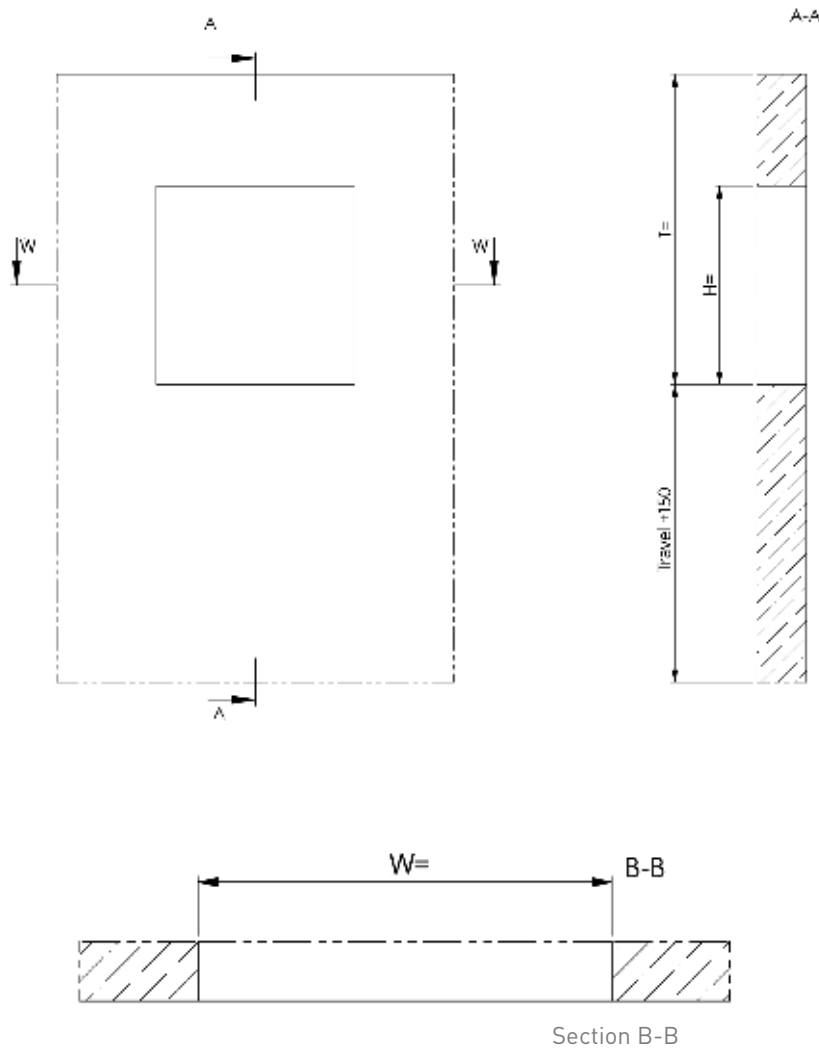
1) Measured from invert penstock to top edge structure.

* Please specify in the enquiry/ order.

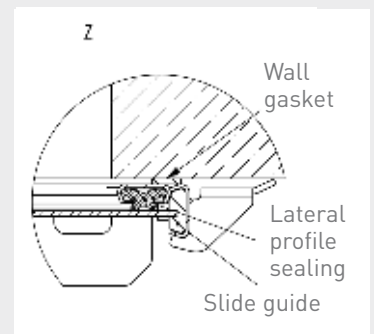
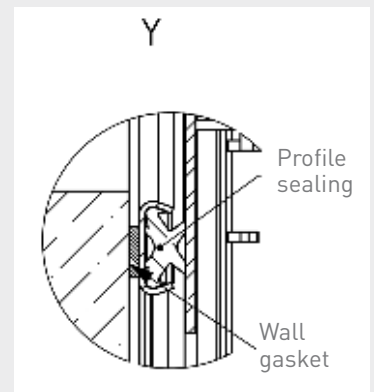
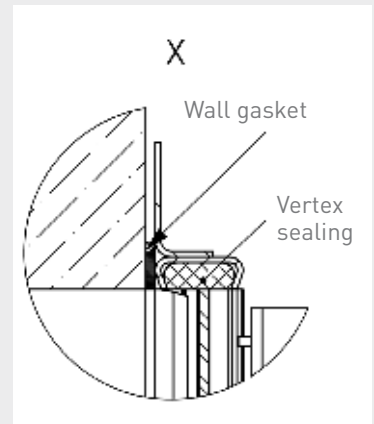
WAGU®-CL Weir type penstock for anchor bolting

With straight sill for anchor bolting

Wall recess

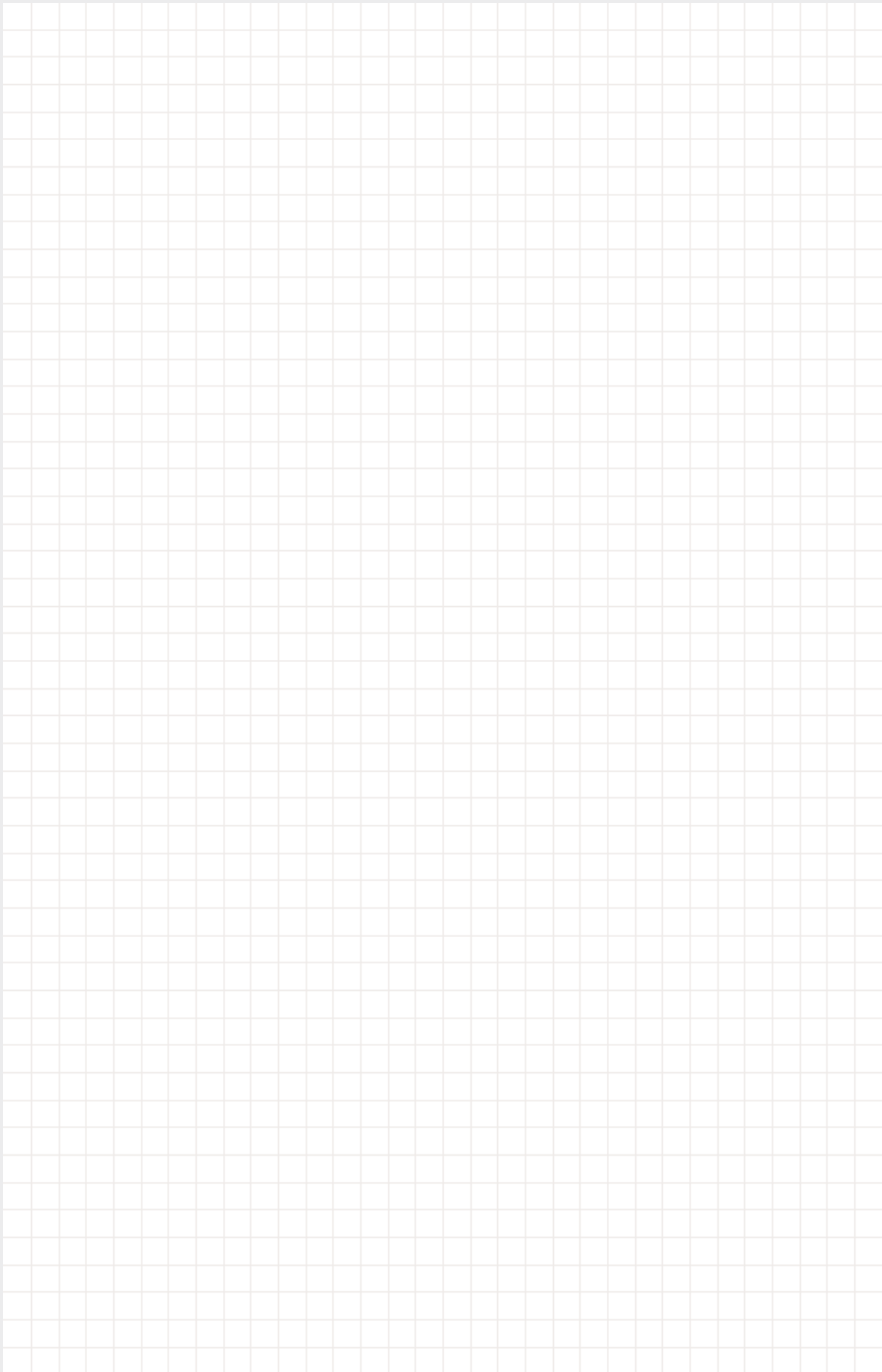


Details

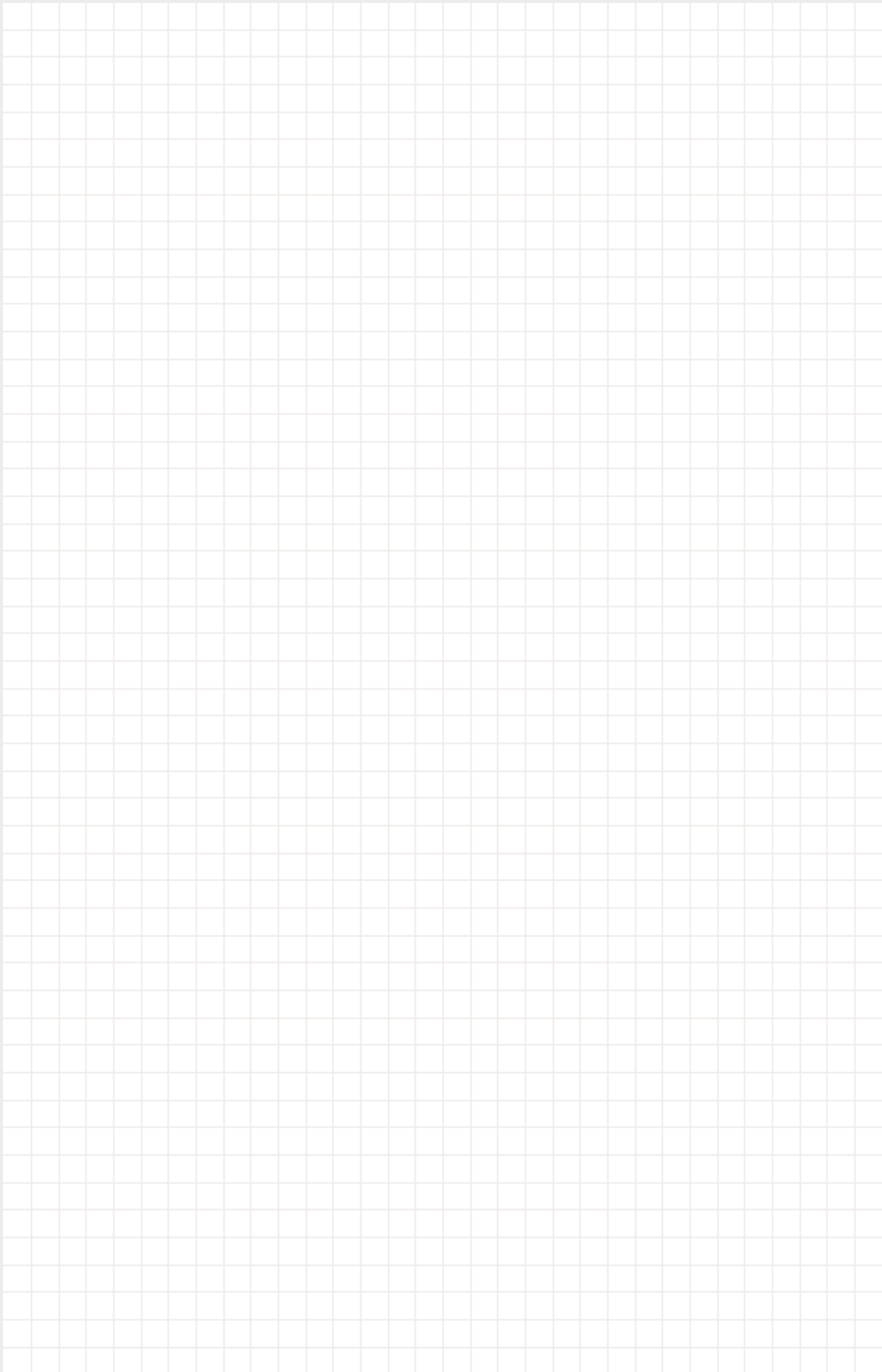


Installation Guide

- Apply wall gasket overlapping on the back of the frame.
- Place WAGU-CL penstock with door in the designated position and align.
- The holes in upper across support bracket serve for the first fixation.
- Place clamping claws at designated position.
- During tightening the fixation nuts WAGU-CL penstock must be free of distortion.
- Structure tolerance accordingly to DIN 18202 will be compensated by the wall gasket.
- Apply the mounting torque on the nuts crosswise and evenly.

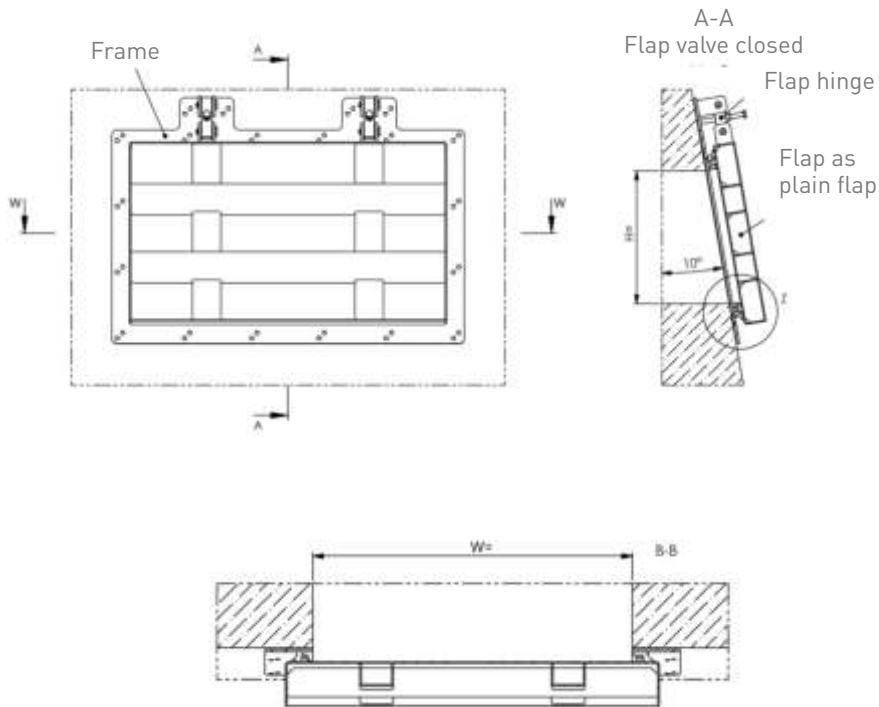


01	WAGU®-Handstops	01
02	WAGU®-Channel Penstocks (Leightweight)	02
03	WAGU®-Channel Penstocks	03
04	WAGU®-Stoplogs	04
05	WAGU®-Stop Plates	05
06	WAGU®-Weir Type Channel Penstocks (3 Facings)	06
07	WAGU®-Slide Penstocks	07
08		08
09		09
10	WAGU®-Weir Type Penstocks (4 Facings)	10
11		11
12	WAGU®-Flap Valves	12
13	WAGU®-Tidal Flaps	13
14	WAGU®-Tilting Flap Spillways	14
15		15
16		16
17	WAGU®-Isolating and Flushing Valves	17
18	WAGU®-Reversing Flaps	18
19		19
20	WAGU®-Telescopic Valves	20
21	WAGU®-Basin Inlets	21
22	WAGU®-Operating Gears	22



WAGU®-Flap Valve Rectangular Type

4 facings, suitable as non-return device against flooding, for mounting to structure or chamber outlets, for anchor bolting to inclined concrete walls.



Design

- ➔ For anchor bolting
- ➔ Plain flap
- ➔ Hollow-float flap
- ➔ Flap with lecer and counterweightt
- ➔ Impact damping through special profile sealing

Design Features

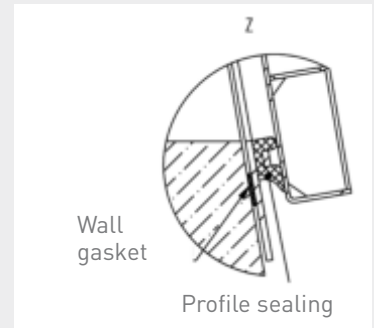
- ➔ Welded body with Flap valve closeds and boltet profile sealing
- ➔ Flap with reinforcing ribs and double articulated hinges, in corresponding design as: plain flap, hollow-float flap and flap with lever and counterweight

Dimensions

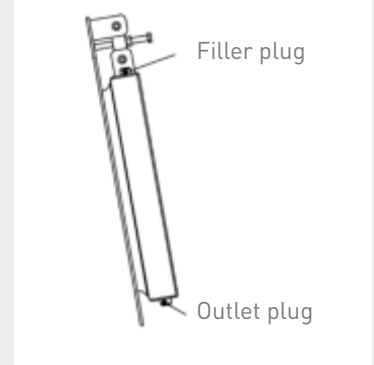
- ➔ W x H 200 x 200 up to very large dimensions

Various designs and combinations available on request.

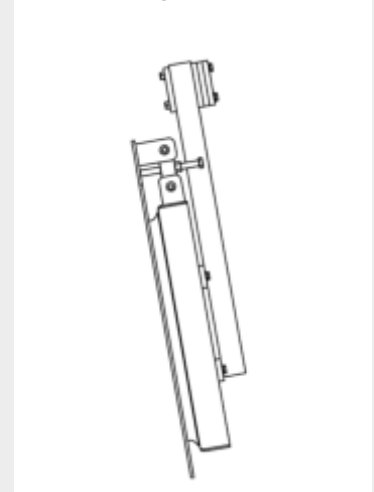
Details



Design with hollow-float flap



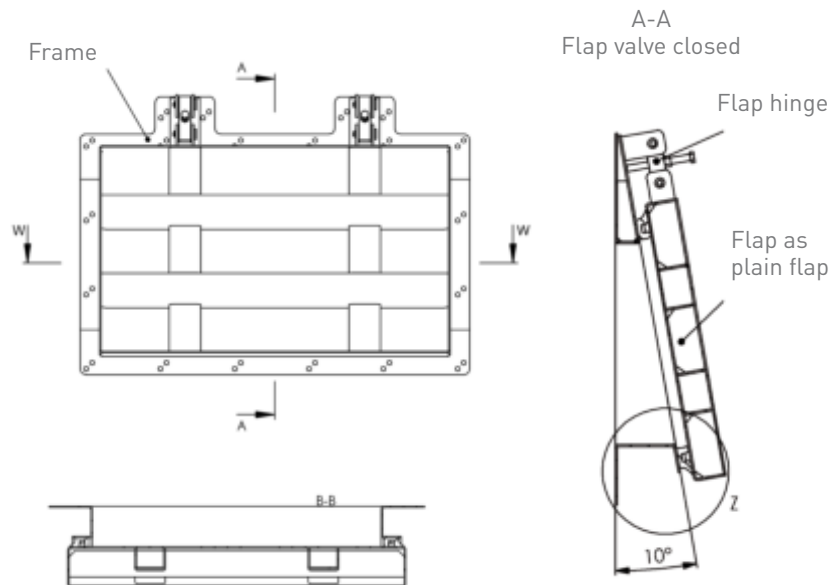
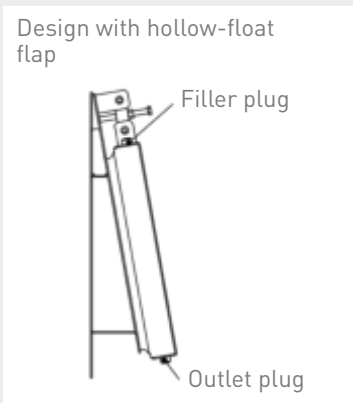
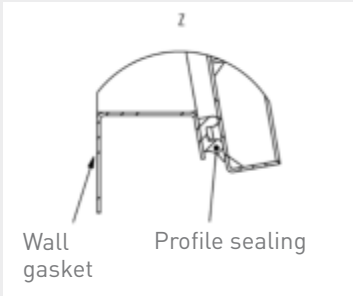
Design with plain flap, counterweight and lever



WAGU®-Flap Valve Rectangular Type

4 facings, suitable as non-return device against flooding, for mounting to structure or chamber outlets, with neck, for anchor bolting to vertical concrete walls.

Details



Design

- ➔ For anchor bolting
- ➔ Plain flap
- ➔ Hollow-float flap
- ➔ Flap with lever and counterweight
- ➔ Impact damping through special profile sealing

Design Features

- ➔ Welded body with Flap valve closed and bolted profile sealing
- ➔ Flap with reinforcing ribs and double articulated hinges, in corresponding design as: plain flap, hollow-float flap and flap with lever and counterweight

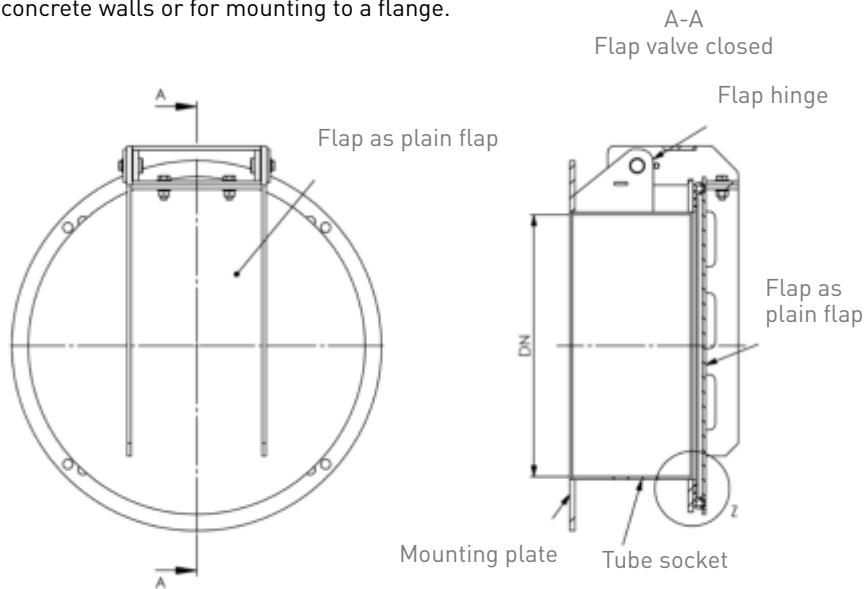
Dimensions

- ➔ W x H 200 x 200 up to very large dimensions

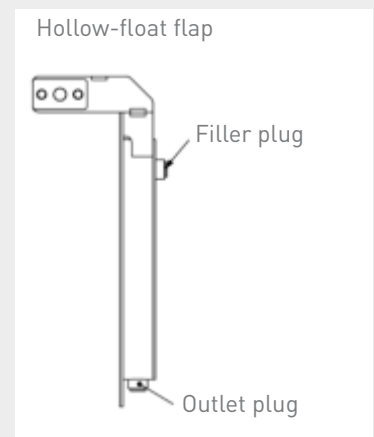
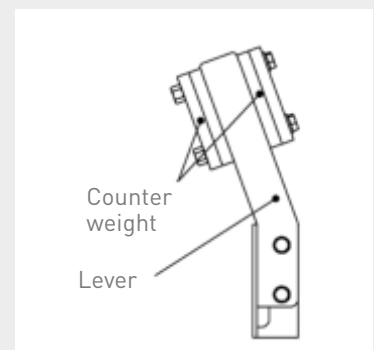
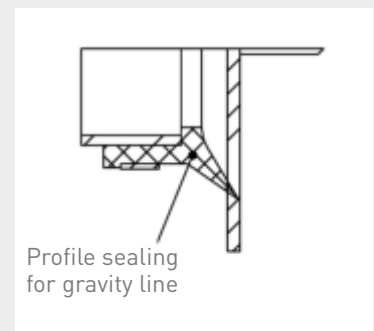
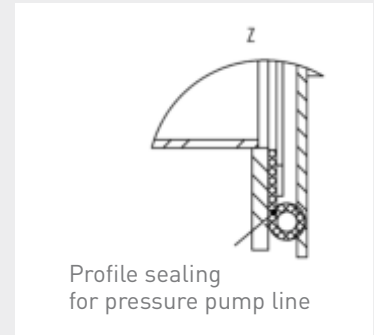
Various designs and combinations available on request.

WAGU®-Flap Valve Circular Type

Circular facing, suitable as non-return device against flooding, for mounting to structure or chamber outlets, for anchor bolting to vertical concrete walls or for mounting to a flange.



Details



Design

- ➔ For anchor bolting
- ➔ Plain flap
- ➔ Hollow-float flap
- ➔ Flap with lecer and counterweightt
- ➔ Impact damping through special profile sealing

Design Features

- ➔ Welded body with (wall) flange, adjustable flap hinge, and circular profile seal fixed with a clamping ring
- ➔ Flap with reinforcing ribs and bearing levers, in the corresponding design as: plain flap, hollow-float flap, and flap with lever and counterweight

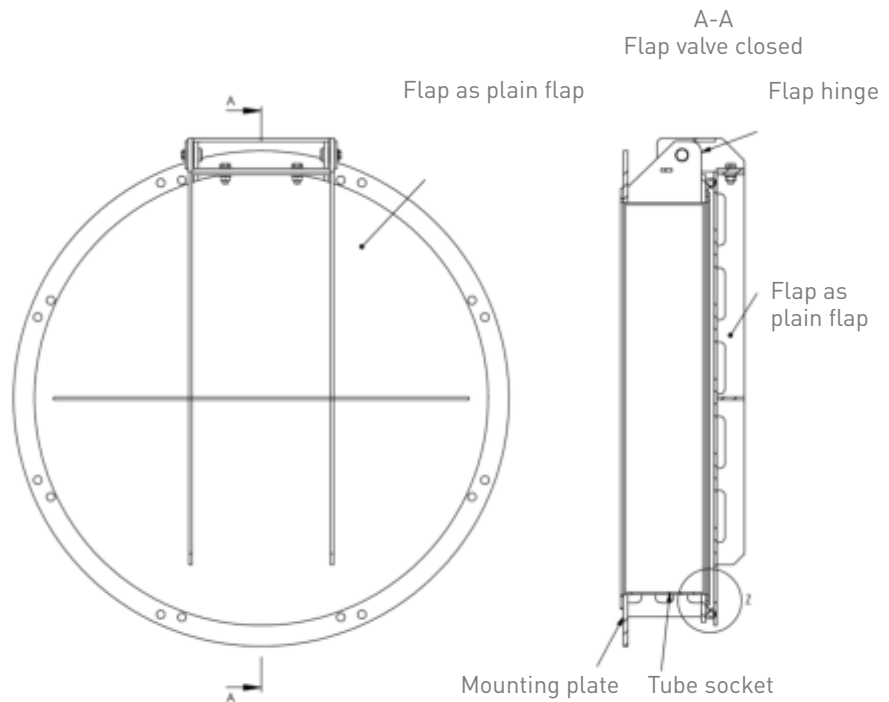
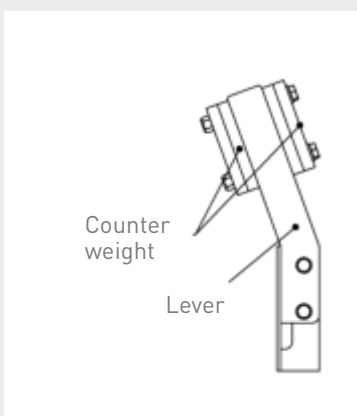
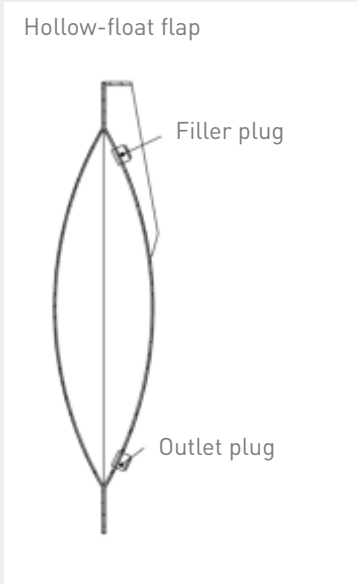
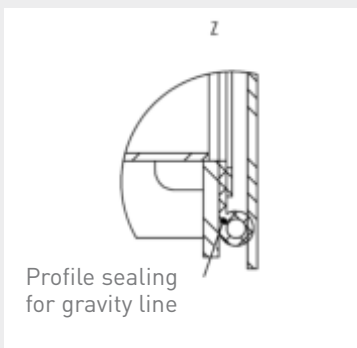
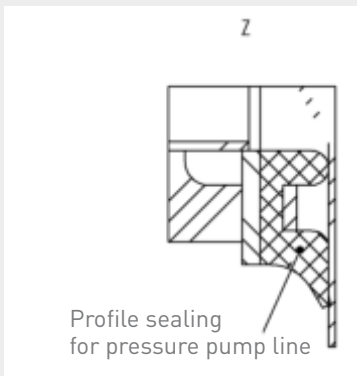
Dimensions

- ➔ DN 200 - 600

WAGU®-Flap Valve Circular Type

Circular facing, suitable as non-return device against flooding, for mounting to structure or chamber outlets, for anchor bolting to vertical concrete walls or for mounting to a flange.

Details



Design

- ➔ For anchor bolting
- ➔ Plain flap
- ➔ Hollow-float flap
- ➔ Flap with lecer and counterweightt
- ➔ Impact damping through special profile sealing

Design Features

- ➔ Welded body with (wall) flange, adjustable flap hinge, and circular profile seal fixed with a clamping ring
- ➔ Flap with reinforcing ribs and bearing levers, in the corresponding design as: plain flap, hollow-float flap, and flap with lever and counterweight

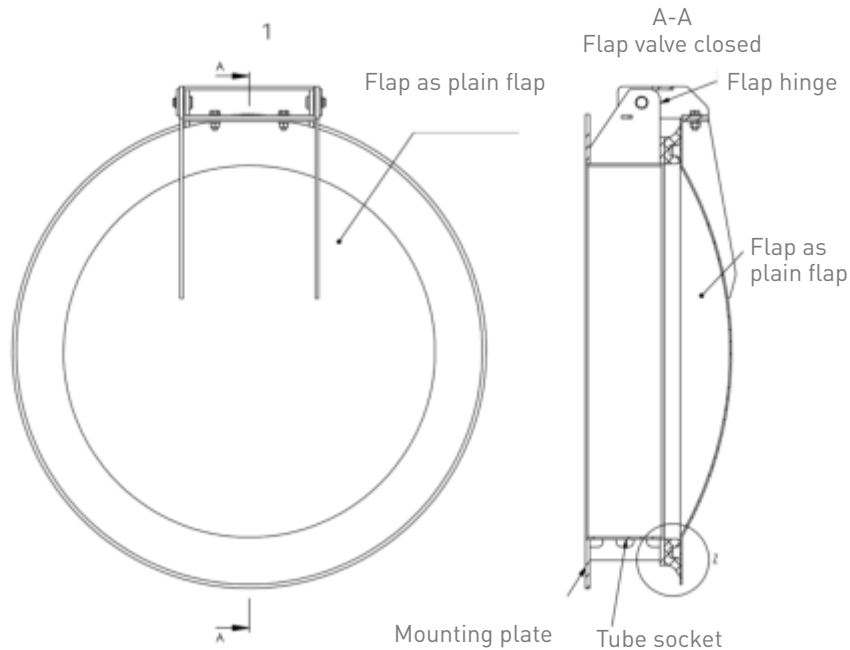
Dimensions

- ➔ DN 700 to 1200

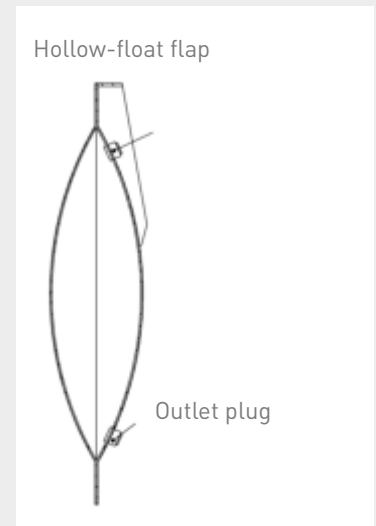
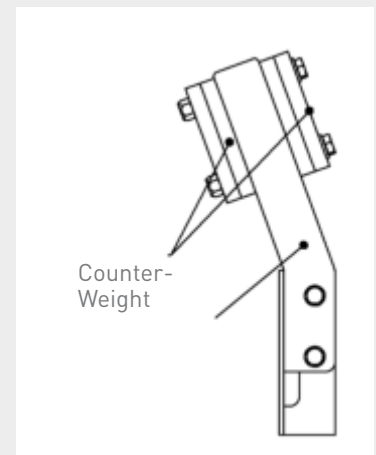
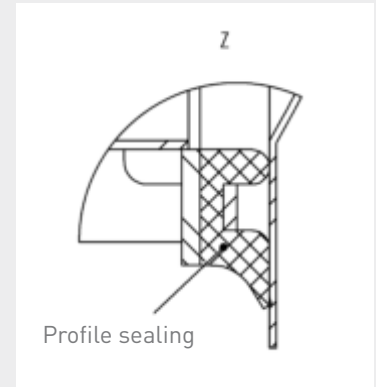
WAGU®-Flap Valve

Circular Type

Circular facing, suitable as non-return device against flooding, for mounting to structure or chamber outlets, for anchor bolting to vertical concrete walls or for mounting to a flange.



Details



Design

- ➔ For anchor bolting
- ➔ Plain flap
- ➔ Hollow-float flap
- ➔ Flap with lecer and counterweightt
- ➔ Impact damping through special profile sealing

Design Features

- ➔ Welded body with (wall) flange, adjustable flap hinge, and circular profile seal fixed with a clamping ring
- ➔ Flap with reinforcing ribs and bearing levers, in the corresponding design as: plain flap, hollow-float flap, and flap with lever and counterweight

Dimensions

- ➔ DN 1300 up to very large dimensions

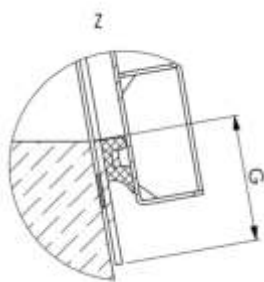
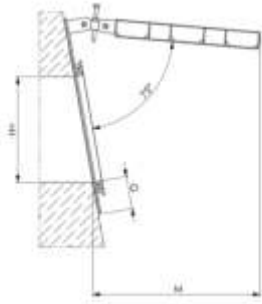
WAGU®-Flap Valve Rectangular Type

With plain flap, for anchor bolting

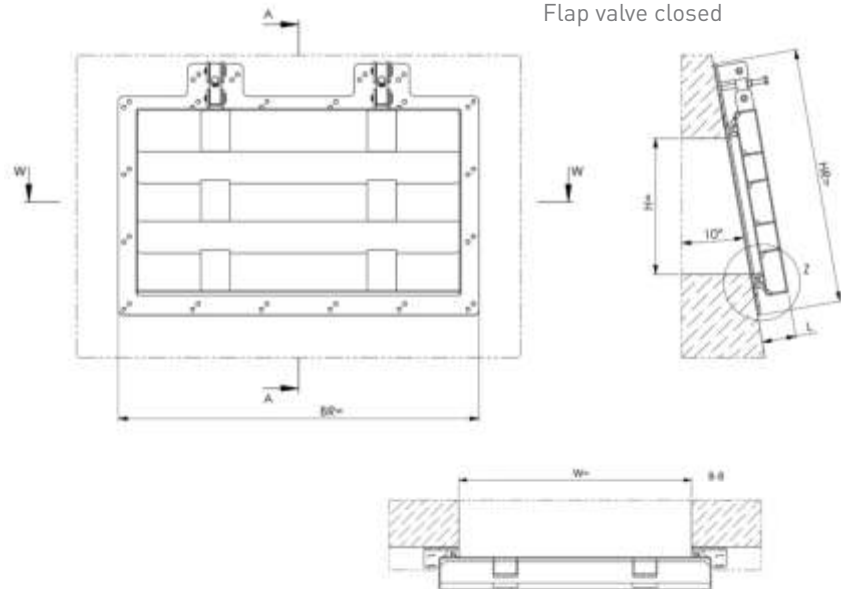
W x H 200 x 200 up to very large dimensions, PN 0,6

Details

A-A
Flap valve opened



A-A
Flap valve closed



Materials

Frame	Flap	Sealing	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	A4

Other materials or combinations available on request.

Order text

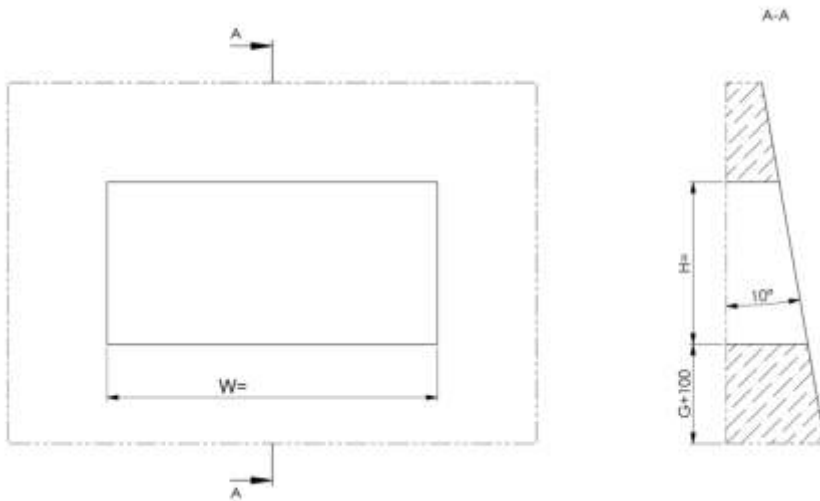
Flap Valve, rectangular type, with plain flap, for anchor bolting.
Cat.-sheet 12.41.

Materials*	Dimensions*
Frame:	W x H: mm
Flap:	Operating pressure: bar
Sealing:	
Connecting parts:	

* Please specify in the enquiry/ order.

WAGU®-Flap Valve Rectangular type

With plain flap, for anchor bolting



Installation Guide

- ➔ Place flap valve in the designated position and align.
- ➔ For anchor bolting, holes are double and diagonal displaced in the frame or flange.
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling.
- ➔ The bolt holes in the flange are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Compound anchor bolts are to be used for fastening.

Sealing flange/wall

- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the flange.
- ➔ Fastening material and wall gasket are included.
- ➔ The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.

Fastening with compound anchor

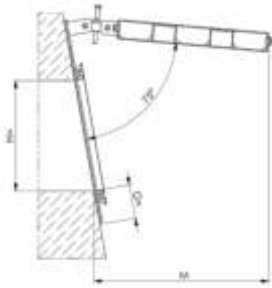
- ➔ For fixing, drill hole depth and diameter see installation instructions of the anchor manufacturer.

WAGU®-Flap Valve Rectangular type

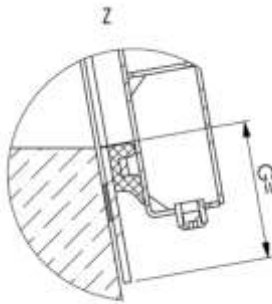
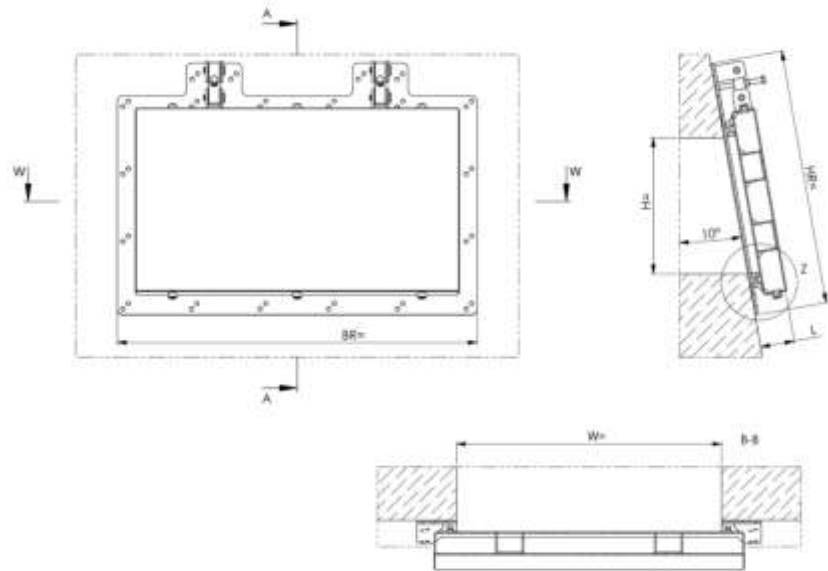
With hollow-float flap, for anchor bolting
W x H 200 x 200 up to very large dimensions, PN 0,6

Details

A-A
Flap valve opened



A-A
Flap valve closed



Materials

Frame	Flap	Sealing	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	A4

Other materials or combinations available on request.

Order text

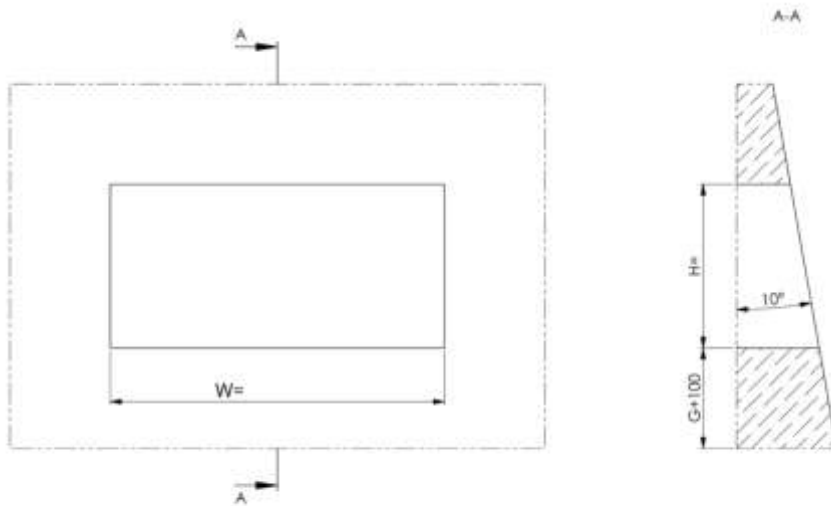
Flap Valve, rectangular type with hollow-float flap, for anchor bolting.
Cat.-sheet 12.43.

Materials*	Dimensions*
Frame:	W x H: mm
Flap:	Operating pressure: bar
Sealing:	
Connecting parts:	

* Please specify in the enquiry/ order.

WAGU®-Flap Valve Rectangular type

With hollow-flap flap, for anchor bolting



Installation Guide

- ➔ Place flap valve in the designated position and align.
- ➔ For anchor bolting, holes are double and diagonal displaced in the frame or flange.
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling.
- ➔ The bolt holes in the flange are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Compound anchor bolts are to be used for fastening.

Sealing flange/wall

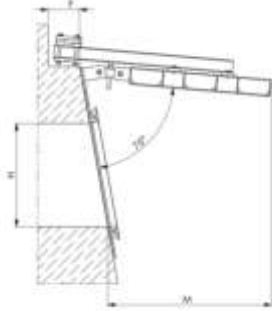
- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the flange.
- ➔ Fastening material and wall gasket are included.
- ➔ The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.

Fastening with compound anchor

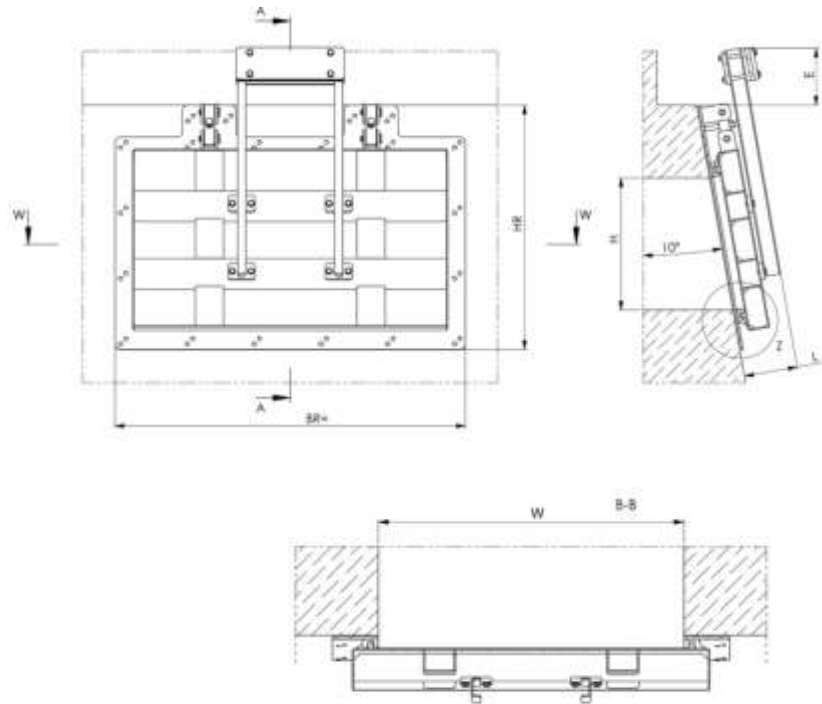
- ➔ For fixing, drill hole depth and diameter see installation instructions of the anchor manufacturer.

Details

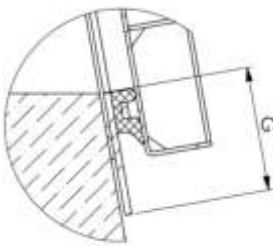
A-A
Flap valve opened



A-A
Flap valve closed



Z



WAGU® - Flap Valve

Rectangular type

With plain flap, lever and counterweight, for anchor bolting
W x H 200 x 200 up to very large dimensions, PN 0,6

Materials

Frame	Flap	Sealing	Weight	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	1.4301	A4
1.4404 / <input type="checkbox"/> 1.4571	1.4404 / <input type="checkbox"/> 1.4571	Neoprene	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Flap Valve, rectangular type, with plain flap, lever and counterweight, for anchor bolting. Cat.-sheet 12.45.

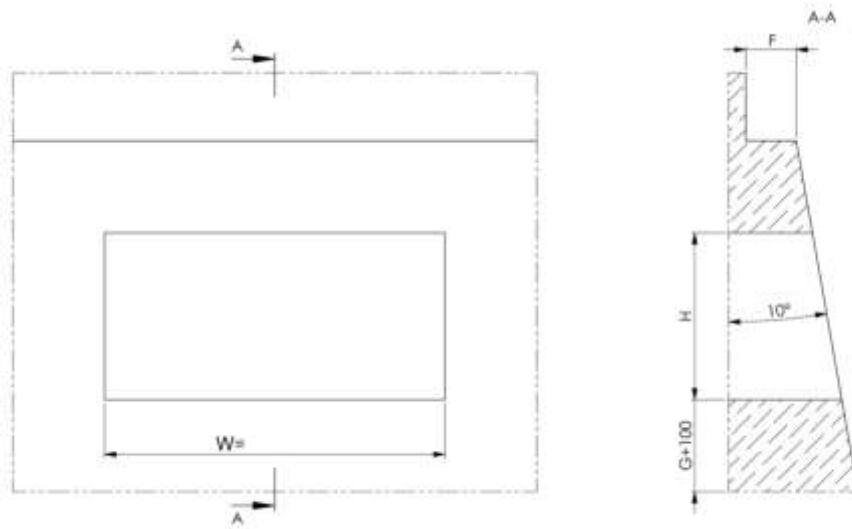
Materials*	Dimensions*
Frame:	W x H: mm
Flap:	Operating pressure: bar
Sealing:	
Connecting parts:	

* Please specify in the enquiry/ order.

WAGU®-Flap Valve

Rectangular type

With plain flap, lever and counterweight, for anchor bolting



Installation Guide

- ➔ Place flap valve in the designated position and align.
- ➔ For anchor bolting, holes are double and diagonal displaced in the frame or flange.
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling.
- ➔ The bolt holes in the flange are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Compound anchor bolts are to be used for fastening.

Sealing flange/wall

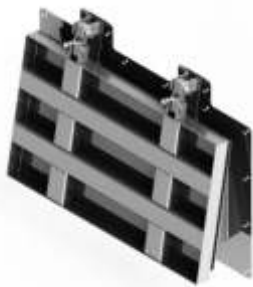
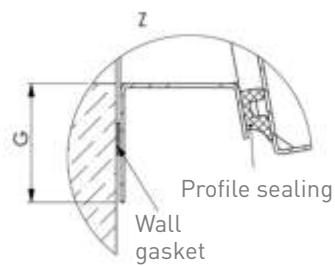
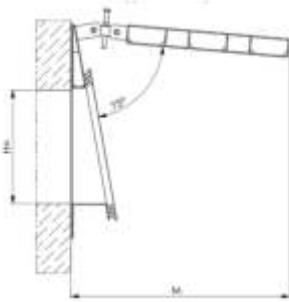
- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the flange.
- ➔ Fastening material and wall gasket are included.
- ➔ The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.

Fastening with compound anchor

- ➔ For fixing, drill hole depth and diameter see installation instructions of the anchor manufacturer.

Details

A-A
Flap valve opened

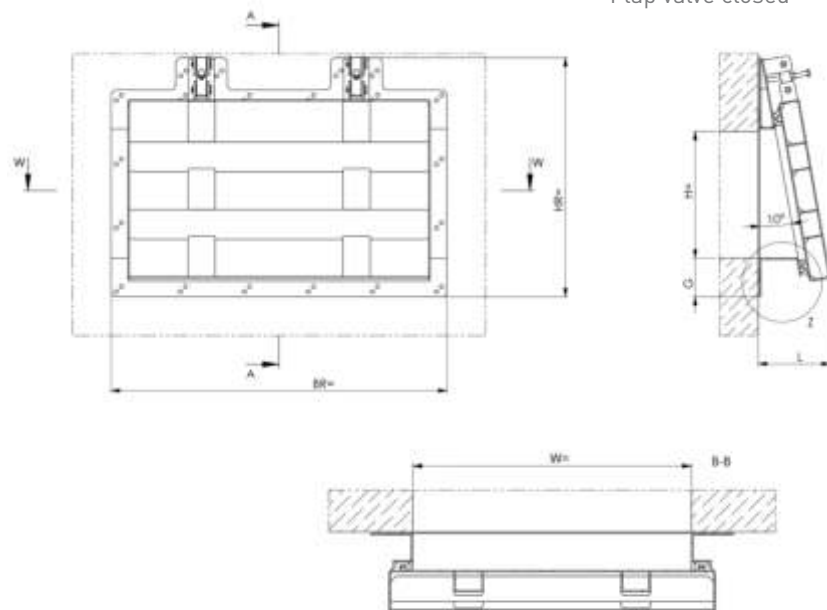


WAGU®-Flap Valve Rectangular type

With neck and plain flap, for anchor bolting

W x H 200 x 200 up to very large dimensions, PN 0,6

A-A
Flap valve closed



Materials

Frame	Flap	Sealing	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	A4

Other materials or combinations available on request.

Order text

Flap Valve rectangular type with neck and plain flap, for anchor bolting.

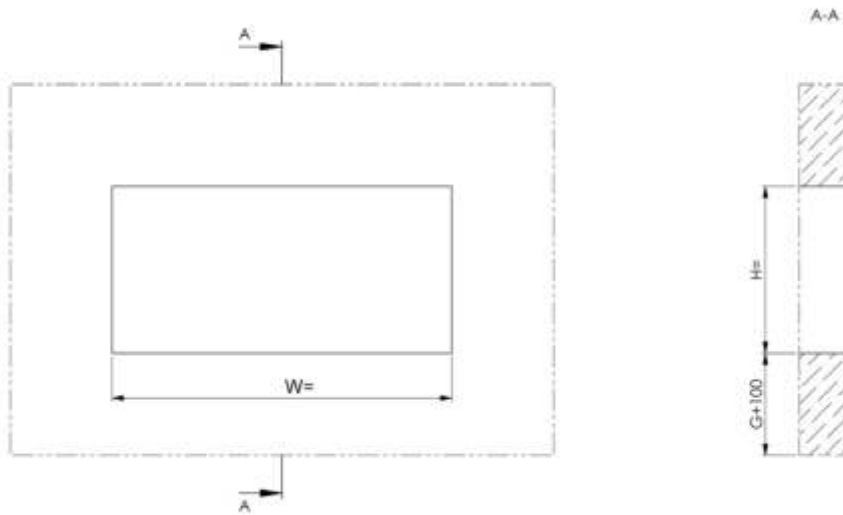
Cat.-sheet 12.47.

Materials*	Dimensions*
Frame:	W x H: mm
Flap:	Operating pressure: bar
Sealing:	
Connecting parts:	

* Please specify in the enquiry/ order.

WAGU®-Flap Valve, Rectangular type

With neck and plain flap, for anchor bolting



Installation Guide

- ➔ Place flap valve in the designated position and align.
- ➔ For anchor bolting, holes are double and diagonal displaced in the frame or flange.
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling.
- ➔ The bolt holes in the flange are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Compound anchor bolts are to be used for fastening.

Sealing flange/wall

- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the flange.
- ➔ Fastening material and wall gasket are included.
- ➔ The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.

Fastening with compound anchor

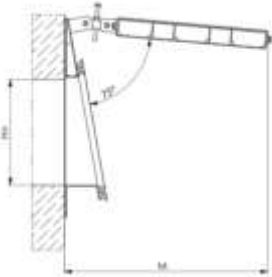
- ➔ For fixing, drill hole depth and diameter see installation instructions of the anchor manufacturer.

WAGU®-Flap Valve Rectangular type

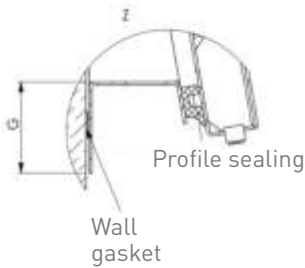
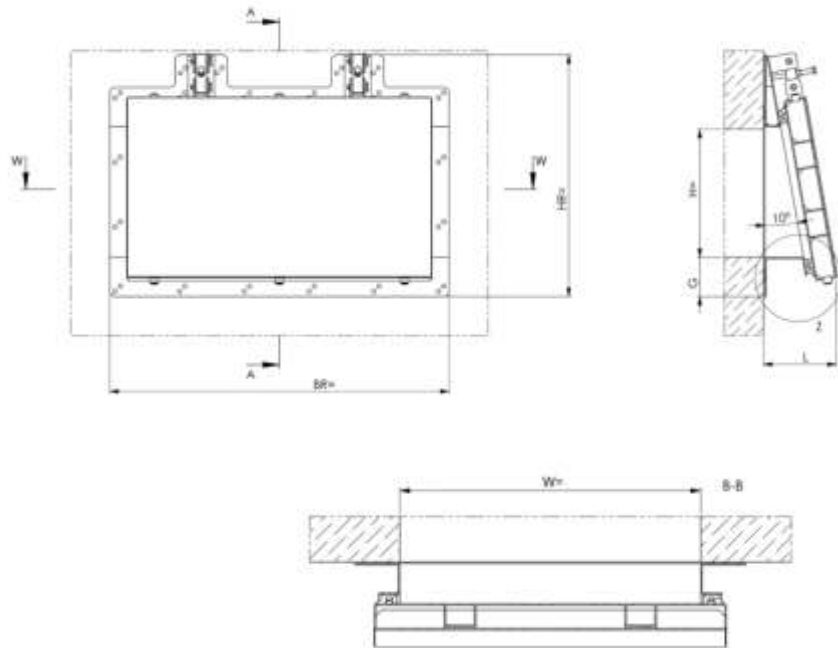
With neck and hollow-float flap, for anchor bolting
W x H 200 x 200 up to very large dimensions, PN 0,6

Details

A-A
Flap valve opened



A-A
Flap valve closed



Materials

Frame	Flap	Sealing	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	A4

Other materials or combinations available on request.

Order text

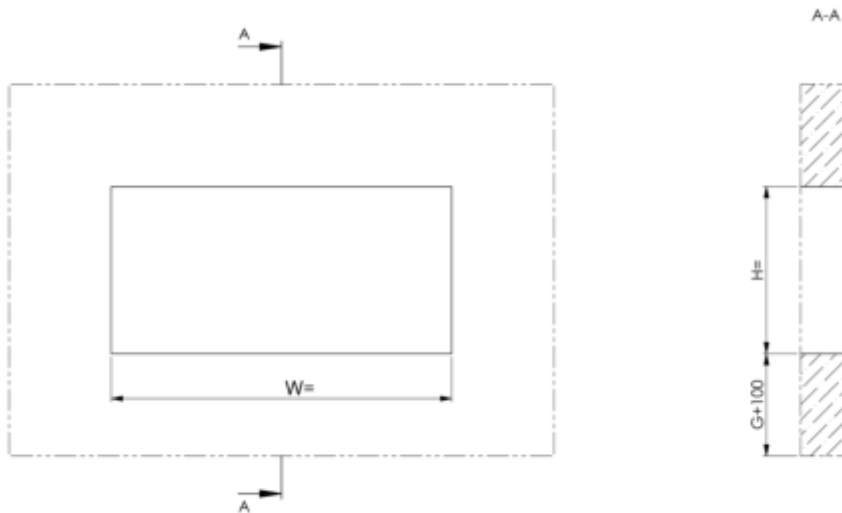
Flap Valve rectangular type with neck and hollow-float flap, for anchor bolting.
Cat.-sheet 12.49.

Materials*	Dimensions*
Frame:	W x H: mm
Flap:	Operating pressure: bar
Sealing:	
Connecting parts:	

* Please specify in the enquiry/ order.

WAGU®-Flap Valve Rectangular type

With neck and hollow-flap, for anchor bolting



Installation Guide

- ➔ Place flap valve in the designated position and align.
- ➔ For anchor bolting, holes are double and diagonal displaced in the frame or flange.
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling.
- ➔ The bolt holes in the flange are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Compound anchor bolts are to be used for fastening.

Sealing flange/wall

- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the flange.
- ➔ Fastening material and wall gasket are included.
- ➔ The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.

Fastening with compound anchor

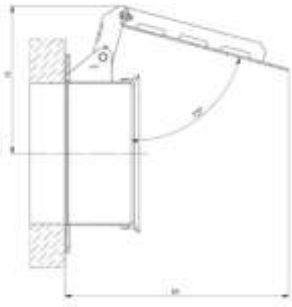
- ➔ For fixing, drill hole depth and diameter see installation instructions of the anchor manufacturer.

WAGU® - Flap Valve Circular type

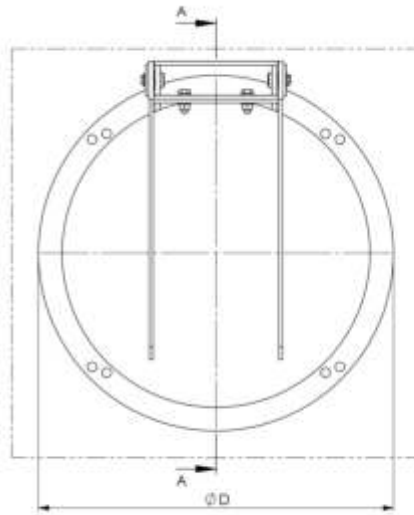
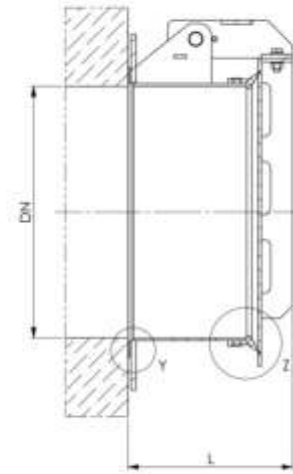
With plain flap, for anchor bolting
DN 200 up to 600

Details

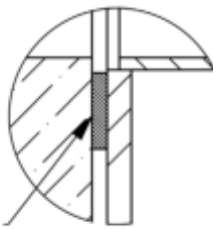
A-A
Flap valve opened



A-A
Flap valve closed

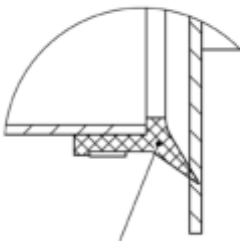


Y



Wall gasket

Z



Profile sealing



Materials

Frame	Flap	Sealing	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	A4

Other materials or combinations available on request.

Order text

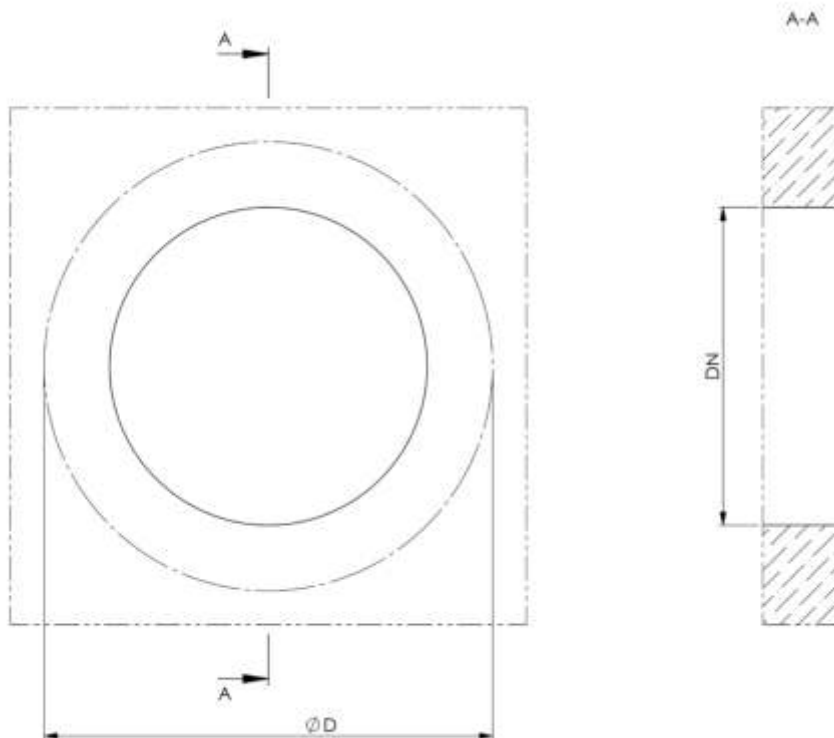
Flap Valve, circular type, with plain flap, for anchor bolting.
Cat.-sheet 12.51.

Materials*	Dimensions*
Frame:	DN: mm
Flap:	Operating pressure: bar
Sealing:	
Connecting parts:	

* Please specify in the enquiry/ order.

WAGU®-Flap Valve Circular type

With plain flap, for anchor bolting



Installation Guide

- ➔ Place flap valve in the designated position and align.
- ➔ On mounting plate fastening holes are marked.
- ➔ For mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling.
- ➔ The bolt holes in the flange are 2 mm larger than the drill.
- ➔ Compound anchors with bigger washer have to be used for fastening.

Sealing flange/wall

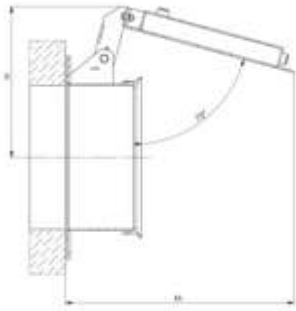
- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the flange.
- ➔ Fastening material and wall gasket are included.
- ➔ The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.

WAGU®-Flap Valve Circular type

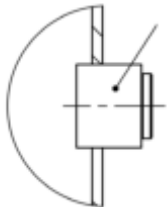
With hollow-float flap, for anchor bolting
DN 200 up to 600

Details

A-A
Flap valve opened

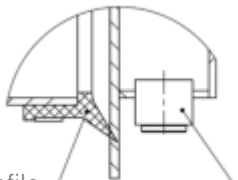


X
Filler plug



Filler plug

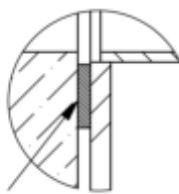
Z



Profile sealing

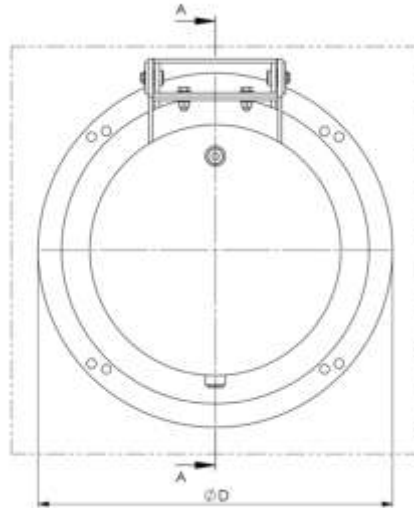
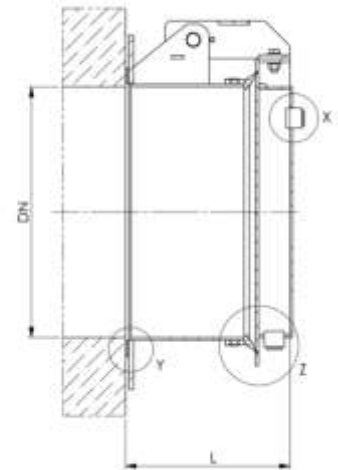
Outlet plug

Y



Wall gasket

A-A
Flap valve closed



Materials

Frame	Flap	Sealing	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	A4

Other materials or combinations available on request.

Order text

Flap Valve, circular type, with hollow-float flap, for anchor bolting.
Cat.-sheet 12.53.

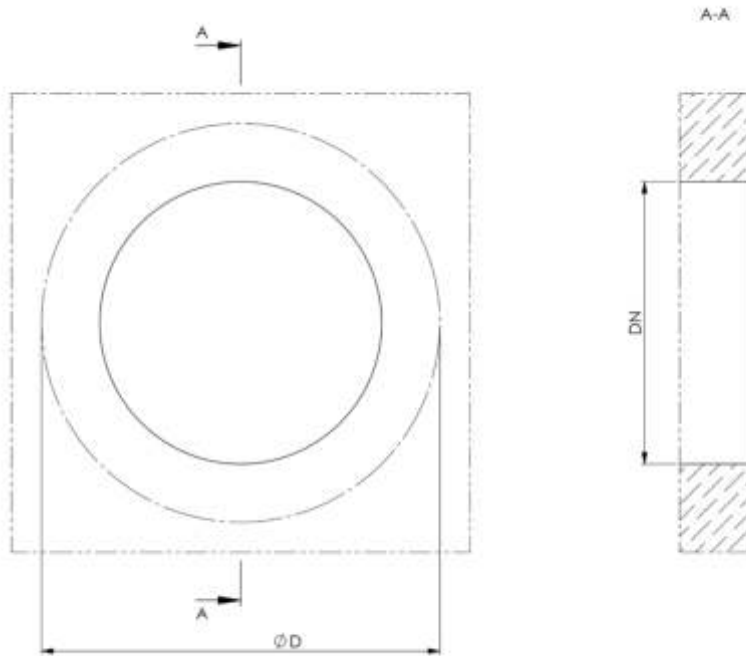
Materials*	Dimensions*
Frame:	DN: mm
Flap:	Operating pressure: bar
Sealing:	
Connecting parts:	

* Please specify in the enquiry/ order.



WAGU®-Flap Valve Circular type

With hollow-float flap, for anchor bolting



Installation Guide

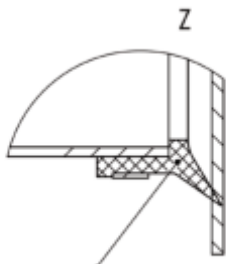
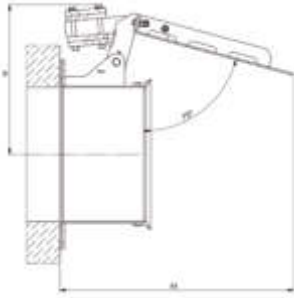
- ➔ Place flap valve in the designated position and align.
- ➔ On mounting plate fastening holes are marked.
- ➔ For mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling.
- ➔ The bolt holes in the flange are 2 mm larger than the drill.
- ➔ Compound anchors with bigger washer have to be used for fastening.

Sealing flange/wall

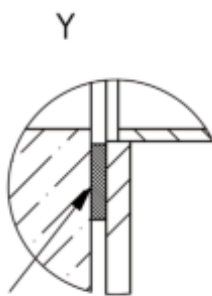
- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the flange.
- ➔ Fastening material and wall gasket are included.
- ➔ The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.

Details

A-A
Flap valve opened



Profile sealing



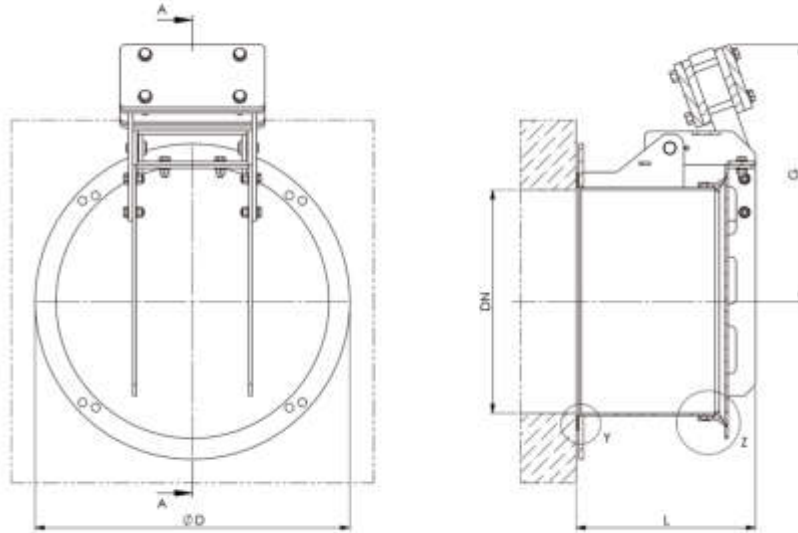
Wall gasket



WAGU®-Flap Valve Circular type

With plain flap, lever and counterweight, for anchor bolting
DN 200 up to DN 600

A-A
Flap valve closed



Materials

Frame	Flap	Sealing	Weight	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	1.4301	A4
1.4404 / <input type="checkbox"/>	1.4404 / <input type="checkbox"/>	Neoprene	1.4404 /	A4
1.4571	1.4571		1.4571	

Other materials or combinations available on request.

Order text

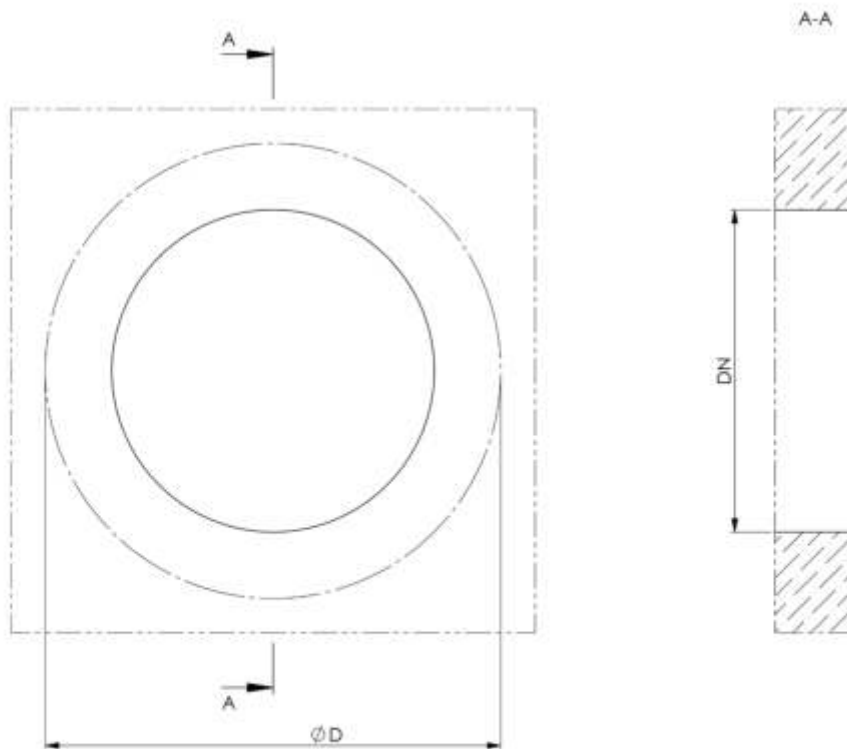
Flap Valve, circular type, with plain flap, lever and counterweight, for anchor bolting. Cat.-sheet 12.55.

Materials*	Dimensions*
Frame:	DN: mm
Flap:	Operating pressure: bar
Sealing:	
Connecting parts:	

* Please specify in the enquiry/ order.

WAGU®-Flap Valve Circular type

With plain flap, lever and counterweight, for anchor bolting



Installation Guide

- ➔ Place flap valve in the designated position and align.
- ➔ On mounting plate fastening holes are marked.
- ➔ For mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling.
- ➔ The bolt holes in the flange are 2 mm larger than the drill.
- ➔ Compound anchors with bigger washer have to be used for fastening.

Sealing flange/wall

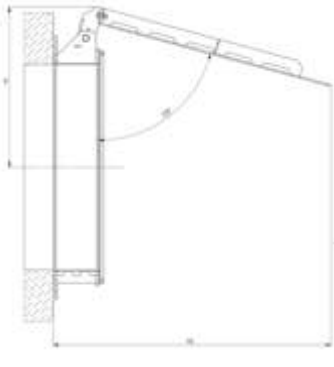
- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the flange.
- ➔ Fastening material and wall gasket are included.
- ➔ The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.

WAGU®-Flap Valve Circular type

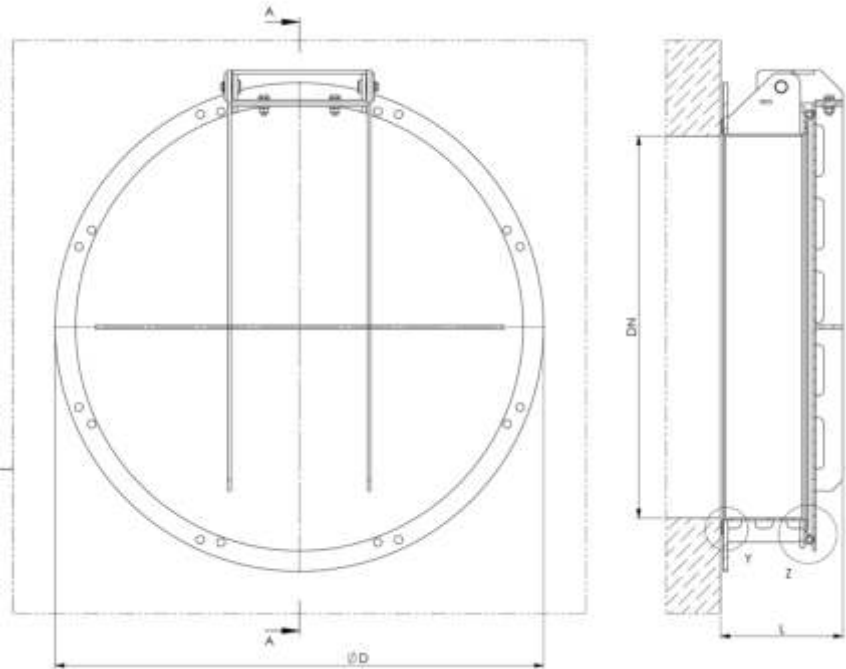
With plain flap, for anchor bolting
DN 700 up to 1200

Details

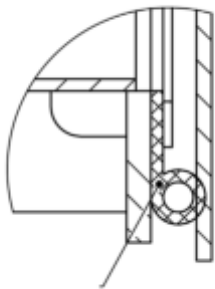
A-A
Flap valve opened



A-A
Flap valve closed

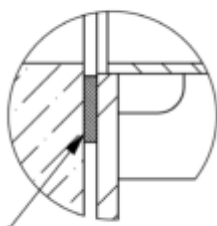


Z



Profile sealing

Y



Wall gasket



Materials

Frame	Flap	Sealing	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	A4

Other materials or combinations available on request.

Order text

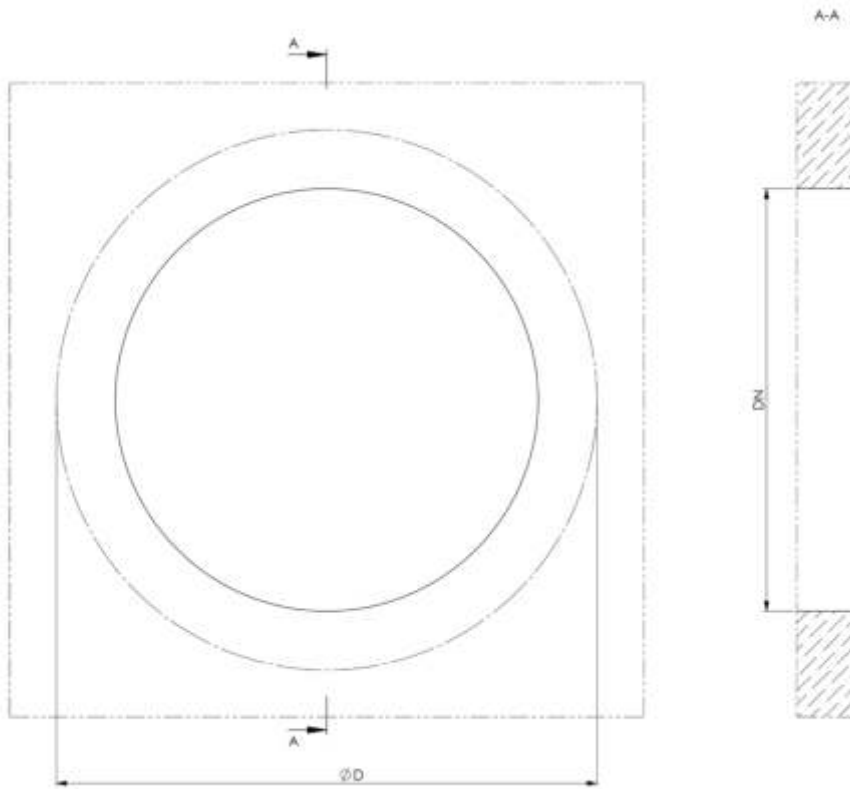
Flap Valve, circular type, with plain flap, for anchor bolting. Cat.-sheet 12.57.

Materials*	Dimensions*
Frame:	DN: mm
Flap:	Operating pressure: bar
Sealing:	
Connecting parts:	

* Please specify in the enquiry/ order.

WAGU® - Flap Valve Circular type

With plain flap, for anchor bolting



Installation Guide

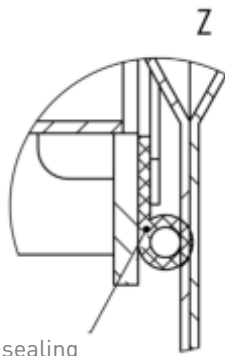
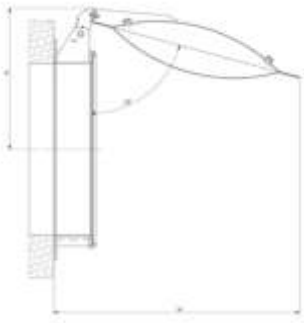
- ➔ Place flap valve in the designated position and align.
- ➔ On mounting plate fastening holes are marked.
- ➔ For mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling.
- ➔ The bolt holes in the flange are 2 mm larger than the drill.
- ➔ Compound anchors with bigger washer have to be used for fastening.

Sealing flange/wall

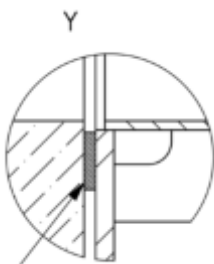
- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the flange.
- ➔ Fastening material and wall gasket are included.
- ➔ The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.

Details

A-A
Flap valve opened



Profile sealing



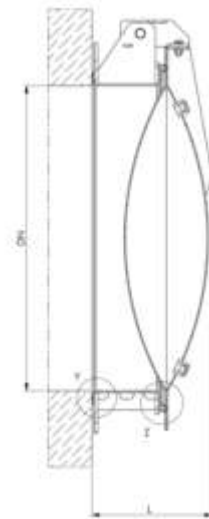
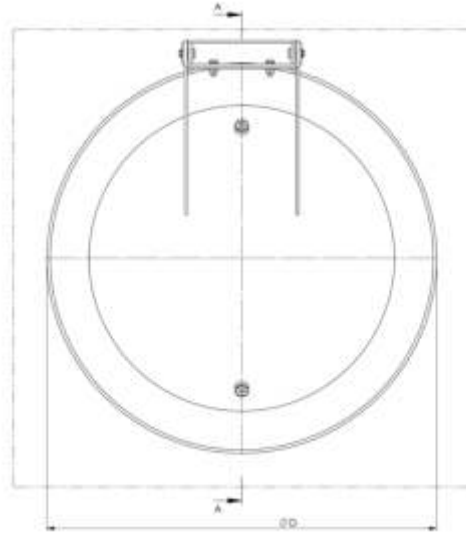
Wall gasket



WAGU®-Flap Valve Circular type

With hollow-float flap, for anchor bolting
DN 700 up to 1200

A-A
Flap valve closed



Materials

Frame	Flap	Sealing	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	A4

Other materials or combinations available on request.

Order text

Flap Valve, circular type, with hollow-float flap, for anchor bolting.
Cat.-sheet 12.59.

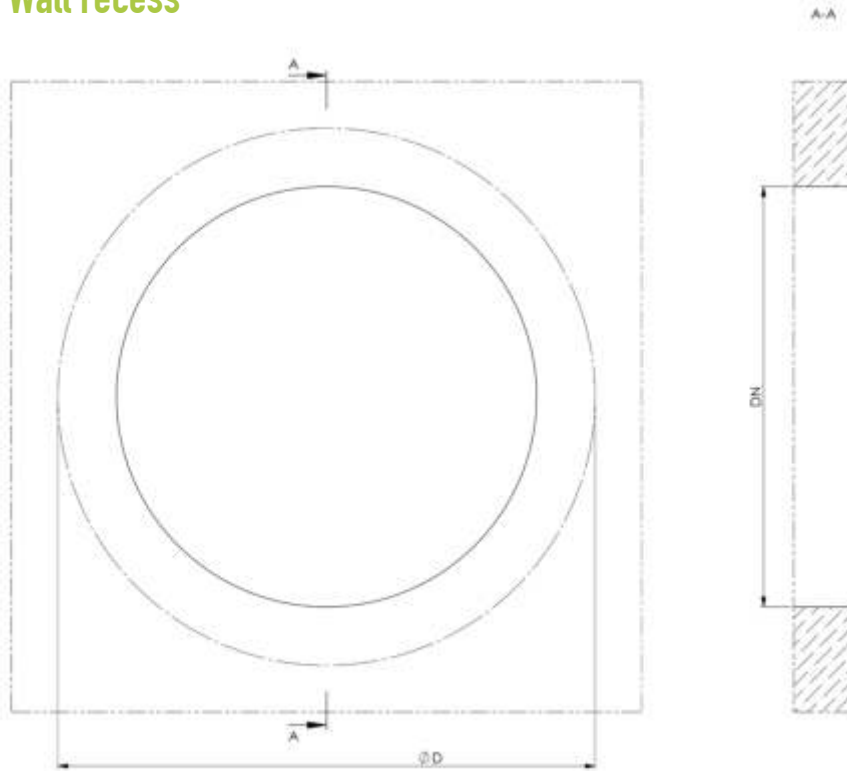
Materials*	Dimensions*
Frame:	DN: mm
Flap:	Operating pressure: bar
Sealing:	
Connecting parts:	

* Please specify in the enquiry/ order.

WAGU®-Flap Valve Circular type

With hollow-flap flap, for anchor bolting

Wall recess



Installation Guide

- ➔ Place flap valve in the designated position and align.
- ➔ On mounting plate fastening holes are marked.
- ➔ For mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling.
- ➔ The bolt holes in the flange are 2 mm larger than the drill. Compound anchors with bigger washer have to be used for fastening.

Sealing flange/wall

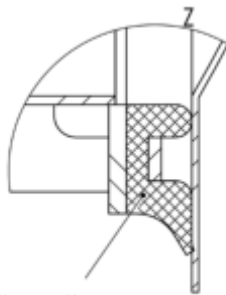
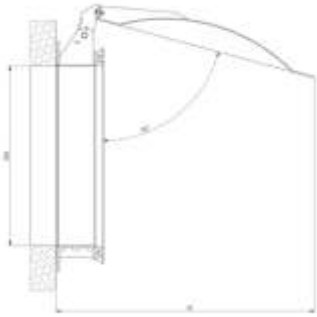
- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the flange.
- ➔ Fastening material and wall gasket are included.
- ➔ The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.

WAGU®-Flap Valve Circular type

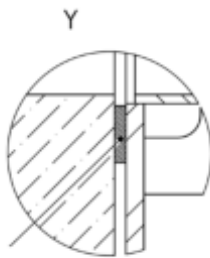
With plain flap, for anchor bolting
DN 1300 up to 2000

Details

A-A
Flap valve opened



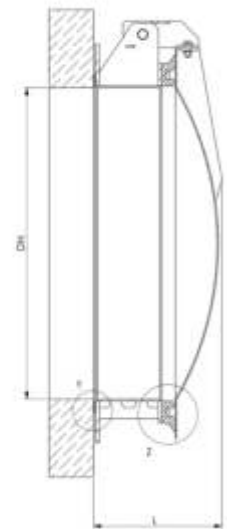
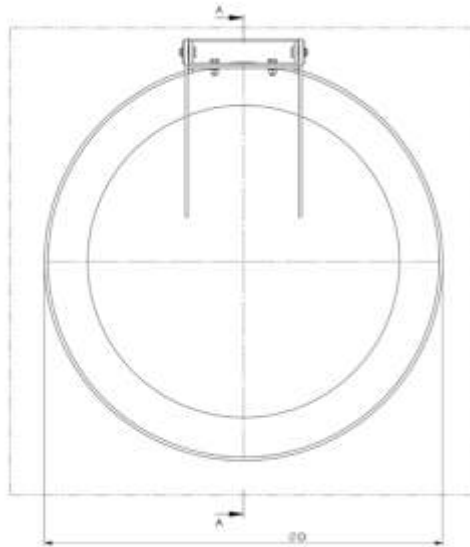
Profile sealing



Wall gasket



A-A
Flap valve closed



Materials

Frame	Flap	Sealing	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	A4

Other materials or combinations available on request.

Order text

Flap Valve, circular type, with plain flap, for anchor bolting. Cat.-sheet 12.61.

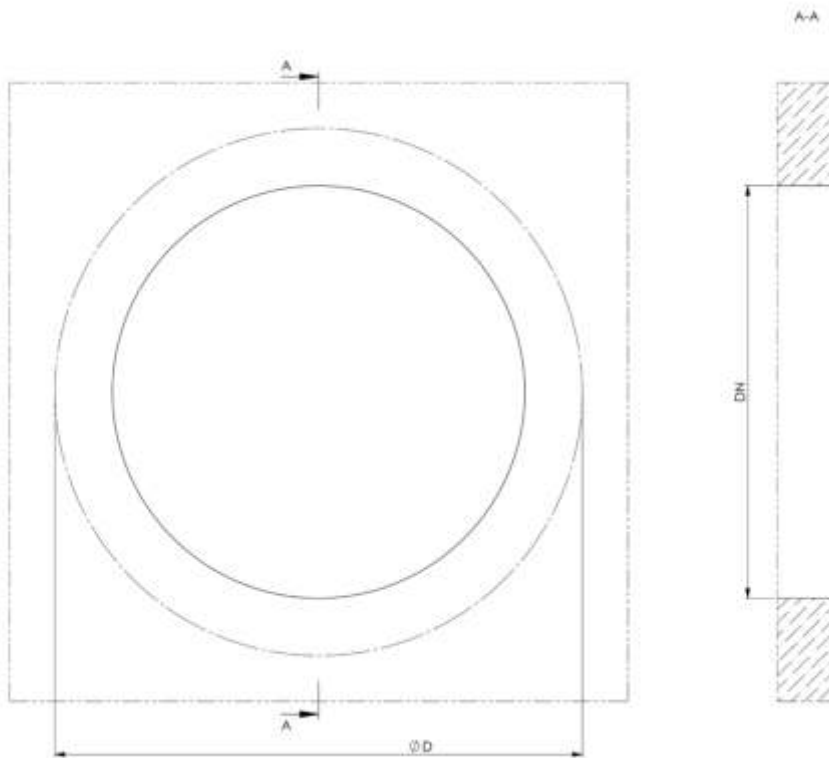
Materials*	Dimensions*
Frame:	DN: mm
Flap:	Operating pressure: bar
Sealing:	
Connecting parts:	

* Please specify in the enquiry/ order.

WAGU®-Flap Valve Circular type

With plain flap, for anchor bolting

Wall recess



Installation Guide

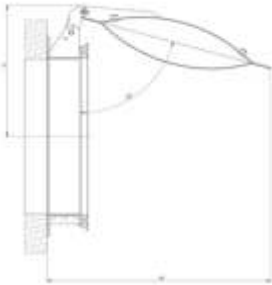
- ➔ Place flap valve in the designated position and align.
- ➔ On mounting plate fastening holes are marked.
- ➔ For mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling.
- ➔ The bolt holes in the flange are 2 mm larger than the drill.
- ➔ Compound anchors with bigger washer have to be used for fastening.

Sealing flange/wall

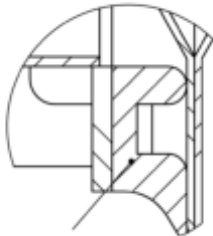
- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the flange.
- ➔ Fastening material and wall gasket are included.
- ➔ The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.

Details

A-A
Flap valve opened

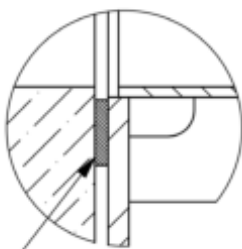


Z



Profile sealing

Y



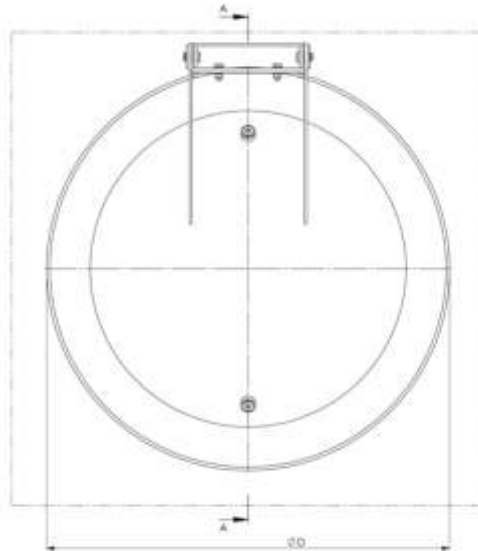
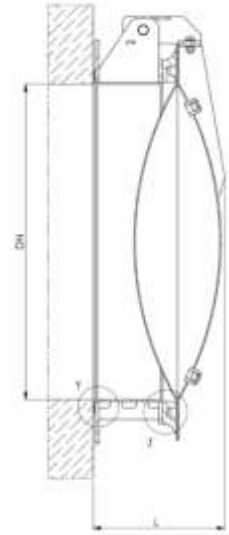
Wall gasket



WAGU®-Flap Valve Circular type

With hollow-float flap, for anchor bolting
DN 1300 up to 2000

A-A
Flap valve closed



Materials

Frame	Flap	Sealing	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	A4

Other materials or combinations available on request.

Order text

Flap Valve, circular type, with hollow-float flap, for anchor bolting.
Cat.-sheet 12.63.

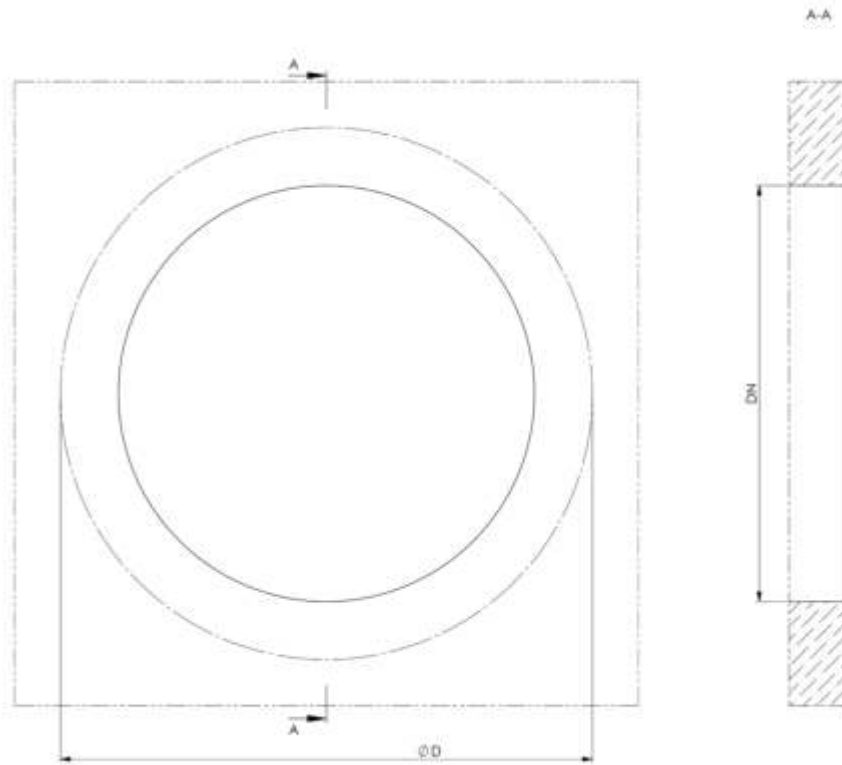
Materials*	Dimensions*
Frame:	DN: mm
Flap:	Operating pressure: bar
Sealing:	
Connecting parts:	

* Please specify in the enquiry/ order.

WAGU®-Flap Valve Circular type

With hollow-flap flap, for anchor bolting

Wall recess



Installation Guide

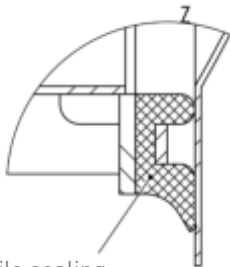
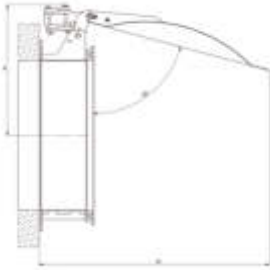
- ➔ Place flap valve in the designated position and align.
- ➔ On mounting plate fastening holes are marked.
- ➔ For mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling.
- ➔ The bolt holes in the flange are 2 mm larger than the drill. Compound anchors with bigger washer have to be used for fastening.

Sealing flange/wall

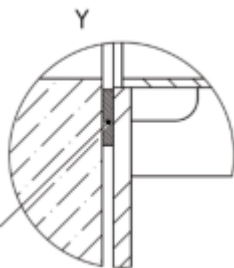
- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the flange.
- ➔ Fastening material and wall gasket are included.
- ➔ The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.

Details

A-A
Flap valve opened



Profile sealing



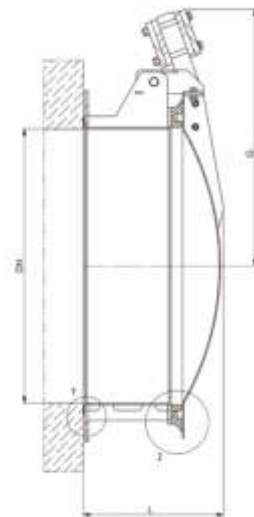
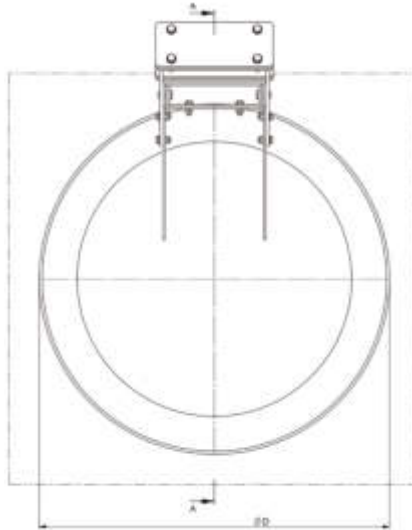
Wall gasket



WAGU® - Flap Valve Circular type

With plain flap, lever and counterweight, for anchor bolting
DN 1300 up to 2000

A-A
Flap valve closed



Materials

Frame	Flap	Sealing	Weight	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	1.4301	A4
1.4404 / <input type="checkbox"/> 1.4571	1.4404 / <input type="checkbox"/> 1.4571	Neoprene	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Flap Valve, circular type, with plain flap, lever and counterweight, for anchor bolting. Cat.-sheet 12.65.

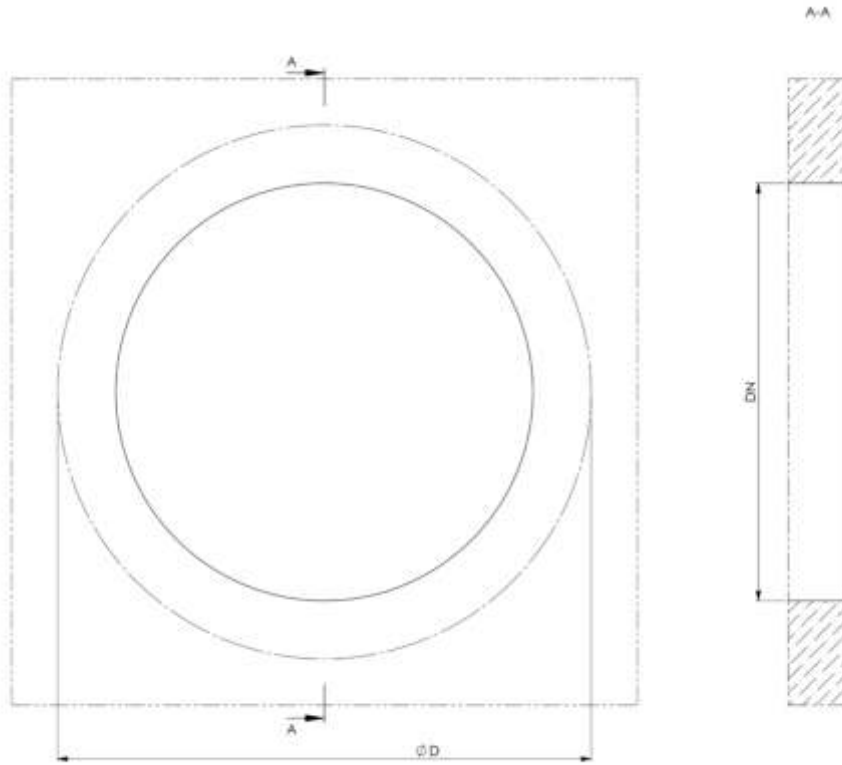
Materials*	Dimensions*
Frame:	DN: mm
Flap:	Operating pressure: bar
Sealing:	
Connecting parts:	

* Please specify in the enquiry/ order.

WAGU®-Flap Valve Circular type

With plain flap, lever and counterweight, for anchor bolting

Wall recess



Installation Guide

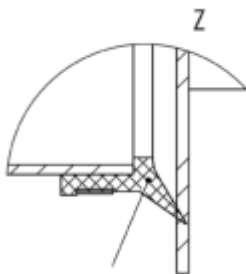
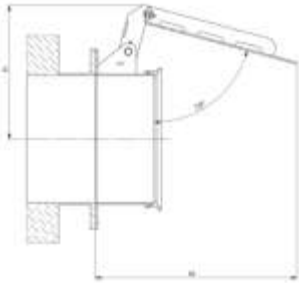
- ➔ Place flap valve in the designated position and align.
- ➔ On mounting plate fastening holes are marked.
- ➔ For mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling.
- ➔ The bolt holes in the flange are 2 mm larger than the drill.
- ➔ Compound anchors with bigger washer have to be used for fastening.

Sealing flange/wall

- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the flange.
- ➔ Fastening material and wall gasket are included.
- ➔ The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.

Details

A-A
Flap valve opened

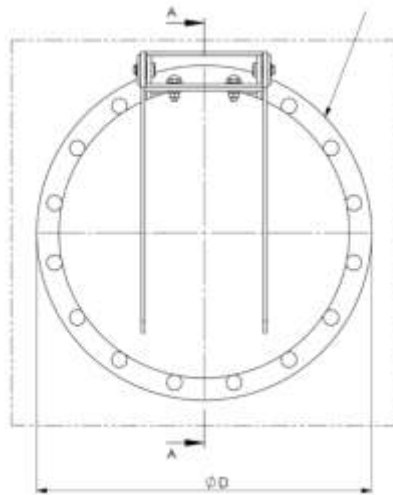


Profile sealing

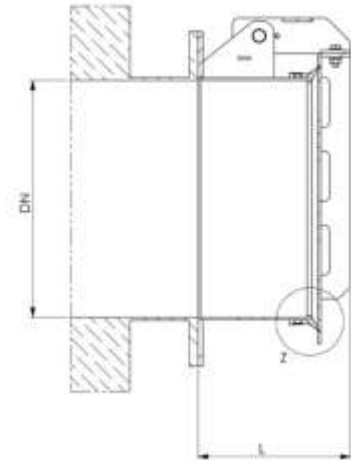


WAGU®-Flap Valve Circular type

With plain flap and flange connection
DN 200 up to 600



A-A
Flap valve closed



Flange connecting dimensions to DIN 2501, PN 10
(other connecting dimensions on request).

Materials

Frame	Flap	Sealing	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	A4

Other materials or combinations available on request.

Order text

Flap Valve, circular type, with plain flap and flange connection.

Cat.-sheet 12.71

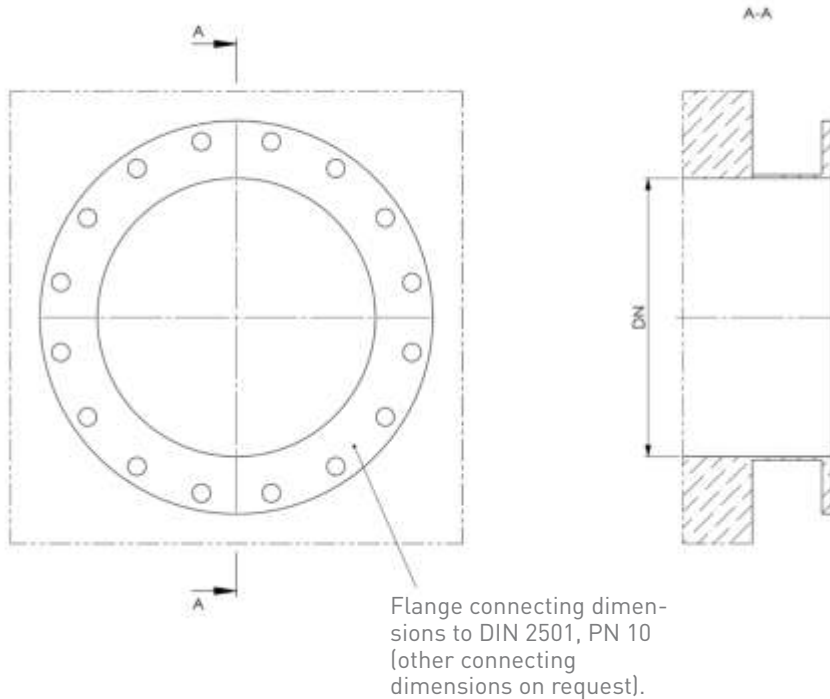
Materials*	Dimensions*
Frame:	DN: mm
Flap:	Operating pressure: bar
Sealing:	
Connecting parts:	

* Please specify in the enquiry/ order.

WAGU®-Flap Valve Circular type

With plain flap and flange connection

Wall recess

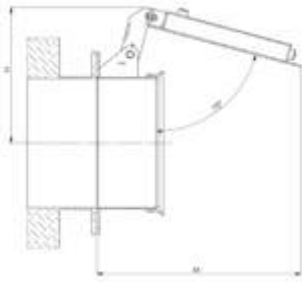


Installation Guide

- ➔ WAGU Flap Valves with flange connection can be used as end-of line valves only.
- ➔ Place the Flap Valve at the wall or pipeline flange and align.
- ➔ The counter flange has to be vertical and plane-parallel, the fastening holes have to be arranged off centre.
- ➔ For fastening, connecting bolts, hexagon nuts, washers, and seals according to the corresponding standard (DIN etc.) have to be used.
- ➔ The connecting bolts have to be tightened crosswise and evenly.

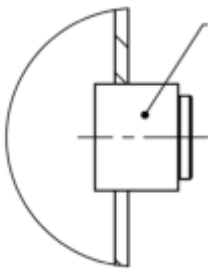
Details

A-A
Flap valve opened



X

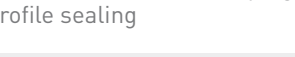
Filler plug



Z

Outlet plug

Profile sealing

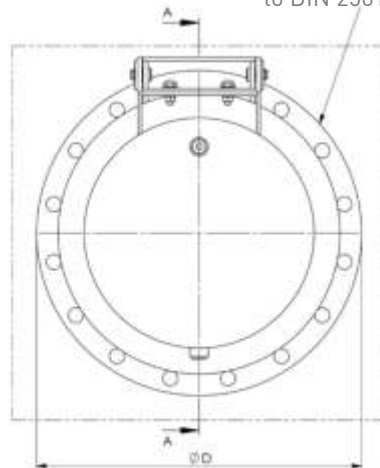


WAGU®-Flap Valve

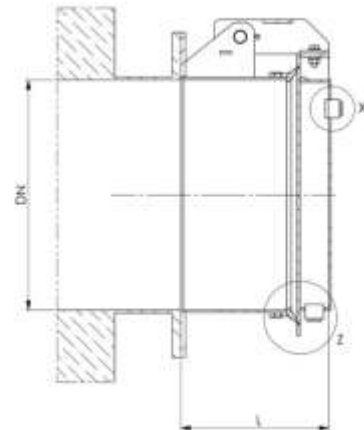
Circular type

Flap Valve, circular type with hollow-float flap and flange connection
DN 200 to 600

Flange connecting dimensions to DIN 2501 / PN10



A-A
Flap valve closed



Flange connecting dimensions to DIN 2501, PN 10 (other connecting dimensions on request).

Materials

Frame	Flap	Sealing	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	A4

Other materials or combinations available on request.

Order text

Flap Valve, circular type, with hollow-float flap and flange connection.
Cat.-sheet 12.73.

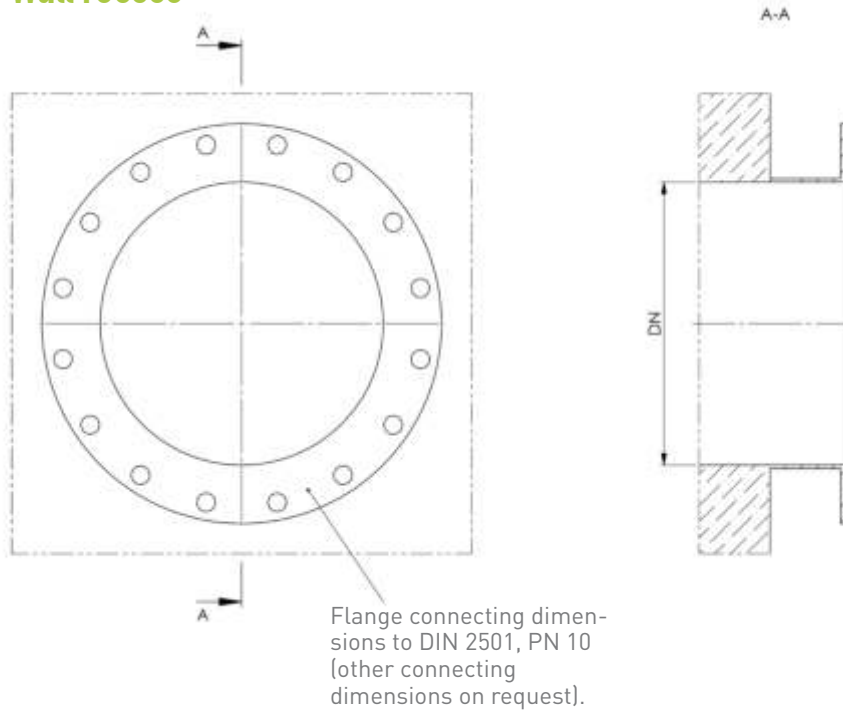
Materials*	Dimensions*
Frame:	DN: mm
Flap:	Operating pressure: bar
Sealing:	
Connecting parts:	

* Please specify in the enquiry/ order.

WAGU®-Flap Valve Circular type

Flap Valve, circular type with hollow-float flap and flange connection

Wall recess



Installation Guide

- ➔ WAGU Flap Valves with flange connection can be used as end-of line valves only.
- ➔ Place the Flap Valve at the wall or pipeline flange and align.
- ➔ The counter flange has to be vertical and plane-parallel, the fastening holes have to be arranged off centre.
- ➔ For fastening, connecting bolts, hexagon nuts, washers, and seals according to the corresponding standard (DIN etc.) have to be used.
- ➔ The connecting bolts have to be tightened crosswise and evenly.

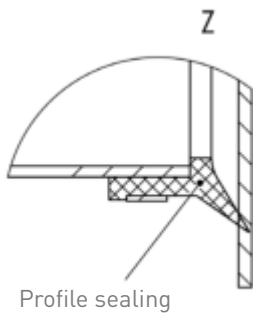
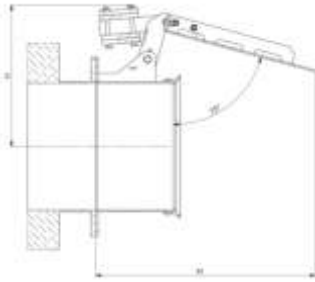
WAGU®-Flap Valve Circular type

Flap Valve, circular type with plain flap, lever and counterweight and flange connection

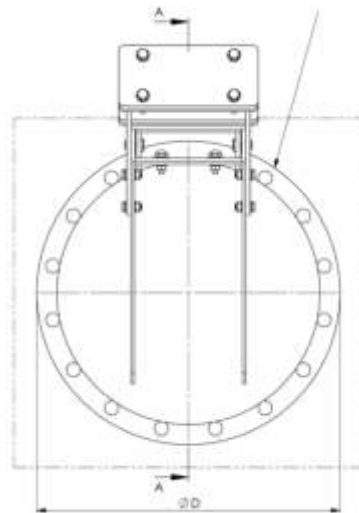
DN 200 up to 600

Details

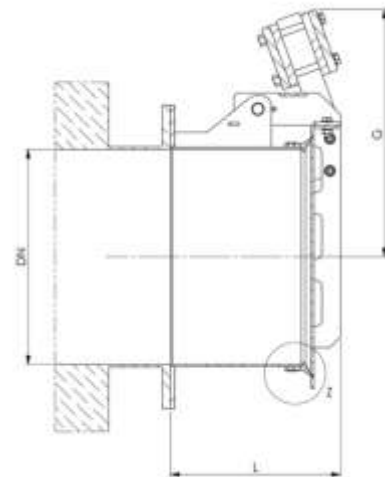
A-A
Flap valve opened



Flange connecting dimensions to DIN 2501 / PN10



A-A
Flap valve closed



Flange connecting dimensions to DIN 2501, PN 10 (other connecting dimensions on request).

Materials

Frame	Flap	Sealing	Weight	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	1.4301	A4
1.4404 / <input type="checkbox"/> 1.4571	1.4404 / <input type="checkbox"/> 1.4571	Neoprene	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Flap Valve, circular type with plain flap, lever and counterweight and flange connection. Cat.-sheet 12.75.

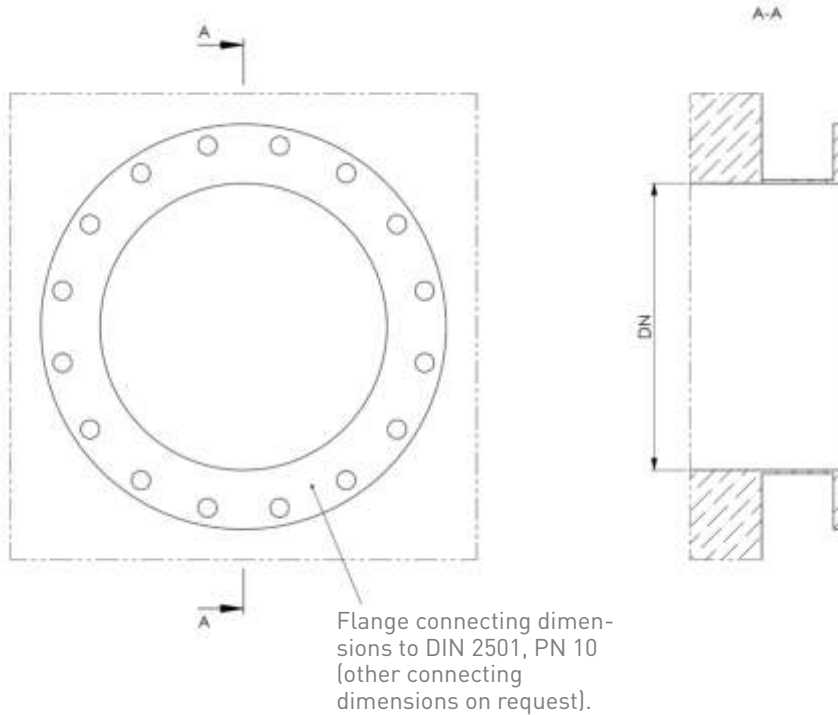
Materials*	Dimensions*
Frame:	DN: mm
Flap:	Operating pressure: bar
Sealing:	
Connecting parts:	

* Please specify in the enquiry/ order.

WAGU®-Flap Valve Circular type

Flap Valve, circular type with plain flap, lever and counterweight and flange connection

Wall recess

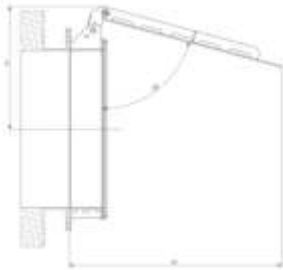


Installation Guide

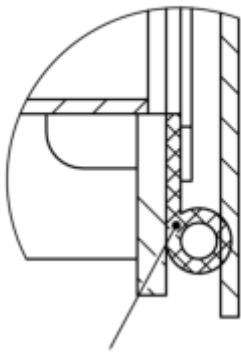
- ➔ WAGU Flap Valves with flange connection can be used as end-of line valves only.
- ➔ Place the Flap Valve at the wall or pipeline flange and align.
- ➔ The counter flange has to be vertical and plane-parallel, the fastening holes have to be arranged off centre.
- ➔ For fastening, connecting bolts, hexagon nuts, washers, and seals according to the corresponding standard (DIN etc.) have to be used.
- ➔ The connecting bolts have to be tightened crosswise and evenly.

Details

A-A
Flap valve opened



Z



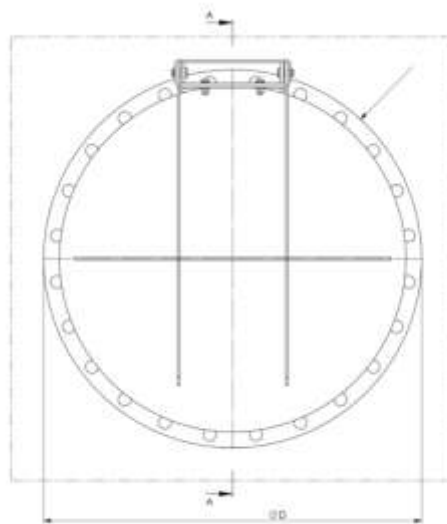
Profile sealing



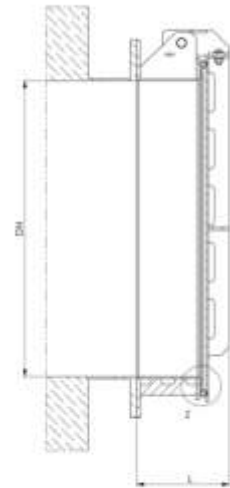
WAGU®-Flap Valve Circular type

With plain flap and flange connection
DN 700 up to 1200

Flange connecting dimen-
sions to DIN 2501 / PN10



A-A
Flap valve closed



Flange connecting dimen-
sions to DIN 2501, PN 10
(other connecting
dimensions on request).

Materials

Frame	Flap	Sealing	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	A4

Other materials or combinations available on request.

Order text

Flap Valve, circular type, with plain flap and flange connection.
Cat.-sheet 12.77.

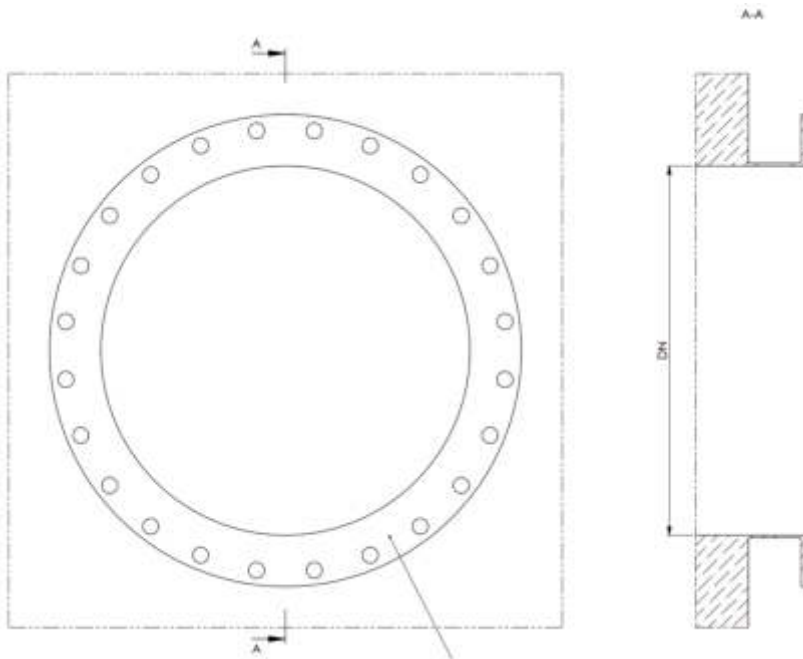
Materials*	Dimensions*
Frame:	DN: mm
Flap:	Operating pressure: bar
Sealing:	
Connecting parts:	

* Please specify in the enquiry/ order.

WAGU®-Flap Valve Circular type

With plain flap and flange connection

Wall recess



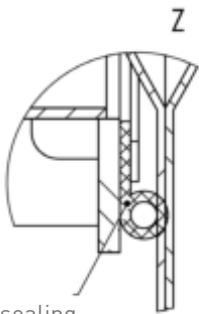
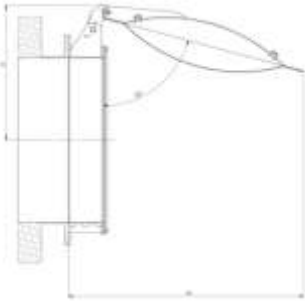
Flange connecting dimensions to DIN 2501, PN 10 (other connecting dimensions on request).

Installation Guide

- ➔ WAGU Flap Valves with flange connection can be used as end-of line valves only.
- ➔ Place the Flap Valve at the wall or pipeline flange and align.
- ➔ The counter flange has to be vertical and plane-parallel, the fastening holes have to be arranged off centre.
- ➔ For fastening, connecting bolts, hexagon nuts, washers, and seals according to the corresponding standard (DIN etc.) have to be used.
- ➔ The connecting bolts have to be tightened crosswise and evenly.

Details

A-A
Flap valve opened



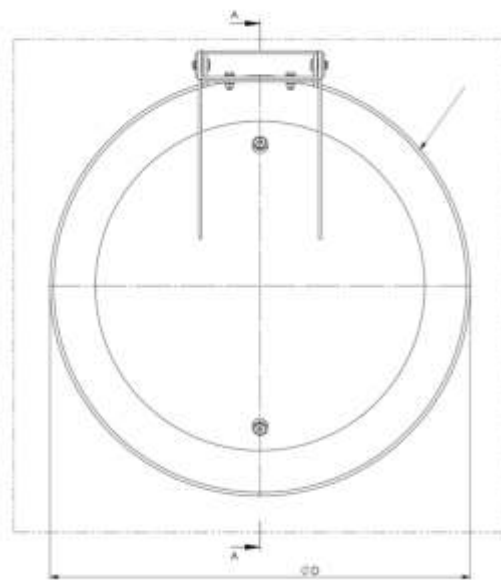
Profile sealing



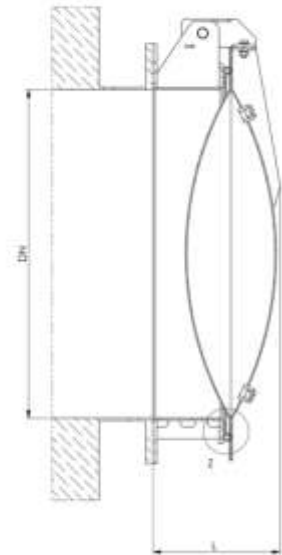
WAGU®-Flap Valve Circular type

With hollow-float flap and flange connection
DN 700 up to 1200

Flange connecting dimensions to DIN 2501 / PN10



A-A
Flap valve closed



Flange connecting dimensions to DIN 2501, PN 10
(other connecting dimensions on request).

Materials

Frame	Flap	Sealing	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	A4

Other materials or combinations available on request.

Order text

Flap Valve, circular type, with hollow-float flap and flange connection.

Cat.-sheet 12.79.

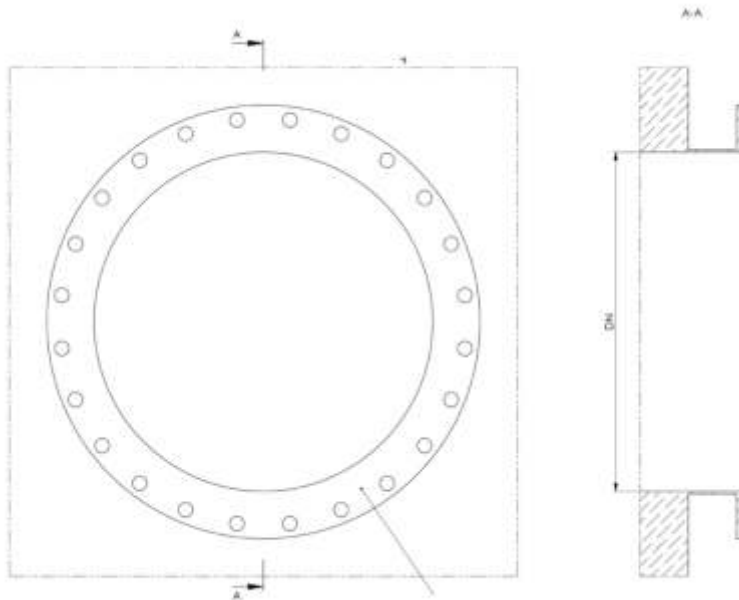
Materials*	Dimensions*
Frame:	DN: mm
Flap:	Operating pressure: bar
Sealing:	
Connecting parts:	

* Please specify in the enquiry/ order.

WAGU®-Flap Valve Circular type

With hollow-float flap and flange connection

Wall recess



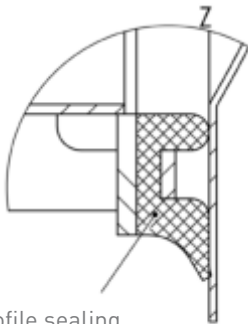
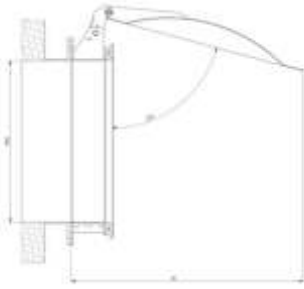
Flange connecting dimensions to DIN 2501, PN 10 (other connecting dimensions on request).

Installation Guide

- ➔ WAGU Flap Valves with flange connection can be used as end-of line valves only.
- ➔ Place the Flap Valve at the wall or pipeline flange and align.
- ➔ The counter flange has to be vertical and plane-parallel, the fastening holes have to be arranged off centre.
- ➔ For fastening, connecting bolts, hexagon nuts, washers, and seals according to the corresponding standard (DIN etc.) have to be used.
- ➔ The connecting bolts have to be tightened crosswise and evenly.

Details

A-A
Flap valve opened



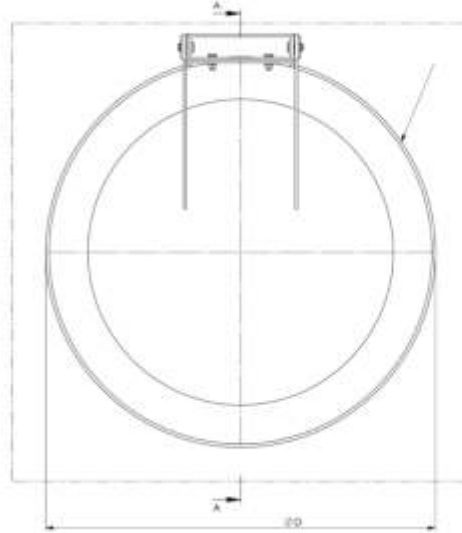
Profile sealing



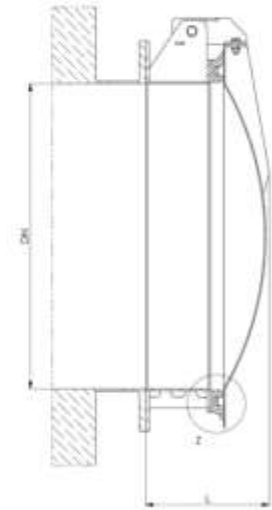
WAGU®-Flap Valve Circular type

With plain flap and flange connection
DN 1300 up to 2000

Flange connecting dimensions to DIN 2501 / PN10



A-A
Flap valve closed



Flange connecting dimensions to DIN 2501, PN 10 (other connecting dimensions on request).

Materials

Frame	Flap	Sealing	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	A4

Other materials or combinations available on request.

Order text

Flap Valve, circular type, with plain flap and flange connection.
Cat.-sheet 12.81.

Materials*	Dimensions*
Frame:	DN: mm
Flap:	Operating pressure: bar
Sealing:	

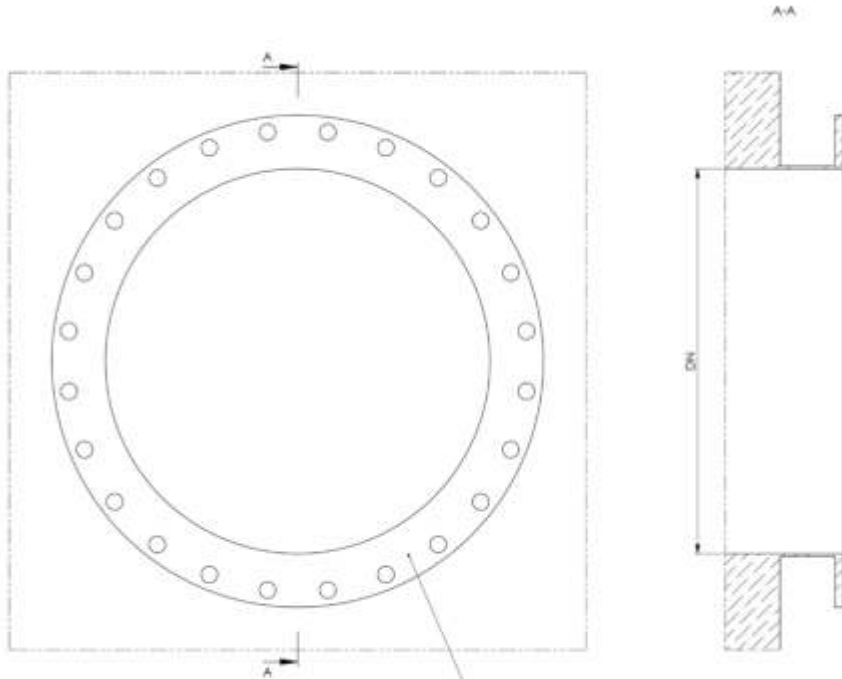
Connecting parts:

* Please specify in the enquiry/ order.

WAGU®-Flap Valve Circular type

With plain flap and flange connection

Wall recess



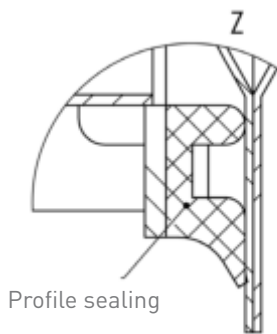
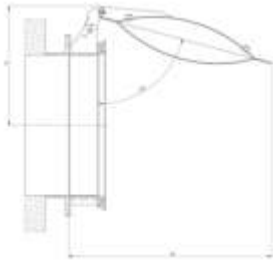
Flange connecting dimensions to DIN 2501, PN 10 (other connecting dimensions on request).

Installation Guide

- ➔ WAGU Flap Valves with flange connection can be used as end-of line valves only.
- ➔ Place the Flap Valve at the wall or pipeline flange and align.
- ➔ The counter flange has to be vertical and plane-parallel, the fastening holes have to be arranged off centre.
- ➔ For fastening, connecting bolts, hexagon nuts, washers, and seals according to the corresponding standard (DIN etc.) have to be used.
- ➔ The connecting bolts have to be tightened crosswise and evenly.

Details

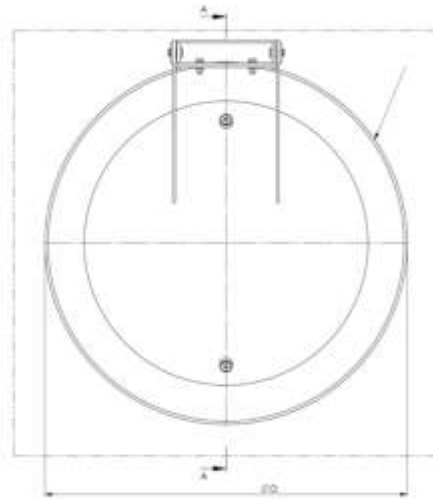
A-A
Flap valve opened



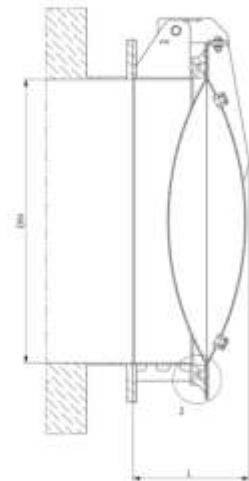
WAGU®-Flap Valve Circular type

With hollow-float flap and flange connection
DN 1300 up to 2000

Flange connecting dimensions to DIN 2501 / PN10



A-A
Flap valve closed



Flange connecting dimensions to DIN 2501, PN 10
(other connecting dimensions on request).

Materials

Frame	Flap	Sealing	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	Neoprene	A4

Other materials or combinations available on request.

Order text

Flap Valve, circular type, with hollow-float flap and flange connection.

Cat.-sheet 12.83

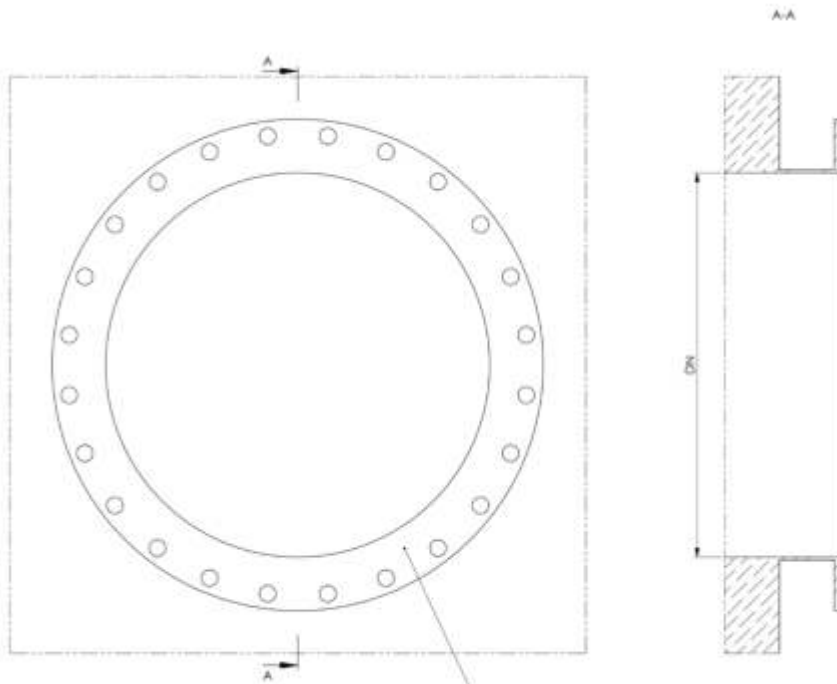
Materials*	Dimensions*
Frame:	DN: mm
Flap:	Operating pressure: bar
Sealing:	
Connecting parts:	

* Please specify in the enquiry/ order.

WAGU®-Flap Valve Circular type

With hollow-float flap and flange connection

Wall recess



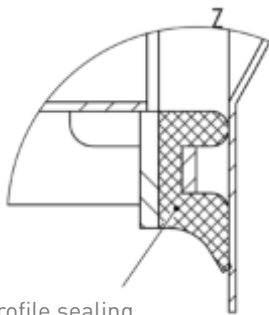
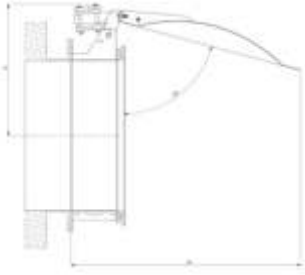
Flange connecting dimensions to DIN 2501, PN 10 (other connecting dimensions on request).

Installation Guide

- ➔ WAGU Flap Valves with flange connection can be used as end-of line valves only.
- ➔ Place the Flap Valve at the wall or pipeline flange and align.
- ➔ The counter flange has to be vertical and plane-parallel, the fastening holes have to be arranged off centre.
- ➔ For fastening, connecting bolts, hexagon nuts, washers, and seals according to the corresponding standard (DIN etc.) have to be used.
- ➔ The connecting bolts have to be tightened crosswise and evenly.

Details

A-A
Flap valve opened



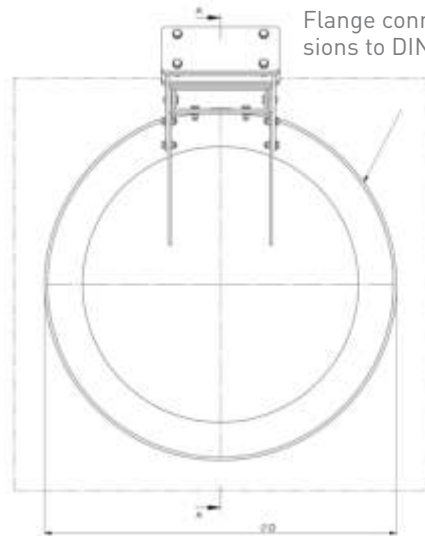
Profile sealing



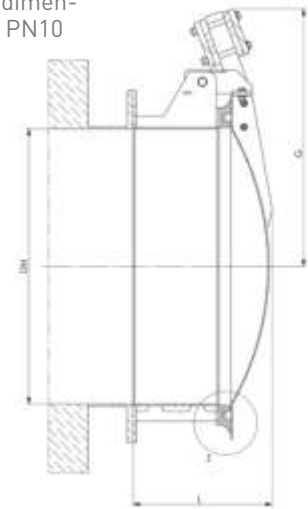
WAGU®-Flap Valve Circular type

With plain flap, lever and counterweight and flange connection
DN 1300 up to 2000

A-A
Flap valve closed



Flange connecting dimensions to DIN 2501 / PN10



Flange connecting dimensions to DIN 2501, PN 10 (other connecting dimensions on request).

Materials

Frame	Flap	Sealing	Weight	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	1.4301	A4
1.4404 / <input type="checkbox"/> 1.4571	1.4404 / <input type="checkbox"/> 1.4571	Neoprene	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Flap Valve, circular type, with plain flap, lever and counterweight and flange connection. Cat.-sheet 12.85.

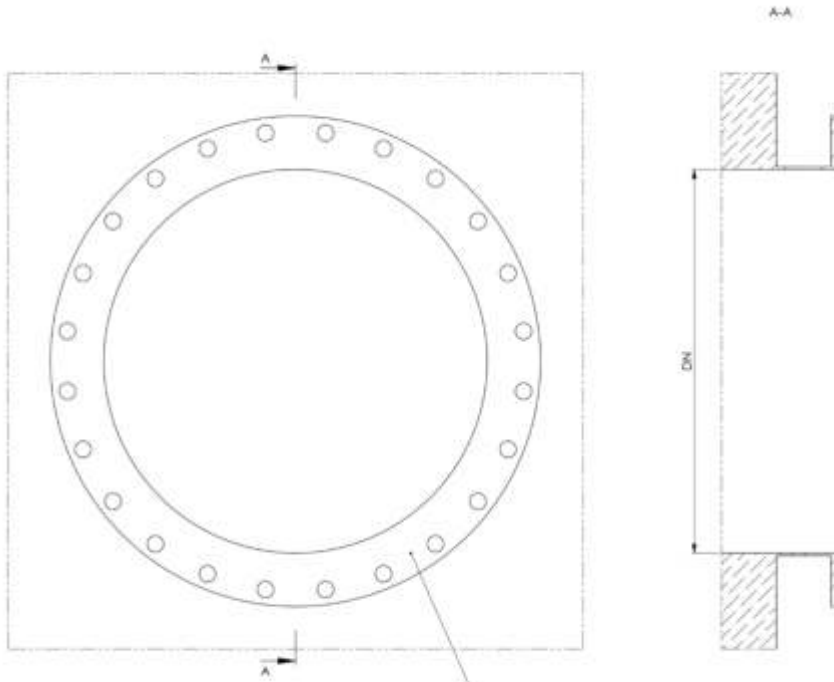
Materials*	Dimensions*
Frame:	DN: mm
Flap:	Operating pressure: bar
Sealing:	
Connecting parts:	

* Please specify in the enquiry/ order.

WAGU® - Flap Valve Circular type

With plain flap, lever and counterweight and flange connection

Wall recess



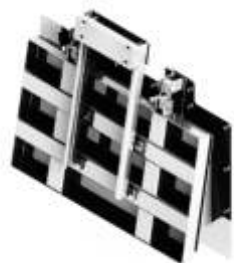
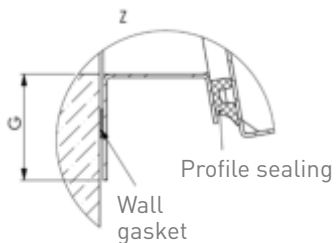
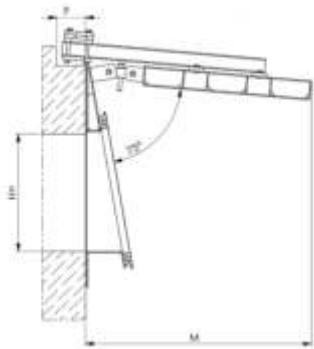
Flange connecting dimensions to DIN 2501, PN 10 (other connecting dimensions on request).

Installation Guide

- ➔ WAGU Flap Valves with flange connection can be used as end-of line valves only.
- ➔ Place the Flap Valve at the wall or pipeline flange and align.
- ➔ The counter flange has to be vertical and plane-parallel, the fastening holes have to be arranged off centre.
- ➔ For fastening, connecting bolts, hexagon nuts, washers, and seals according to the corresponding standard (DIN etc.) have to be used.
- ➔ The connecting bolts have to be tightened crosswise and evenly.

Details

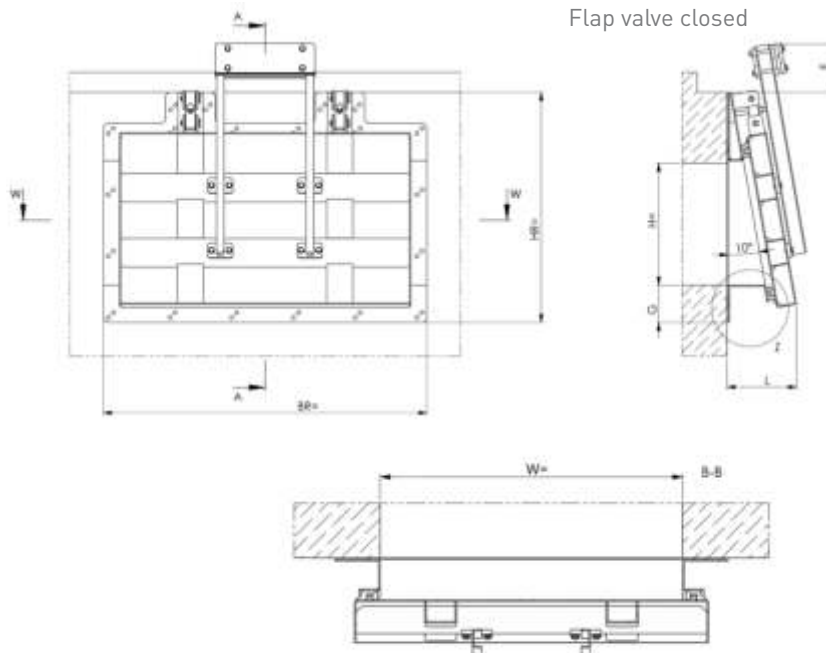
A-A
Flap valve opened



WAGU®-Flap Valve Rectangular type

With plain flap, lever and counterweight, for anchor bolting
W x H 200 x 200 up to very large dimensions, PN 0,6

A-A
Flap valve closed



Materials

Frame	Flap	Sealing	Weight	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	1.4301	A4
1.4404 / <input type="checkbox"/> 1.4571	1.4404 / <input type="checkbox"/> 1.4571	Neoprene	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

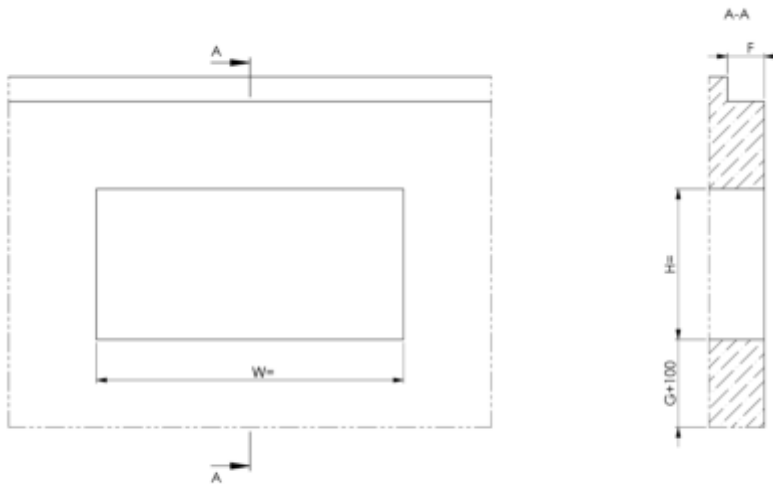
Flap Valve, rectangular type, with plain flap, lever and counterweight, for anchor bolting. Cat.-sheet 12.411.

Materials*	Dimensions*
Frame:	W x H: mm
Flap:	Operating pressure: bar
Sealing:	
Connecting parts:	

* Please specify in the enquiry/ order.

WAGU®-Flap Valve Rectangular type

With plain flap, lever and counterweight, for anchor bolting



Installation Guide

- ➔ Place flap valve in the designated position and align.
- ➔ For anchor bolting, holes are double and diagonal displaced in the frame or flange.
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling.
- ➔ The bolt holes in the flange are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Compound anchor bolts are to be used for fastening.

Sealing flange/wall

- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the flange.
- ➔ Fastening material and wall gasket are included. The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.

Fastening with compound anchor

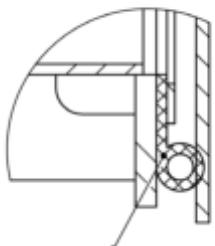
- ➔ For fixing, drill hole depth and diameter see installation instructions of the anchor manufacturer.

Details

A-A
Flap valve opened

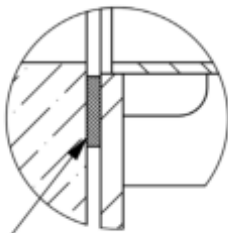


Z



Profile sealing

Y



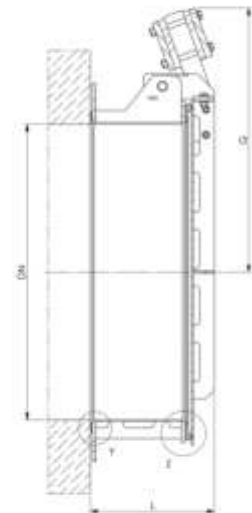
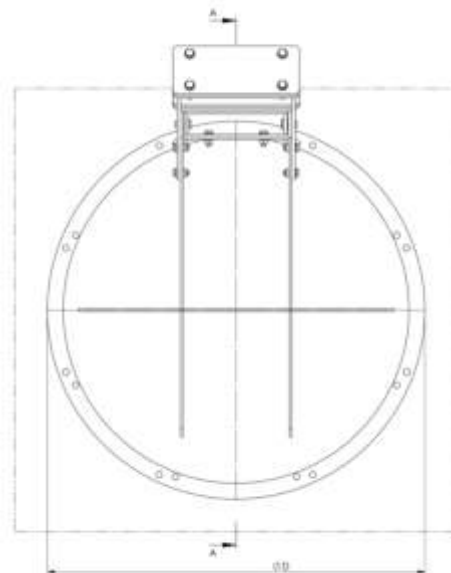
Wall gasket



WAGU®-Flap Valve Circular type

With plain flap, lever and counterweight, for anchor bolting
DN 700 up to 1200

A-A
Flap valve closed



Materials

Frame	Flap	Sealing	Weight	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	1.4301	A4
1.4404 / <input type="checkbox"/> 1.4571	1.4404 / <input type="checkbox"/> 1.4571	Neoprene	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

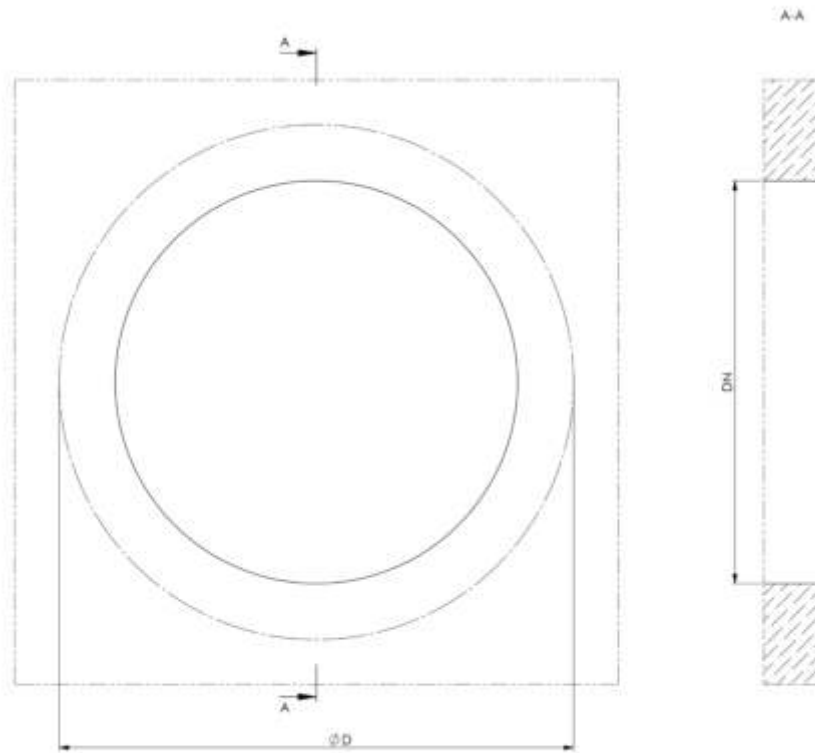
Flap Valve, circular type, with plain flap, lever and counterweight, for anchor bolting. Cat.-sheet 12.511.

Materials*	Dimensions*
Frame:	DN: mm
Flap:	Operating pressure: bar
Sealing:	
Connecting parts:	

* Please specify in the enquiry/ order.

WAGU®-Flap Valve Circular type

With plain flap, lever and counterweight, for anchor bolting



Installation Guide

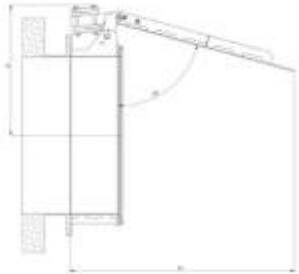
- ➔ Place flap valve in the designated position and align.
- ➔ On mounting plate fastening holes are marked.
- ➔ For mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling.
- ➔ The bolt holes in the flange are 2 mm larger than the drill.
- ➔ Compound anchors with bigger washer have to be used for fastening.

Sealing flange/wall

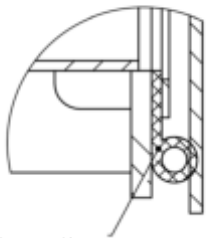
- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the flange.
- ➔ Fastening material and wall gasket are included.
- ➔ The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall. Distortion of the frame affects performance and tightness of the penstock.

Details

A-A
Flap valve opened



Z

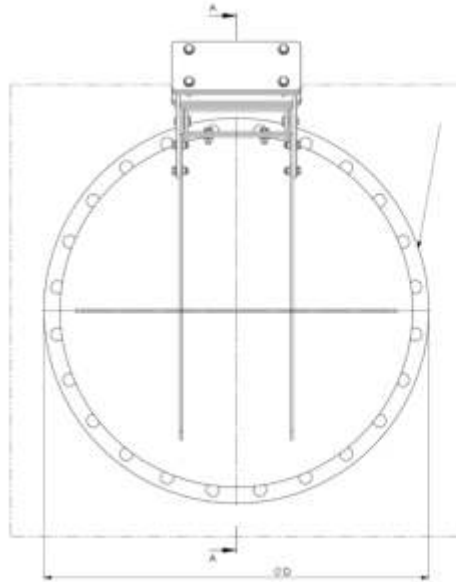


Profile sealing

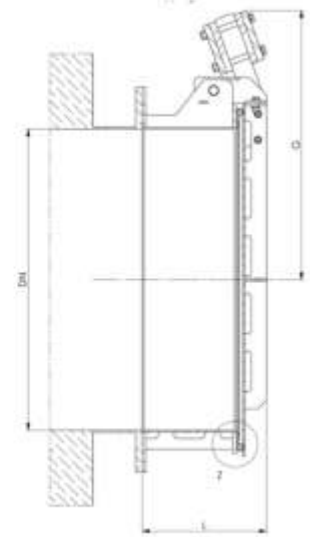


WAGU®-Flap Valve Circular type

With plain flap, lever and counterweight and flange connection
DN 700 up to 1200



A-A
Flap valve closed



Flange connecting dimensions to DIN 2501, PN 10 (other connecting dimensions on request).

Materials

Frame	Flap	Sealing	Weight	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	Neoprene	1.4301	A4
1.4404 / <input type="checkbox"/> 1.4571	1.4404 / <input type="checkbox"/> 1.4571	Neoprene	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Flap Valve, circular type, with plain flap, lever and counterweight and flange connection. Cat.-sheet 12.711.

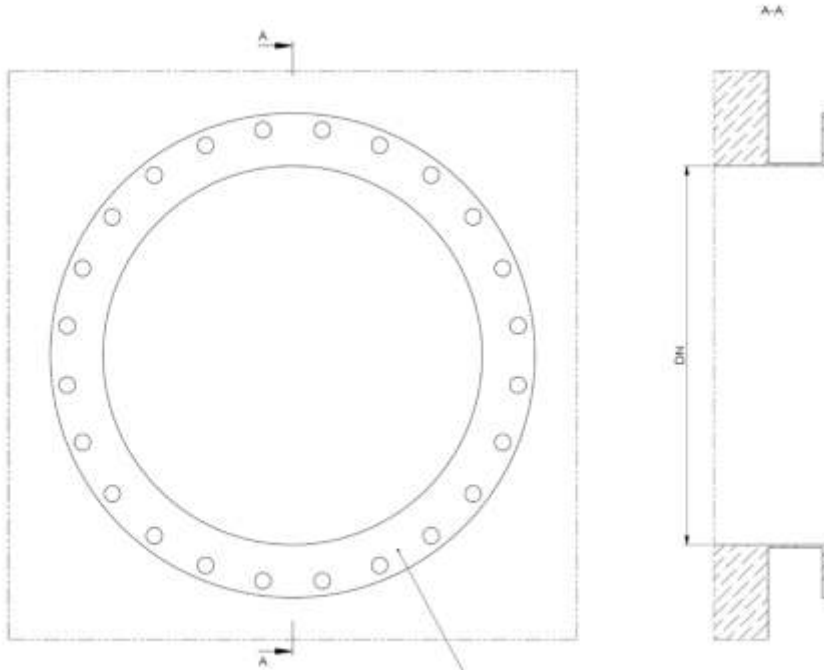
Materials*	Dimensions*
Frame:	DN: mm
Flap:	Operating pressure: bar
Sealing:	
Connecting parts:	

* Please specify in the enquiry/ order.

WAGU®-Flap Valve Circular type

With plain flap, lever and counterweight and flange connection

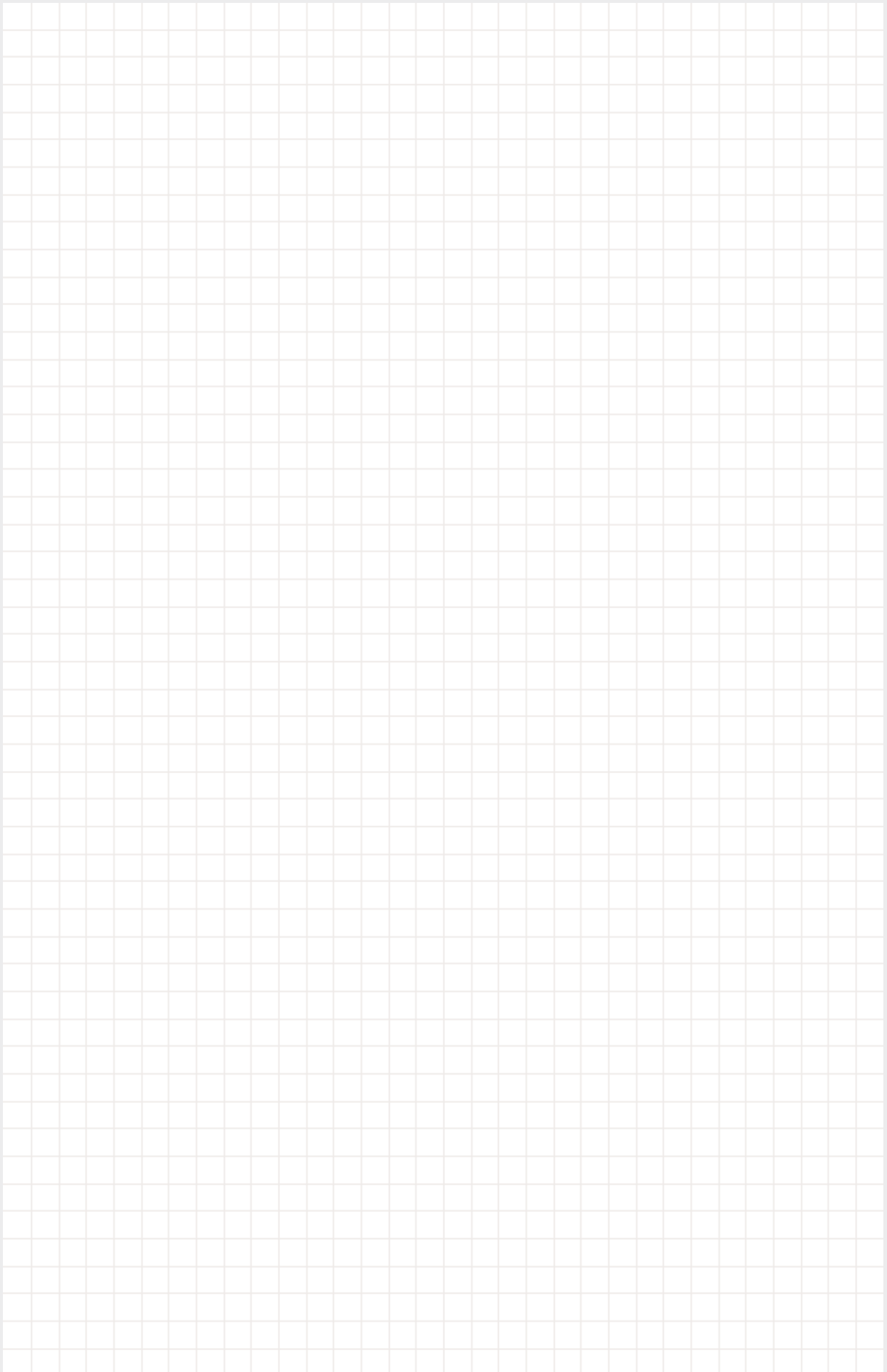
Wall recess



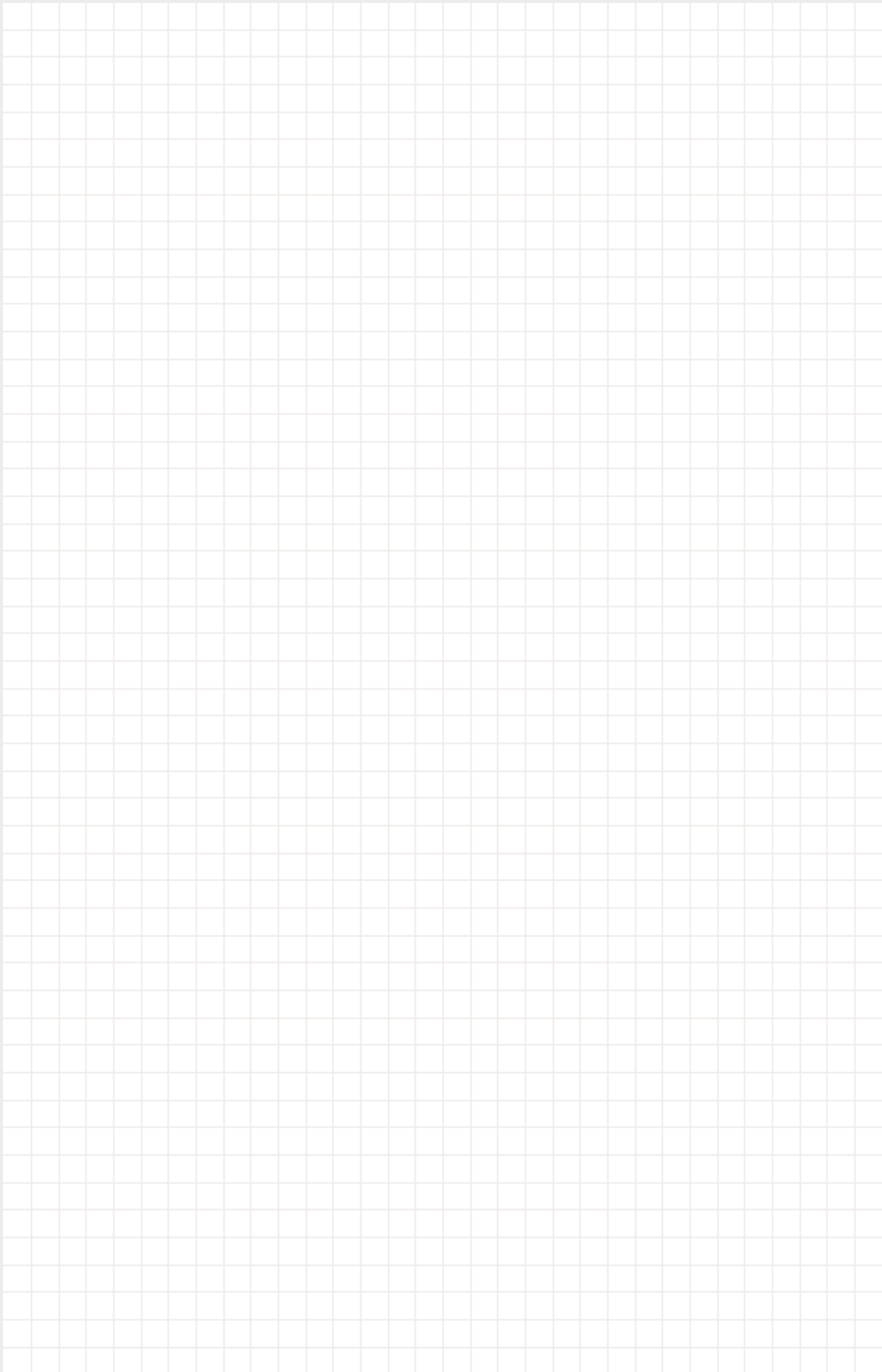
Flange connecting dimensions to DIN 2501, PN 10 (other connecting dimensions on request).

Installation Guide

- ➔ WAGU Flap Valves with flange connection can be used as end-of line valves only.
- ➔ Place the Flap Valve at the wall or pipeline flange and align.
- ➔ The counter flange has to be vertical and plane-parallel, the fastening holes have to be arranged off centre.
- ➔ For fastening, connecting bolts, hexagon nuts, washers, and seals according to the corresponding standard (DIN etc.) have to be used.
- ➔ The connecting bolts have to be tightened crosswise and evenly.

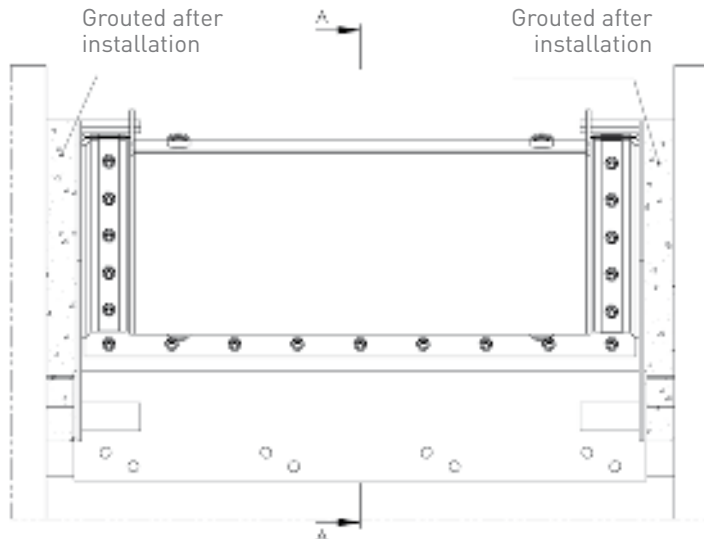


01	WAGU®-Handstops	01
02	WAGU®-Channel Penstocks (Leightweight)	02
03	WAGU®-Channel Penstocks	03
04	WAGU®-Stoplogs	04
05	WAGU®-Stop Plates	05
06	WAGU®-Weir Type Channel Penstocks (3 Facings)	06
07	WAGU®-Slide Penstocks	07
08		08
09		09
10	WAGU®-Weir Type Penstocks (4 Facings)	10
11		11
12	WAGU®-Flap Valves	12
13	WAGU®-Tidal Flaps	13
14	WAGU®-Tilting Flap Spillways	14
15		15
16		16
17	WAGU®-Isolating and Flushing Valves	17
18	WAGU®-Reversing Flaps	18
19		19
20	WAGU®-Telescopic Valves	20
21	WAGU®-Basin Inlets	21
22	WAGU®-Operating Gears	22

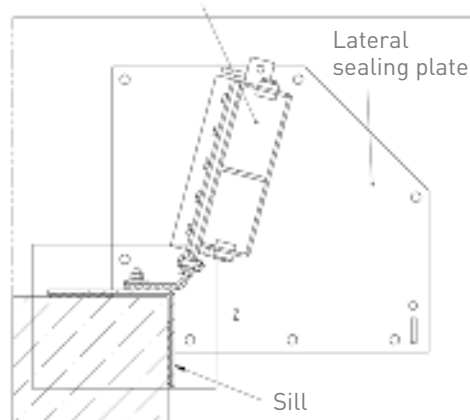


WAGU® -Tidal Flap

Suitable as non-return device for mounting to outlets of storage basins, for anchor bolting onto spillway sills, lateral sealing plates for anchor bolting and sealing by cement mortar.



Tilting flap of hollow design



Design

- 3 facing
- 4 facing

Design Features

Welded design consisting of the following main components:

- Sill with lateral sealing plates and stops for Open-Closed positions
- Tilting flap designed as rigid flap, hollow type, with rubber hinge band or tubular shaft and lateral profile sealings
- Design with 4 facings with top rail and top seal

Dimensions

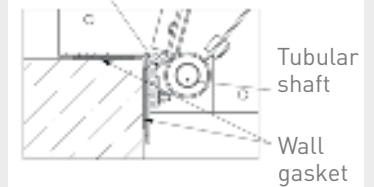
- W x Dh 400 x 200 up to very large dimensions

Various designs and combinations available on request.

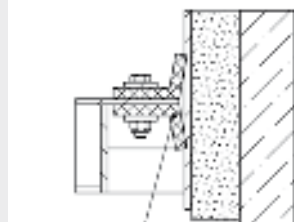
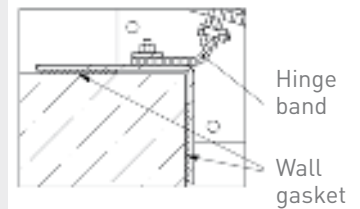
Details

View Z design with tubular shaft

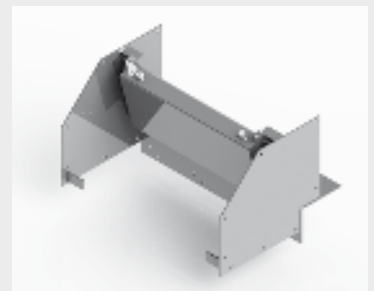
Profile sealing



View Z design with hinge band



Lateral profile sealing



WAGU®-Tidal Flap 3 facing

With hinge band, for anchor bolting, with lateral sealing plates for grouting
W x Dh 400 x 200 up to very large dimensions

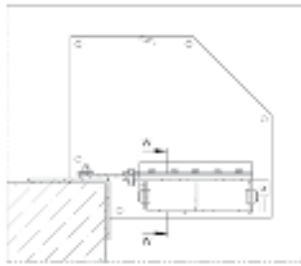
Details

Tidal Flap closed



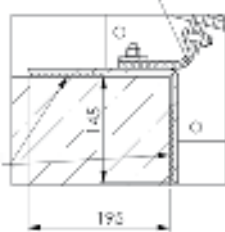
Section A-A

Tidal Flap opened

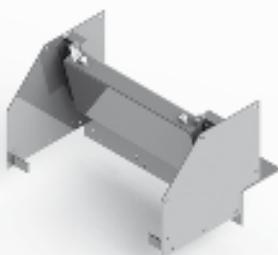
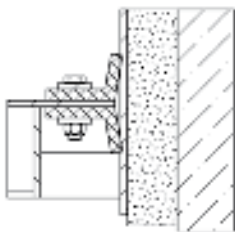


Section A-A

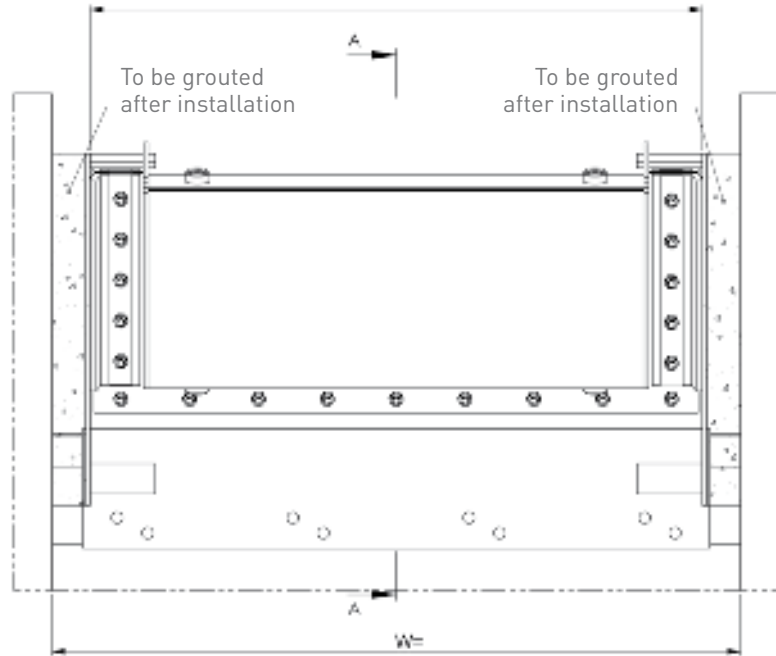
Hinge band



Wall gasket



clearance = W-100



Materials

Frame	Side wall	Tilt door	Sealing	Connection parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	1.4301	Neoprene	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571	Neoprene	A4

Other materials or combinations available on request.

Order text

Tidal Flap 3 facings with hinge band, for anchor bolting, with lateral sealing plates for grouting. Cat.-sheet 13.20, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Sill:	W: mm
Side wall:	DH: mm
Tilt door:	Installation depth T: mm ¹⁾
Sealing:	
Connecting parts:	

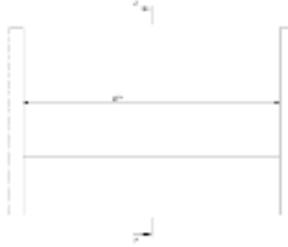
1) Measured from invert penstock to top edge structure.

* Please specify in the enquiry/order.

WAGU® -Tidal Flap 3 facing

With hinge band, for anchor bolting, with lateral sealing plates for grouting

Wall recess



Design

- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the frame.
- ➔ The Tidal Flap must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ Place tidal flap in the designated position and align.
- ➔ Tidal flap must be placed centered, wall distance to the lateral sealing plates must be equal.

Anchor bolting sill to building

- ➔ For anchor bolting, holes are double and diagonal displaced in the sill support bracket (vertical and horizontal).
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling.
- ➔ The bolt holes in the sill support bracket are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ To keep the sill removable drive-in anchor are to be used for the horizontal fastening.
- ➔ Compound anchor bolts are to be used for vertical fastening.

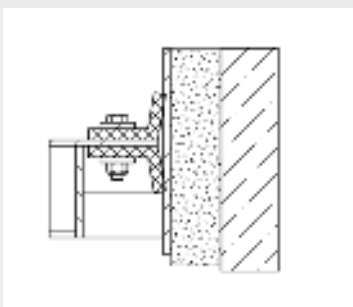
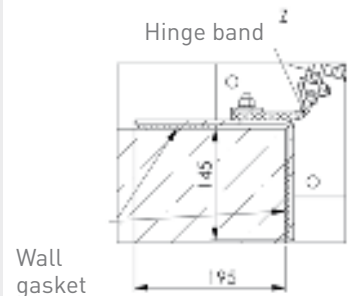
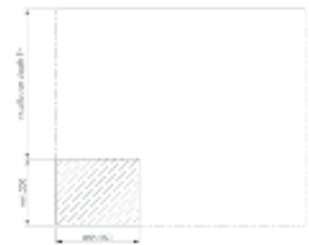
Fixing lateral sealing plates

- ➔ On the lateral sealing plates anchor bolting holes are placed outside of the swiveling range.
- ➔ The bolt holes in the lateral sealing plates are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Drill the holes in the lateral wall.
- ➔ Set lateral anchors and insert the threaded rods in order that one hexagon nut is on each side of the lateral sealing plate.
- ➔ Lateral sealing plate must be fastened with hexagon nut in order that lateral profile sealing of the tilting flap clings in the whole swiveling range.
- ➔ After setting casing cavities between lateral sealing plates and wall and grout with grouting mortar.¹⁾ Bear in mind to support the lateral sealing plates with a cross strut to avoid buckling during compacting the mortar.
- ➔ When grouting, mortar must not touch the sealing or lateral sealing plates, if necessary wash off carefully before hardening.

¹⁾ We recommend a cement-based grout.

Details

Section A-A

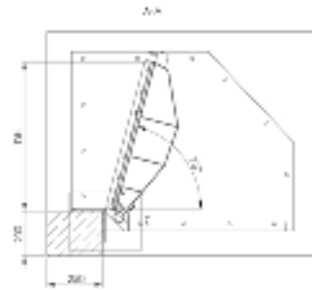


WAGU®-Tidal Flap 3 facing

With tubular shaft, for anchor bolting, with lateral sealing plates for grouting
W x Dh 400 x 200 up to very large dimensions

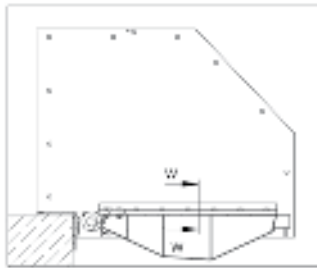
Details

Tidal Flap closed



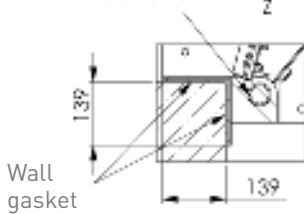
Section A-A

Tidal Flap opened

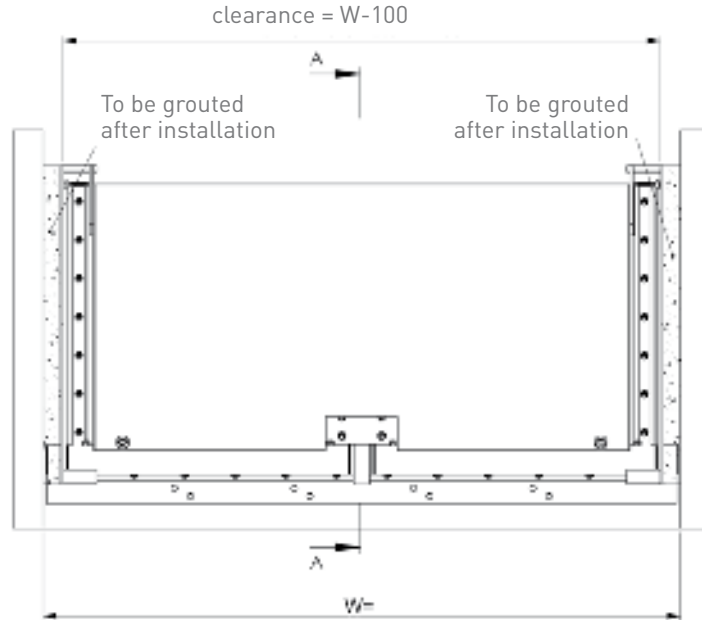
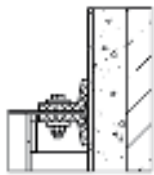


Section A-A

Tubular shaft



Wall gasket



Materials

Frame	Side wall	Tilt door	Sealing	Connection parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	1.4301	Neoprene	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571	Neoprene	A4

Other materials or combinations available on request.

Order text

Tidal Flap 3 facings with tubular shaft, for anchor bolting, with lateral sealing plates for grouting. Cat.-sheet 13.22, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Sill:	W: mm
Side wall:	DH: mm
Tilt door:	Installation depth T: mm ¹⁾
Sealing:	
Connecting parts:	

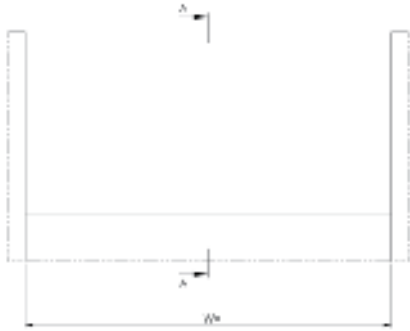
1) Measured from invert penstock to top edge structure.

* Please specify in the enquiry/order.

WAGU®-Tidal Flap 3 facing

With tubular shaft, for anchor bolting, with lateral sealing plates for grouting

Wall recess



Design

- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the frame.
- ➔ The Tidal Flap must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ Place tidal flap in the designated position and align.
- ➔ Tidal flap must be placed centered, wall distance to the lateral sealing plates must be equal.

Anchor bolting sill to building

- ➔ For anchor bolting, holes are double and diagonal displaced in the sill support bracket (vertical and horizontal).
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling.
- ➔ The bolt holes in the sill support bracket are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ To keep the sill removable drive-in anchor are to be used for the horizontal fastening.
- ➔ Compound anchor bolts are to be used for vertical fastening.

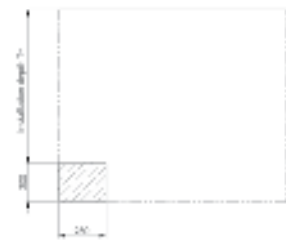
Fixing lateral sealing plates

- ➔ On the lateral sealing plates anchor bolting holes are placed outside of the swiveling range.
- ➔ The bolt holes in the lateral sealing plates are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Drill the holes in the lateral wall.
- ➔ Set lateral anchors and insert the threaded rods in order that one hexagon nut is on each side of the lateral sealing plate.
- ➔ Lateral sealing plate must be fastened with hexagon nut in order that lateral profile sealing of the tilting flap clings in the whole swiveling range.
- ➔ After setting casing cavities between lateral sealing plates and wall and grout with grouting mortar.¹⁾ Bear in mind to support the lateral sealing plates with a cross strut to avoid buckling during compacting the mortar.
- ➔ When grouting, mortar must not touch the sealing or lateral sealing plates, if necessary wash off carefully before hardening.

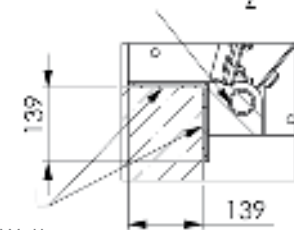
¹⁾ We recommend a cement-based grout.

Details

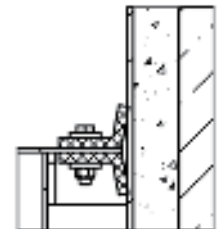
Section A-A



Tubular shaft



Wall gasket

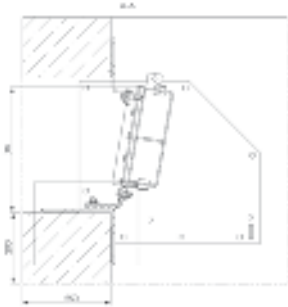


WAGU®-Tidal Flap 4 facing

With hinge band, for anchor bolting, with lateral sealing plates for grouting
W x Dh 400 x 200 up to very large dimensions

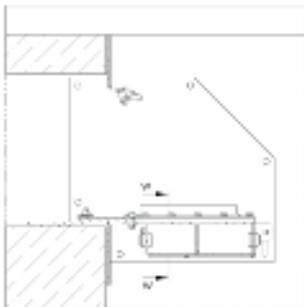
Details

Tidal Flap closed



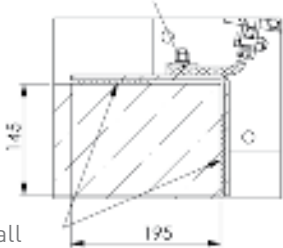
Section A-A

Tidal Flap opened

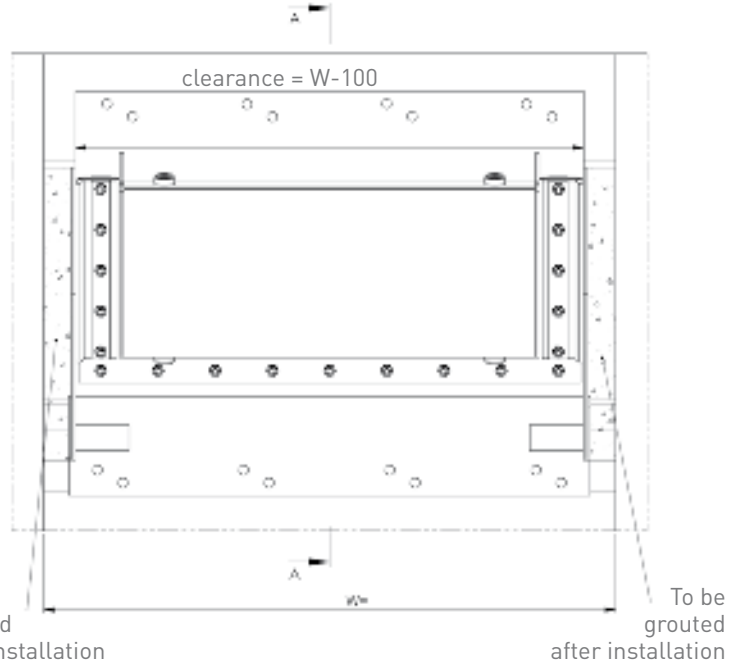
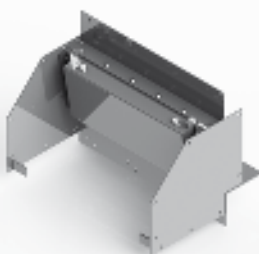


Section A-A

Hinge band



Wall gasket



Materials

Frame	Side wall	Tilt door	Sealing	Connection parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	1.4301	Neoprene	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571	Neoprene	A4

Other materials or combinations available on request.

Order text

Tidal Flap 4 facing with hinge band, for anchor bolting, with lateral sealing plates for grouting. Cat.-sheet 13.30, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Sill:	W: mm
Side wall:	DH: mm
Tilt door:	Installation depth T: mm ¹⁾
Sealing:	
Connecting parts:	

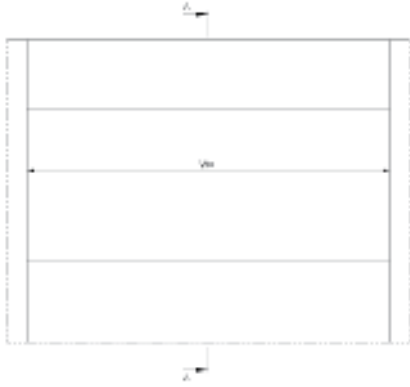
1) Measured from invert penstock to top edge structure.

* Please specify in the enquiry/order.

WAGU®-Tidal Flap 4 facing

With hinge band, for anchor bolting, with lateral sealing plates for grouting

Wall recess



Design

- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the frame.
- ➔ The Tidal Flap must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ Place tidal flap in the designated position and align.
- ➔ Tidal flap must be placed centered, wall distance to the lateral sealing plates must be equal.

Anchor bolting sill to building

- ➔ For anchor bolting, holes are double and diagonal displaced in the sill support bracket (vertical and horizontal).
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling.
- ➔ The bolt holes in the sill support bracket are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ To keep the sill removable drive-in anchor are to be used for the horizontal fastening.
- ➔ Compound anchor bolts are to be used for vertical fastening.

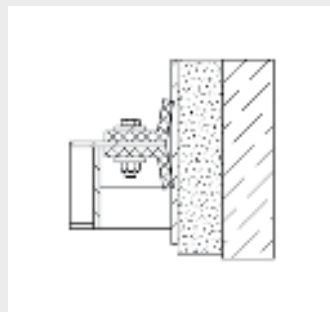
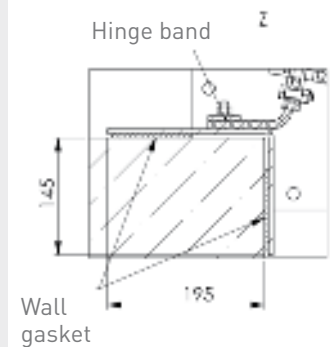
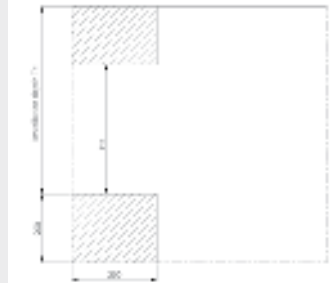
Fixing lateral sealing plates

- ➔ On the lateral sealing plates anchor bolting holes are placed outside of the swiveling range.
- ➔ The bolt holes in the lateral sealing plates are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Drill the holes in the lateral wall.
- ➔ Set lateral anchors and insert the threaded rods in order that one hexagon nut one each side of the lateral sealings plate.
- ➔ Lateral sealing plate must be fasten with hexagon nut in order that lateral profile sealing of the tilting flap clinging in the whole swiveling range.
- ➔ After setting casing cavities between lateral sealing plates and wall and grout with grouting mortar.¹⁾ Bear in mind to support the lateral sealing plates with a cross strut to avoid buckling during compacting the mortar.
- ➔ When grouting, mortar must not touch the sealing or lateral sealing plates, if necessary wash off carefully before hardening.

1) We recommend a cement-based grout.

Details

Section A-A

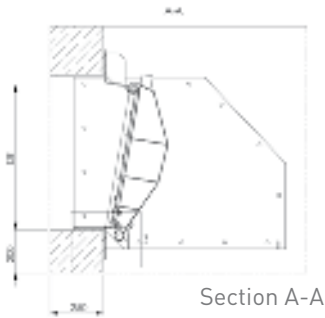


WAGU® - Tidal Flap 4 facing

With tubular shaft, for anchor bolting, with lateral sealing plates for grouting
W x Dh 400 x 200 up to very large dimensions

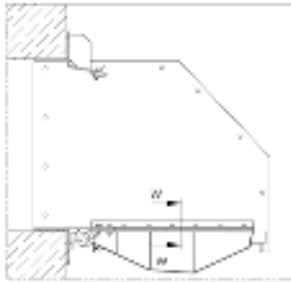
Details

Tidal Flap closed



Section A-A

Tidal Flap opened

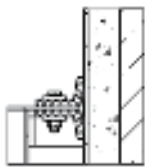


Section A-A

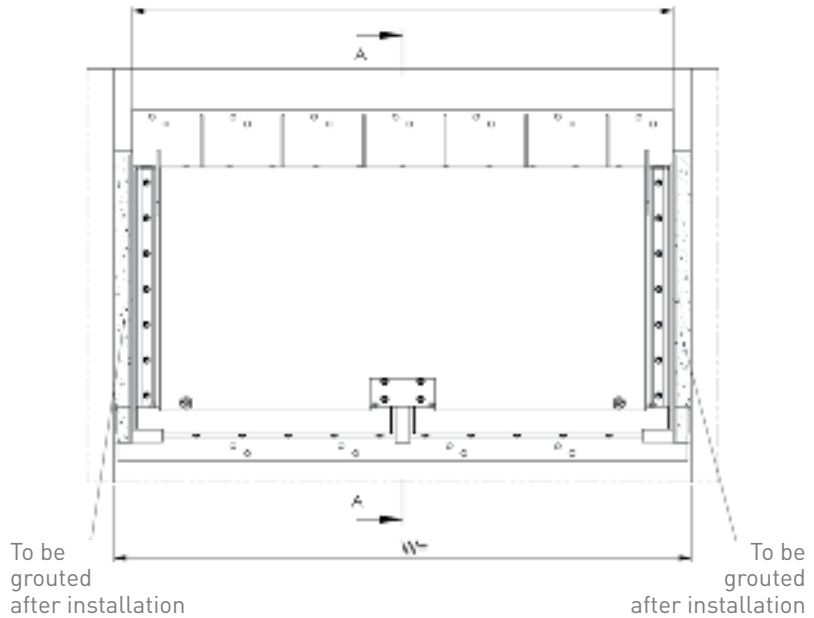
Tubular shaft Z



Wall gasket



clearance = W-100



Materials

Frame	Side wall	Tilt door	Sealing	Connection parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	1.4301	Neoprene	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571	Neoprene	A4

Other materials or combinations available on request.

Order text

Tidal Flap 4 facing with tubular shaft, for anchor bolting, with lateral sealing plates for grouting. Cat.-sheet 13.32, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Sill:	W: mm
Side wall:	DH: mm
Tilt door:	Installation depth T: mm ¹⁾
Sealing:	
Connecting parts:	

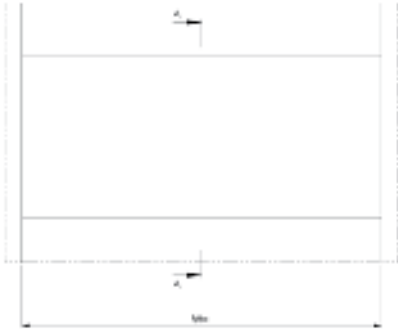
1) Measured from invert penstock to top edge structure.

* Please specify in the enquiry/order.

WAGU®-Tidal Flap 4 facing

With tubular shaft, for anchor bolting, with lateral sealing plates for grouting

Wall recess



Design

- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the back of the frame.
- ➔ The Tidal Flap must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ Place tidal flap in the designated position and align.
- ➔ Tidal flap must be placed centered, wall distance to the lateral sealing plates must be equal.

Anchor bolting sill to building

- ➔ For anchor bolting, holes are double and diagonal displaced in the sill support bracket (vertical and horizontal).
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling.
- ➔ The bolt holes in the sill support bracket are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ To keep the sill removable drive-in anchor are to be used for the horizontal fastening.
- ➔ Compound anchor bolts are to be used for vertical fastening.

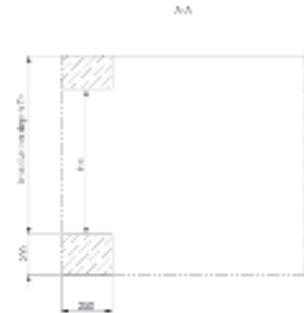
Fixing lateral sealing plates

- ➔ On the lateral sealing plates anchor bolting holes are placed outside of the swiveling range.
- ➔ The bolt holes in the lateral sealing plates are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Drill the holes in the lateral wall.
- ➔ Set lateral anchors and insert the threaded rods in order that one hexagon nut is on each side of the lateral sealing plate.
- ➔ Lateral sealing plate must be fastened with hexagon nut in order that lateral profile sealing of the tilting flap clings in the whole swiveling range.
- ➔ After setting casing cavities between lateral sealing plates and wall and grout with grouting mortar.¹⁾ Bear in mind to support the lateral sealing plates with a cross strut to avoid buckling during compacting the mortar.
- ➔ When grouting, mortar must not touch the sealing or lateral sealing plates, if necessary wash off carefully before hardening.

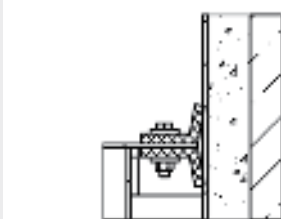
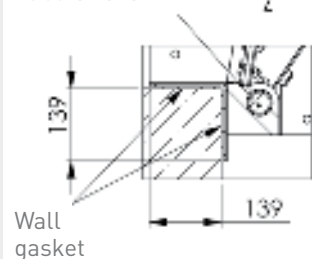
¹⁾ We recommend a cement-based grout.

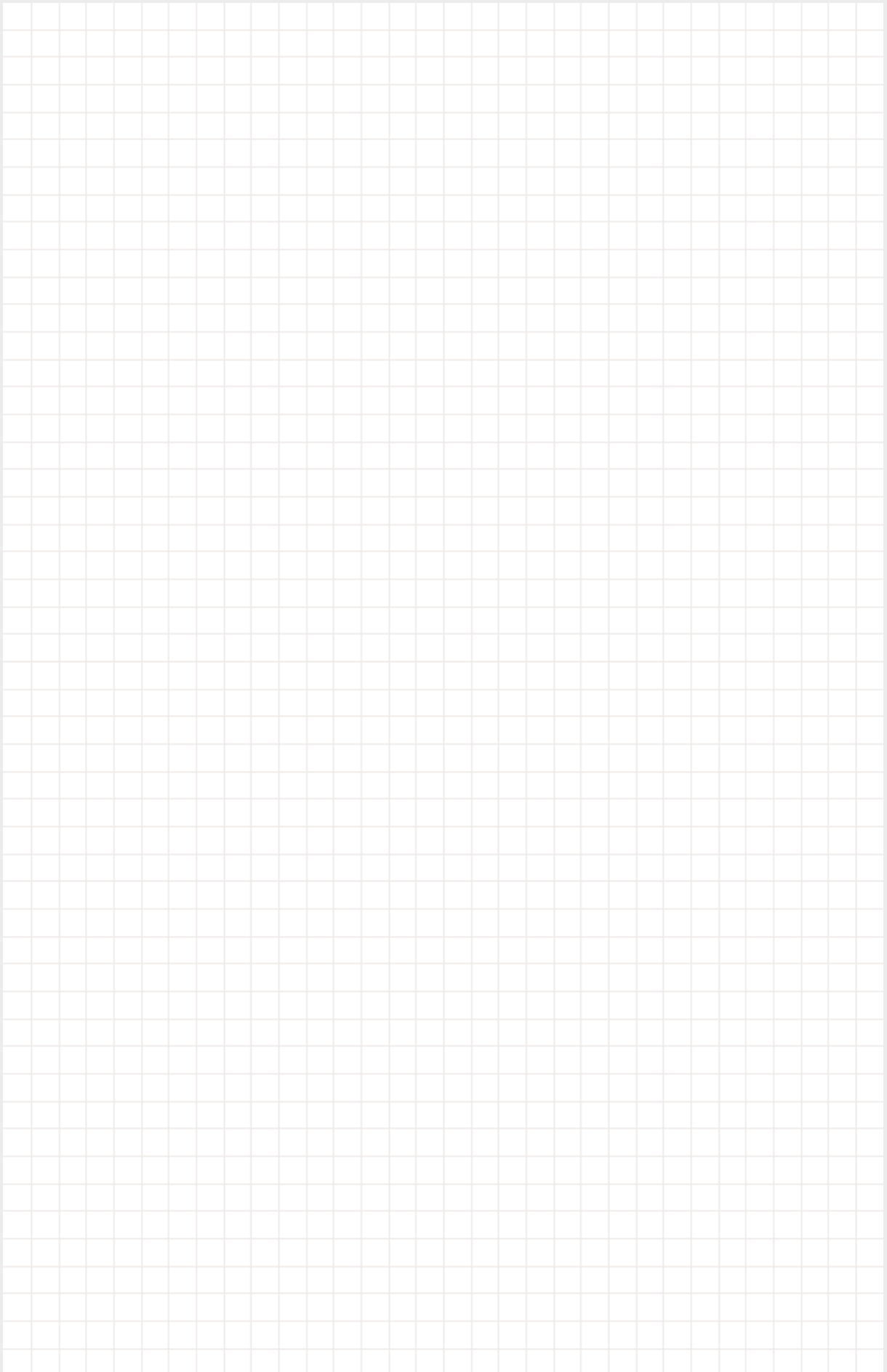
Details

Section A-A

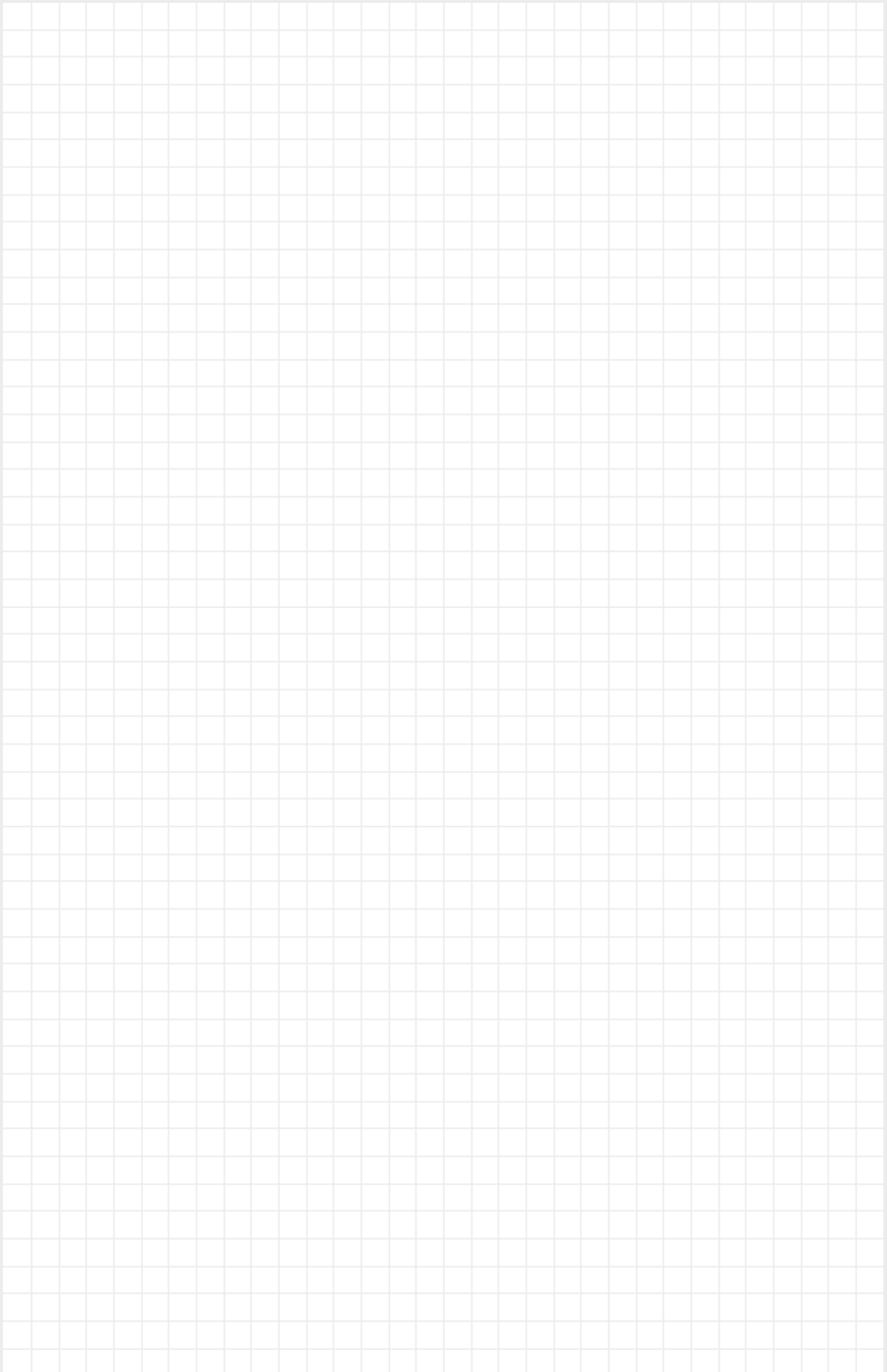


Tubular shaft



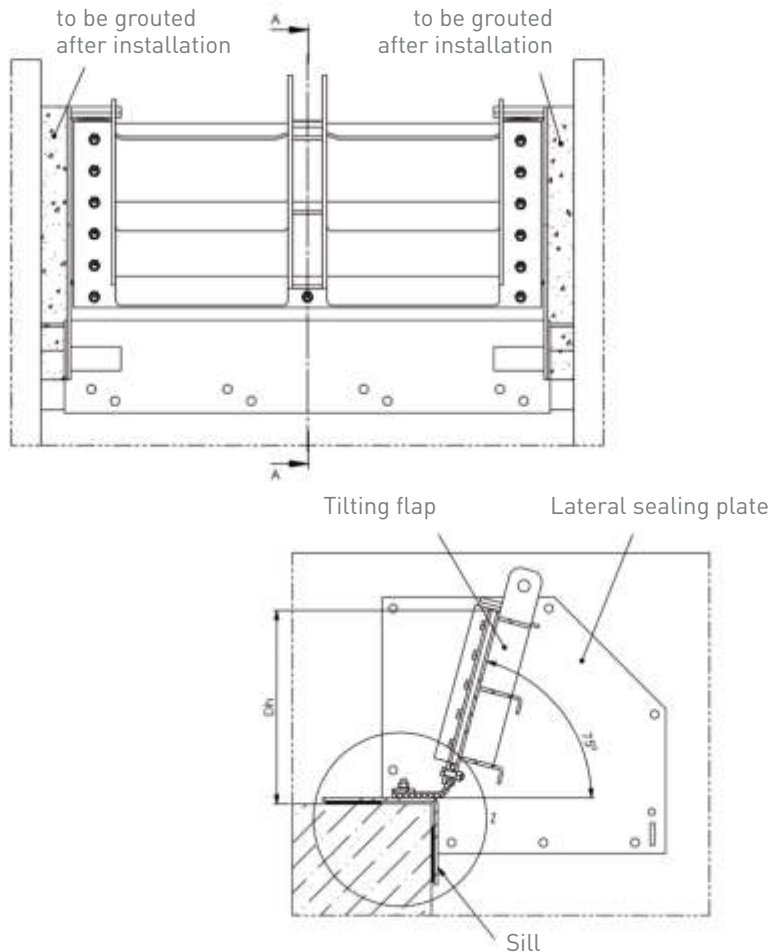


01	WAGU®-Handstops	01
02	WAGU®-Channel Penstocks (Leightweight)	02
03	WAGU®-Channel Penstocks	03
04	WAGU®-Stoplogs	04
05	WAGU®-Stop Plates	05
06	WAGU®-Weir Type Channel Penstocks (3 Facings)	06
07	WAGU®-Slide Penstocks	07
08		08
09		09
10	WAGU®-Weir Type Penstocks (4 Facings)	10
11		11
12	WAGU®-Flap Valves	12
13	WAGU®-Tidal Flaps	13
14	WAGU®-Tilting Flap Spillways	14
15		15
16		16
17	WAGU®-Isolating and Flushing Valves	17
18	WAGU®-Reversing Flaps	18
19		19
20	WAGU®-Telescopic Valves	20
21	WAGU®-Basin Inlets	21
22	WAGU®-Operating Gears	22



WAGU®-Tilting Flap Spillway

3 facings, suitable as flow control penstock for level control or scum discharge with large discharge widths and low heights of travel, for mounting to outlets of basins, for anchor bolting onto spillway sill, with lateral sealing plates for anchor bolting and sealing by cement mortar.



Design

- With hinge band
- With tubular shaft

Design Features

Welded design consisting of the following main components:

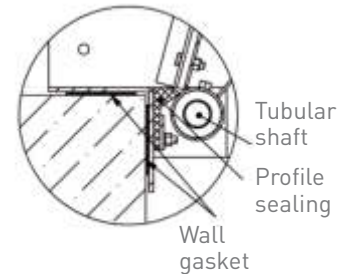
- Sill with lateral sealing plates and stops for Open-Closed position
- Tilting flap designed as rigid flap with articulation by means of rubber sealing tape or tubular shaft with profile seal as well as lateral angular seals
- With laterally or centrally arranged suspension of operation gear

Dimensions

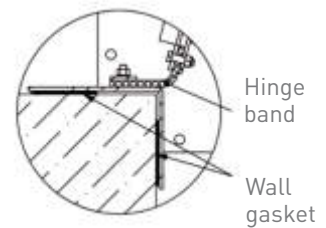
- W x Dh 400 x 200 up to very large dimensions

Details

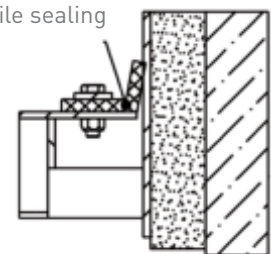
View Z design with tubular shaft



View Z design with hinge band



Lateral profile sealing

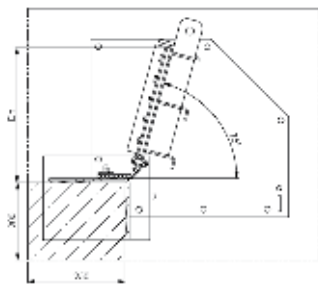


WAGU®-Tilting Flap Spillway

With hinge band, for anchor bolting, with lateral sealing plates for grouting
W x Dh 400 x 200 up to very large dimensions

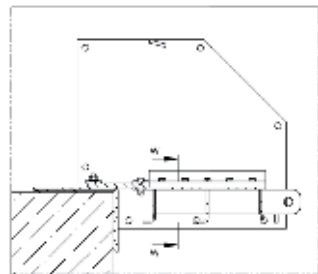
Details

Closed



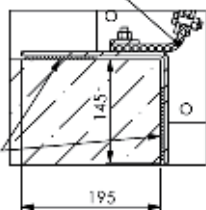
Section A-A

Opened



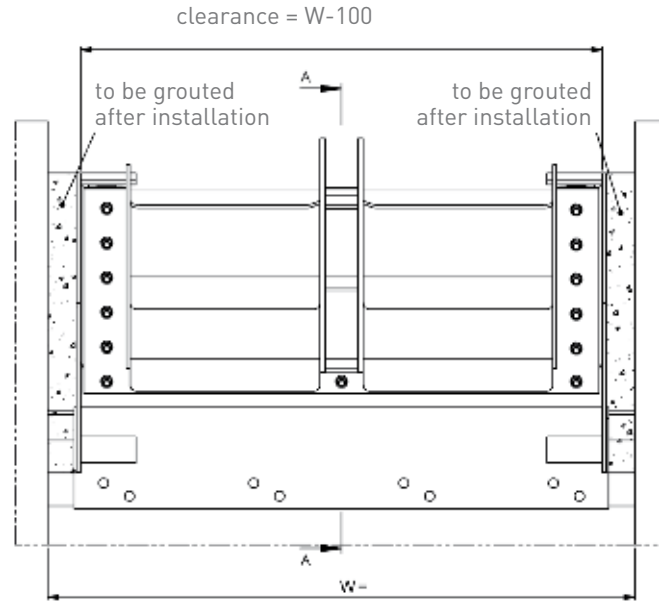
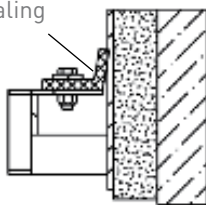
Section A-A

Hinge band z



Wall gasket

Lateral profile sealing



Materials

Frame	Lateral sealing plate	Tilting flap	Sealing	Connecting parts
1.4301 <input type="checkbox"/>	1.4301 <input type="checkbox"/>	1.4301	Neoprene	A4
1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571 <input type="checkbox"/>	1.4404 / 1.4571	Neoprene	A4

Other materials or combinations available on request.

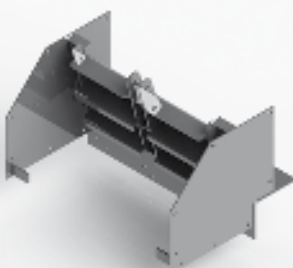
Order text

Tilting flap with hinge band, for anchor bolting, with lateral sealing plates for grouting. Cat.-sheet 14.41, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Sill:	W: mm
Lateral sealing plate:	Dh: mm
Tilting flap:	Installation depth T: mm ¹⁾
Sealing:	
Connecting parts:	

1) Invert to top of building.

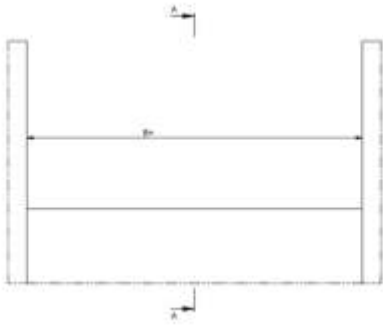
* Please specify in the enquiry/ order.



WAGU® - Tilting Flap Spillway

With hinge band, for anchor bolting, mit Lateral sealing plate for grouting

Wall recess



Installation Guide

- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the sill.
- ➔ The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ Place tilting flap in the designated position and align horizontal.
- ➔ Tilting flap must be placed centered, wall distance to the lateral sealing plates must be equal.

Anchor bolting sill to building

- ➔ For anchor bolting, holes are double and diagonal displaced in the sill support bracket (vertical and horizontal).
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling.
- ➔ The bolt holes in the sill support bracket are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ To keep the sill removable drive-in anchor are to be used for the horizontal fastening.
- ➔ Compound anchor bolts are to be used for vertical fastening.

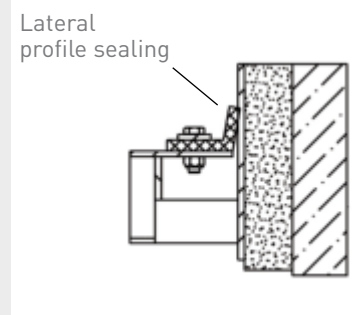
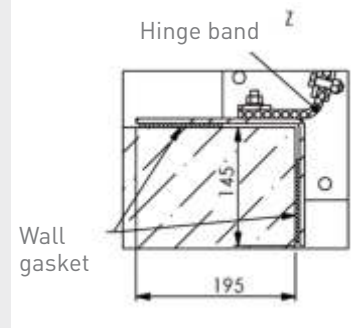
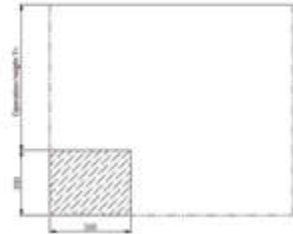
Fixing lateral sealing plates

- ➔ On the lateral sealing plates anchor bolting holes are placed outside of the swiveling range.
- ➔ The bolt holes in the lateral sealing plates are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Drill the holes in the lateral wall.
- ➔ Set lateral anchors and insert the threaded rods in order that one hexagon nut one each side of the lateral sealings plate.
- ➔ Lateral sealing plate must be fasten with hexagon nut in order that lateral profile sealing of the tilting flap clinging in the whole swiveling range.
- ➔ After setting casing cavities between lateral sealing plates and wall and grout with grouting mortar¹⁾. Bear in mind to support the lateral sealing plates with a cross strut to avoid buckling during compacting the mortar.
- ➔ When grouting, mortar must not touch the sealing or lateral sealing plates, if necessary wash off carefully before hardening.

1) We recommend a cement-based grout.

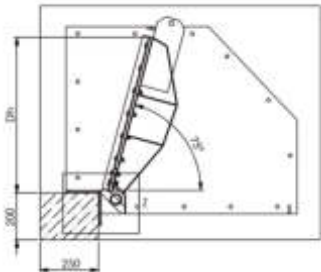
Details

Section A-A



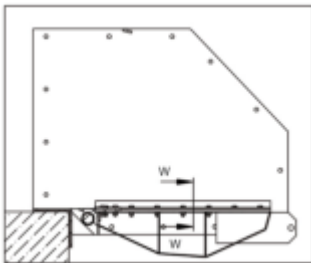
Details

Closed



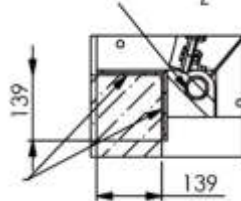
Section A-A

Opened



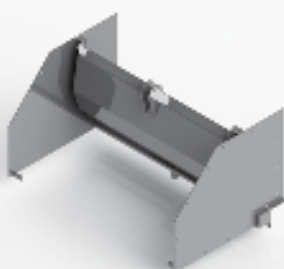
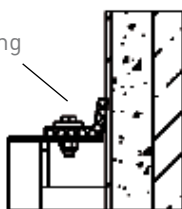
Section A-A

Tubular



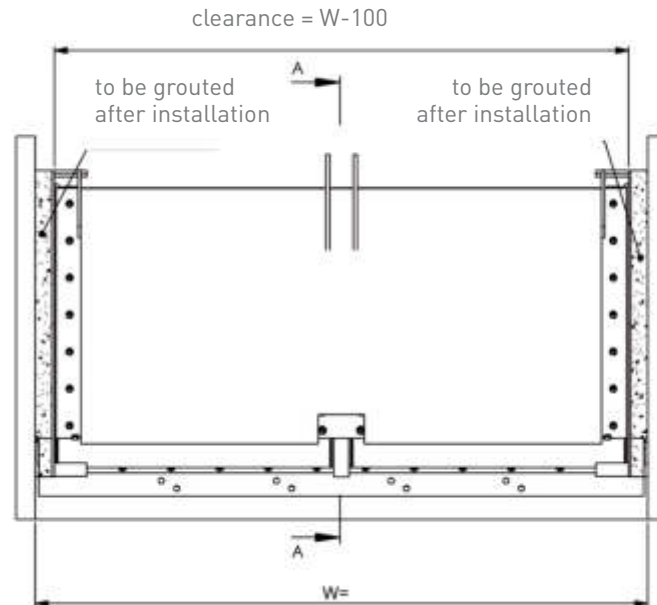
Wall gasket

Lateral profile sealing



WAGU®-Tilting Flap Spillway

With tubular shaft, for anchor bolting, with lateral sealing plates for grouting
W x Dh 400 x 200 up to very large dimensions



Materials

Frame	Lateral sealing plate	Tilting flap	Sealing	Connecting parts		
1.4301	<input type="checkbox"/>	1.4301	<input type="checkbox"/>	1.4301	Neoprene	A4
1.4404 / 1.4571	<input type="checkbox"/>	1.4404 / 1.4571	<input type="checkbox"/>	1.4404 / 1.4571	Neoprene	A4

Other materials or combinations available on request.

Order text

Tilting flap with tubular shaft, for anchor bolting, with lateral sealing plates for grouting. Cat.-sheet 14.43, operating gear see at the corresponding cat.-sheet.

Materials*	Dimensions*
Sill:	W: mm
Lateral sealing plate:	Dh: mm
Tilting flap:	Installation depth T: mm ¹⁾
Sealing:	
Connecting parts:	

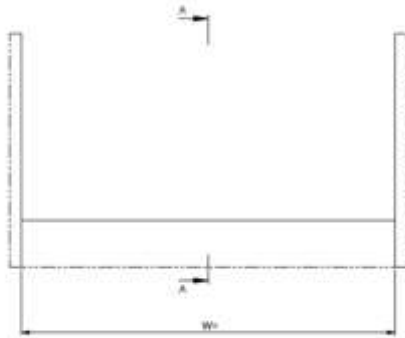
1) Invert to top of building.

* Please specify in the enquiry/ order.

WAGU®-Tilting Flap Spillway

With tubular shaft, for anchor bolting, with lateral sealing plates for grouting

Wall recess



Installation Guide

- ➔ Prior to the mounting on the wall, the wall gasket is to be applied on the sill.
- ➔ The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- ➔ Place tilting flap in the designated position and align horizontal.
- ➔ Tilting flap must be placed centered, wall distance to the lateral sealing plates must be equal.

Anchor bolting sill to building

- ➔ For anchor bolting, holes are double and diagonal displaced in the sill support bracket (vertical and horizontal).
- ➔ Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling.
- ➔ The bolt holes in the sill support bracket are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ To keep the sill removable drive-in anchor are to be used for the horizontal fastening.
- ➔ Compound anchor bolts are to be used for vertical fastening.

Fixing lateral sealing plates

- ➔ On the lateral sealing plates anchor bolting holes are placed outside of the swiveling range.
- ➔ The bolt holes in the lateral sealing plates are 2 mm larger than the drill and should be used as guide for drilling.
- ➔ Drill the holes in the lateral wall.
- ➔ Set lateral anchors and insert the threaded rods in order that one hexagon nut one each side of the lateral sealings plate.
- ➔ Lateral sealing plate must be fasten with hexagon nut in order that lateral profile sealing of the tilting flap clinging in the whole swiveling range.
- ➔ After setting casing cavities between lateral sealing plates and wall and grout with grouting mortar¹⁾. Bear in mind to support the lateral sealing plates with a cross strut to avoid buckling during compacting the mortar.
- ➔ When grouting, mortar must not touch the sealing or lateral sealing plates, if necessary wash off carefully before hardening.

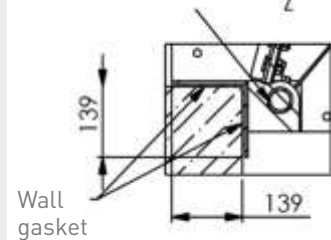
1) We recommend a cement-based grout.

Details

Section A-A

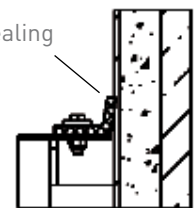


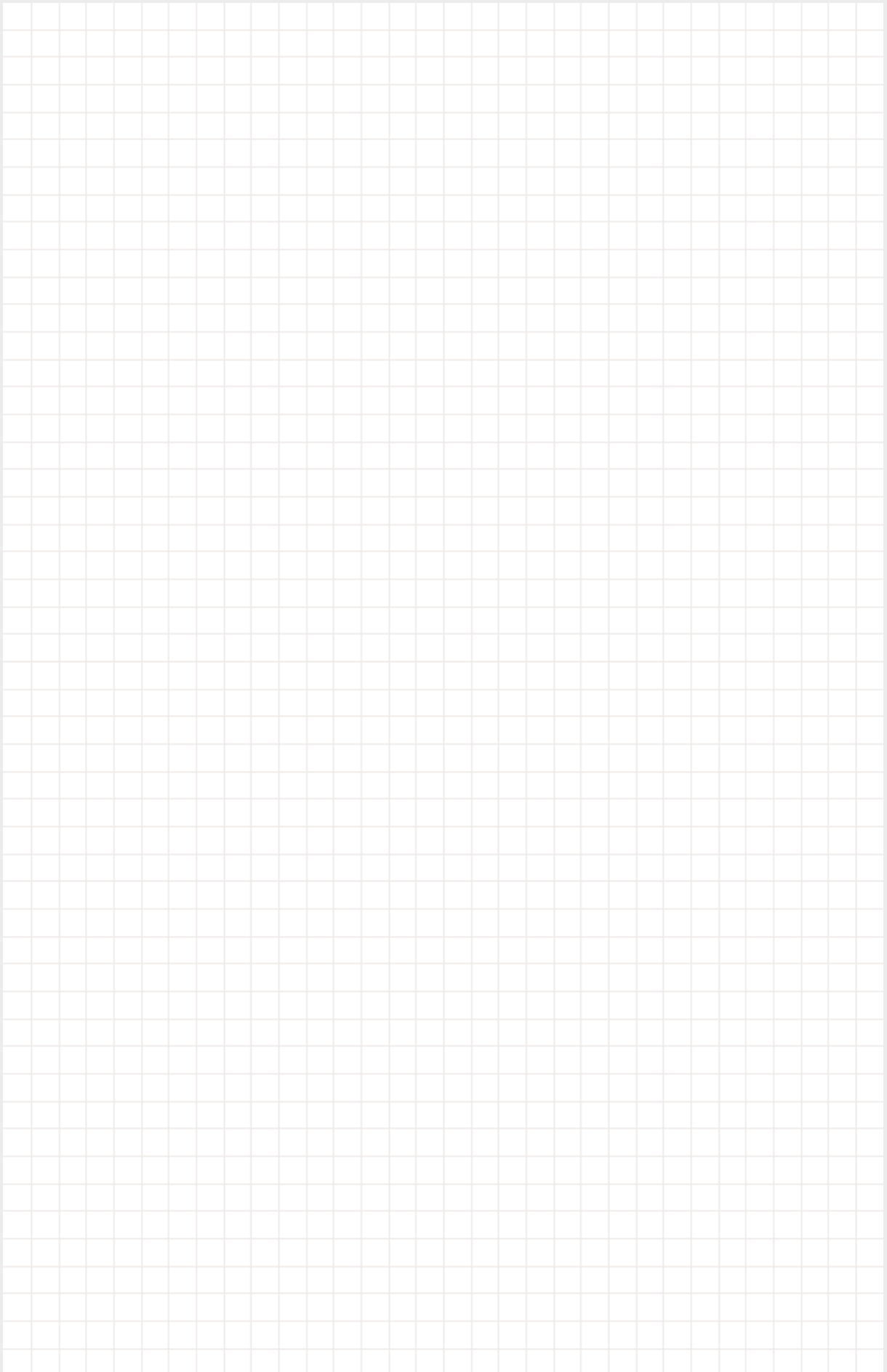
Tubular shaft



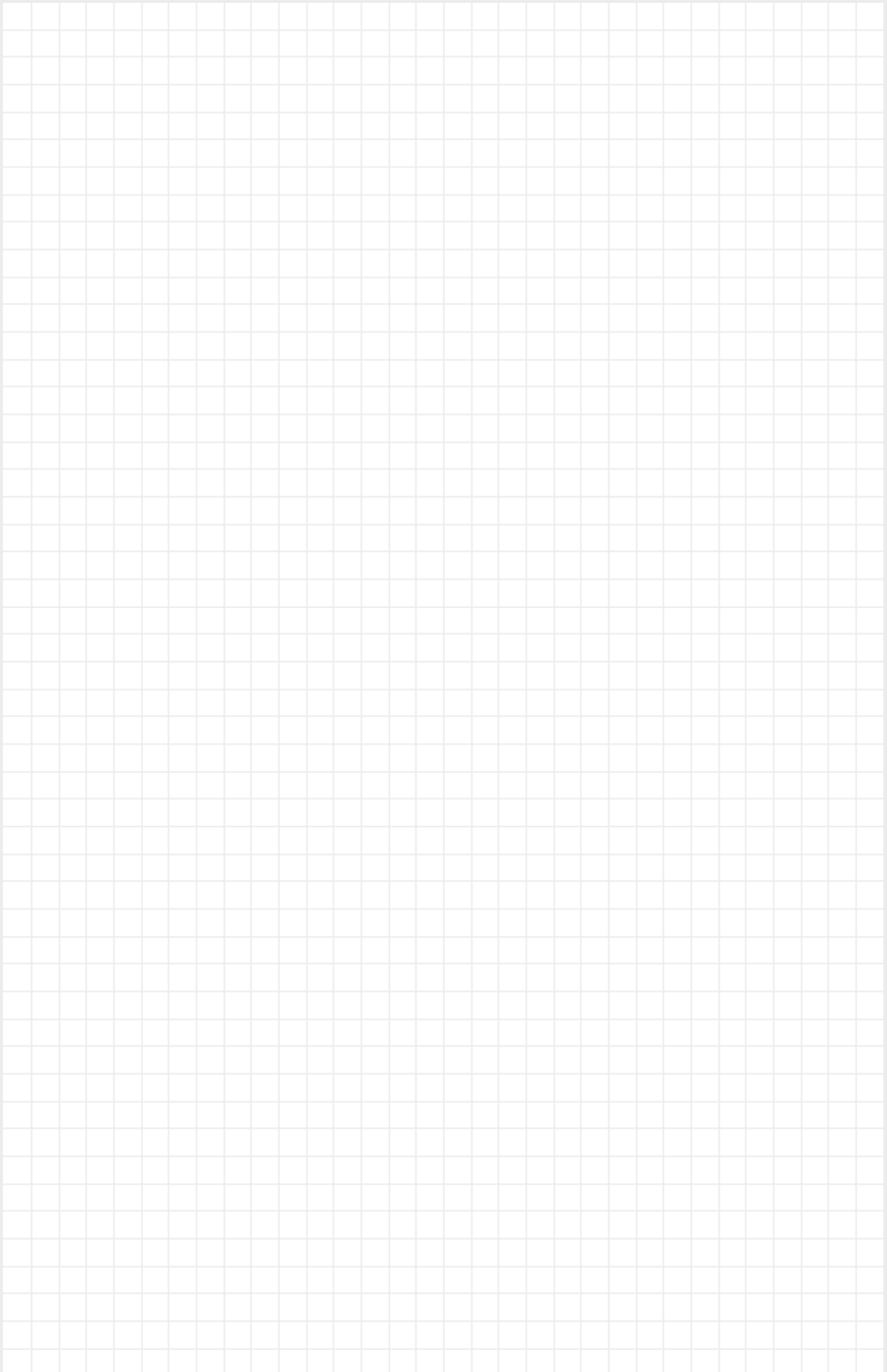
Wall gasket

Lateral profile sealing



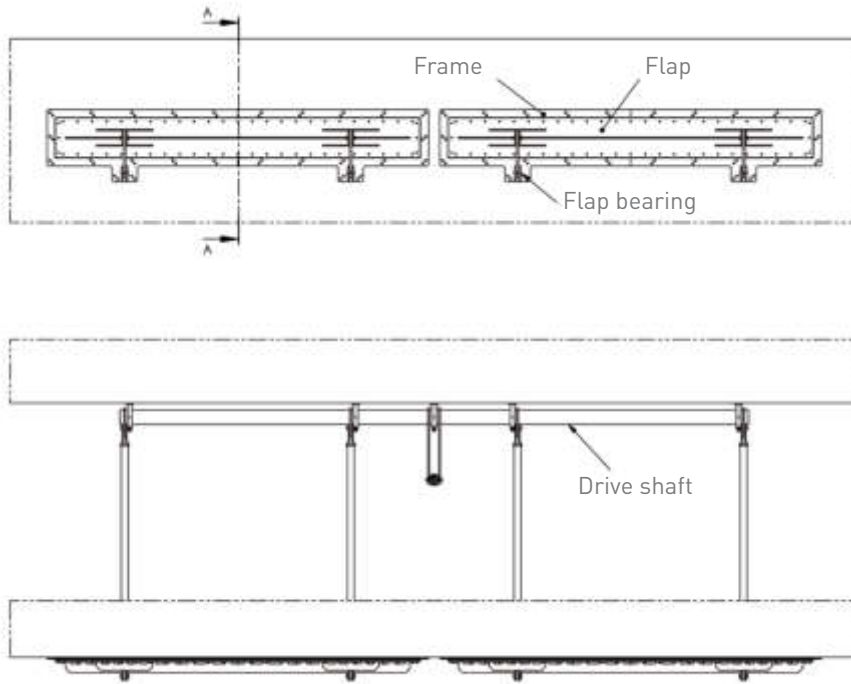


01	WAGU®-Handstops	01
02	WAGU®-Channel Penstocks (Leightweight)	02
03	WAGU®-Channel Penstocks	03
04	WAGU®-Stoplogs	04
05	WAGU®-Stop Plates	05
06	WAGU®-Weir Type Channel Penstocks (3 Facings)	06
07	WAGU®-Slide Penstocks	07
08		08
09		09
10	WAGU®-Weir Type Penstocks (4 Facings)	10
11		11
12	WAGU®-Flap Valves	12
13	WAGU®-Tidal Flaps	13
14	WAGU®-Tilting Flap Spillways	14
15		15
16		16
17	WAGU®-Isolating and Flushing Valves	17
18	WAGU®-Reversing Flaps	18
19		19
20	WAGU®-Telescopic Valves	20
21	WAGU®-Basin Inlets	21
22	WAGU®-Operating Gears	22



WAGU® - Isolating and Flushing Valve

4 facings, closure by means of lever, flap of two-piece type, suitable as isolating and flushing valve, rectangular type with large widths of aperture and small heights of aperture, for mounting to basin outlets.

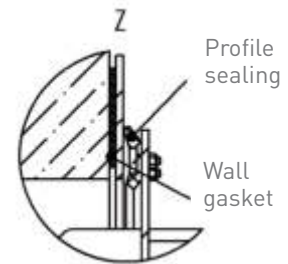
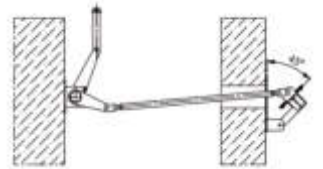


Details

A-A
Closed



A-A
Opened



Design

- Frame for anchor bolting to smooth concrete walls

Design Features

Welded design consisting of the following main components:

- Frame with wall fixation
- Pivoting shaft bearing arranged below the valve with closure by means of adjustable lever and central suspension for operating gear
- Flap of two-piece type, with profile seal, reinforcing ribs, and bearing suspension for shaft lever

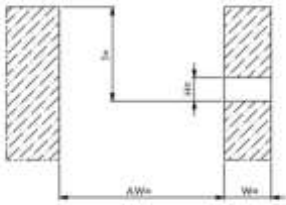
Dimensions

- W = 1000 up to 6000; H = 100 up to 300; W1 = 500 up to 3000

Various designs and combinations available on request.

Details

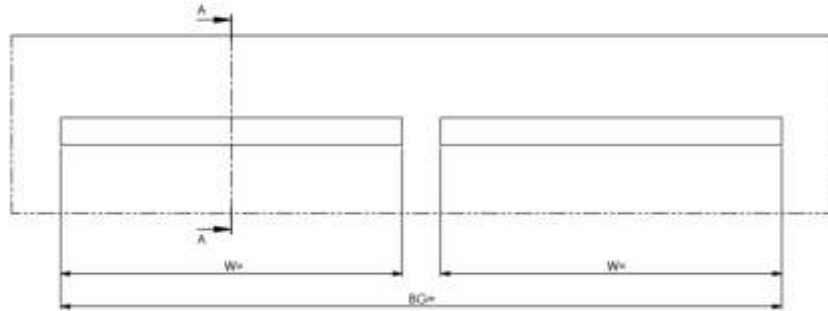
Section A-A



WAGU®-Isolating and Flushing Valve

4 facing, for anchor bolting with lever and drive shaft

Wall recess



Installation Guide

- Prior to the mounting on the wall, the wall gasket is to be applied on the back of the frame.
- The concrete wall must be flat in the area of the sealing surfaces of the wall sealing.
- Place isolating and flushing valve in the designated position and align.

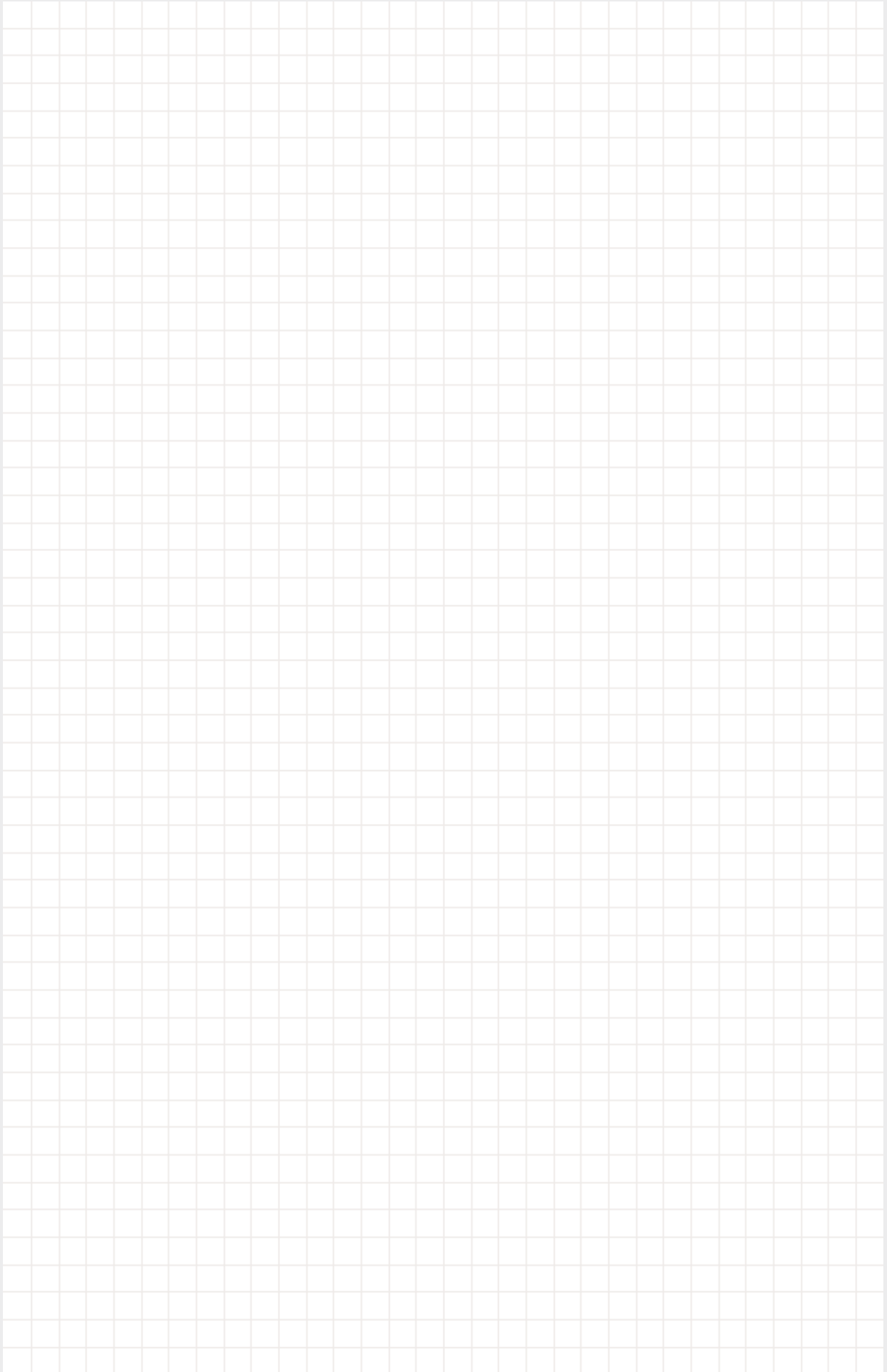
Anchor bolting sill to building

- For anchor bolting, holes are double and diagonal displaced in the frame.
- Thus, for mounting there are always alternative holes if for example you encounter a concrete reinforcement while drilling.
- The bolt holes in the frame are 2 mm larger than the drill and should be used as guide for drilling.
Compound anchor bolts are to be used for fastening.
- When tighten the fastening nuts, make sure that the frame sits even and uniform against the concrete wall.

Fixing drive shaft

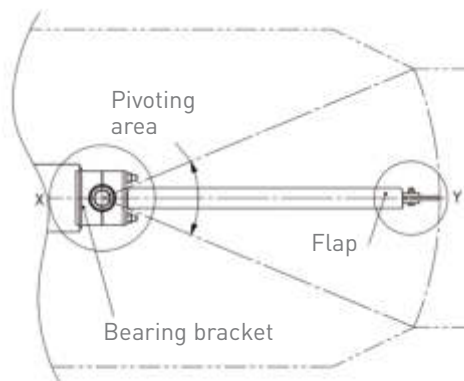
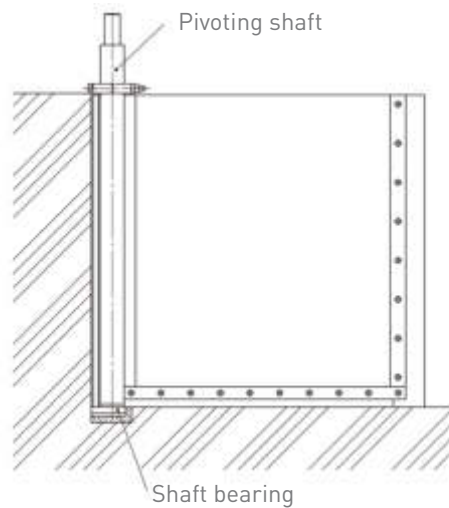
- Place drive shaft with guides in the designated position. Take care that drive shaft is exactly horizontally positioned and align with the isolation and flushing valve.
- The bolt holes in the sill support bracket are 2 mm larger than the drill and should be used as guide for drilling.
Compound anchor bolts are to be used for fastening.

01	WAGU®-Handstops	01
02	WAGU®-Channel Penstocks (Leightweight)	02
03	WAGU®-Channel Penstocks	03
04	WAGU®-Stoplogs	04
05	WAGU®-Stop Plates	05
06	WAGU®-Weir Type Channel Penstocks (3 Facings)	06
07	WAGU®-Slide Penstocks	07
08		08
09		09
10	WAGU®-Weir Type Penstocks (4 Facings)	10
11		11
12	WAGU®-Flap Valves	12
13	WAGU®-Tidal Flaps	13
14	WAGU®-Tilting Flap Spillways	14
15		15
16		16
17	WAGU®-Isolating and Flushing Valves	17
18	WAGU®-Reversing Flaps	18
19		19
20	WAGU®-Telescopic Valves	20
21	WAGU®-Basin Inlets	21
22	WAGU®-Operating Gears	22



WAGU®-Reversing Flap

3 facings, suitable as isolating and flushing valve and flow control valve for installation in channel, bearing bracket for anchor bolting to smooth concrete walls, invert bearing for grouting into channel recess.



Design

- ➔ Operating gear with hand lever suitable for small dimensions
- ➔ Operating gear on hinge pin suitable for small dimensions
- ➔ Operating gear with horizontal threaded stem suitable for small and large dimensions

Design Features

Welded design consisting of the following main components:

- ➔ Bearing bracket with swinging bracket and shaft sealing
- ➔ Flap with invert and lateral seal as well as fixing device for hand lever or stem nut

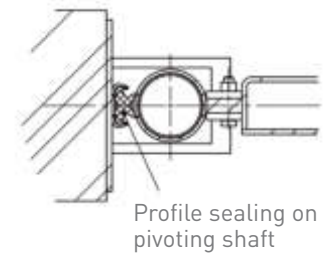
Dimensions

- ➔ W x H 400 x 400 up to 2000 x 2000

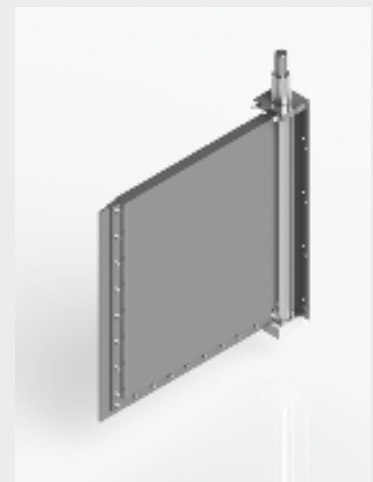
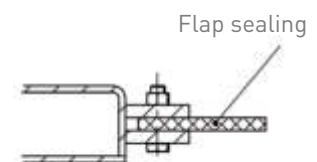
Various designs and combinations available on request.

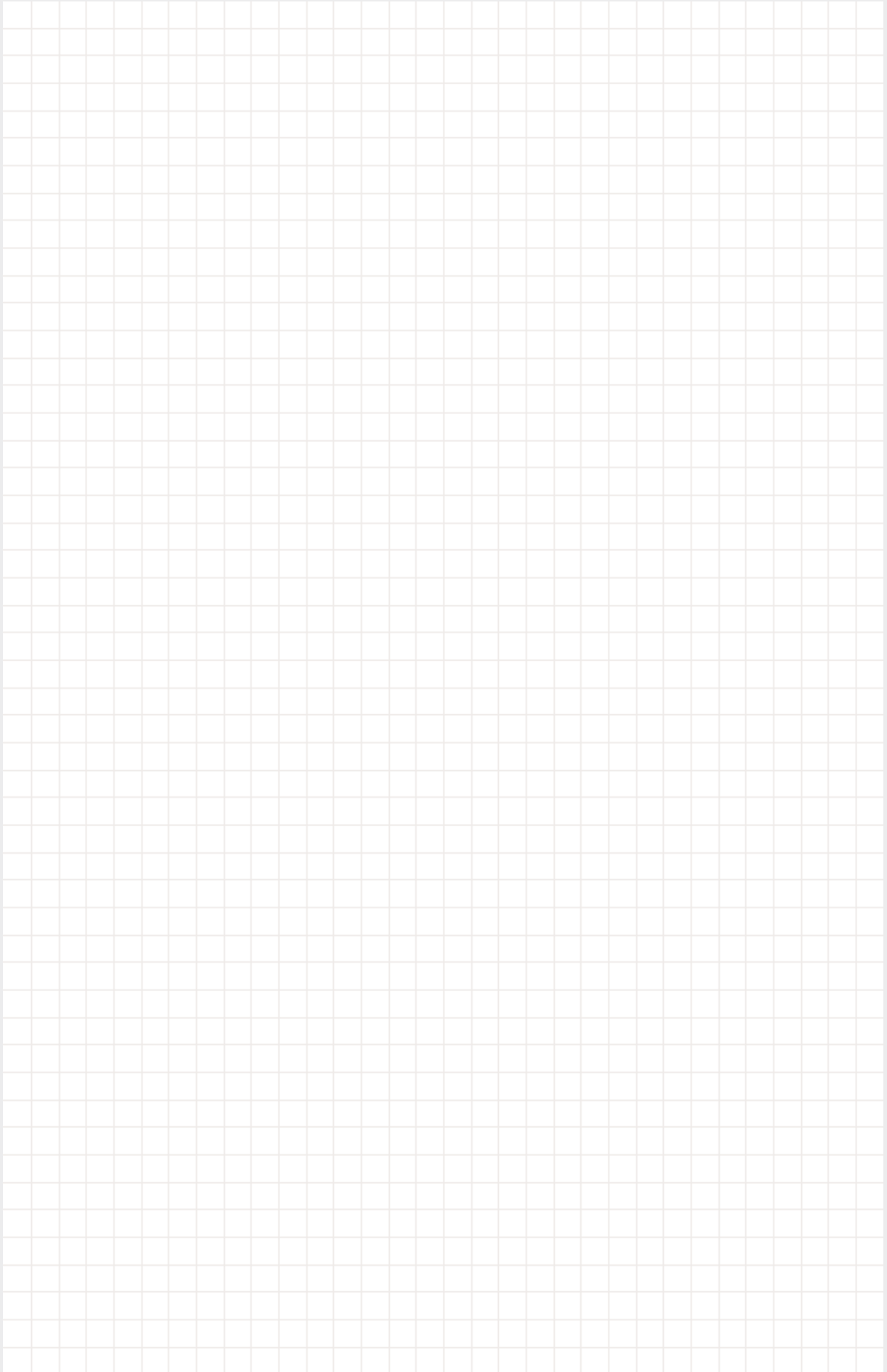
Details

Detail X

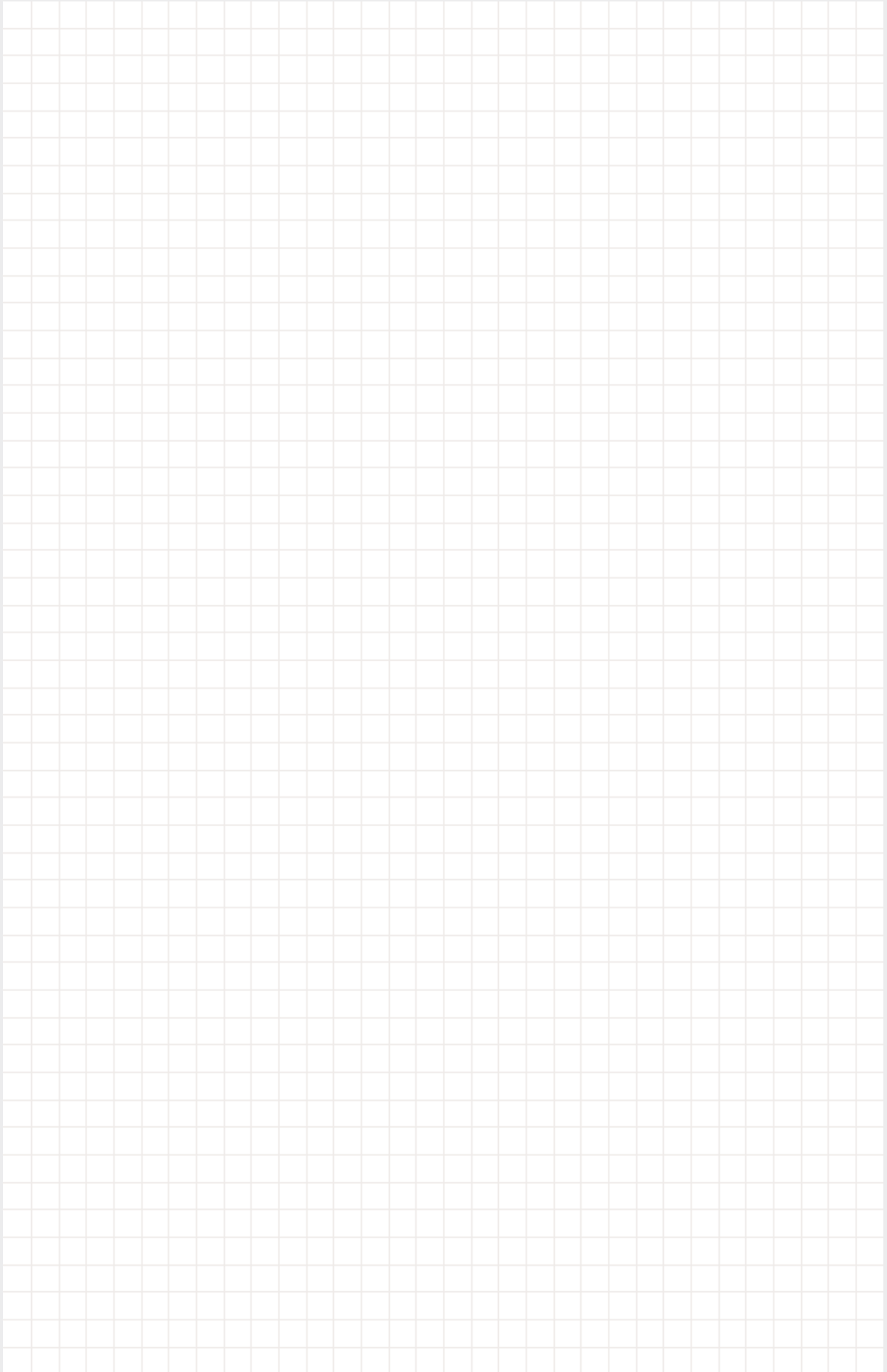


Detail Y



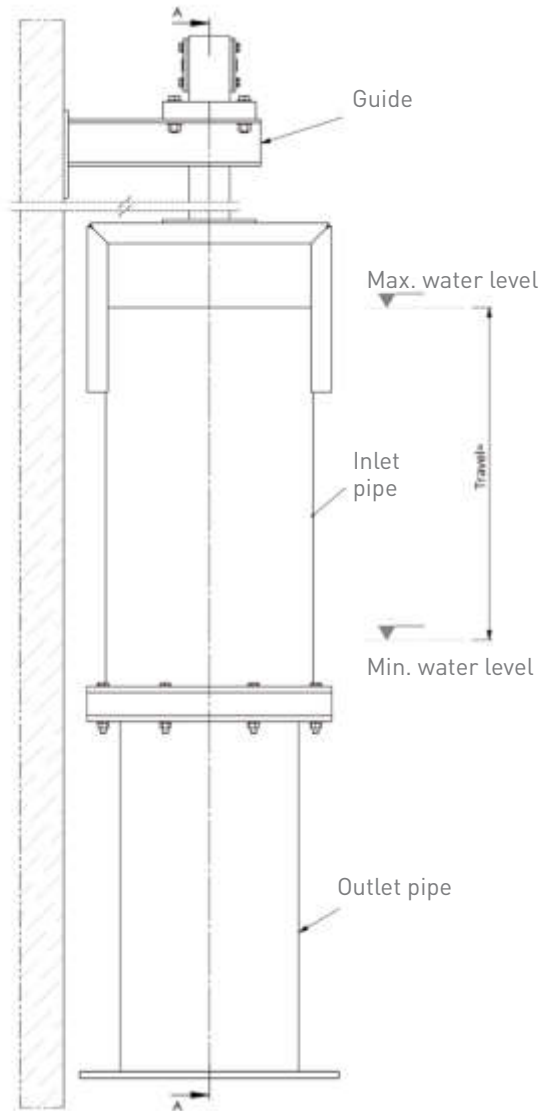


01	WAGU®-Handstops	01
02	WAGU®-Channel Penstocks (Leightweight)	02
03	WAGU®-Channel Penstocks	03
04	WAGU®-Stoplogs	04
05	WAGU®-Stop Plates	05
06	WAGU®-Weir Type Channel Penstocks (3 Facings)	06
07	WAGU®-Slide Penstocks	07
08		08
09		09
10	WAGU®-Weir Type Penstocks (4 Facings)	10
11		11
12	WAGU®-Flap Valves	12
13	WAGU®-Tidal Flaps	13
14	WAGU®-Tilting Flap Spillways	14
15		15
16		16
17	WAGU®-Isolating and Flushing Valves	17
18	WAGU®-Reversing Flaps	18
19		19
20	WAGU®-Telescopic Valves	20
21	WAGU®-Basin Inlets	21
22	WAGU®-Operating Gears	22



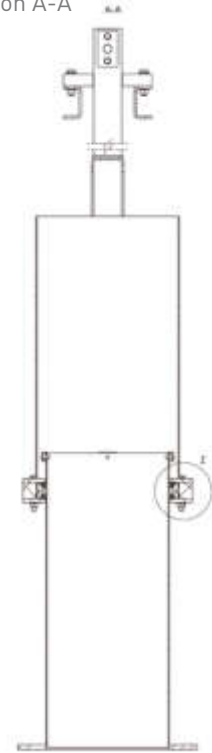
WAGU® - Telescopic Valves

Suitable for drawing off supernatant matters or for level control, for installation in basins or chambers



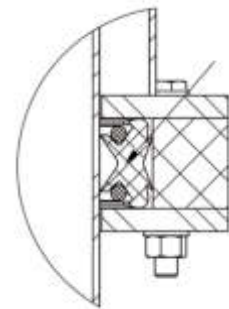
Details

Section A-A



View Z

Profile sealing



Design

- ➔ With cylindrical inlet
- ➔ With conical inlet

Design Features

Welded design consisting of the following main components:

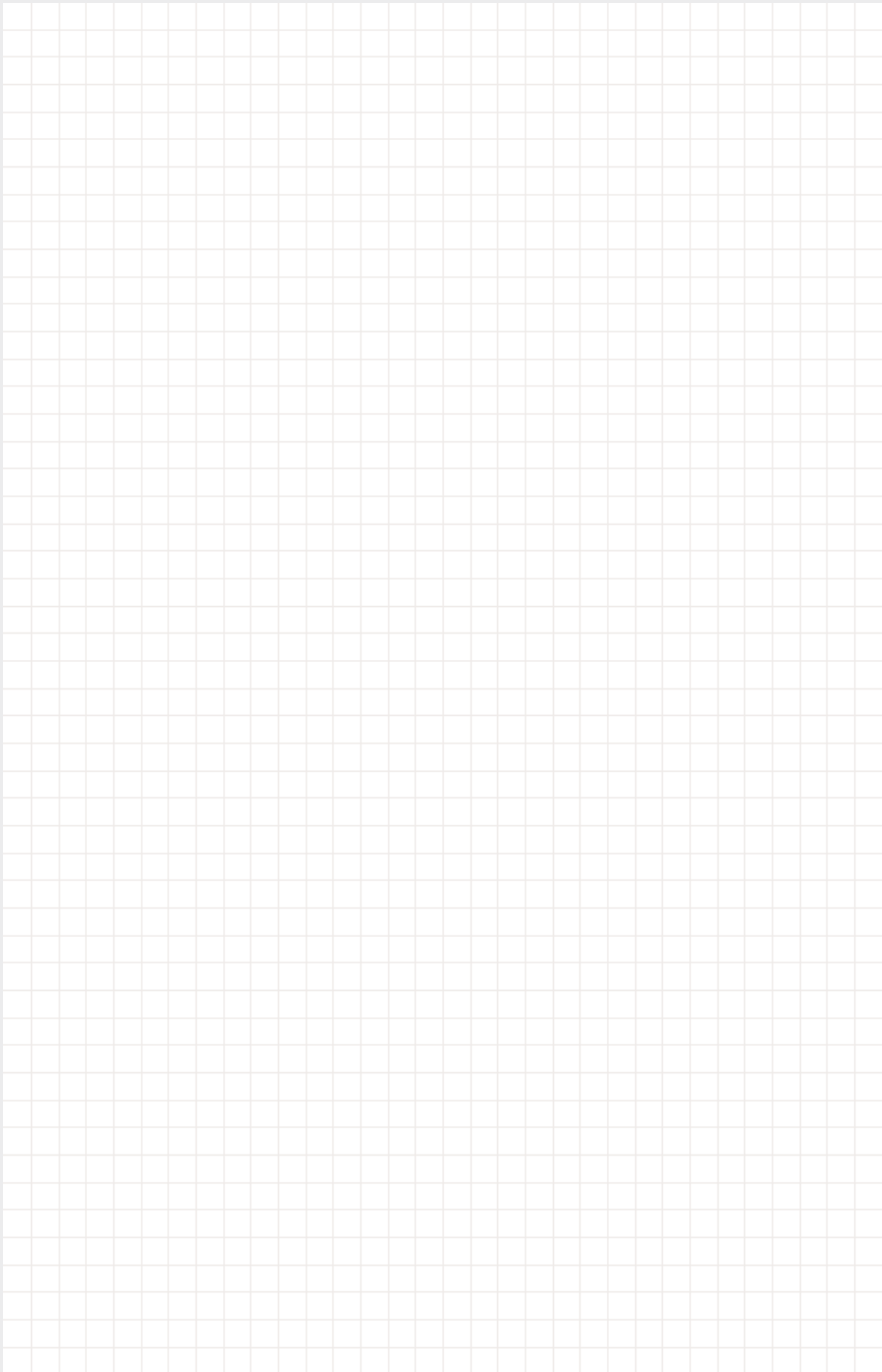
- ➔ Wall guide bracket for fixing at the wall
- ➔ Inlet pipe with pipe sealing and fixing device for operating gear
- ➔ Outlet pipe for flange connection

Dimensions

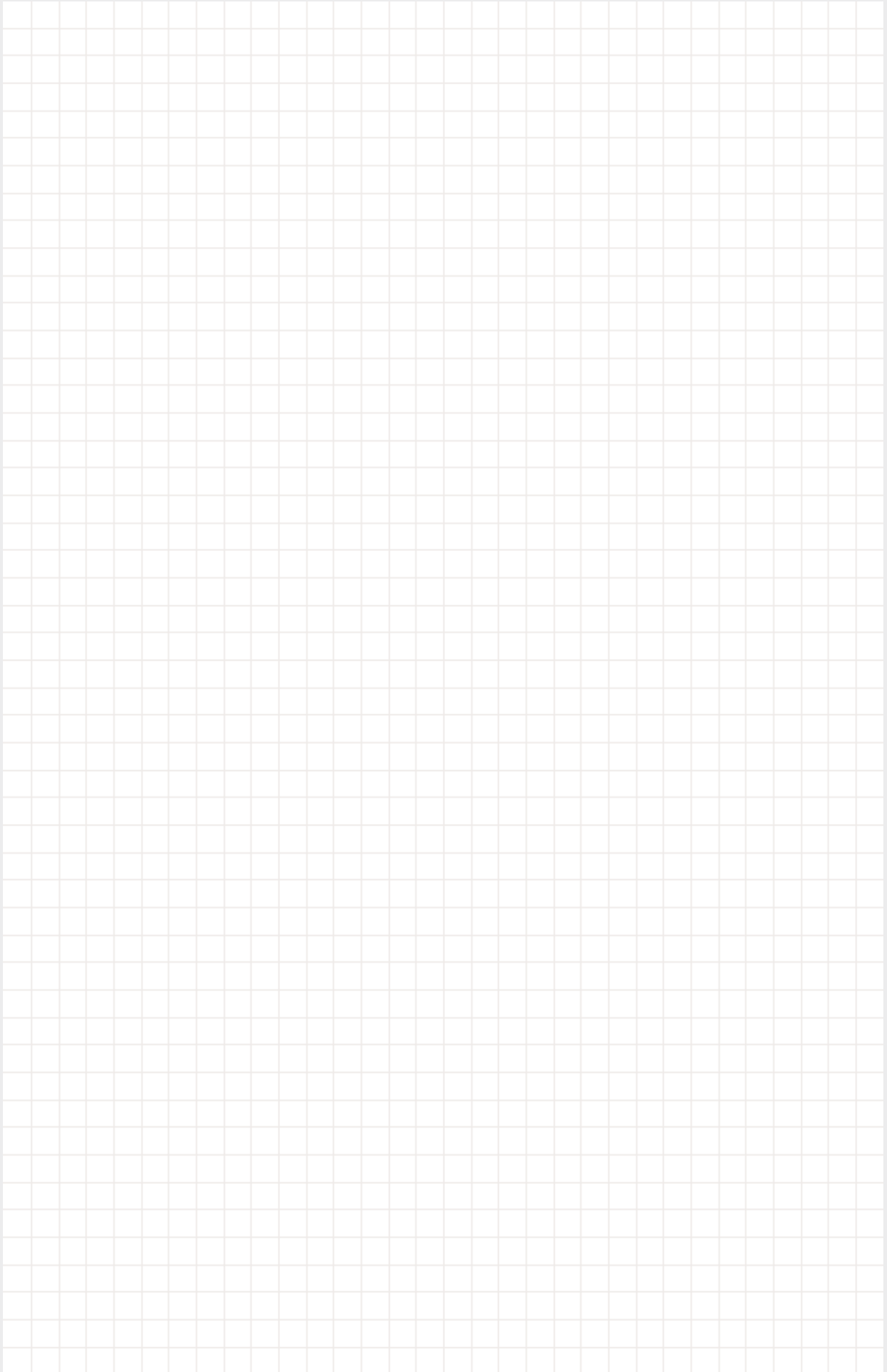
- ➔ Outlet pipe DN 100-500

Various designs and combinations available on request.



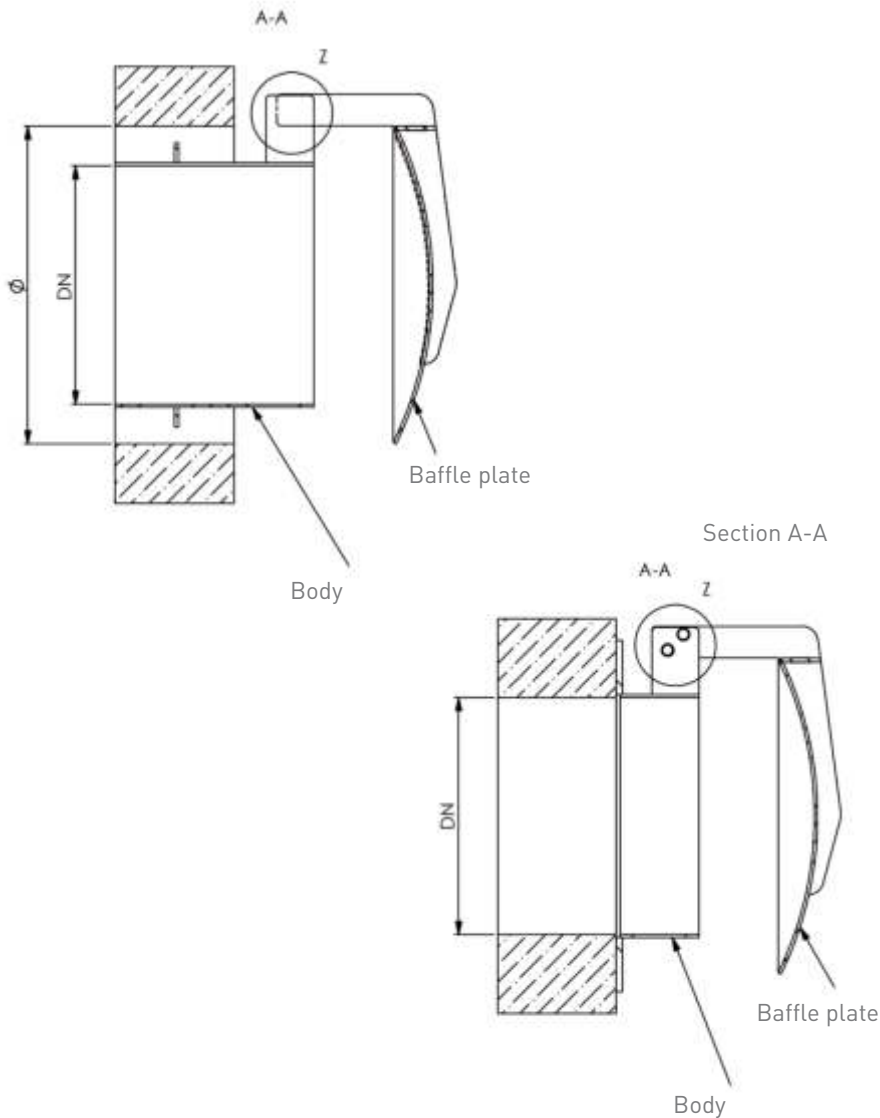


01	WAGU®-Handstops	01
02	WAGU®-Channel Penstocks (Leightweight)	02
03	WAGU®-Channel Penstocks	03
04	WAGU®-Stoplogs	04
05	WAGU®-Stop Plates	05
06	WAGU®-Weir Type Channel Penstocks (3 Facings)	06
07	WAGU®-Slide Penstocks	07
08		08
09		09
10	WAGU®-Weir Type Penstocks (4 Facings)	10
11		11
12	WAGU®-Flap Valves	12
13	WAGU®-Tidal Flaps	13
14	WAGU®-Tilting Flap Spillways	14
15		15
16		16
17	WAGU®-Isolating and Flushing Valves	17
18	WAGU®-Reversing Flaps	18
19		19
20	WAGU®-Telescopic Valves	20
21	WAGU®-Basin Inlets	21
22	WAGU®-Operating Gears	22



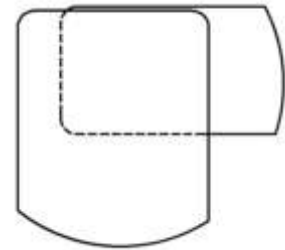
WAGU®-Basin Inlet

With body and baffle plate



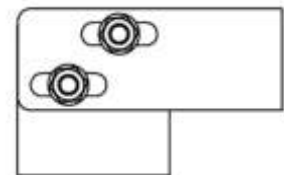
Details

Rigid baffle plate



Section A-A

Adjustable baffle plate



Section A-A



Design

- ➔ With cylindrical inlet
- ➔ With body and rigid baffle plate
- ➔ With body and adjustable baffle plate
- ➔ For embedding in concrete
- ➔ For anchor bolting

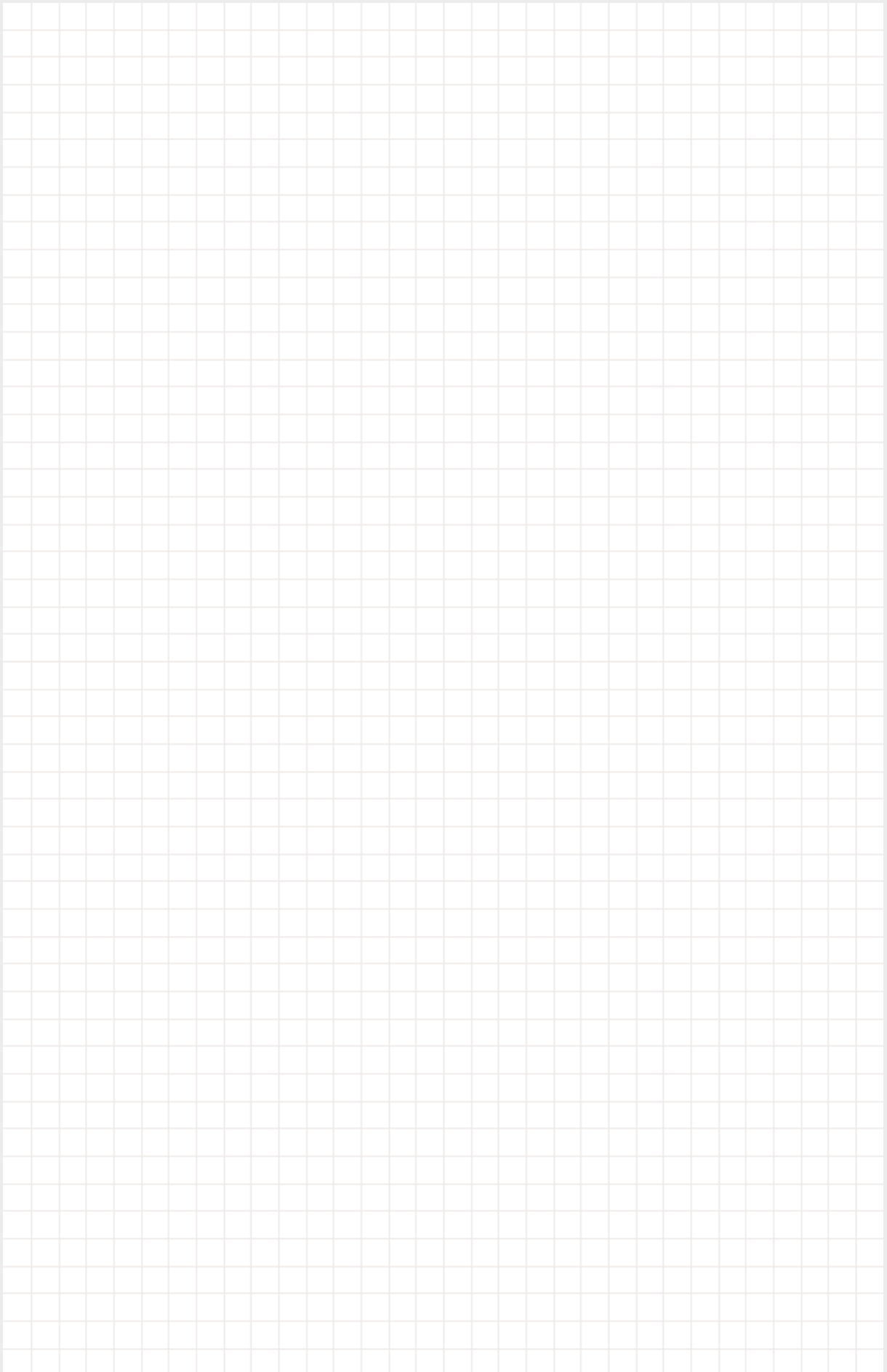
Design Features

Welded design consisting of wall mounting pipe with baffle plate

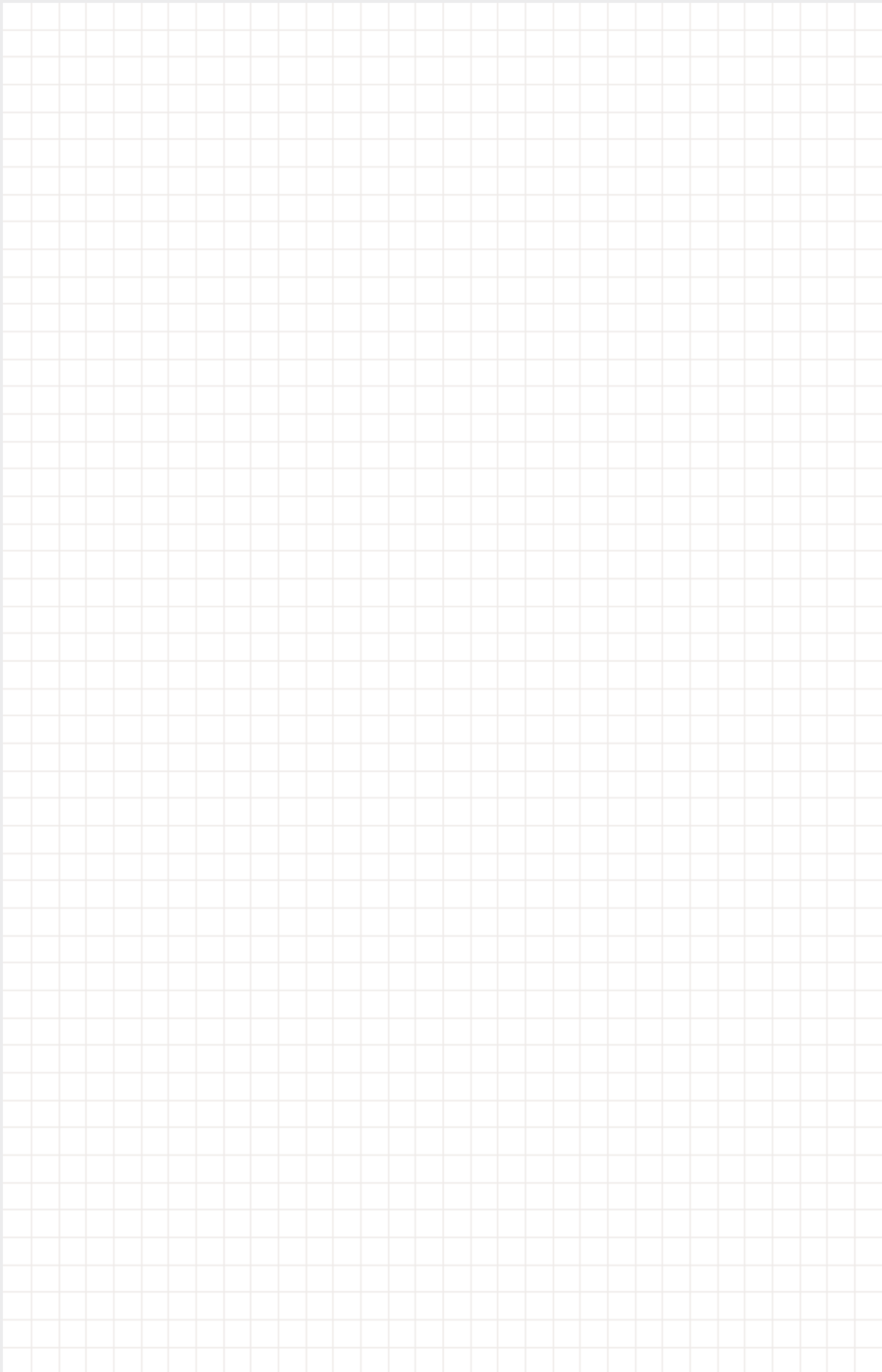
Dimensions

- ➔ DN 100-600

Various designs and combinations available on request.

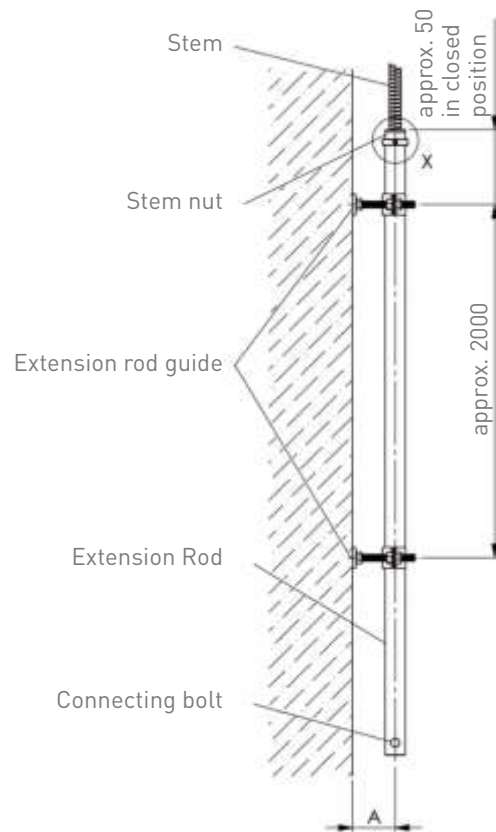


01	WAGU®-Handstops	01
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12	WAGU®-Flap Valves	12
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17	WAGU®-Isolating and Flushing Valves	17
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20	WAGU®-Telescopic Valves	20
21	WAGU®-Basin Inlets	21
22	WAGU®-Operating Gears	22



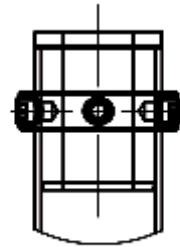
WAGU®-Pushing rod

With Guide



Details

X (1 : 5)



Materials

Extension rod	Guide	Stem nut	Connecting parts
1.4301	1.4301 / POM	Rg7	A4
1.4404 / 1.4571	1.4404 / 1.4571 / POM	Rg7	A4

Other materials or combinations available on request.

Order text

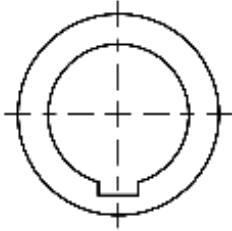
Cat.-sheet 22.01

Materials*	Dimensions*
Pushing rod:	A: mm
Guide:	T: mm
Stem nut:	
Connecting parts:	

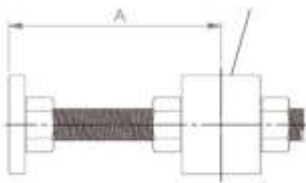
* Please specify in the enquiry/order.

Details

View X

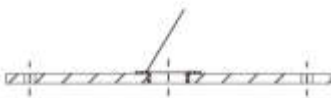


Guide component



Guide for wall mounting

Guide bush



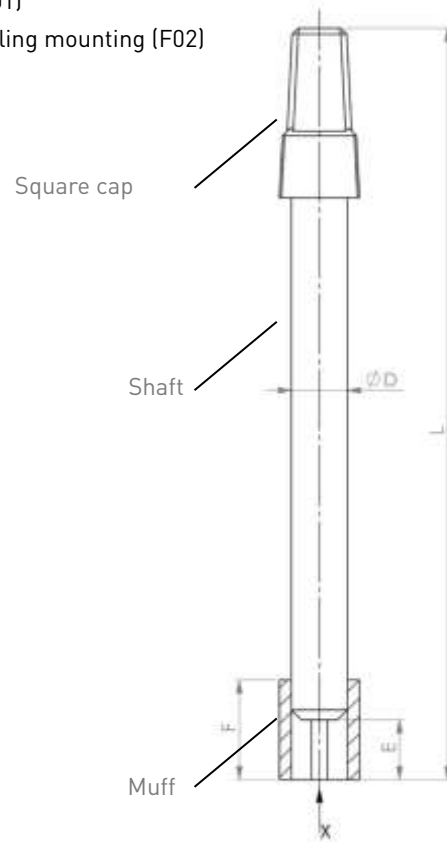
Guide for surface box or ceiling mounting



WAGU®-Extension Stem

With guide for wall mounting (F01)

With guide for surface box or ceiling mounting (F02)



Materials

Extension stem	Guide	Coupling muff	Connecting parts
1.4301	1.4301 / POM	Cast iron	A4
1.4404 / 1.4571	1.4404 / 1.4571 / POM	Cast iron	A4

Other materials or combinations available on request.

Order text

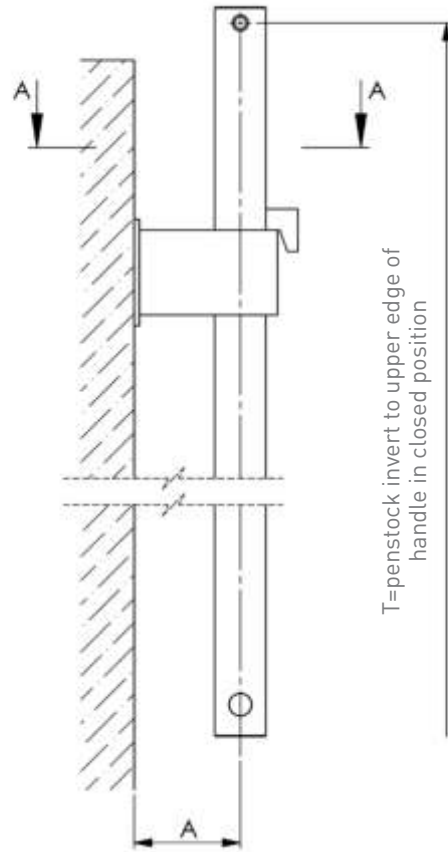
Cat.-sheet 22.02 F01 / 22.02 F02

Materials*	Dimensions*			
Extension rod:	T:			mm
Guide:	A:			mm
Coupling muff:	Dia. D:			mm
Connecting parts:	E:	F:	L:	mm

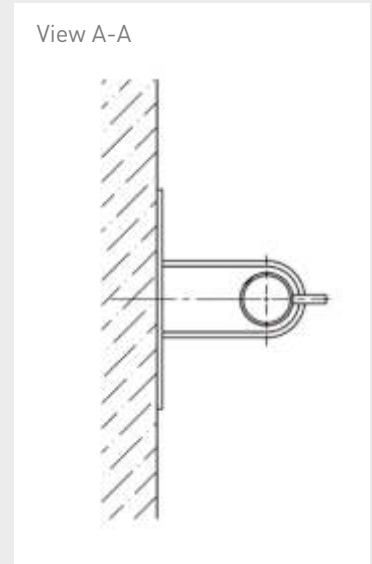
* Please specify in the enquiry/order.

WAGU®-Manual Lifting Rod

With handle and device for lifting



Details



Materials

Tie rod	Lifting lug	Connecting parts
1.4301	1.4301	A4
1.4404 / 1.4571	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.11

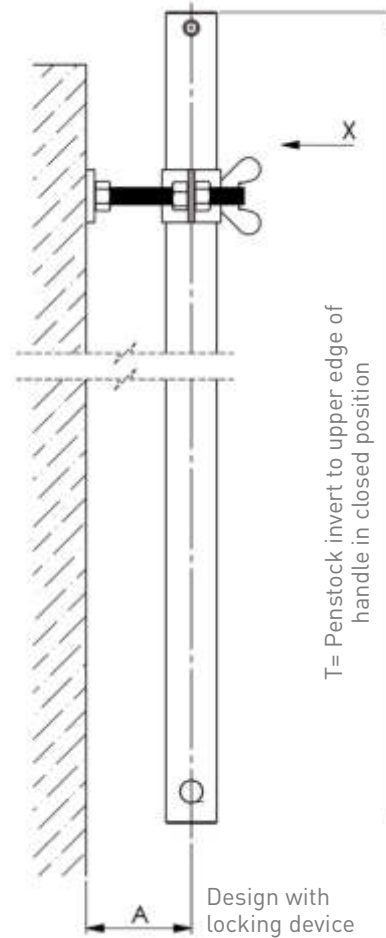
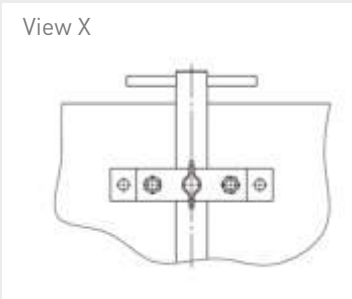
Materials*	Dimensions*
Tie rod:	T: mm
Lifting lug:	A: mm
Connecting parts:	

* Please specify in the enquiry/order.

WAGU®-Manual Lifting Rod

With handle and locking device

Details



Materials

Tie rod	Locking device	Connecting parts
1.4301	1.4301	A4
1.4404 / 1.4571	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

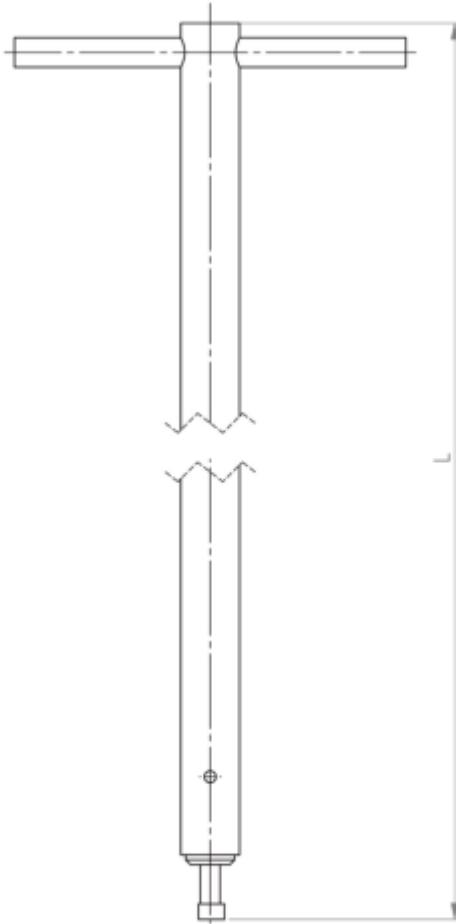
Cat.-sheet 22.12

Materials*	Dimensions*
Tie rod:	T: mm
Locking device:	A: mm
Connecting parts:	

* Please specify in the enquiry/order.

WAGU® -Manual Lifting Rod

With handle and lifting hook



Details



Materials

Tie rod

1.4301

1.4404 / 1.4571

Other materials or combinations available on request.

Order text

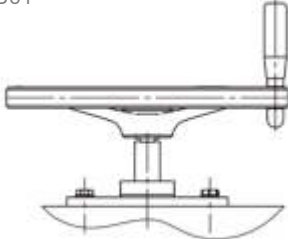
Cat.-sheet 22.13

Materials*	Dimensions*
Tie rod:	L: mm

* Please specify in the enquiry/order.

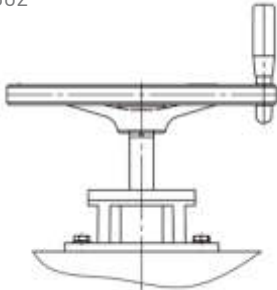
Details

B01



With plain bearing and handwheel

B02



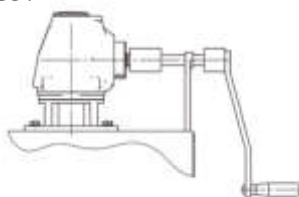
With rolling bearing and handwheel

B03



With bevel gearbox and frontal crank handle

B04



With bevel gearbox and lateral crank handle

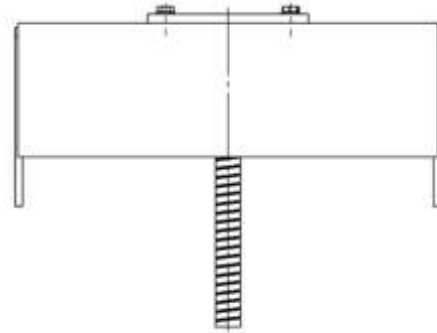
WAGU®-Operating Gear Mounted on Thrust Bridge

With stem, plain bearing and handwheel (B01)

With stem, rolling bearing and handwheel (B02)

With stem, bevel gearbox and frontal crank handle (B03)

With stem, bevel gearbox and lateral crank handle (B04)



Materials

Thrust bridge	Stem	Stem nut	Bevel-gearbox	Handwheel / Crank	Connecting parts
1.4301	1.4305	Rg7	Cast iron encapsulated	Steel / Al / 1.4301	A4
1.4404 / 1.4571	1.4404 / 1.4571	Rg7	Cast iron encapsulated	Steel / Al / 1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.21 B01 / 22.21 B02 / 22.21 B03 / 22.21 B04

Materials*	Dimensions*
Thrust bridge:	T: mm ¹⁾
Stem:	
Stem nut:	
Connecting parts:	
Handwheel:	2)
Bevel gearbox:	2)
Crank handle:	2)

1) Dimension from penstock invert to upper edge of handwheel or to centre of crank handle.

2) For the corresponding design only.

* Please specify in the enquiry/order.

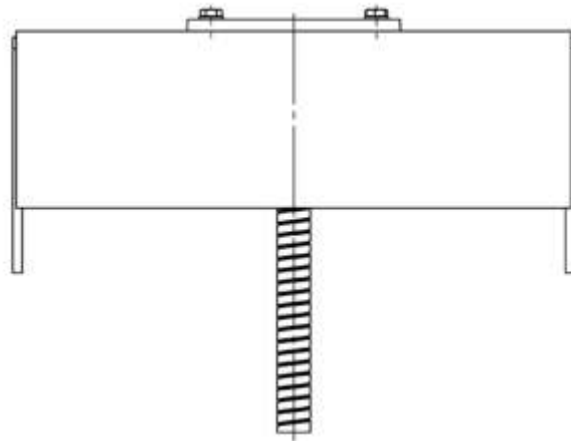
WAGU® - Operating Gear Mounted on Thrust Bridge

With stem, plain bearing and square cap (B10)

With stem, rolling bearing and square cap (B11)

With stem, spur gearbox and frontal square cap (B12)

With stem, spur gearbox and lateral square cap (B13)



Materials

Thrust bridge	Stem	Stem nut	Bevel-gearbox	Handwheel / Crank	Connecting parts
1.4301	1.4305	Rg7	Cast iron encapsulated	Steel / Al / 1.4301	A4
1.4404 / 1.4571	1.4404 / 1.4571	Rg7	Cast iron encapsulated	Steel / Al / 1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.22 B10 / 22.22 B11 / 22.22 B12 / 22.22 B13

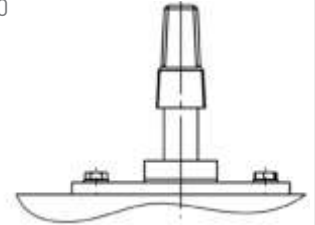
Materials*	Dimensions*
Thrust bridge:	T: mm ¹⁾
Stem:	C: mm
Stem nut:	
Connecting parts:	
Square cap:	
Spur gearbox:	

1) Dimension from penstock invert to upper edge of square cap.

* Please specify in the enquiry/ order.

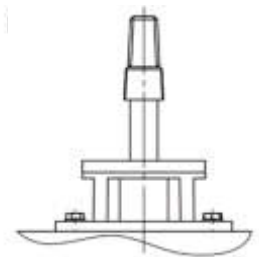
Details

B10



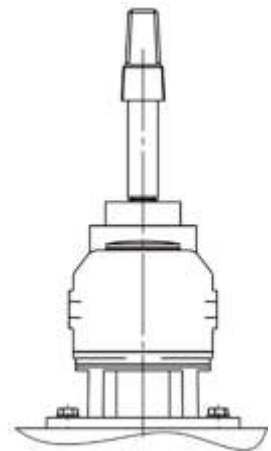
With plain bearing and square cap

B11



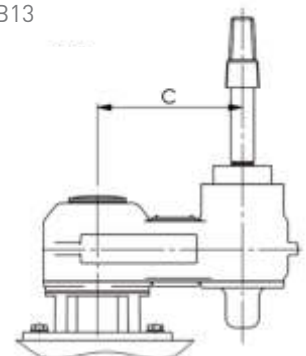
With rolling bearing and square cap

B12



With spur gearbox and frontal square cap

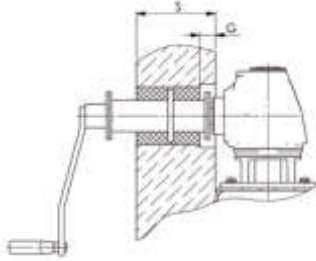
B13



With spur gearbox and lateral square cap

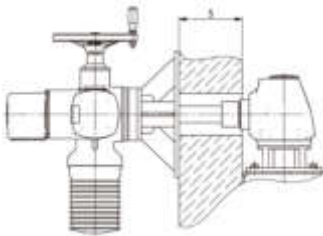
Details

B30



With crank handle

B31

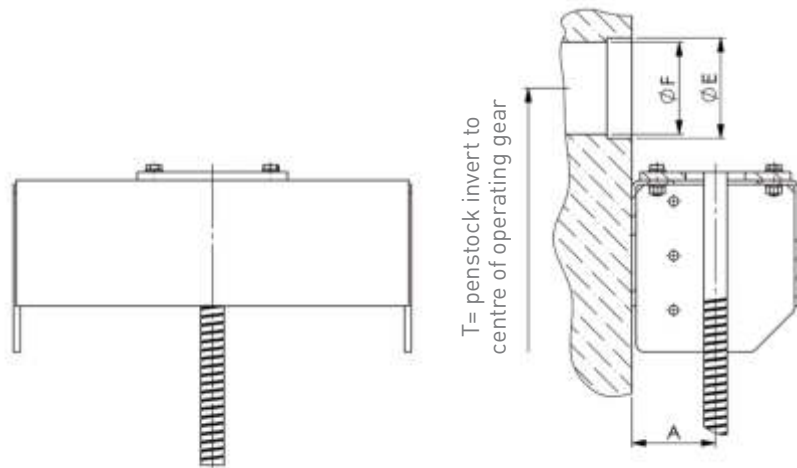


With electric actuator

WAGU®-Operating Gear Mounted on Thrust Bridge

With stem, bevel gearbox, wall duct and crank handle (B30)

With stem, bevel gearbox, wall duct and electric actuator (B31)



Materials

Thrust bridge	Stem	Stem nut	Bevel-gearbox	Handwheel / Crank	Connecting parts
1.4301	1.4305	Rg7	Cast iron encapsulated	Steel / Al / 1.4301	A4
1.4404 / 1.4571	1.4404 / 1.4571	Rg7	Cast iron encapsulated	Steel / Al / 1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.24 B30 / 22.24 B31

Materials*	Dimensions*
Thrust bridge:	T: mm ¹⁾
Stem:	A: mm
Stem nut:	Dia. E: mm
Connecting parts:	Dia. F: mm
Wall duct:	G: mm
Bevel gearbox:	S: mm

1) Dimension from penstock invert to centre of operating gear.

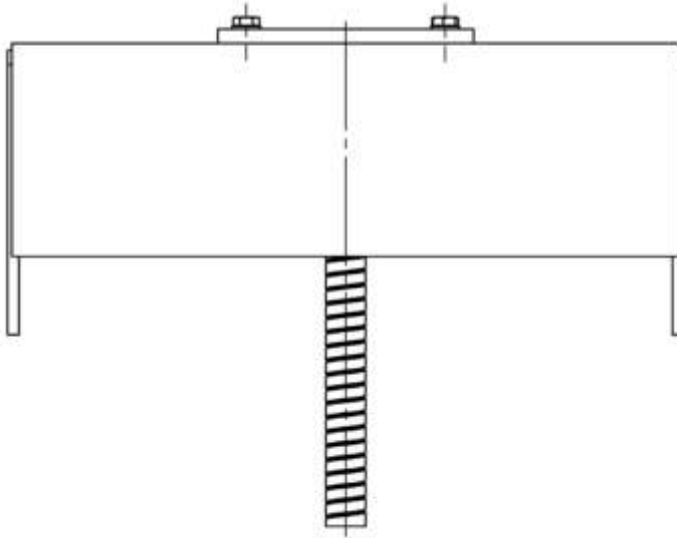
2) For the corresponding design only.

* Please specify in the enquiry/order.

WAGU® - Operating Gear Mounted on Thrust Bridge

With stem and electric actuator (B40)

With stem, bevel gearbox and electric actuator (B41)



Materials

Headstock	Stem	Stem nut	Bevel gearbox	Connecting parts
1.4301	1.4305	Rg7	Cast iron encapsulated	A4
1.4404 / 1.4571	1.4404 / 1.4571	Rg7	Cast iron encapsulated	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.25 B40 / 22.25 B41

Materials*	Dimensions*
Thrust bridge:	T: mm ¹⁾
Stem:	
Stem nut:	
Connecting parts:	
Bevel gearbox:	2)

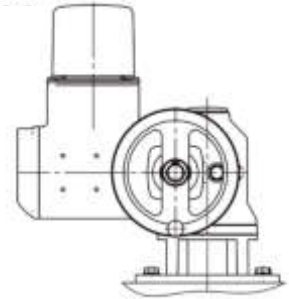
1) Dimension from penstock invert to centre of operating gear.

2) For the corresponding design only.

* Please specify in the enquiry/ order.

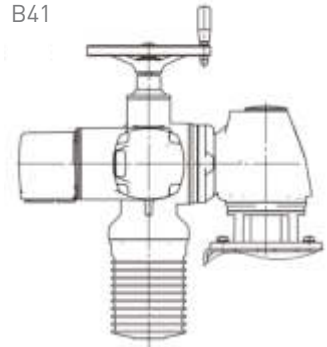
Details

B40



With electric actuator

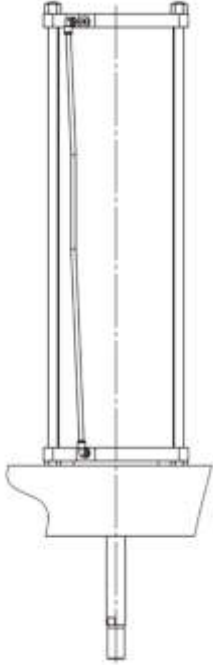
B41



With bevel gearbox and electric actuator

Details

B50



Pneumatic cylinder

B51

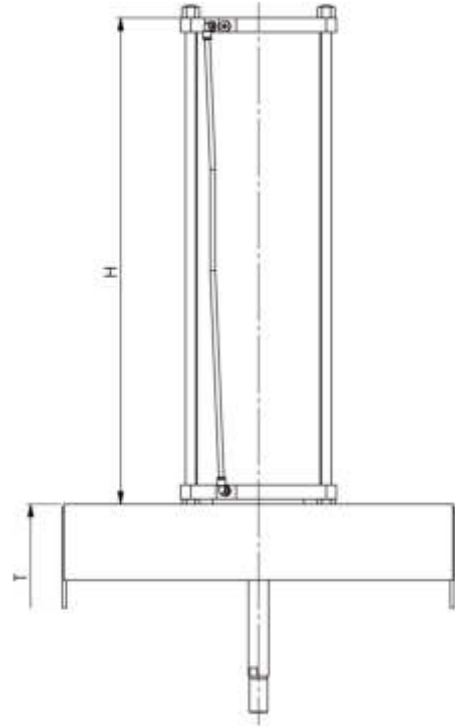


Hydraulic cylinder

WAGU®-Operating Gear Mounted on Thrust Bridge

With pneumatic cylinder (B50)

With hydraulic cylinder (B51)



Materials

Thrust bridge	Pneumatic - cylinder	Hydraulic- cylinder	Piston rod	Connecting parts
1.4301	Alu	Steel / coated	Steel / hard-chromium plated	A4
1.4404 / 1.4571	Alu	Steel / coated	Steel / hard-chromium plated	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.26 B50 / 22.26 B51

Materials*	Dimensions*
Thrust bridge:	T: mm ¹⁾
Cylinder:	H: mm
Piston rod:	Cyl. dia.: mm
Connecting parts:	

1) Dimension from penstock invert to centre of operating gear.

* Please specify in the enquiry/ order.

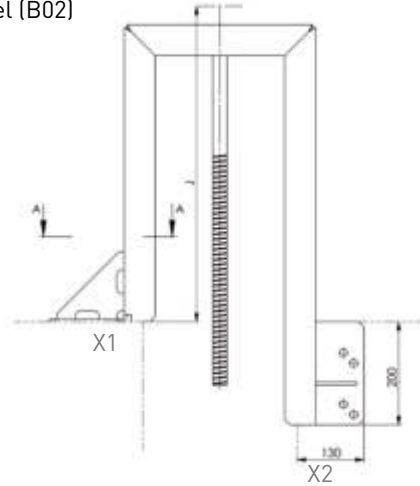
WAGU® - Operating Gear Mounted on Support Bracket

With stem, plain bearing and handwheel (B01)

With stem, rolling bearing and handwheel (B02)

With stem, bevel gearbox and frontal crank handle (B03)

With stem, bevel gearbox and lateral crank handle (B04)



X1) Central type,

Penstock for grouting

X2) Protruding type,

Penstock for anchor bolting

Materials

Operating gear support bracket	Stem	Stem nut	Bevel gearbox	Handwheel / crank	Connecting parts
1.4301	1.4305	Rg7	Cast iron encapsulated	Steel / Al / 1.4301	A4
1.4404 / 1.4571	1.4404 / 1.4571	Rg7	Cast iron encapsulated	Steel / Al / 1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.31 B01 / 22.31 B02 / 22.31 B03 / 22.31 B04

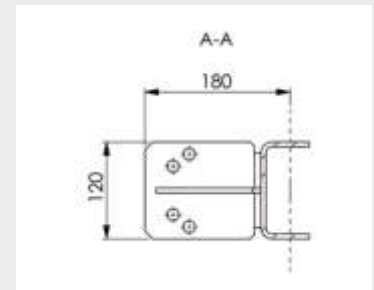
Materials*	Dimensions*
Operating gear support bracket:	T: mm ¹⁾
Stem:	J: mm
Stem nut:	
Connecting parts:	
Handwheel:	2)
Bevel gearbox:	2)
Crank handle:	2)

1) Dimension from penstock invert to upper edge of handwheel.

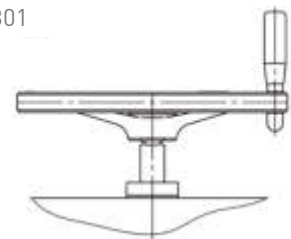
2) For the corresponding design only.

* Please specify in the enquiry/ order.

Details

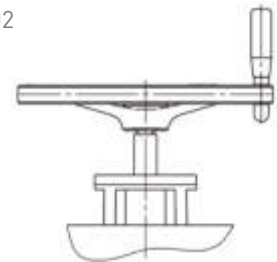


B01



With plain bearing and handwheel

B02



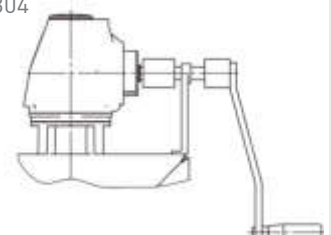
With rolling bearing and handwheel

B03



With bevel gearbox and frontal crank handle

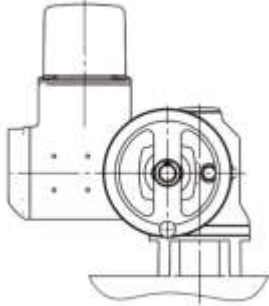
B04



With bevel gearbox and lateral crank handle

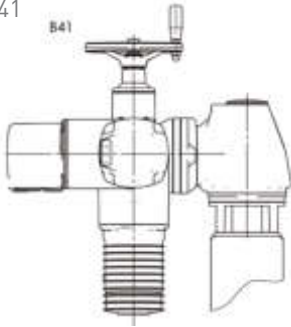
Details

B40



With electric actuator

B41

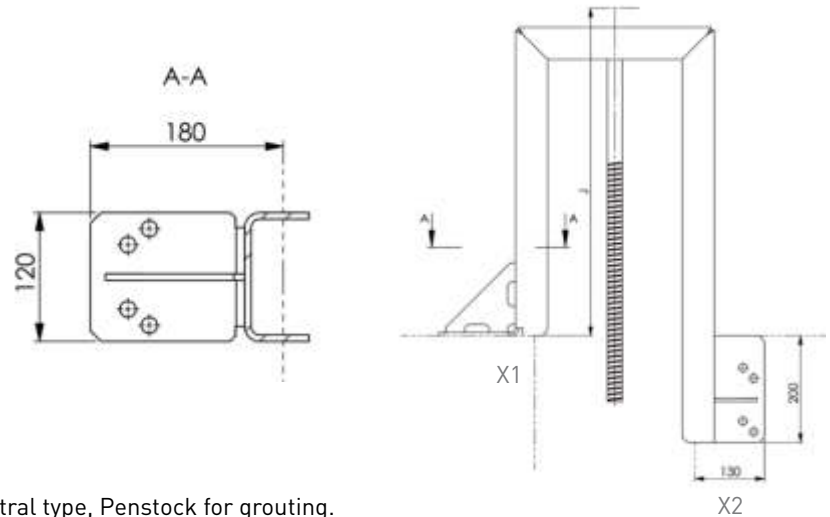


With bevel gearbox and electric actuator

WAGU®-Operating Gear Mounted on Support Bracket

With stem and electric actuator (B40)

With stem, bevel gearbox and electric actuator (B41)



X1) Central type, Penstock for grouting.

X2) Protruding type, Penstock for anchor bolting

Materials

Operating gear support bracket	Stem	Stem nut	Bevel gearbox	Connecting parts
1.4301	1.4305	Rg7	Cast iron encapsulated	A4
1.4404 / 1.4571	1.4404 / 1.4571	Rg7	Cast iron encapsulated	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.32 B40 / 22.32 B41

Materials*	Dimensions*	
Operating gear support bracket:	T:	mm ¹⁾
Stem:	J:	mm
Stem nut:		
Connecting parts:		
Bevel gearbox:		2)

1) Dimension from penstock invert to centre of operating gear.

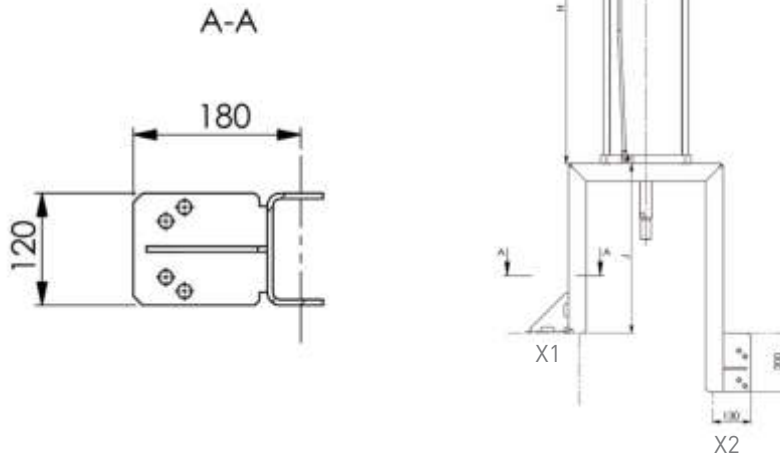
2) For the corresponding design only.

* Please specify in the enquiry/order.

WAGU® - Operating Gear Mounted on Support Bracket

With pneumatic cylinder (B50)

With hydraulic cylinder (B51)



X1) Central type, Penstock for grouting.

X2) Protruding type, Penstock for anchor bolting.

Materials

Operating gear support bracket	Pneumatic cylinder	Hydraulic cylinder	Piston rod	Connecting parts
1.4301	Alu	Steel / coated	Steel / hard-chromium plated	A4
1.4404 / 1.4571	Alu	Steel / coated	Steel / hard-chromium plated	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.33 B50 / 22.33 B51

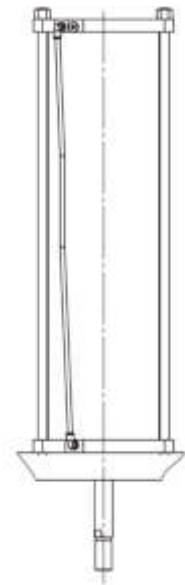
Materials*	Dimensions*
Operating gear support bracket:	T: mm ¹⁾
Cylinder:	J: mm
Piston rod:	Cyl. dia.: mm
Connecting parts:	

1) Dimension from penstock invert to upper edge of operating gear support bracket.

* Please specify in the enquiry/order.

Details

B50



Pneumatic cylinder

B51

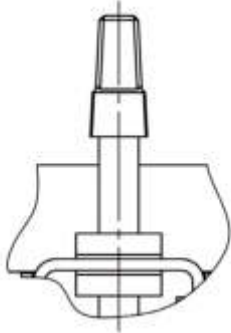


Hydraulic cylinder

WAGU®-Operating Gear Mounted on Wall Bracket

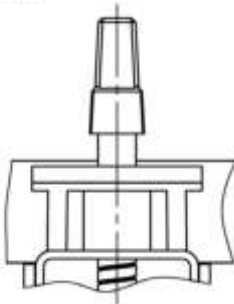
Details

B10



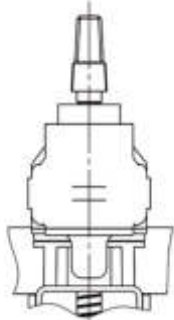
With plain bearing and square cap

B11



With rolling bearing and square cap

B12



With spur gearbox and frontal square cap

B03



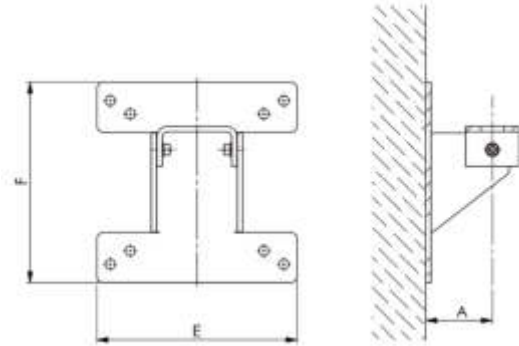
With bevel gearbox and frontal crank handle

With stem, plain bearing and square cap (B10)

With stem, rolling bearing and square cap (B11)

With stem, spur gearbox and frontal square cap (B12)

With stem, bevel gearbox and frontal crank handle (B03)



Materials

Wall bracket	Stem	Stem nut	Spur gearbox / Bevel gearbox	Square cap	Connecting parts
1.4301	1.4305	Rg7	Cast iron encapsulated	Cast iron	A4
1.4404 / 1.4571	1.4404 / 1.4571	Rg7	Cast iron encapsulated	Cast iron	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.41 B10 / 22.41 B11 / 22.41 B12 / 22.41 B13 / 22.41 B03

Materials*	Dimensions*
Wall bracket:	T: mm ¹⁾
Stem:	A: mm
Stem nut:	C: mm
Connecting parts:	E: mm
Square cap:	F: mm
Crank handle:	
Spur gearbox:	
Bevel gearbox:	

1) Dimension from penstock invert to upper edge of square cap or centre of operating gear.

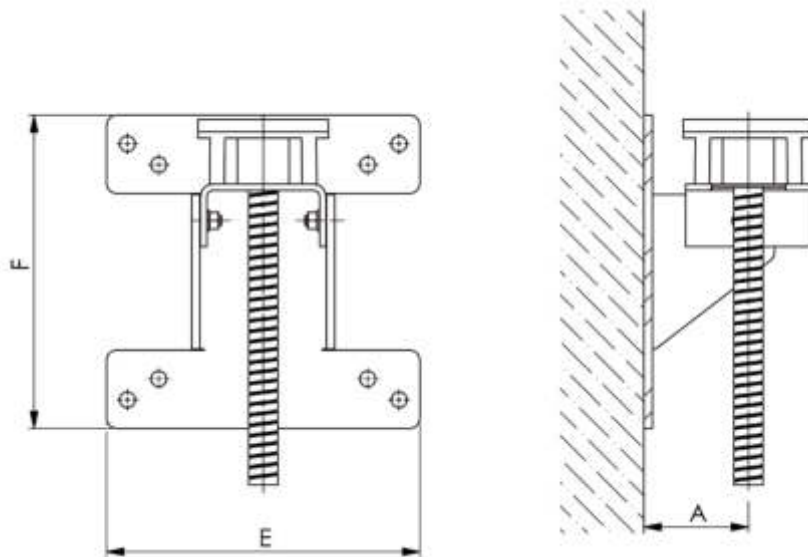
2) For the corresponding design only.

* Please specify in the enquiry/order.

WAGU®-Operating Gear Mounted on Wall Bracket

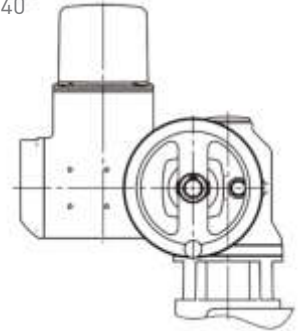
With stem and electric actuator (B40)

With stem, bevel gearbox and electric actuator (B41)



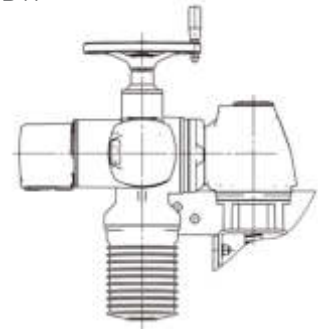
Details

B40



With electric actuator

B41



With bevel gearbox and electric actuator

Materials

Wall bracket	Stem	Stem nut	Bevel gearbox	Connecting parts
1.4301	1.4305	Rg7	Cast iron encapsulated	A4
1.4404 / 1.4571	1.4404 / 1.4571	Rg7	Cast iron encapsulated	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.42 B40 / 22.42 B41

Materials*	Dimensions*
Wall bracket:	T: mm ¹⁾
Stem:	A: mm
Stem nut:	E: mm
Connecting parts:	F: mm
Bevel gearbox:	²⁾

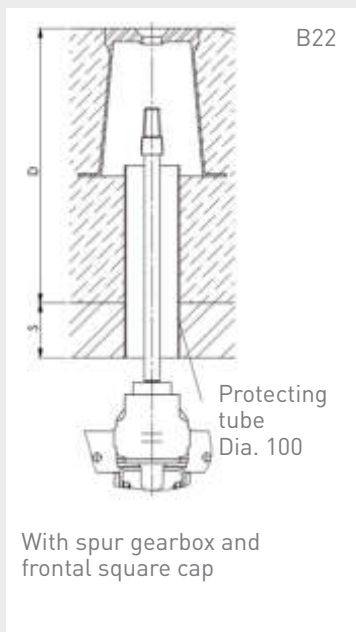
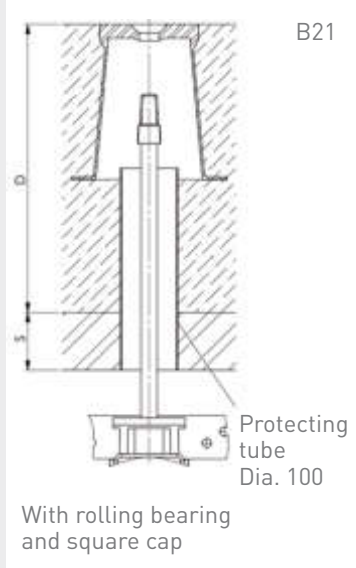
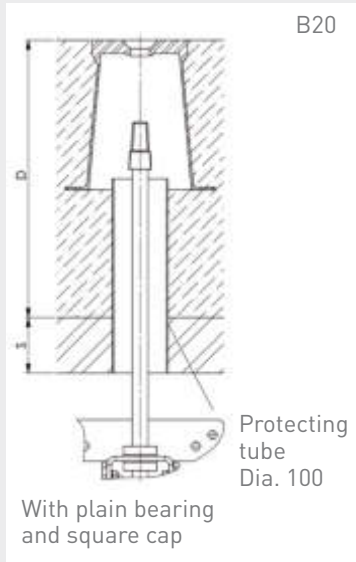
1) Dimension from penstock invert to centre of operating gear.

2) For the corresponding design only.

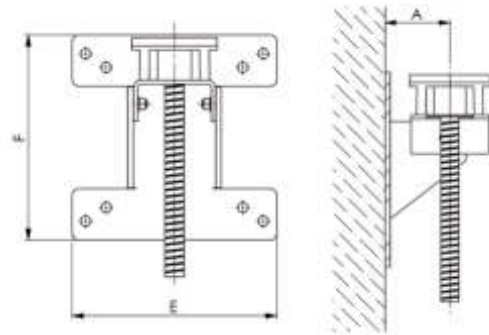
* Please specify in the enquiry/ order.

WAGU®-Operating Gear Mounted on Wall Bracket

Details



With stem, plain bearing, extension stem with square cap and surface box (B20)
 With stem, rolling bearing, extension stem with square cap and surface box (B21)
 With stem, spur gearbox, extension stem and frontal square cap with surface box (B22)



Materials

Wall bracket	Stem	Stem nut	Spur gearbox / Bevel gearbox	Square cap	Surface box	Connecting parts
1.4301	1.4305	Rg7	Cast iron encapsulated	Cast iron	Cast iron	A4
1.4404 / 1.4571	1.4404 / 1.4571	Rg7	Cast iron encapsulated	Cast iron	Cast iron	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.43 B20 / 22.43 B21 / 22.43 B22

Materials*	Dimensions*
Wall bracket:	T: mm ¹⁾
Stem:	A: mm
Stem nut:	C: mm
Connecting parts:	E: mm
Square cap:	F: mm
Surface box:	S: mm
Spur gearbox:	D: mm ²⁾

1) Dimension from penstock invert to lower edge of ceiling.

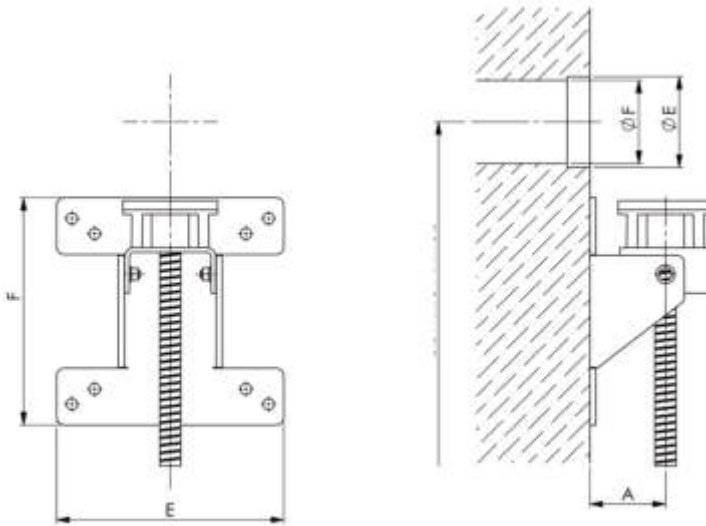
2) For the corresponding design only.

* Please specify in the enquiry/order.

WAGU® - Operating Gear Mounted on Wall Bracket

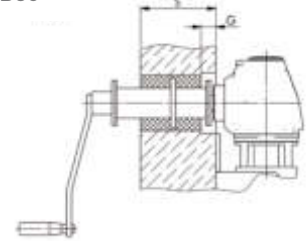
With stem, bevel gearbox, wall duct and crank handle (B30)

With stem, bevel gearbox, wall duct and electric actuator (B31)



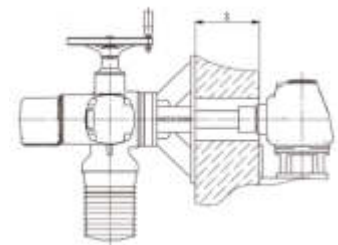
Details

B30



With crank handle

B31



With electric actuator

Materials

Wall bracket	Stem	Stem nut	Bevel gearbox	Connecting parts
1.4301	1.4305	Rg7	Cast iron encapsulated	A4
1.4404 / 1.4571	1.4404 / 1.4571	Rg7	Cast iron encapsulated	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.44 B30 / 22.44 B31

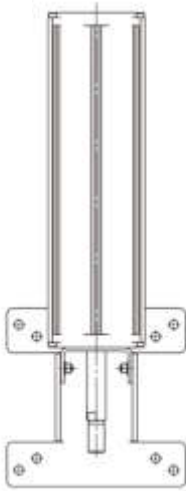
Materials*	Dimensions*
Wall bracket:	T: mm ¹⁾
Stem:	A: mm
Stem nut:	Dia. E: mm
Connecting parts:	Dia. F: mm
Wall duct:	G: mm
Bevel gearbox:	S: mm

1) Dimension from penstock invert to centre of operating gear.

* Please specify in the enquiry/order.

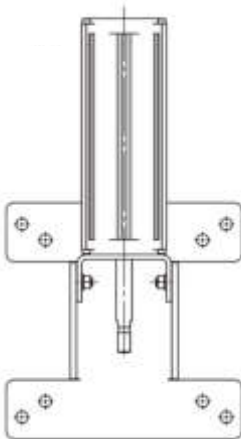
Details

B50



With pneumatic cylinder

B51

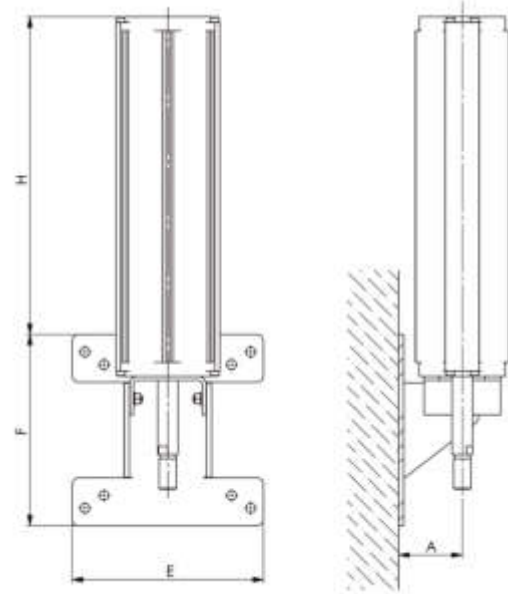


With hydraulic cylinder

WAGU® - Operating Gear Mounted on Wall Bracket

With pneumatic cylinder (B50)

With hydraulic cylinder (B51)



Materials

Wall bracket	Pneumatic - cylinder	Hydraulic-cylinder	Piston rod	Connecting parts
1.4301	Alu	Steel / coated	Steel / hard-chromium plated	A4
1.4404 / 1.4571	Alu	Steel / coated	Steel / hard-chromium plated	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.45 B50 / 22.45 B51

Materials*	Dimensions*
Wall bracket:	T: mm ¹⁾
Cylinder:	A: mm
Piston rod:	E: mm
Connecting parts:	F: mm
	H: mm
	Cyl. dia.: mm

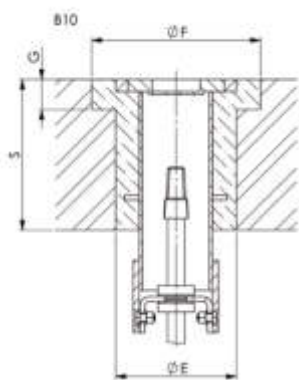
1) Dimension from penstock invert to upper edge of wall bracket.

* Please specify in the enquiry/order.

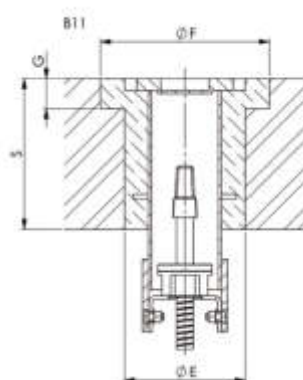
WAGU® - Ceiling-mounted Operating Gear

With stem, plain bearing and square cap (B10)

With stem, rolling bearing and square cap (B11)



With plain bearing



With rolling bearing

Materials

Ceiling sleeve	Stem	Stem nut	Square cap	Connecting parts
1.4301	1.4305	Rg7	Cast iron	A4
1.4404 / 1.4571	1.4404 / 1.4571	Rg7	Cast iron	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.51 B10 / 22.51 B11

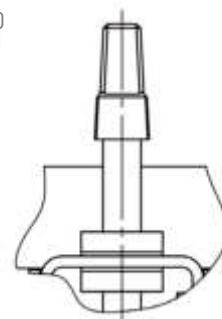
Materials*	Dimensions*
Ceiling sleeve:	T: mm ¹⁾
Stem:	S: mm
Stem nut:	G: mm
Connecting parts:	Dia. E: mm
Square cap:	Dia. F: mm

1) Dimension from penstock invert to lower edge of ceiling.

* Please specify in the enquiry/order.

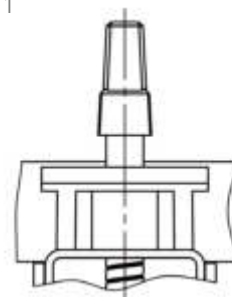
Details

B10



With plain bearing and square cap

B11

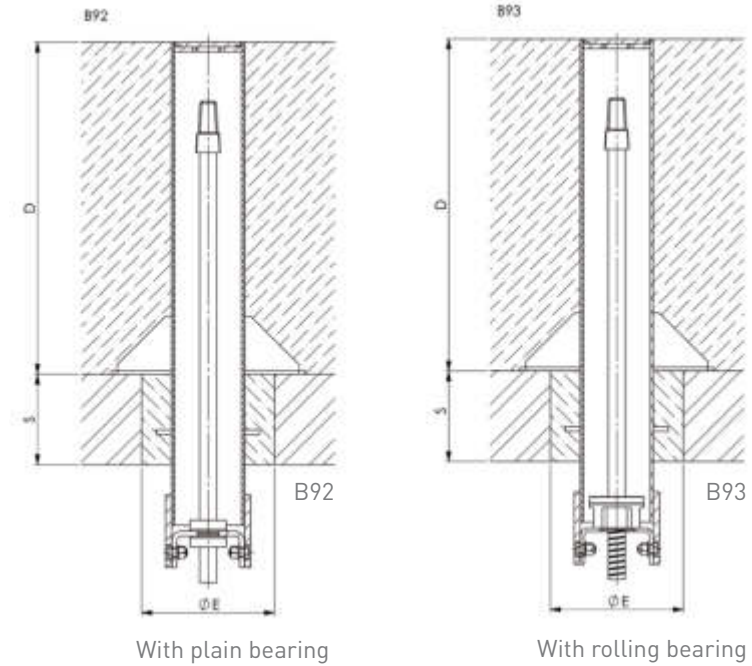


With rolling bearing and square cap

WAGU® - Ceiling-mounted Operating Gear

With stem, plain bearing, extended ceiling sleeve and square cap (B92)

With stem, rolling bearing, extended ceiling sleeve and square cap (B93)



Materials

Ceiling sleeve	Stem	Stem nut	Square cap	Connecting parts
1.4301	1.4305	Rg7	Cast iron	A4
1.4404 / 1.4571	1.4404 / 1.4571	Rg7	Cast iron	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.52 B92 / 22.52 B93

Materials*	Dimensions*
Ceiling sleeve:	T: mm ¹⁾
Stem:	S: mm
Stem nut:	D: mm
Connecting parts:	Dia. E: mm
Square cap:	

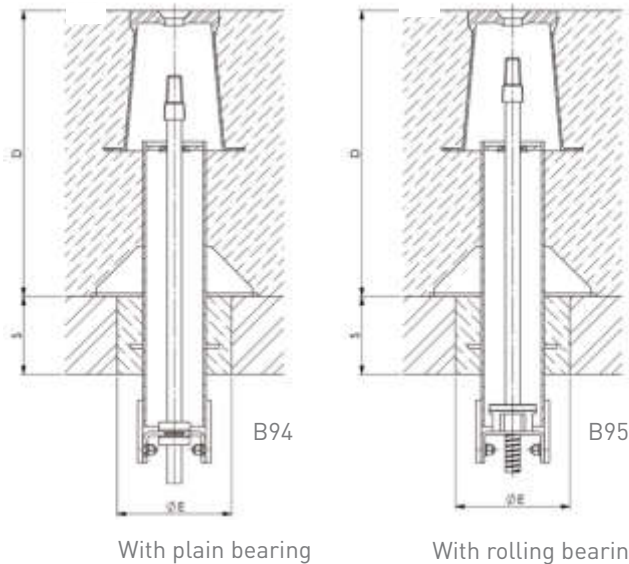
1) Dimension from penstock invert to lower edge of ceiling.

* Please specify in the enquiry/order.

WAGU® - Ceiling-mounted Operating Gear

With stem, plain bearing, extended ceiling sleeve, square cap and surface box (B94)

With stem, rolling bearing, extended ceiling sleeve, square cap and surface box (B95)



With plain bearing

With rolling bearing

Materials

Ceiling sleeve	Stem	Stem nut	Square cap	Surface box	Connecting parts
1.4301	1.4305	Rg7	Cast iron	Cast iron	A4
1.4404 / 1.4571	1.4404 / 1.4571	Rg7	Cast iron	Cast iron	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.53 B94 / 22.53 B95

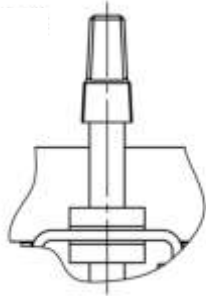
Materials*	Dimensions*
Ceiling sleeve:	T: mm ¹⁾
Stem:	S: mm
Stem nut:	D: mm
Connecting parts:	Dia. E: mm
Square cap:	

1) Dimension from penstock invert to lower edge of ceiling.

* Please specify in the enquiry/order.

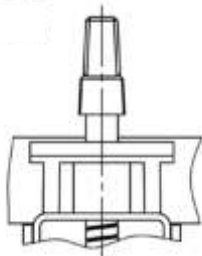
Details

B10



With plain bearing and square cap

B11



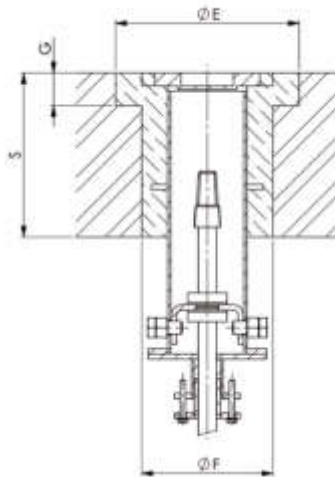
With rolling bearing and square cap

WAGU® - Ceiling-mounted Operating Gear

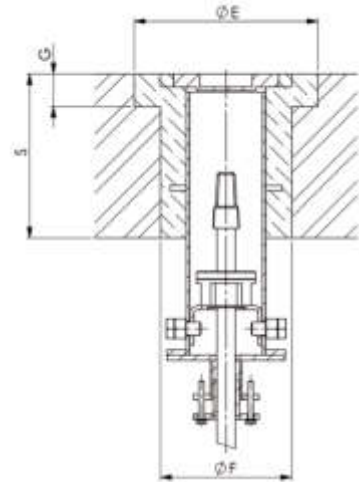
With pressure-tight ceiling duct

With stem, plain bearing and square cap (B10)

With stem, rolling bearing and square cap (B11)



With plain bearing



With rolling bearing

Materials

Ceiling sleeve	Stem	Stem nut	Square cap	Connecting parts
1.4301	1.4305	Rg7	Cast iron	A4
1.4404 / 1.4571	1.4404 / 1.4571	Rg7	Cast iron	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.56 B10 / 22.56 B11

Materials*	Dimensions*
Ceiling sleeve:	T: mm ¹⁾
Stem:	S: mm
Stem nut:	G: mm
Connecting parts:	Dia. E: mm
Square cap:	Dia. F: mm

1) Dimension from penstock invert to lower edge of ceiling.

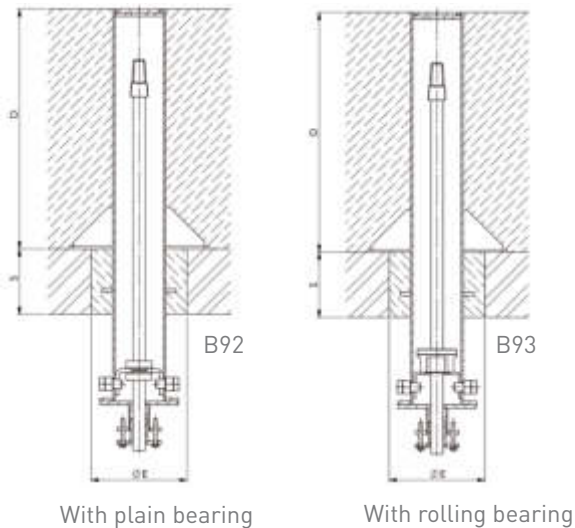
* Please specify in the enquiry/order.

WAGU® - Ceiling-mounted Operating Gear

With pressure-tight ceiling duct

With stem, plain bearing, extended ceiling sleeve and square cap (B92)

With stem, rolling bearing, extended ceiling sleeve and square cap (B93)



With plain bearing

With rolling bearing

Materials

Ceiling sleeve	Stem	Stem nut	Square cap	Surface box	Connecting parts
1.4301	1.4305	Rg7	Cast iron	Cast iron	A4
1.4404 / 1.4571	1.4404 / 1.4571	Rg7	Cast iron	Cast iron	A4

Other materials or combinations available on request.

Order text

Kat.-Bl. 22.57 B92 / 22.57 B93

Materials*	Dimensions*
Ceiling sleeve:	T: mm ¹⁾
Stem:	S: mm
Stem nut:	D: mm
Connecting parts:	Dia. E: mm
Square cap:	

1) Dimension from penstock invert to lower edge of ceiling.

* Please specify in the enquiry/order.

WAGU® - Ceiling-mounted Operating Gear

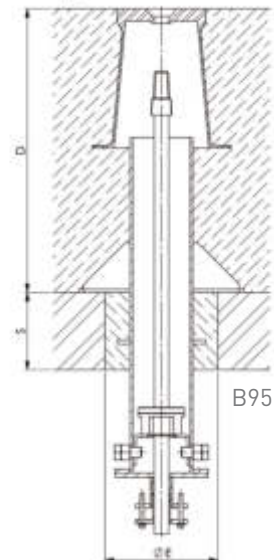
With pressure-tight ceiling duct

With stem, plain bearing, extended ceiling sleeve, square cap and surface box (B94)

With stem, rolling bearing, extended ceiling sleeve, square cap, and surface box (B95)



With plain bearing



With rolling bearing

Materials

Ceiling sleeve	Stem	Stem nut	Square cap	Connecting parts
1.4301	1.4305	Rg7	Cast iron	A4
1.4404 / 1.4571	1.4404 / 1.4571	Rg7	Cast iron	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.58 B94 / 22.58 B95

Materials*	Dimensions*
Ceiling sleeve:	T: mm ¹⁾
Stem:	S: mm
Stem nut:	D: mm
Connecting parts:	Dia. E: mm
Square cap:	

¹⁾ Dimension from penstock invert to lower edge of ceiling.

* Please specify in the enquiry/order.

WAGU® - Central Headstock L

With stem, plain bearing

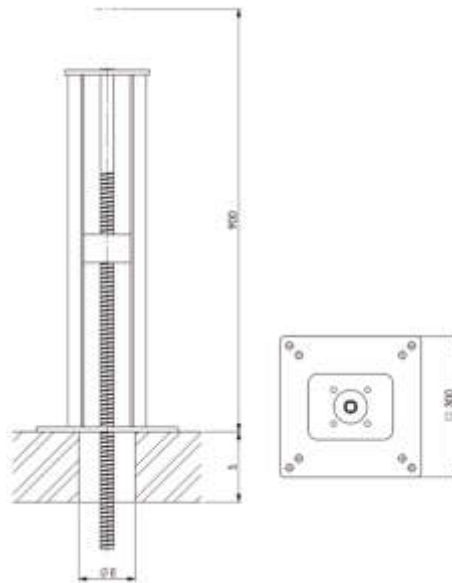
and handwheel (B01)

With stem, rolling bearing

and handwheel (B02)

With stem, bevel gearbox

and crank handle (B03)



Materials

Head stock	Stem	Stem nut	Bevel gearbox	Handwheel / crank	Connecting parts
1.4301	1.4305	Rg7	Cast iron encapsulated	Steel / Al / 1.4301	A4
1.4404 / 1.4571	1.4404 / 1.4571	Rg7	Cast iron encapsulated	Steel / Al / 1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.61 B01 / 22.61 B02 / 22.61 B03

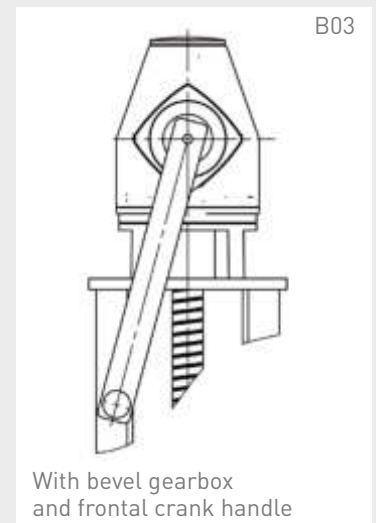
Materials*	Dimensions*
Headstock:	T: mm ¹⁾
Stem:	S: mm
Stem nut:	Dia. E: mm
Connecting parts:	
Handwheel:	2)
Bevel gearbox:	2)
Crank handle:	2)

1) Measured from invert penstock to top edge structure.

2) For the corresponding design only.

* Please specify in the enquiry/order.

Details



WAGU® - Central Headstock L

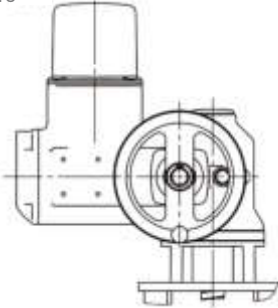
With stem and electric actuator (B40)

With stem, bevel gearbox and electric actuator (B41)

With stem, spur gearbox and electric actuator (B42)

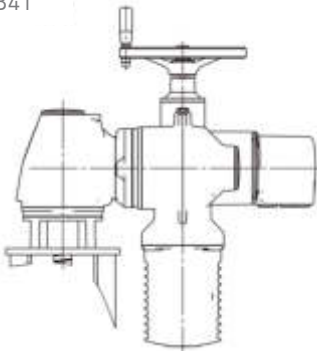
Details

B40



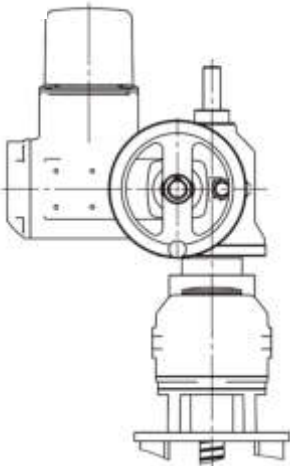
With electric actuator

B41

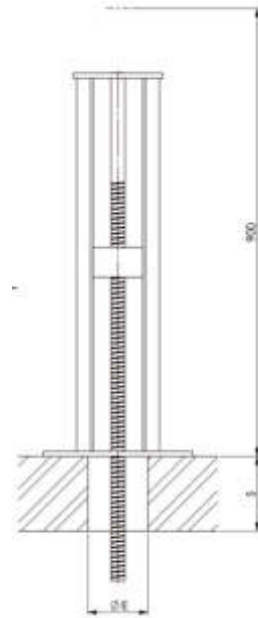
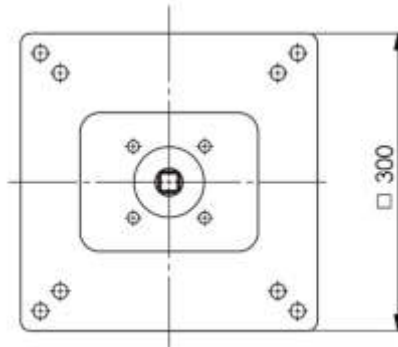


With bevel gearbox
and electric actuator

B42



With spur gearbox
and electric actuator



Materials

Headstock	Stem	Stem nut	Connecting parts
1.4301	1.4305	Rg7	A4
1.4404 / 1.4571	1.4404 / 1.4571	Rg7	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.62 B40 / 22.62 B41 / 22.62 B42

Materials*	Dimensions*
Headstock:	T: mm ¹⁾
Stem:	S: mm
Stem nut:	Dia. E: mm
Connecting parts:	
Bevel gearbox:	2)
Spur gearbox:	2)

1) Measured from invert penstock to top edge structure.

2) For the corresponding design only.

* Please specify in the enquiry/order.

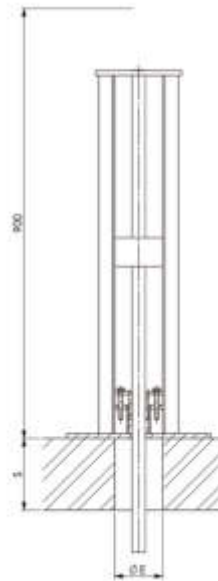
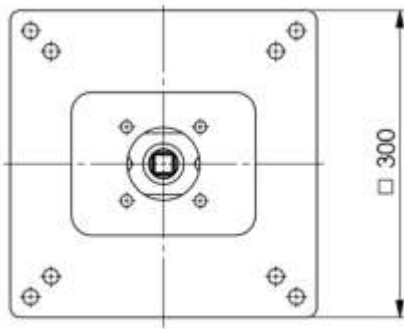
WAGU® - Central Headstock L

With pressure-tight ceiling duct

With stem, plain bearing and handwheel (B01)

With stem, rolling bearing and handwheel (B02)

With stem, bevel gearbox and crank handle (B03)



Materials

Head-stock	Stem	Stem nut	Bevel gearbox	Handwheel / crank	Connecting parts
1.4301	1.4305	Rg7	Cast iron encapsulated	Steel / Al / 1.4301	A4
1.4404 / 1.4571	1.4404 / 1.4571	Rg7	Cast iron encapsulated	Steel / Al / 1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.65 B01 / 22.65 B02 / 22.65 B03

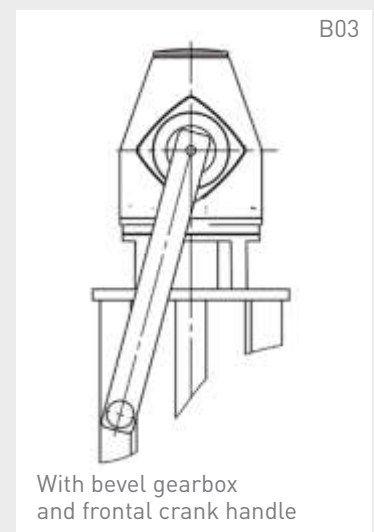
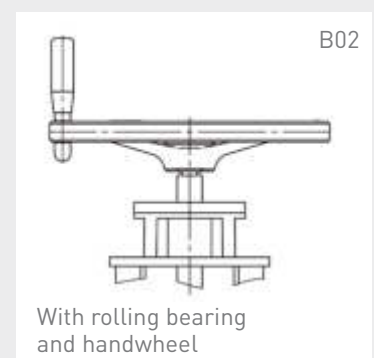
Materials*	Dimensions*
Headstock:	T: mm ¹⁾
Stem:	S: mm
Stem nut:	Dia. E: mm
Connecting parts:	
Handwheel:	2)
Bevel gearbox:	2)
Crank handle:	2)

1) Measured from invert penstock to top edge structure.

2) For the corresponding design only.

* Please specify in the enquiry/order.

Details



WAGU®-Central Headstock L

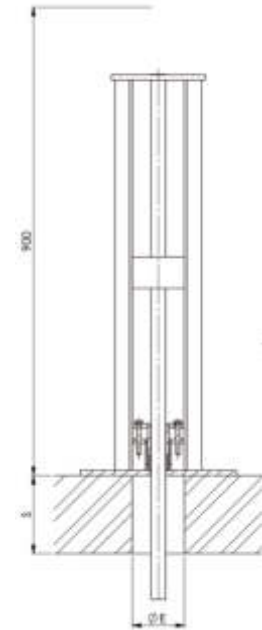
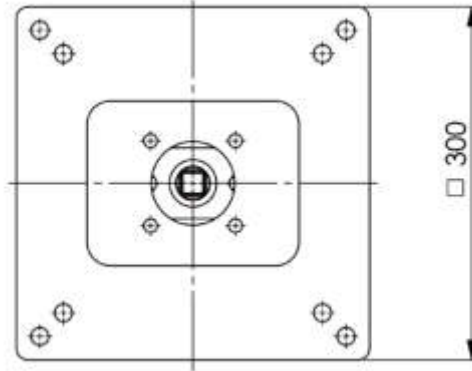
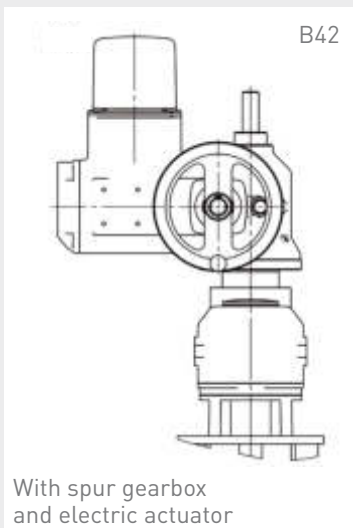
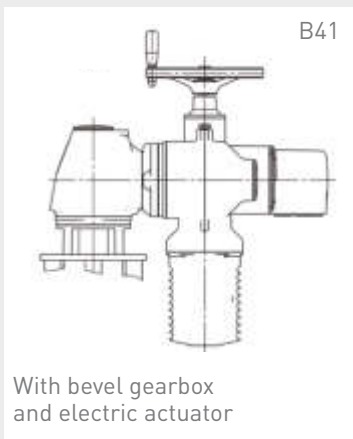
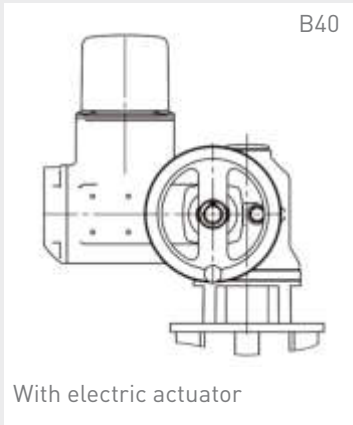
With pressure-tight ceiling duct

With stem and electric actuator (B40)

With stem, bevel gearbox and electric actuator (B41)

With stem, spur gearbox and electric actuator (B42)

Details



Materials

Headstock	Stem	Stem nut	Connecting parts
1.4301	1.4305	Rg7	A4
1.4404 / 1.4571	1.4404 / 1.4571	Rg7	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.66 B40 / 22.66 B41 / 22.66 B42

Materials*	Dimensions*
Headstock:	T: mm ¹⁾
Stem:	S: mm
Stem nut:	Dia. E: mm
Connecting parts:	
Bevel gearbox:	2)
Spur gearbox:	2)

1) Measured from invert penstock to top edge structure.

2) For the corresponding design only.

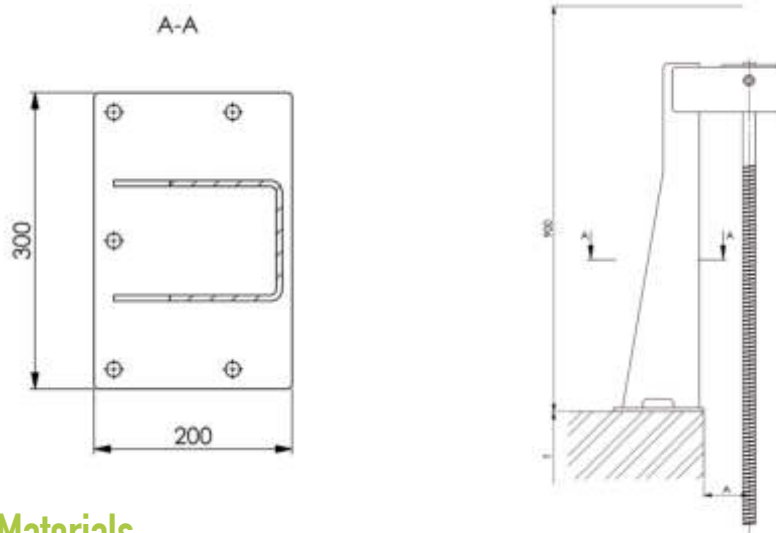
* Please specify in the enquiry/order.

WAGU®-Protruding Headstock L

With stem, plain bearing and handwheel (B01)

With stem, rolling bearing and handwheel (B02)

With stem, bevel gearbox and frontal crank handle (B03)



Materials

Head stock	Stem	Stem nut	Bevel gearbox	Handwheel / crank	Connecting parts
1.4301	1.4305	Rg7	Cast iron encapsulated	Steel / Al 1.4301	A4
1.4404 / 1.4571	1.4404 / 1.4571	Rg7	Cast iron encapsulated	Steel / Al 1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.71 B01 / 22.71 B02 / 22.71 B03

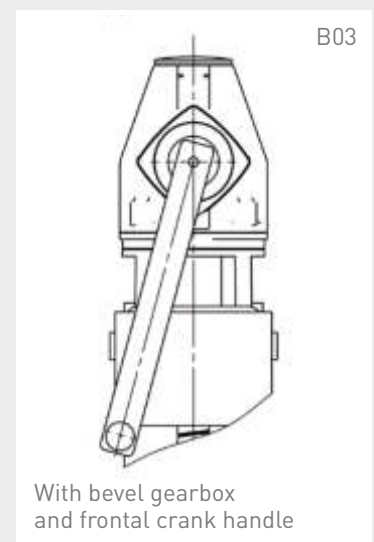
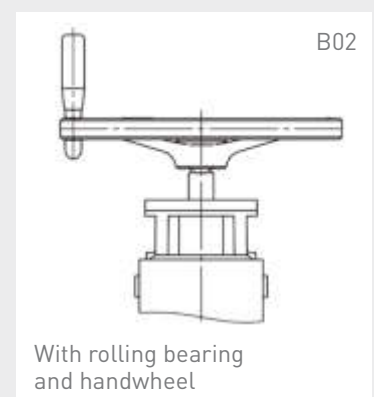
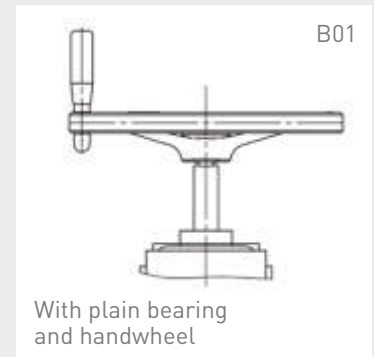
Materials*	Dimensions*
Headstock:	T: mm ¹⁾
Stem:	A: mm
Stem nut:	
Connecting parts:	
Bevel gearbox:	2)
Handwheel:	2)
Crank handle:	2)

1) Dimension from penstock invert to upper edge of the structure.

2) For the corresponding design only.

* Please specify in the enquiry/order.

Details



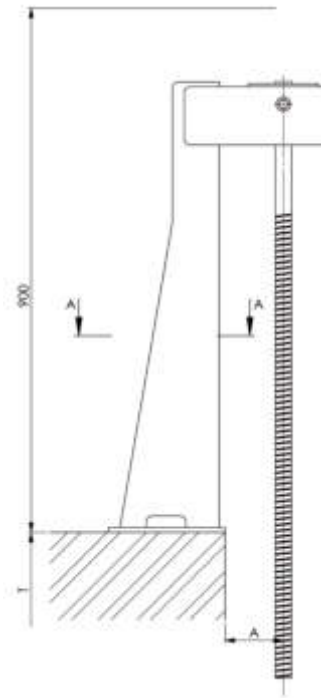
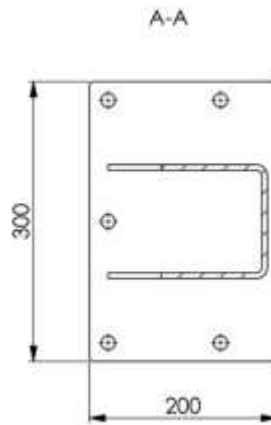
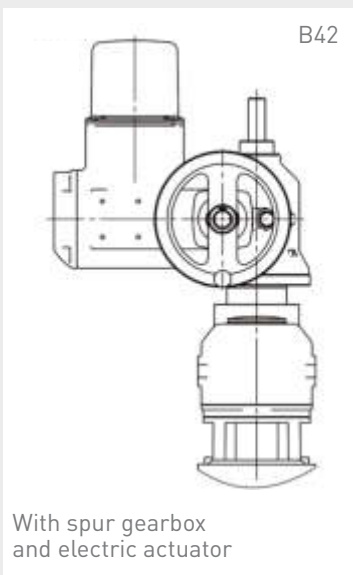
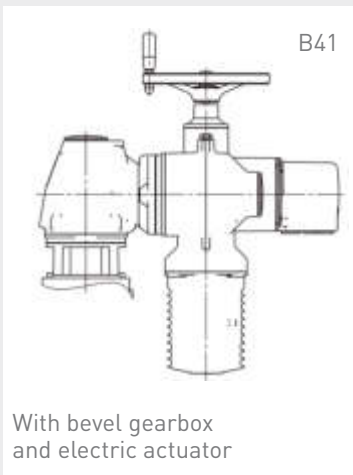
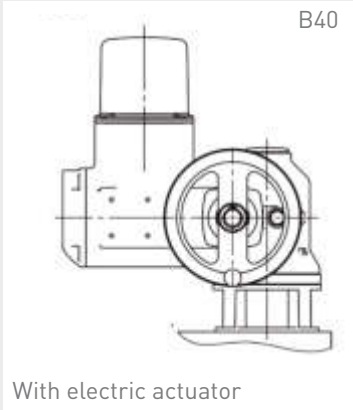
WAGU®-Protruding Headstock L

With stem and electric actuator (B40)

With stem, bevel gearbox and electric actuator (B41)

With stem, spur gearbox and electric actuator (B42)

Details



Materials

Headstock	Stem	Stem nut	Connecting parts
1.4301	1.4305	Rg7	A4
1.4404 / 1.4571	1.4404 / 1.4571	Rg7	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.72 B40 / 22.72 B41 / 22.72 B42

Materials*	Dimensions*
Headstock:	T: mm ¹⁾
Stem:	A: mm
Stem nut:	
Connecting parts:	
Bevel gearbox:	2)
Spur gearbox:	2)

1) Measured from invert penstock to top edge structure.

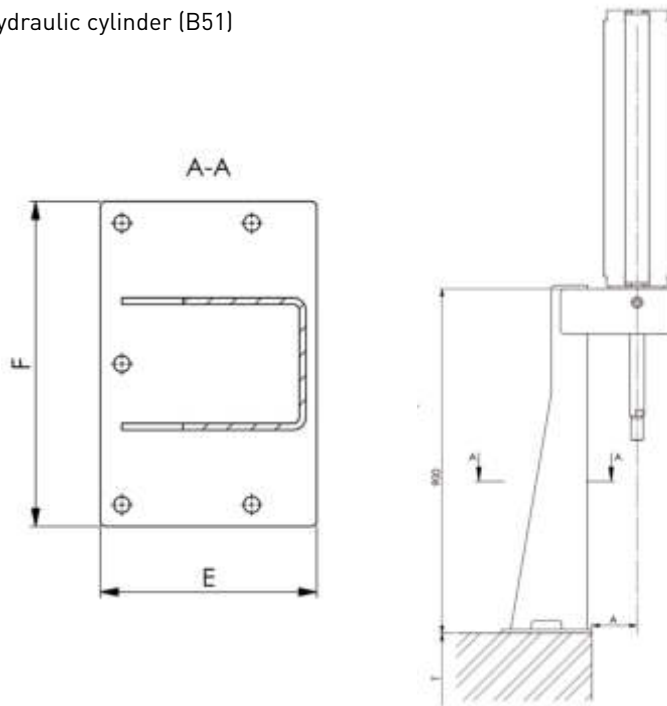
2) For the corresponding design only.

* Please specify in the enquiry/order.

WAGU®-Protruding Headstock L

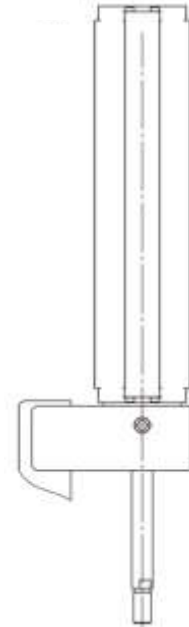
With pneumatic cylinder (B50)

With hydraulic cylinder (B51)



Details

B50



With pneumatic cylinder

B50



With hydraulic cylinder

Materials

Head - stock	Pneumatik- cylinder	Hydraulic- cylinder	Piston rod	Connecting parts
1.4301	Alu	Steel / coated	Steel / hard-chromium plated	A4
1.4404 / 1.4571	Alu	Steel / coated	Steel / hard-chromium plated	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.73 B50 / 22.73 B51

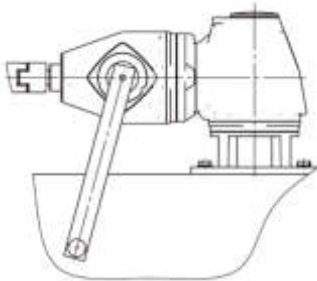
Materials*	Dimensions*
Headstock:	T: mm ¹⁾
Cylinder:	A: mm
Piston rod:	E: mm
Connecting parts:	F: mm
	Cyl. dia.: mm

1) Dimension from penstock invert to upper edge of the structure.

* Please specify in the enquiry/ order.

Details

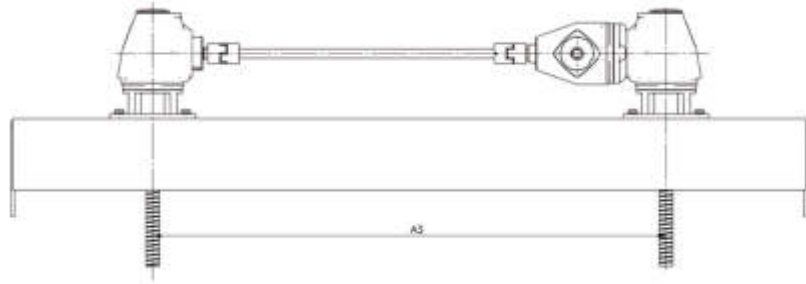
B61



With frontal
crank handle

WAGU® - Operating Gear Mounted on Thrust Bridge

With 2 stems, 3 bevel gearboxes and frontal crank handle (B61)



Materials

Thrust bridge	Stem	Stem nut	Bevel gearbox	Handwheel / crank	Connecting parts
1.4301	1.4305	Rg7	Cast iron encapsulated	Steel / Al / 1.4301	A4
1.4404 / 1.4571	1.4404 / 1.4571	Rg7	Cast iron encapsulated	Steel / Al / 1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.210 B60 / 22.210 B61

Materials*	Dimensions*
Thrust bridge:	T: mm ¹⁾
Stem:	AS: mm
Stem nut:	
Connecting parts:	
Handwheel:	2)
Crank handle:	2)
Bevel gearbox:	

1) Dimension from penstock invert to centre of operating gear.

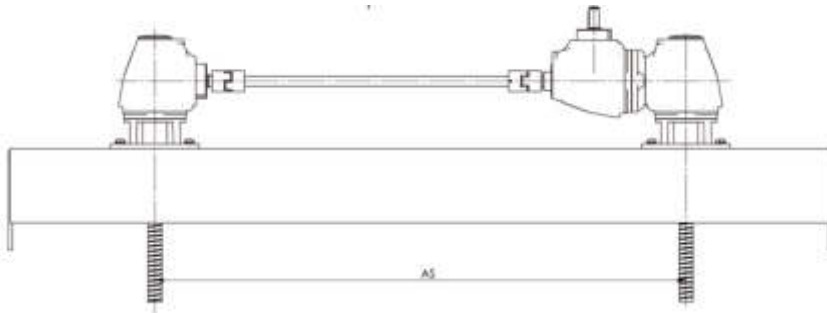
2) For the corresponding design only.

* Please specify in the enquiry/order.

WAGU® - Operating Gear Mounted on Thrust Bridge

With 2 stems, 3 bevel gearboxes and square cap (B65)

With 2 stems, 3 bevel gearboxes, extension stem and square cap (B66)



Materials

Thrust bridge	Stem	Stem nut	Bevel gearbox	Square cap	Connecting gearbox
1.4301	1.4305	Rg7	Cast iron encapsulated	Cast iron	A4
1.4404 / 1.4571	1.4404 / 1.4571	Rg7	Cast iron encapsulated	Cast iron	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.211 B65 / 22.211 B66

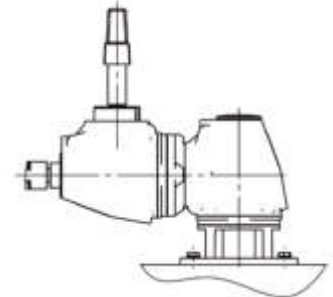
Materials*	Dimensions*
Thrust bridge:	T: mm ¹⁾
Stem:	AS: mm
Stem nut:	S: mm
Connecting parts:	D: mm
Square cap:	
Bevel gearbox:	

1) Dimension from penstock invert to centre of operating gear.

* Please specify in the enquiry/order.

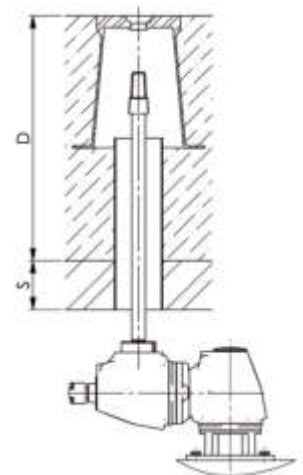
Details

B65



With bevel gearbox and square cap

B66



With bevel gearbox, extension stem, square cap and surface box

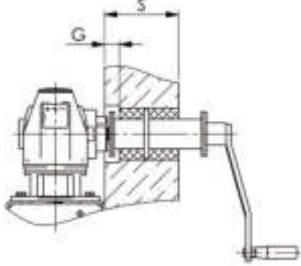
WAGU®-Operating Gear Mounted on Thrust Bridge

With 2 stems, 3 bevel gearboxes, wall duct and crank handle (B70)

With 2 stems, 3 bevel gearboxes, wall duct and electric actuator (B71)

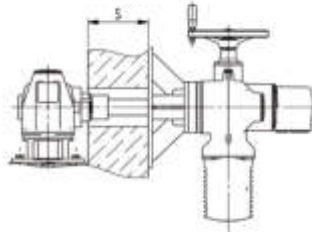
Details

B70

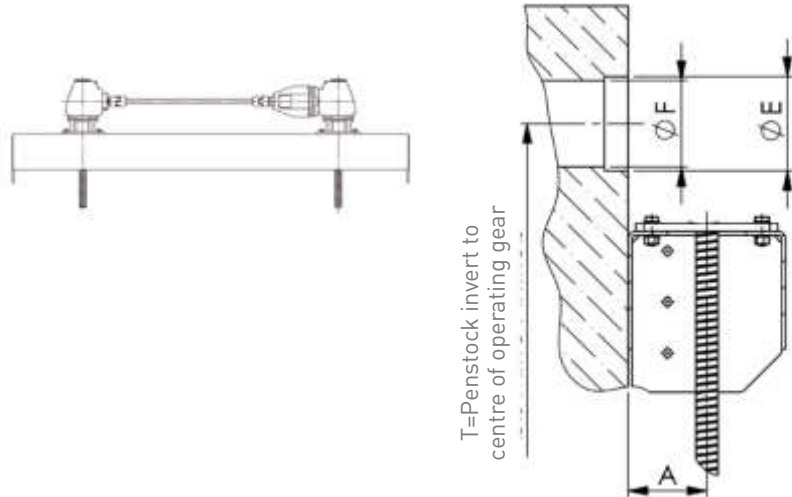


With crank handle

B71



With electric actuator



Materials

Thrust bridge	Stem	Stem nut	Bevel gearbox	Wall duct	Connecting parts
1.4301	1.4305	Rg7	Cast iron encapsulated	1.4301	A4
1.4404 / 1.4571	1.4404 / 1.4571	Rg7	Cast iron encapsulated	1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.212 B70 / 22.212 B71

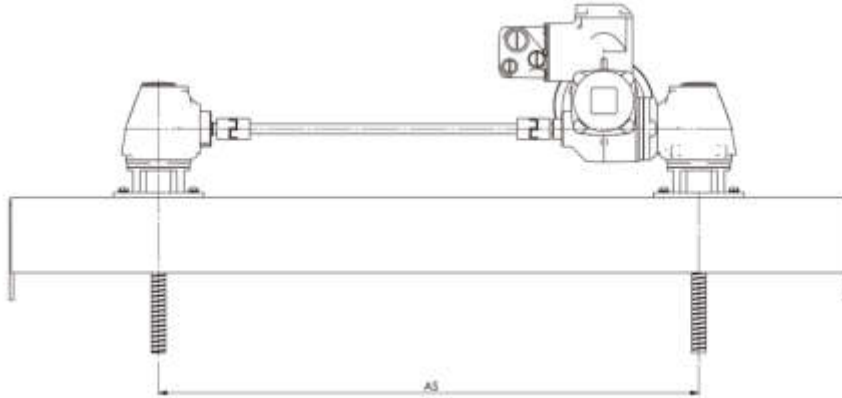
Materials*	Dimensions*
Thrust bridge:	T: mm ¹⁾
Stem:	A: mm
Stem nut:	AS: mm
Connecting parts:	Dia. E: mm
Wall duct:	Dia. F: mm
Bevel gearbox:	G: mm
	S: mm

1) Dimension from penstock invert to centre of operating gear.

* Please specify in the enquiry/order.

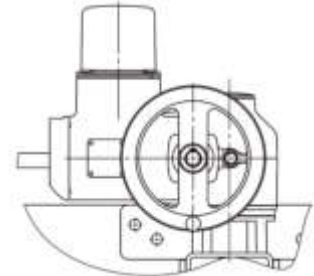
WAGU® - Operating Gear Mounted on Thrust Bridge

With 2 stems, 2 bevel gearboxes and central electric actuator (B80)



Details

B80



With central electric actuator

Materials

Thrust bridge	Stem	Stem nut	Bevel gearbox	Connecting parts
1.4301	1.4305	Rg7	Cast iron encapsulated	A4
1.4404 / 1.4571	1.4404 / 1.4571	Rg7	Cast iron encapsulated	A4

Other materials or combinations available on request.

Order text

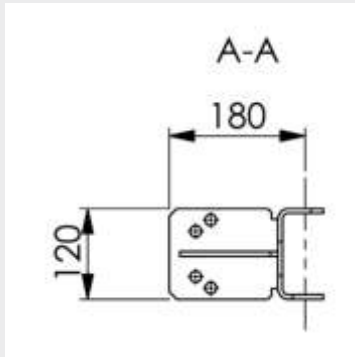
Cat.-sheet 22.213 B80

Materials*	Dimensions*
Thrust bridge:	T: mm ¹⁾
Stem:	AS: mm
Stem nut:	
Connecting parts:	
Bevel gearbox:	

1) Dimension from penstock invert to centre of operating gear.

* Please specify in the enquiry/ order.

Details



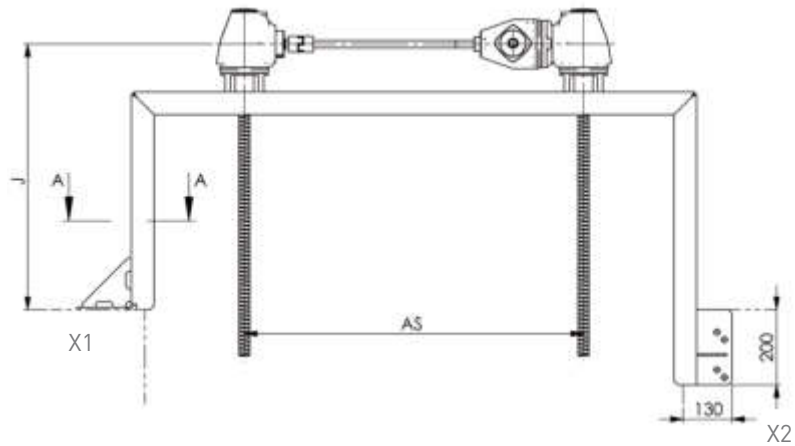
B61



With frontal crank handle

WAGU®-Operating Gear Mounted on Support Bracket

With 2 stems, 3 bevel gearboxes and frontal crank handle (B61)



X1) Central type, Penstock for grouting.

X2) Protruding type, Penstock for anchor bolting.

Materials

Support bracket	Stem	Stem nut	Bevel gearbox	Handwheel / crank	Connecting parts
1.4301	1.4305	Rg7	Cast iron encapsulated	Steel / Al / 1.4301	A4
1.4404 / 1.4571	1.4404 / 1.4571	Rg7	Cast iron encapsulated	Steel / Al / 1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.310 B61

Materials*	Dimensions*
Support bracket:	T: mm ¹⁾
Stem:	J: mm
Stem nut:	AS: mm
Connecting parts:	
Handwheel:	2)
Crank handle:	2)
Bevel gearbox:	

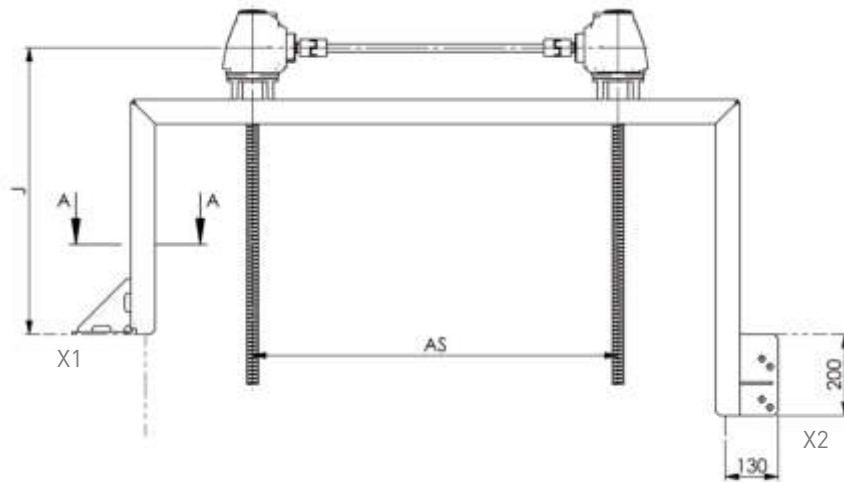
1) Dimension from penstock invert to centre of operating gear.

2) For the corresponding design only.

* Please specify in the enquiry/order.

WAGU® - Operating Gear Mounted on Support Bracket

With 2 stems, 2 bevel gearboxes and central electric actuator (B80)



X1) Central type, Penstock for grouting.

X2) Protruding type, Penstock for anchor bolting.

Materials

Support bracket	Stem	Stem nut	Bevel gearbox	Connecting parts
1.4301	1.4305	Rg7	Cast iron encapsulated	A4
1.4404 / 1.4571	1.4404 / 1.4571	Rg7	Cast iron encapsulated	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.311 B80

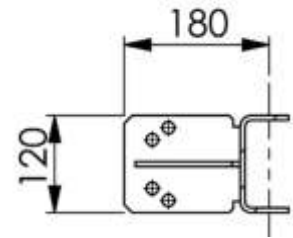
Materials*	Dimensions*
Thrust bridge:	T: mm ¹⁾
Stem:	J: mm
Stem nut:	AS: mm
Connecting parts:	
Bevel gearbox:	

1) Dimension from penstock invert to centre of operating gear.

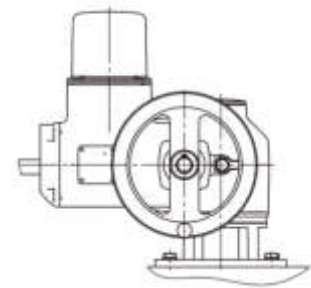
* Please specify in the enquiry/order.

Details

Section A-A

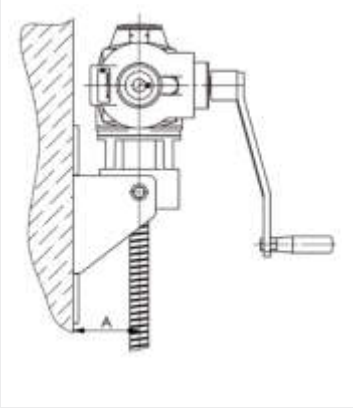


B80

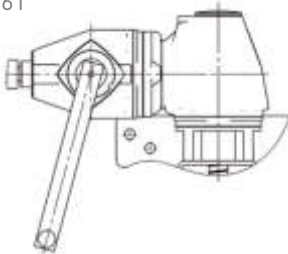


With central electric actuator

Details



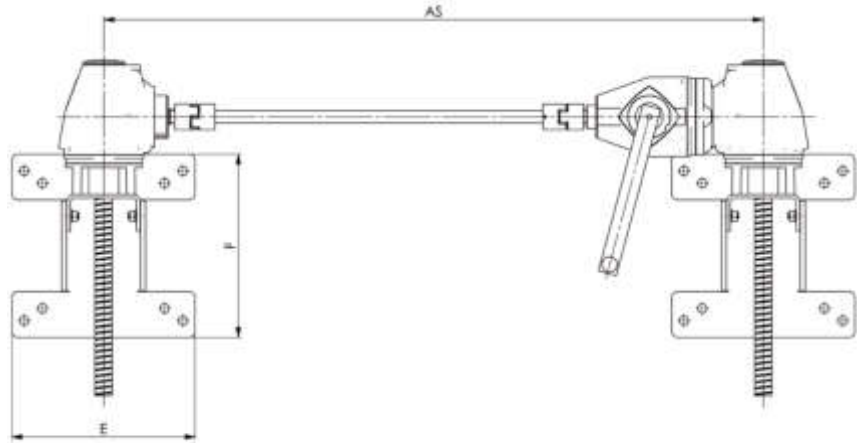
B61



With bevel gearbox
and frontal crank handle

WAGU® - Operating Gear Mounted on Wall Bracket

With 2 stems, 3 bevel gearboxes and frontal crank handle (B61)



Materials

Wall bracket	Stem	Stem nut	Bevel gearbox	Handwheel / crank	Connecting parts
1.4301	1.4305	Rg7	Cast iron encapsulated	Steel / Al / 1.4301	A4
1.4404 / 1.4571	1.4404 / 1.4571	Rg7	Cast iron encapsulated	Steel / Al / 1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.410 B61

Materials*	Dimensions*
Wall bracket:	T: mm ¹⁾
Stem:	AS: mm
Stem nut:	A: mm
Connecting parts:	E: mm
Handwheel: ²⁾	F: mm
Crank handle: ²⁾	
Bevel gearbox:	

1) Dimension from penstock invert to centre of operating gear.

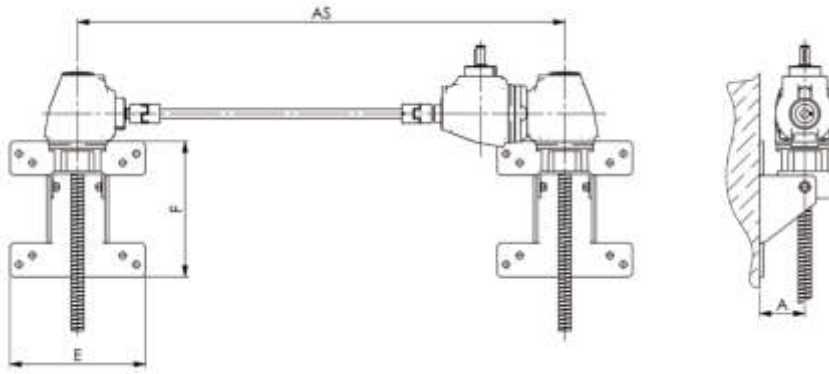
2) For the corresponding design only.

* Please specify in the enquiry/order.

WAGU® - Operating Gear Mounted on Wall Bracket

With 2 stems, 3 bevel gearboxes and square cap (B65)

With 2 stems, 3 bevel gearboxes, extension stem and square cap (B66)



Materials

Wall bracket	Stem	Stem nut	Bevel gearbox	Square - cap	Connecting gearbox
1.4301	1.4305	Rg7	Cast iron encapsulated	Cast iron	A4
1.4404 / 1.4571	1.4404 / 1.4571	Rg7	Cast iron encapsulated	Cast iron	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.411 B65 / 22.411 B66

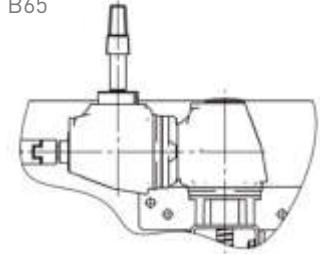
Materials*	Dimensions*
Wall bracket:	T: mm ¹⁾
Stem:	A: mm
Stem nut:	AS: mm
Connecting parts:	E: mm
Square cap:	F: mm
Bevel gearbox:	D: mm
	S: mm

1) Dimension from penstock invert to upper edge of square cap or lower edge of ceiling.

* Please specify in the enquiry/order.

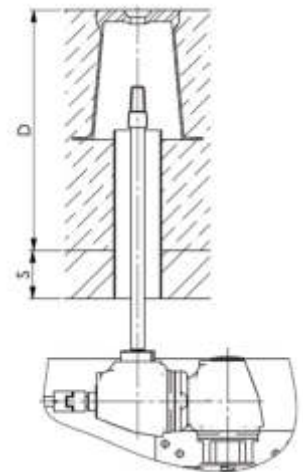
Details

B65



With bevel gearbox and square cap

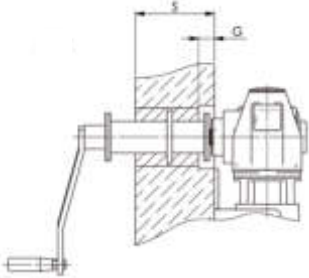
B66



With bevel gearbox, extension stem, square cap and surface box

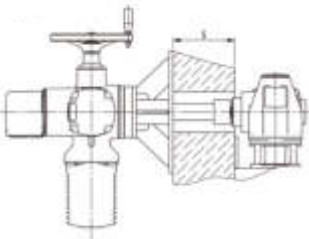
Details

B70



With crank handle

B71

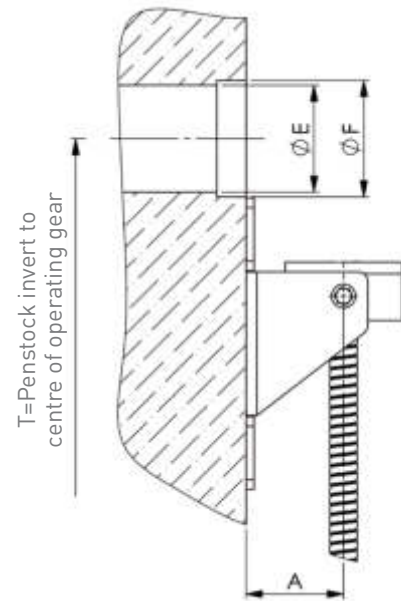
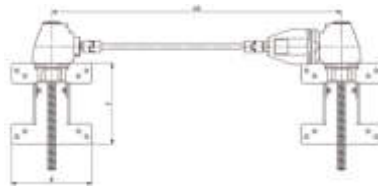


With electric actuator

WAGU®-Operating Gear Mounted on Wall Bracket

With 2 stems, 3 bevel gearboxes, wall duct and crank handle (B70)

With 2 stems, 3 bevel gearboxes, wall duct and electric actuator (B71)



Materials

Wall bracket	Stem	Stem nut	Bevel gearbox	Handwheel / crank	Connecting parts
1.4301	1.4305	Rg7	Cast iron encapsulated	Steel / Al / 1.4301	A4
1.4404 / 1.4571	1.4404 / 1.4571	Rg7	Cast iron encapsulated	Steel / Al / 1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.412 B70 / 22.412 B71

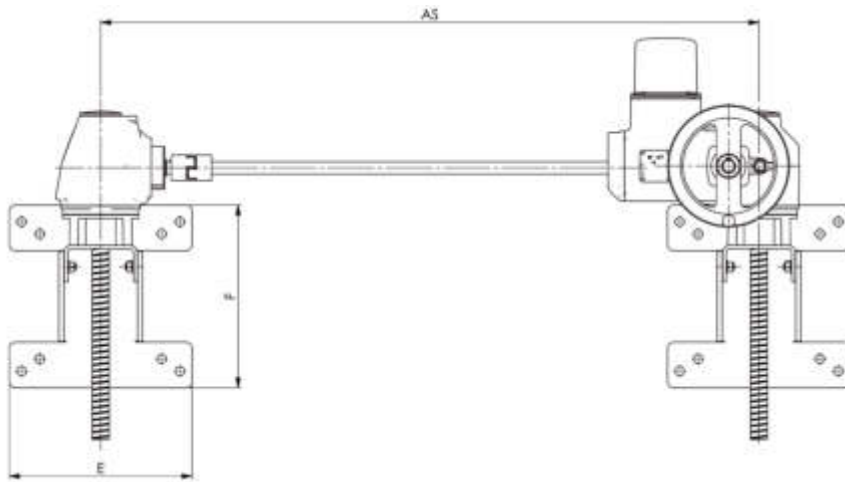
Materials*	Dimensions*
Wall bracket:	T: mm ¹⁾
Stem:	A: mm
Stem nut:	AS: mm
Connecting parts:	Dia. E: mm
Wall duct:	Dia. F: mm
Bevel gearbox:	G: mm
	S: mm

1) Dimension from penstock invert to centre of operating gear.

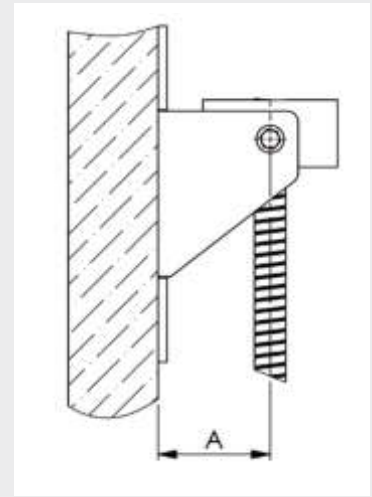
* Please specify in the enquiry/order.

WAGU® - Operating Gear Mounted on Wall Bracket

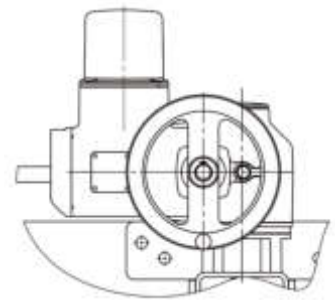
With 2 stems, 2 bevel gearboxes and central electric actuator (B80)



Details



B80



With central electric actuator

Materials

Wall bracket	Stem	Stem nut	Bevel gearbox	Connecting parts
1.4301	1.4305	Rg7	Cast iron encapsulated	A4
1.4404 / 1.4571	1.4404 / 1.4571	Rg7	Cast iron encapsulated	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.413 B80

Materials*	Dimensions*
Wall bracket:	T: mm ¹⁾
Stem:	A: mm
Stem nut:	AS: mm
Connecting parts:	E: mm
Bevel gearbox:	F: mm

1) Dimension from penstock invert to centre of operating gear.

2) For the corresponding design only.

* Please specify in the enquiry/order.

WAGU®-Central Headstock S

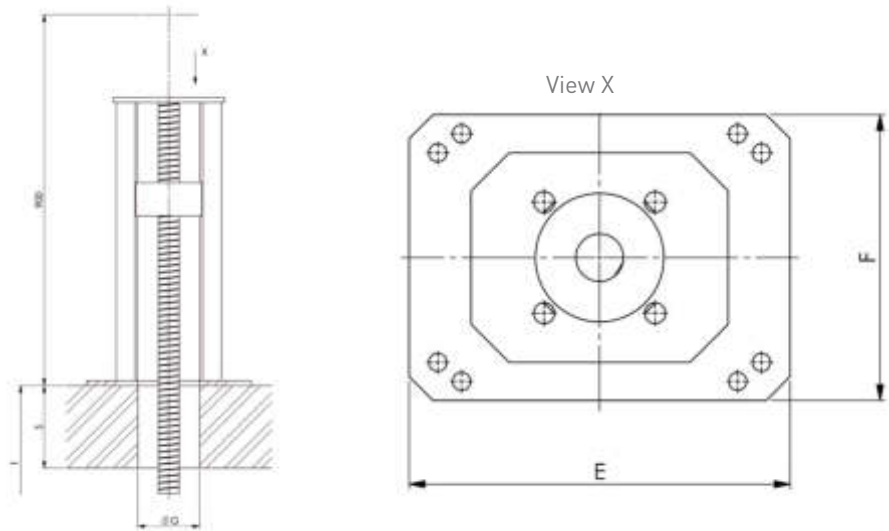
With stem, bevel gearbox and crank handle (B03)

Details

B03



With bevel gearbox and frontal crank handle



Materials

Head-stock	Stem	Stem nut	Bevel gearbox	Handwheel / crank	Connecting parts
1.4301	1.4305	Rg7	Cast iron encapsulated	Steel / Al / 1.4301	A4
1.4404 / 1.4571	1.4404 / 1.4571	Rg7	Cast iron encapsulated	Steel / Al / 1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.610 B03

Materials*	Dimensions*
Headstock:	T: mm ¹⁾
Stem:	S: mm
Stem nut:	E: mm
Connecting parts:	F: mm
Bevel gearbox: ²⁾	Dia. G: mm
Handwheel: ²⁾	
Crank handle: ²⁾	

1) Dimension from penstock invert to upper edge of the structure.

2) For the corresponding design only.

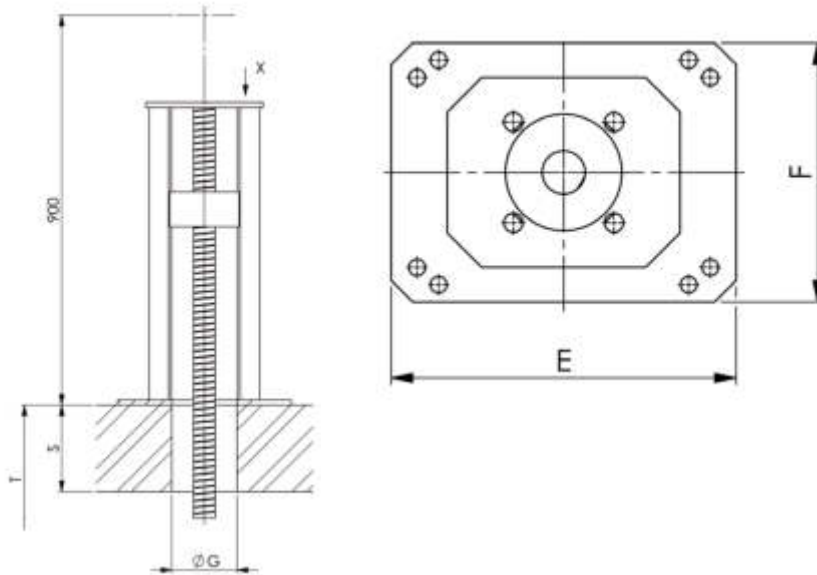
* Please specify in the enquiry/order.

WAGU® - Central Headstock S

With stem and electric actuator (B40)

With stem, bevel gearbox and electric actuator (B41)

With stem, spur gearbox and electric actuator (B42)



Materials

Headstock	Stem	Stem nut	Connecting parts
1.4301	1.4305	Rg7	A4
1.4404 / 1.4571	1.4404 / 1.4571	Rg7	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.611 B40 / 22.611 B41 / 22.611 B42

Materials*	Dimensions*
Headstock:	T: mm ¹⁾
Stem:	S: mm
Stem nut:	E: mm
Connecting parts:	F: mm
Bevel gearbox: ²⁾	Dia. G: mm
Spur gearbox: ²⁾	

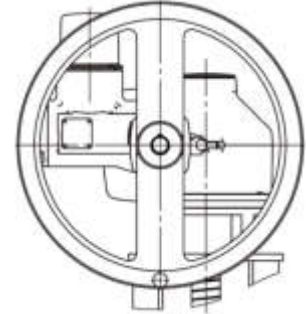
1) Measured from invert penstock to top edge structure.

2) For the corresponding design only.

* Please specify in the enquiry/order.

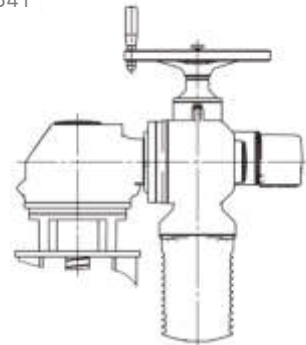
Details

B40



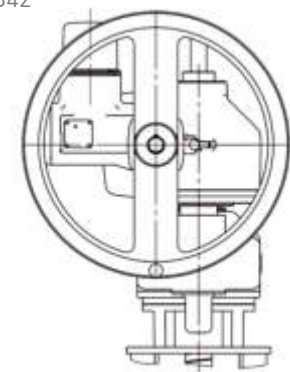
With electric actuator

B41



With bevel gearbox
and electric actuator

B42



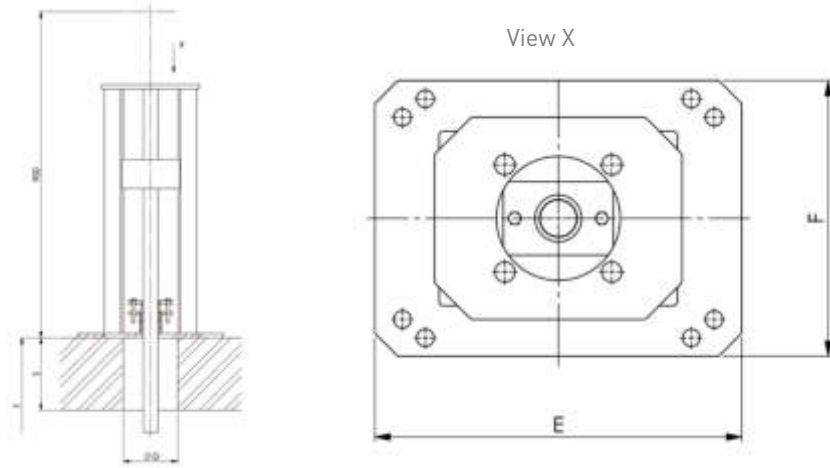
With spur gearbox
and electric actuator

Details

B03



With bevel gearbox and frontal crank handle



Materials

Head-stock	Stem	Stem nut	Bevel gearbox	Handwheel / crank	Connecting parts
1.4301	1.4305	Rg7	Cast iron encapsulated	Steel / Al / 1.4301	A4
1.4404 / 1.4571	1.4404 / 1.4571	Rg7	Cast iron encapsulated	Steel / Al / 1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.615 B03

Materials*	Dimensions*
Headstock:	T: mm ¹⁾
Stem:	S: mm
Stem nut:	E: mm
Connecting parts:	F: mm
Bevel gearbox: ²⁾	Dia. G: mm
Handwheel: ²⁾	
Crank handle: ²⁾	

1) Dimension from penstock invert to upper edge of the structure.

2) For the corresponding design only.

* Please specify in the enquiry/order.

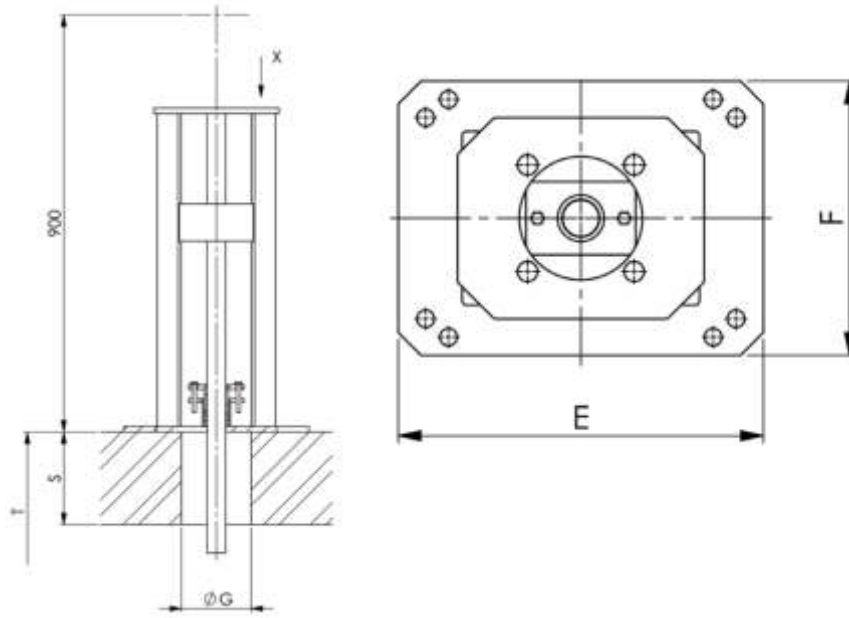
WAGU® - Central Headstock S

With pressure-tight ceiling duct

With stem and electric actuator (B40)

With stem, bevel gearbox and electric actuator (B41)

With stem, spur gearbox and electric actuator (B42)



Materials

Headstock	Stem	Stem nut	Connecting parts
1.4301	1.4305	Rg7	A4
1.4404 / 1.4571	1.4404 / 1.4571	Rg7	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.616 B40 / 22.616 B41 / 22.616 B42

Materials*	Dimensions*
Headstock:	T: mm ¹⁾
Stem:	S: mm
Stem nut:	E: mm
Connecting parts:	F: mm
Bevel gearbox: ²⁾	Dia. G: mm
Spur gearbox: ²⁾	

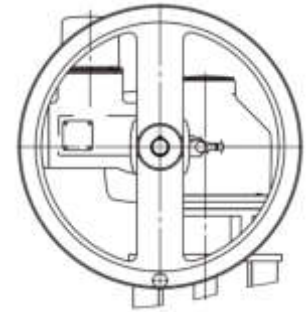
1) Measured from invert penstock to top edge structure.

2) For the corresponding design only.

* Please specify in the enquiry/order.

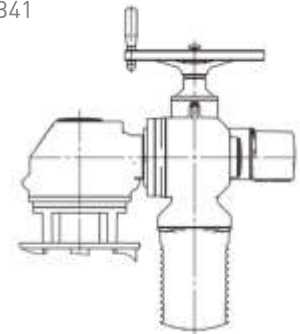
Details

B40



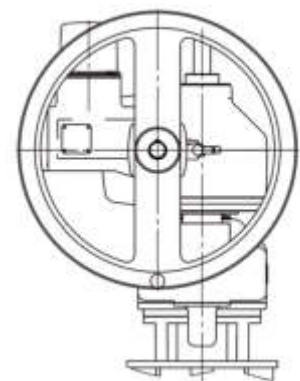
With electric actuator

B41



With bevel gearbox
and electric actuator

B42



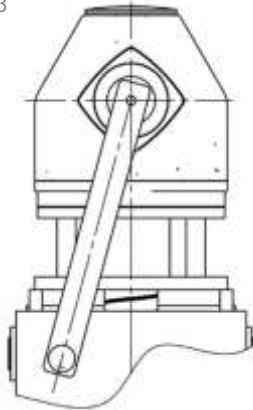
With spur gearbox
and electric actuator

WAGU®-Protruding Headstock S

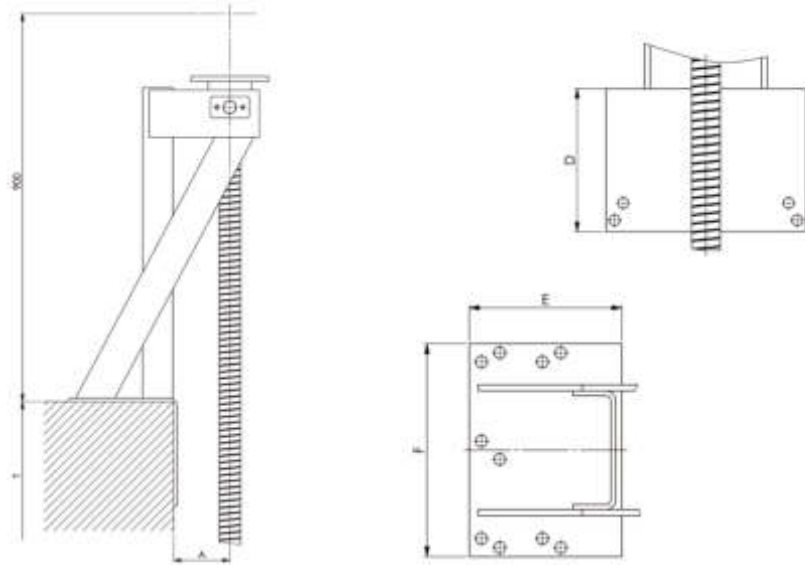
With stem, bevel gearbox and crank handle (B03)

Details

B03



With bevel gearbox and frontal crank handle



Materials

Head-stock	Stem	Stem nut	Bevel gearbox	Handwheel / crank	Connecting parts
1.4301	1.4305	Rg7	Cast iron encapsulated	Steel / Al / 1.4301	A4
1.4404 / 1.4571	1.4404 / 1.4571	Rg7	Cast iron encapsulated	Steel / Al / 1.4404 / 1.4571	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.710 B03

Materials*	Dimensions*
Headstock:	T: mm ¹⁾
Stem:	A: mm
Stem nut:	E: mm
Connecting parts:	F: mm
Bevel gearbox:	D: mm ²⁾
Handwheel:	²⁾
Crank handle:	²⁾

1) Measured from invert penstock to top edge structure.

2) For the corresponding design only.

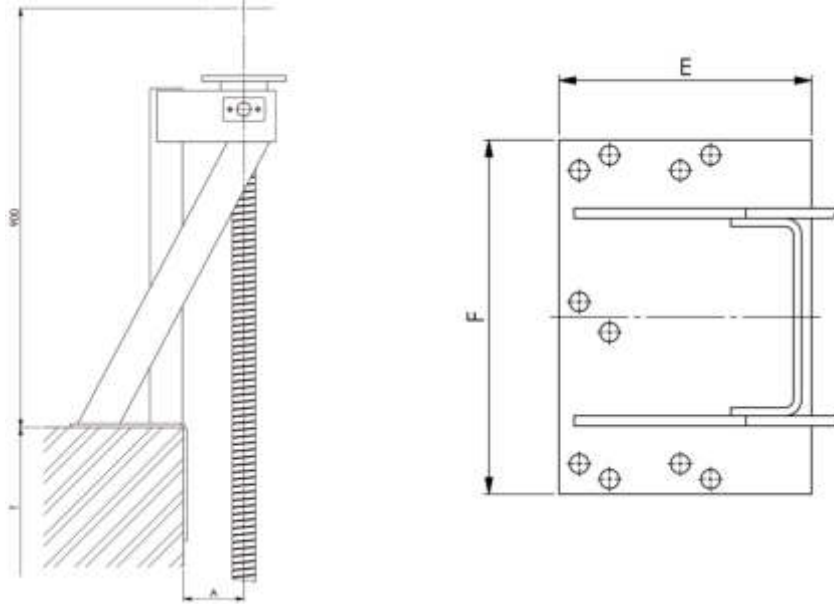
* Please specify in the enquiry/order.

WAGU®-Protruding Headstock S

With stem and electric actuator (B40)

With stem, bevel gearbox and electric actuator (B41)

With stem, spur gearbox and electric actuator (B42)



Materials

Headstock	Stem	Stem nut	Connecting parts
1.4301	1.4305	Rg7	A4
1.4404 / 1.4571	1.4404 / 1.4571	Rg7	A4

Other materials or combinations available on request.

Order text

Cat.-sheet 22.711 B40 / 22.711 B41 / 22.711 B42

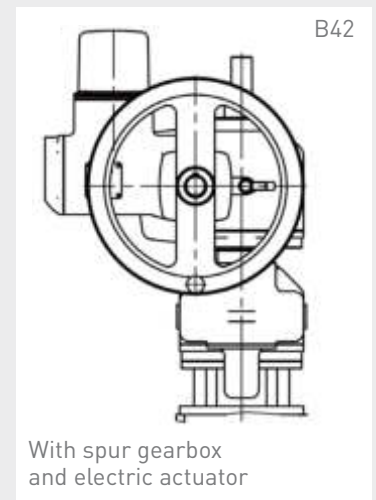
Materials*	Dimensions*
Headstock:	T: mm ¹⁾
Stem:	A: mm
Stem nut:	E: mm
Connecting parts:	F: mm
Bevel gearbox:	D: mm ²⁾
Spur gearbox:	²⁾

1) Dimension from penstock invert to upper edge of the structure.

2) For the corresponding design only.

* Please specify in the enquiry/order.

Details



Details

B50



Pneumatic cylinder

B51

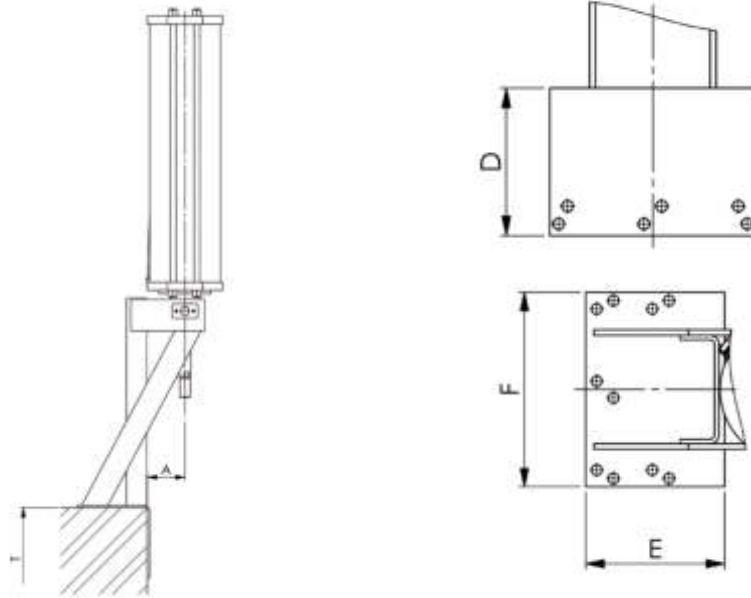


With hydraulic cylinder

WAGU®-Protruding Headstock S

With pneumatic cylinder (B50)

With hydraulic cylinder (B51)



Materials

Headstock	Pneumatic-cylinder	Hydraulic-cylinder	Piston rod	Connecting parts
1.4301	Alu	Steel / coated	Steel / hard-chromium plated	A4
1.4404 / 1.4571	Alu	Steel / coated	Steel / hard-chromium plated	A4

Other materials or combinations available on request.

Order text

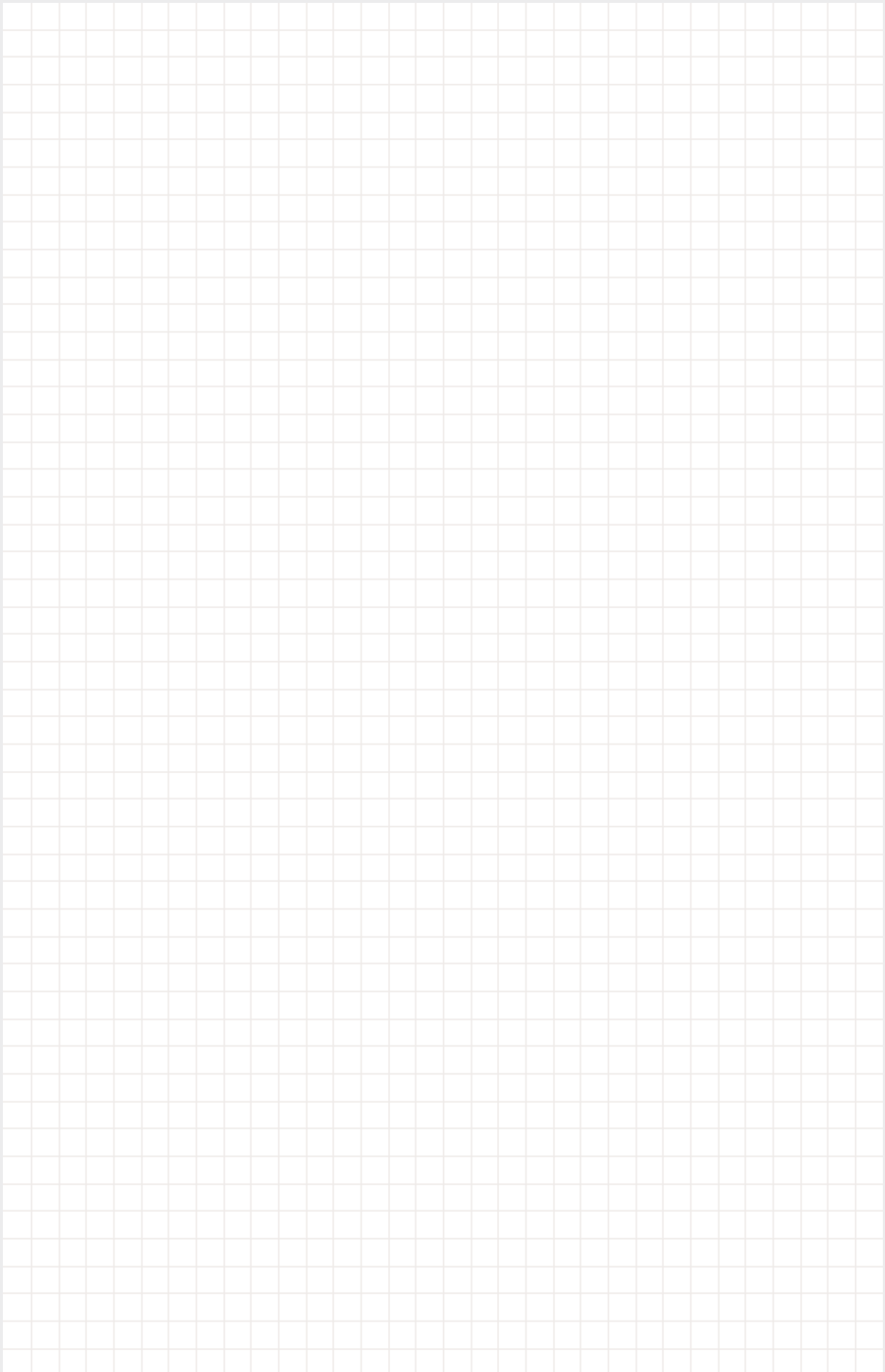
Cat.-sheet 22.712 B50 / 22.712 B51

Materials*	Dimensions*
Headstock:	T: mm ¹⁾
Cylinder:	A: mm
Piston rod:	D: mm
Connecting parts:	E: mm
	F: mm
	Cyl. dia.: mm

1) Measured from invert penstock to top edge structure.

* Please specify in the enquiry/order.

NOTES





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