

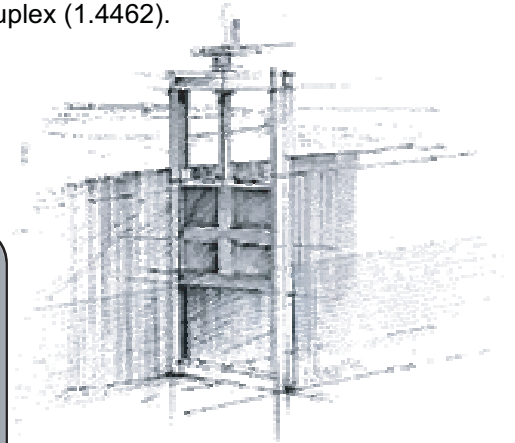
Planning and realising of penstocks

Being a local company with active international partners, we supplied many satisfied customers with our products and services around the globe. Due to our employees long-term expertise in the construction and realization of Penstocks, Weirs, Flaps or valves of any kind, we are in the position to provide you with the right solution for nearly every installation situation or problems in your facilities.

To continually guarantee interference free processes of the installations of our products, we pay particular attention to a robust design of our products according to German standard DIN 19569-4 or BS 7775 : 1995.

Penstocks are field-approved for isolating and controlling of open channels, pits, reservoirs and pipelines. SVM penstocks are used also for flow control, for keeping the sewage level, for flow throttling, for distribution of channel flow and for preventing reflux of the medium.

By means of a specially selected variety of types and by using different materials, a large choice of penstocks is available for virtually any sewage engineering requirement. They can be delivered in sizes from DN 150 to ca. DN 4000 even in rectangular or square shape. The material range includes hot dipped galvanized steel, aluminium alloy, stainless steel 304 (1.4301, 316 (1.4571) and duplex (1.4462).



Penstocks

Summery

- ▶ Handstop 4
- ▶ Channel Penstocks, small type 5
- ▶ Channel Penstock, large type 6
- ▶ Weir Penstocks (3 facings) 7
- ▶ Square penstocks with slide 8
- ▶ Square Penstocks with slide rails 9
- ▶ Circular Penstocks, welding-type seating 10
- ▶ Weir Penstocks (4 facigs) 11
- ▶ Regulating Penstock 12
- ▶ Flap valve 13

Actuators

- ▶ Manual Lifting rod 14
- ▶ Wall bracket with sqaure cap 14
- ▶ Wall bracket with gear 15
- ▶ Wall bracket with electric actuator 15
- ▶ Wall bracket with wall duct 15
- ▶ Wall bracket with hydraulic or pneumatic actuato 15
- ▶ Ceilling-mounted operator 16
- ▶ Protruding headstock 16
- ▶ Central headstock 17
- ▶ Cross bracket on wall pillar / Operator support 17

Handstop

Channel Penstock

small type



Construction features

Welded U-shape frame of C-profile with inserted profile seal and flush invert. Door with fitting handle from B = 800 mm with reinforcing ribs.

Materials

Frame	Door	Sealing
SS 304	AlMg3	NBR
SS 304	SS 304	NBR
SS 316	SS 316	NBR

Other materials or various combination are possible

Aperture

- > Square
- > Rectangulare

Type of invert

- > Straight
- > Round

Facing

- > 3 side facing
- > For seating and off-seating pressure

Type of fixing

- > Grouting
- > Wall bolting

Dimensions w x h

- > 200 x 200 up to 1000 x 1000

Type of operation

- > Lifting handle

Type of application

Installation in open channel or mounting to channel outlet with widths up to 1000 mm and door heights up to 1000 mm. This door size should not be exceeded because of the required pull

Construction features

Welded U-shape frame of C-profile with inserted profile seal, and flush invert. Smooth door, from B = 800 mm with reinforcing ribs. Operating device consisting of welded bearing bracket with fixed bearing bracket with fixed stem and stem nut attached to the door

Materials

Frame	Door	Sealing
SS 304	AlMg3	NBR
SS 304	SS 304	NBR
SS 316	SS 316	NBR

Other materials or various combination are possible

Aperture

- > Square
- > Rectangulare

Type of invert

- > Straight
- > Round

Facing

- > 3 side facing
- > For seating and off-seating pressure

Type of fixing

- > Grouting
- > Wall bolting

Dimensions w x h

- > 200 x 200 up to 1200 x 1200

Type of operation

- > Manual
- > Electric actuator
- > Hydraulic or pneumatic operator

Type of application

Installation in open channel or mounting to channel outlet with widths up to 1000 mm and door heights up to 1200 mm, suitable for isolation or throttling of the flow medium.

Channel Penstock

large type

Weir Penstock



Construction features

Welded frame of U-profile with thrust bridge and bolted-on profile seal as well as enclosed flush invert seal. Door with reinforcing ribs and plastic side rails. Operator directly mounted on the thrust bridge, stem nut attached to the door.

Materials

Frame	Door	Sealing
galvanized steel	galvanized steel	NBR
SS 304	SS 304	NBR
SS 304	SS 316	NBR
SS 316	SS 316	NBR

Other materials or various combination are possible

Aperture

- > Square
- > Rectangulare

Type of invert

- > Straight
- > Round

Facing

- > 3 side facing
- > For seating and off-seating pressure

Type of fixing

- > Grouting
- > Wall bolting

Dimensions w x h

- > 1300 x 1300 up to very large sizes

Type of operation

- > Manual
- > Electric actuator
- > Hydraulic or pneumatic
- > operator

Type of application

Installation in open channel or mounting to channel out let up to very large dimen sions, suitable for installation,control or throttling of the flow medium.



Construction features

Welde frame with thrust bridge and bolted-on profile seal as well as enclosed flush invert seal, penstock door with reinforcing ribs and plastic slide rails. Operator directly mounted on the thrust bridge, stem nut attached to the extended door rod.

Materials

Frame	Door	Sealing
galvanized steel	galvanized steel	NBR
SS 304	SS 304	NBR
SS 304	SS 316	NBR
SS 316	SS 316	NBR

Other materials or various combination are possible

Aperture

- > Square
- > Rectangulare

Type of invert

- > Straight
- > Round

Facing

- > 3 side facing
- > For seating and off-seating pressure

Type of fixing

- > Grouting
- > Wall bolting

Dimensions w x h

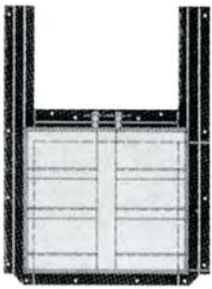
- > 400 x 400 up to very large sizes

Type of operation

- > Manual
- > Electric actuator
- > Hydraulic or pneumatic
- > operator

Type of application

Mounting to channel outlet up to very large dimensions, suitable for discharge and level control.



Construction features

Welded frame with bolted on profile seal as well as enclosed flush invert seal. Door equipped with reinforcing ribs, sliders and suspension of stem nut or push rod.

Materials

Frame	Door	Sealing
galvanized steel	galvanized steel	NBR
SS 304	SS 304	NBR
SS 304	SS 316	NBR
SS 316	SS 316	NBR

Other materials or various combination are possible

Aperture

Square
Rectangulare

Type of invert

Straight
Round

Facing

4 side facing
For seating and off-seating pressure

Type of fixing

Wall bolting with re-grouting
Grouting

Dimensions w x h

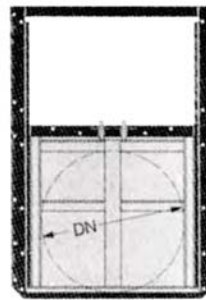
150 x 150 up to very large dimensions

Type of operation

Manual
Electric actuator
Hydraulic or pneumatic operators

Type of application

Mounting to pipe or channel outlet up to very large dimensions, suitable for isolation, control or throttling of the flow medium.



Construction features

Welded frame with bolted-on profile seal as well as enclosed flush invert seal. door with reinforcing ribes sliders and suspension for stem nut or push rod.

Materials

Frame	Door	Sealing
galvanized steel	galvanized steel	NBR
SS 304	SS 304	NBR
SS 304	SS 316	NBR
SS 316	SS 316	NBR

Other materials or various combination are possible

Aperture

Square
Rectangulare

Type of invert

Straight
Round

Facing

4 side facing
For seating and off-seating pressure

Type of fixing

Wall bolting with seal tape
Grouting up to 0,4 bar

Dimensions w x h

150 x 150 up to 1600 x 1600

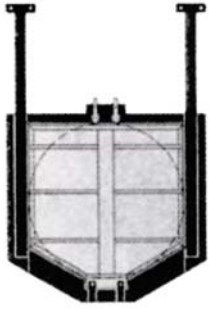
Type of operation

Manual
Electric actuator
Hydraulic or pneumatic operators

Type of application

Mounting to pipe or channel outlet up to DN 1600 or 1600 x 1600, suitable for isolation on the flow medium

Circulare Penstock welding-type seating



Construction features

Welded frame with enclosed annular seal, door with reinforcing ribs, and seatings by wedges (up to DN 600 with flat wedges, from DN 700 with rollers) with suspension for stem nut or push rod.

Materials Frame	Door	Sealing
galvanized steel	galvanized steel	NBR
SS 304	SS 304	NBR
SS 304	SS 316	NBR
SS 316	SS 316	NBR

Other materials or various combination are possible

Aperture

Circular

Type of invert

-

Facing

Circular facing

For seating and off-seating pressure

Type of fixing

Wall bolting

Grouting with spigot back

Flange mounting

Dimensions w x h

DN 150 - DN 2000

Type of operation

Manual

Electric actuator

Hydraulic or pneumatic operators

Type of application

Mounting to pipe or circular channel outlet up to very large sizes, suitable for isolation of the flow medium.

Weir Penstock 4 Facing



Construction features

Welded frame with bolted-on profile seal as well as enclosed top sealing, door with reinforced ribs, plastic slide rails and suspension for stem nut or push rod.

Materials Frame	Door	Sealing
--------------------	------	---------

galvanized steel	galvanized steel	NBR
------------------	------------------	-----

SS 304	SS 304	NBR
--------	--------	-----

SS 304	SS 316	NBR
--------	--------	-----

SS 316	SS 316	NBR
--------	--------	-----

Other materials or various combination are possible

Aperture

Square

Rectangular

Type of invert

Straight

Facing

4 facings

For seating and off-seating pressure.

Type of fixing

Wall bolting

Grouting into lateral recess.

Dimensions w x h

150 x 150 up to very large dimensions

Type of operation

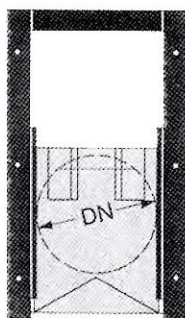
Manual

Electric actuator

Hydraulic or pneumatic operators

Type of application

Mounting to channel outlet up to very large dimensions, suitable for isolation as well as discharge or level control



Construction features

Welded frame with enclosed circular facing and guide rails, door with triangular control orifice, plastic side rails and suspension for stem nut or push rod.

Materials

Frame	Door	Sealing
-------	------	---------

galvanized steel	galvanized steel	NBR
SS 304	SS 304	NBR
SS 316	SS 316	NBR

Other materials or various combination are possible

Aperture

Circular

Type of invert

-

Facing

4 facings.

For seating and off-setting pressure

Type of fixing

Wall bolting

Dimensions w x h

DN 150 - DN 800

Type of operation

Manual

Electric actuator

Hydraulic or pneumatic operators

Type of application

Mounting to pipe-or channeloutlet for smaller sizes, suitable for accurate flow control

Construction features

Welded frame with flap bearing and flap seating off the vertical, facing inserted in frame or flap. The flaps are available in 3 designs:

a) plain flap

b) flap with lever

c) flap with lever and counterweight

Materials

Frame	Door	Sealing
-------	------	---------

galvanized steel	galvanized steel	NBR
SS 304	SS 304	NBR
SS 316	SS 316	NBR

Other materials or various combination are possible

Aperture

Square

Rectangular

Circular

Type of invert

-

Facing

For seating and off-seating pressure.

Type of fixing

Wall bolting

Grouting with spigot back

Flange mounting

Dimensions w x h

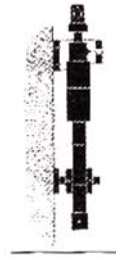
DN 80 up to very large sizes

Type of operation

Automatic

Type of application

Installation at retaining reservoirs, settling basins, etc., suitable as non return device of a free discharge or pump pressure line.



Manual lifting rod

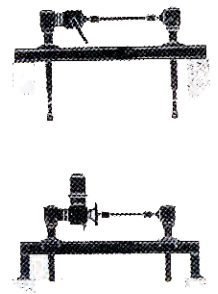
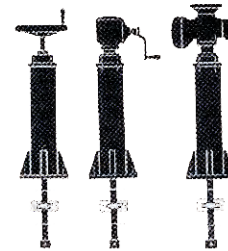
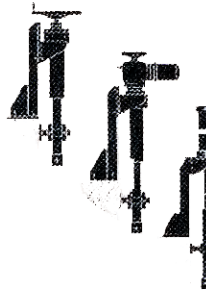
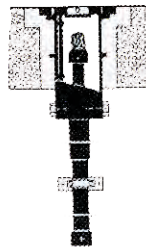
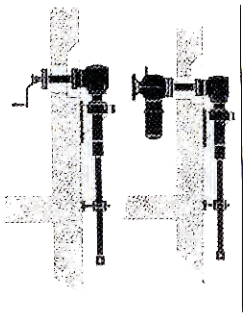
Wall bracket with square

Wall bracket with gear

Wall bracket with electric actuator

Operating equipment	Manual lifting rod	Operating key	Operating key Handwheel or crank handle	Electric actuator
Suitable for DN or w x h	150 - 400	150 - 1000	150 - 4000	150 - 4000
Type of bearing	-	Plain bearing Roller bearing	Roller bearing	Roller bearing
Gear	-	-	●	-
Electric actuator	-	-	-	●
Type of stem	-	Fixed stem	Fixed stem or lifting stem	Fixed stem or lifting stem
Stem bearing	-	●	●	●
Ceiling duct	-	●	●	●

> available type



Wall bracket with wall duct

Wall bracket with hydraulic or pneumatic operator

Ceiling-mounted operator

Protruding headstocks

Central headstock

Cross bracket on wall support bridge operator support

Electric actuator
Handwheel or crank handle

Hydraulic or pneumatic operator

Operating by T-key

Handwheel, gear with handwheel or crank
Electric actuator
Pneumatic or hydraulic actuator

Handwheel, gear with handwheel or crank
Electric actuator

Gear with handwheel or crank
Electric actuator

150 - 4000

150 - 3000 for hydraulic
150 - 2000 for pneumatic

150 - 2000

150 - 4000

150 - 4000

1800 up to very large size

Roller bearing

-

Plain bearing
Roller bearing

Plain bearing
Roller bearing

Plain bearing
Roller bearing

Roller bearing



Fixed stem or lifting stem

Piston rod

Fixed stem

Fixed stem or lifting stem
Piston rod

Fixed stem or lifting stem

Fixed stem or lifting stem

