4. Product Information

The term Penstock that was widely known as a sluice or gate, slide gate, or intake structure that controls water flow, in a pipe or open channel structure in water and sewage systems.

This can be confusing as these terminologies can be used for other valve designs as well many other variations and designs. The most important thing is to understand the application, the benefits, and the limitations of a valve design.

ATEC produces multiple designs depending on the size, application, operation and pressure rating. Below are the five standard designs.

ECOTEC Penstock

- 3 or 4 sided sealing
- Channel or Weir type
- Wall mounted, Recessed
- Sizes up to DN300
- Non-Rising or rising Spindle
- 4m working pressure

CompaTEC Penstock

- 3 or 4 sided sealing
- Channel or Weir type
- Wall mounted Recessed
- Sizes up to DN1200
- Non-Rising or rising Spindle
- 6m working pressure

UniTEC Penstock

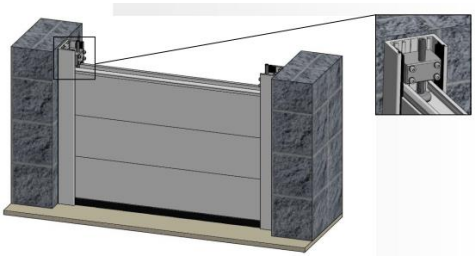
- 3 or 4 sided sealing
- Channel or Weir type
- Wall mounted, Recessed
- Sizes up to DN2000
- Non-Rising or rising Spindle
- 6m working pressure

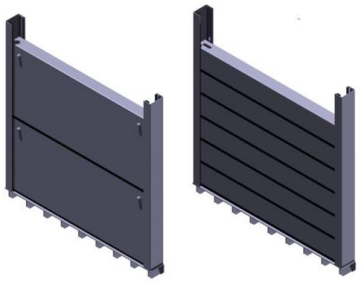
MultiTEC Penstock

- 3 or 4 sided sealing
- Channel or Weir type
- Wall mounted / Recessed
- Sizes up to DN Unlimited
- Non-Rising or rising Spindle
- 30m working pressure

Stop Logs

- Various materials are available
- Easy to maintain design
- Low Wear stop log guides
- Design Specific



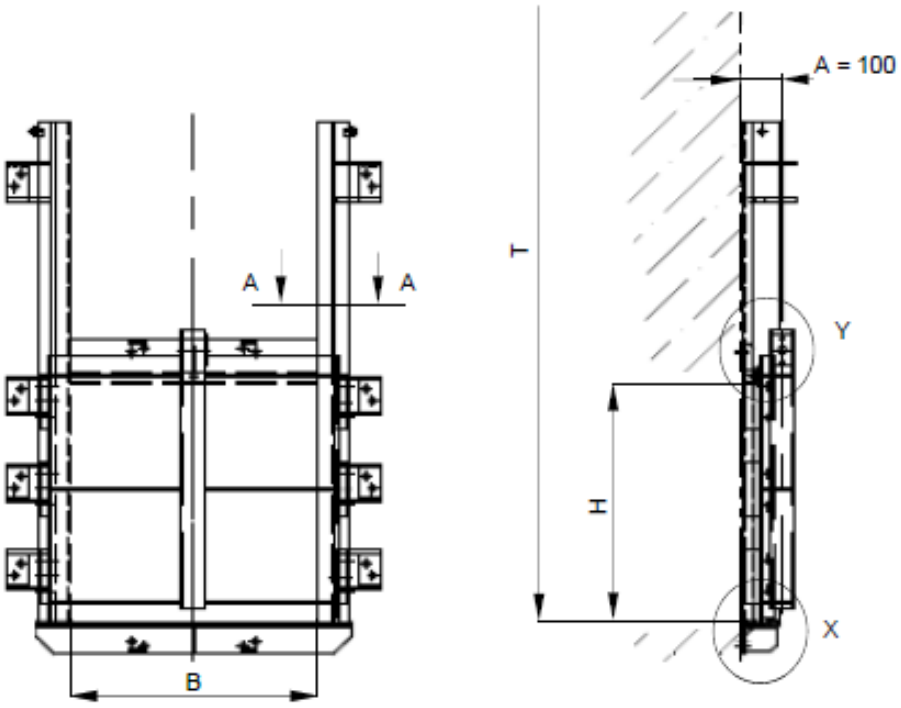


4.1 Product Components

Example Penstock

ATEC PENSTOCK MULTITEC 03.50.10.10

ATEC PENSTOCK MULTITEC for anchor bolting with straight sill for anchor bolting up to the largest dimensions



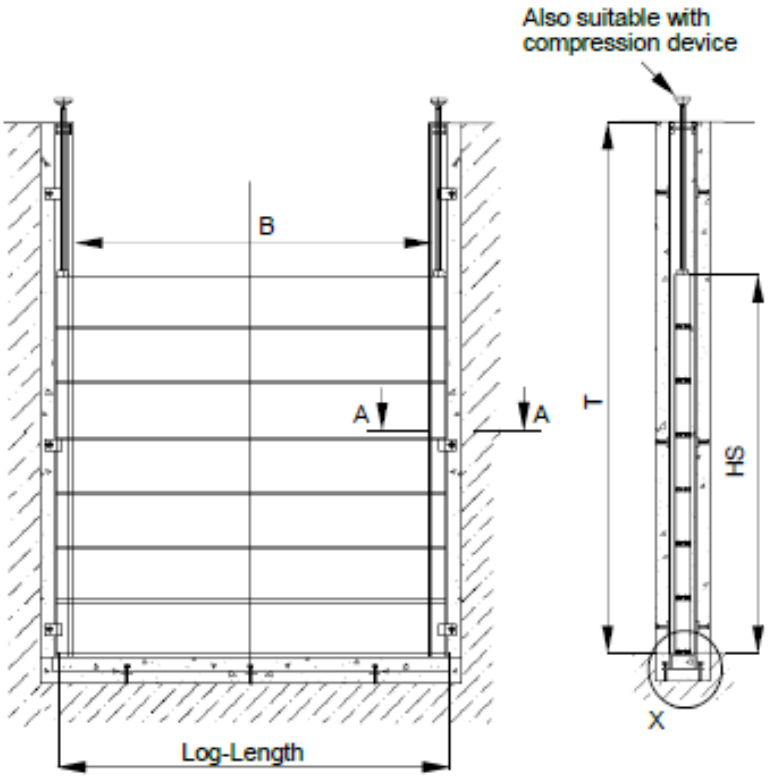
Materials

Frame**	Door**	Seal**	Slide skids**	Stem**	Connection Parts**
SS 316	SS 316	EPDM	UHM WPE	SS 316	SS31 6

Example – Stoplog

ATEC STOPLOG DBTEC 05.10.10.20

ATEC STOPLOG DBTEC with frame for grouting



Materials

Frame**	Log**	Seal**	Slide skid**	Lifting rod**	Connection parts**
SS 316	Aluminum / SS316	EPDM	UHM WPE	SS 316	SS316

4.2 Key Advantages

The key advantages of ATEC Penstocks and Stoplogs are:

- Unique sealing design the provides sealing on all faces through the complete travel.
- Low wear guide system
- Easy to maintain seals are replaceable in situ without the need to remove the body or gate.
- Complete bespoke manufacturing allowing for alternative shapes, materials, and sizes
- Non rising stems available to alleviate any pinch points and improving safety
- Versatile Installation options with adjustable wall mounting brackets
- 100% European materials and manufacturing
- Class A sealing which means 100% drip tight for ‘resilient seated’
- Welded SS seat directly to the body
- 1-year warranty and 50-year design life
- Factory test facility up to 2800mm

4.3 Testing performed for each valve

- Standard Test Process for every single valve at ATEC
- Incoming Control Process for materials
- Dimension Check
- Sealing Test (embedded within Manufacturer’s Acceptance Test in Appendix D,)
- Chemical and mechanical properties control with certificates that are given by the supplier (Certificate 3.1, refer to Appendix E)
- Penetration Test: It is one off non-destructive test that can detect surface-breaking, defects such as hairline cracks, surface porosity, leaks in product and fatigue cracks. It can detect invisible defects to visible defect by using liquid dye. (Appendix E)
- Hydrostatic Test (Appendix E)
- Final quality control process (Appendix E)

4.4 Test Certificates

a) Welding Certificate to EN1090 certificate 1090-2.00034.GSIMue.2016.003 (Appendix B)

b) Certificate for Conformity of the Factory Production Control certificate no. 2451-CPR-EN1090-2014.1876.004 (Appendix C)

c) Manufacturer Acceptance Test and sample of Certificate of Origin (Appendix D)

d) Statement of Compliance to AS 4024 Safety and risk (Appendix F)

e) ATEC Welding Report (Appendix G)