



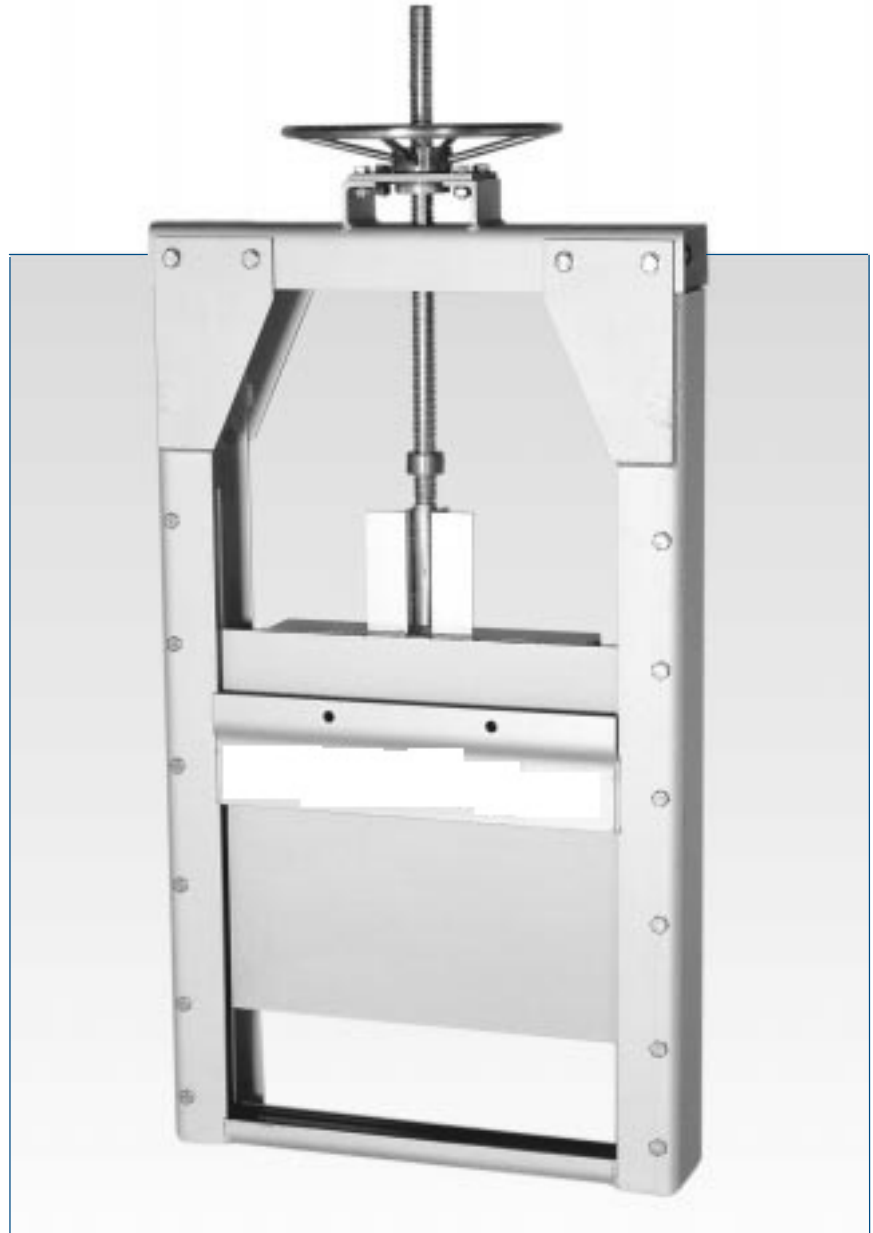
Engineered Penstocks fabricated from either 316 stainless steel or marine grade aluminium

FLOW CONTROL

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Features

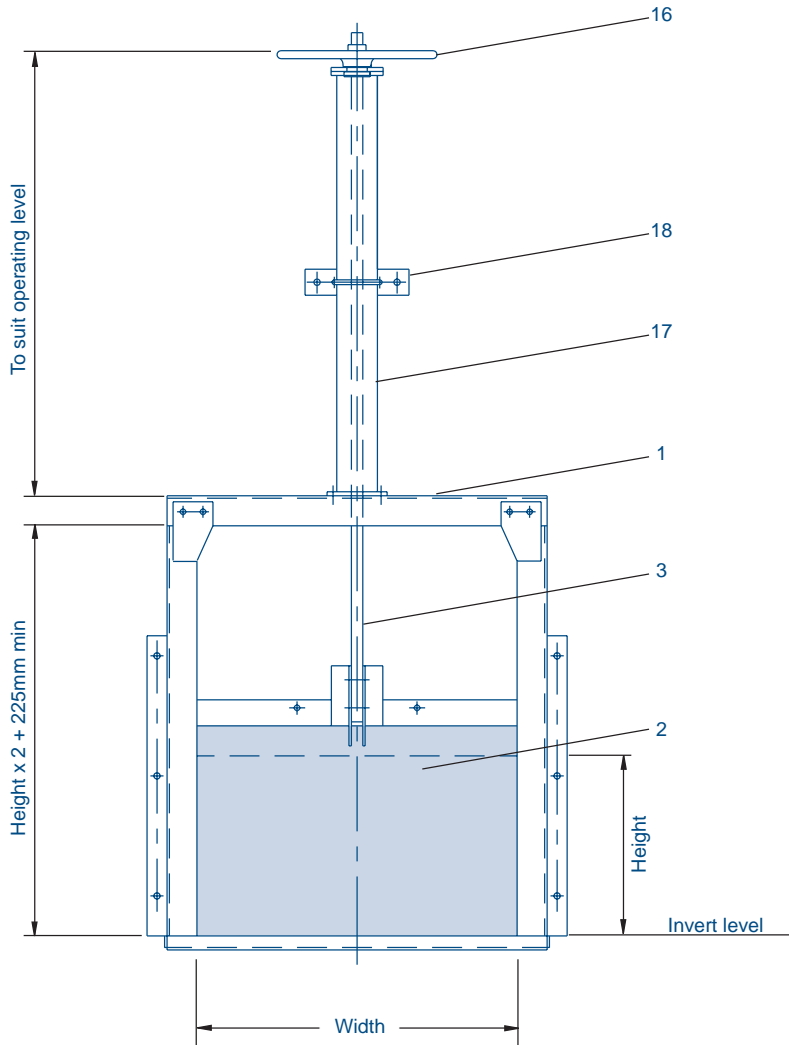
- Engineered for site specific conditions and incorporating componentry that enables fast and effective assembly, easy replacement and availability of all parts.
- Gates are available in either a solid or composite construction presenting a clean, flat surface to the media which is ideal for dirty and hostile environments and eliminates cavities which are a potential source of crevice corrosion.
- Seals are EPDM with Polystone as a bearing material which reduces the co-efficient of friction thus reducing operating torque.
- Easy seal replacement.
- Design suitable for both on/off seating.
- Design concept suitable for all heads and sizes.
- Easy to follow Enquiry Sheet.



General Applications

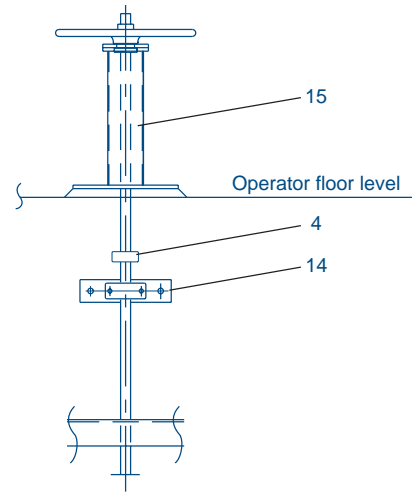
These penstocks are designed specifically for use in water, sewage, stormwater, drainage, water level and spillway control applications.

Penstocks - Figure 980



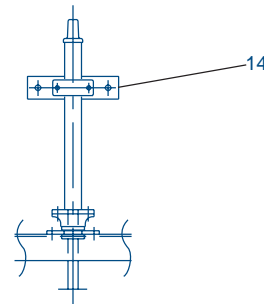
Note: Column mounted spindle illustrated

Pedestal Mounting



Note: Rising spindle

Spindle Cap Actuation

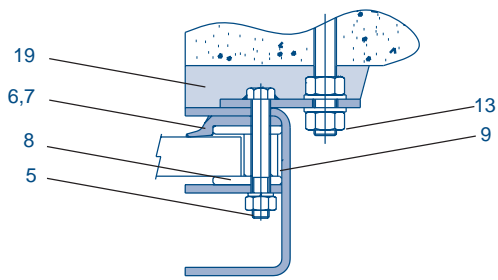


Note: Non-rising spindle

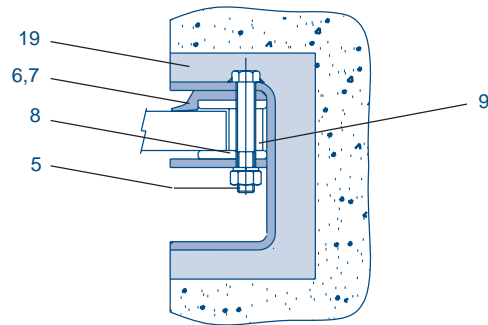
Parts List

No	Description	Material
1	Frame	316 S/S, Aluminium 5083
2	Gate	316 S/S, Aluminium 5083
3	Stem	316 S/S
4	Limit Nut	Gunmetal
5	Assembly Hardware	316 S/S
6	Gate Seal	EPDM
7	Seal Retaining Plate	Polystone 7000
8	Gate Guide (face)	Polystone 7000
9	Gate Guide (side)	Polystone 500
10	Top Seal Retaining Plate	Polystone 7000
11	Seal Cover Plate	316 S/S aluminium 5083
12	Bottom Seal	Polyurethane
13	Anchor Bolts	316 S/S
14	Stem Guide	Polypropylene
15	Pedestal	316 S/S, Galvanised
16	Handwheel	S.G.Iron, 316 S/S
17	Column	316 S/S, Aluminium 5083
18	Column Support	Polypropylene
19	Grout	Non Shrink Grout

Side Frame Details

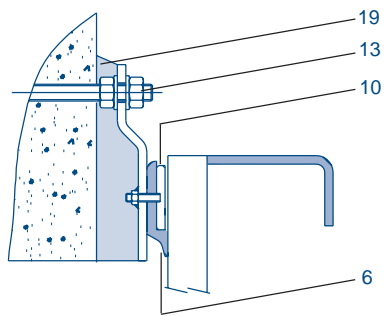


Wall Mounted



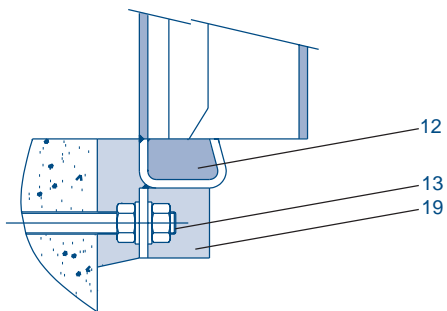
Embedded (Channel Mount)

Top Seal Details

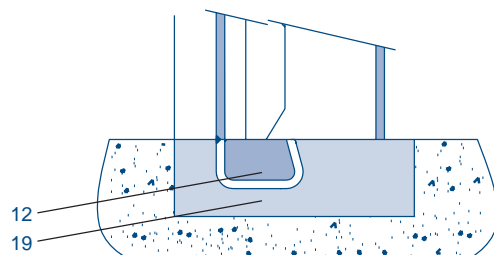


Note:
Gate stiffener required for off seating heads only.

Invert Details



Wall Mounted - Flush



Embedded - Flush

Penstocks - Figure 980

Penstock enquiry sheet

Customer Contact Details:

Organisation:
Name:
Phone:
Fax:
Project:

Material:

316 stainless steel Marine grade Aluminium

Note: The aluminium options have size and pressure limitations.

Media

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Opening size:

.....mm wide xmm high

Head at invert:

On-seating m Off-seatingm

Note:
1m head = 10kPa

Invert to operating floor level:

.....m

Mounting:

Side Frames

Wall Mounted
 Channel Mount

Invert

Embedded
 Wall Mounted

Actuation/Lift

Direct on frame
 Pedestalmm

Stem:

Rising Non-rising

Method of Actuation:

Handwheel T-Key Manual Gearbox Electric actuator Pneumatic actuator
 Other, Specify below

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Glossary of terms

Actuator – electric, pneumatic, oil hydraulic, water hydraulic.

Embedded – frame is recessed into either the wall or floor.

Invert – bottom part of the frame.

Lift – manual action handwheel, geared operator.

Off seating – water pressure pushes penstock off the wall.

On seating – water pressure pushes penstock onto the wall.

Operating Floor Level – floor level at the operator's feet.

Pedestal – for mounting of actuator where thrust is not taken by penstock.

Self contained – the penstock is shipped to site with a complete frame and does not require assembly.

Stem or spindle – Gate lifting device.

Rising: the stem rises through the lift or actuator and is bolted to the door.

Non-rising: the stem is fixed to the lift or actuator nut and turns relative to the door.

Stem guide – ensures that the stem is supported at adequate intervals to prevent buckling.

(usually $L/r < 200$ where L = effective length, r = $1/4$ dia.)

Top seal – is required for submerged applications.

Wall mounted – penstock is bolted to the wall with 316S/S threaded rod and chemical anchors complete with backing nuts.

The gap between the wall and penstock filled with non-shrink grout.

Polystone – trade name for Ultra High Molecular Weight Polyethylene.