FLOOD DEFENCE PENSTOCK

PRODUCT FEATURES

- ✓ Minimum 6MwC pressure rating as standard
- ✓ Operable against full head of water
- ✓ Quality materials
- ✓ Long service life
- ✓ Compact, adaptable design
- ✓ Minimal maintenance
- ✓ Fast, straightforward installation
- ✓ Reduced environmental impact

Built for reliability. Designed for every project.

PRODUCT INFORMATION

Engineered for Performance. Built to Last.

The AQUIKO Flood Defence Penstock is precision-engineered and manufactured in the UK using high-grade Stainless Steel 316 and robust HDPE. Designed for a service life of up to 50 years*, this penstock delivers dependable, long-term performance in demanding flood control applications.

Key Features

Durable Hybrid Construction

- Manufactured from a combination of HDPE and marine-grade Stainless Steel 316, providing exceptional resistance to corrosion, wear, and harsh operating environments.

Compact, High-Strength Design

- A slim, space-efficient frame enables installation in tight or restricted locations. Despite its compact profile, the design delivers excellent strength and is rated for a minimum of 6MwC pressure as standard.

Full-Head Operation

- Engineered to be safely and effectively operated against its full head of water, ensuring reliable performance in critical flood defence scenarios.

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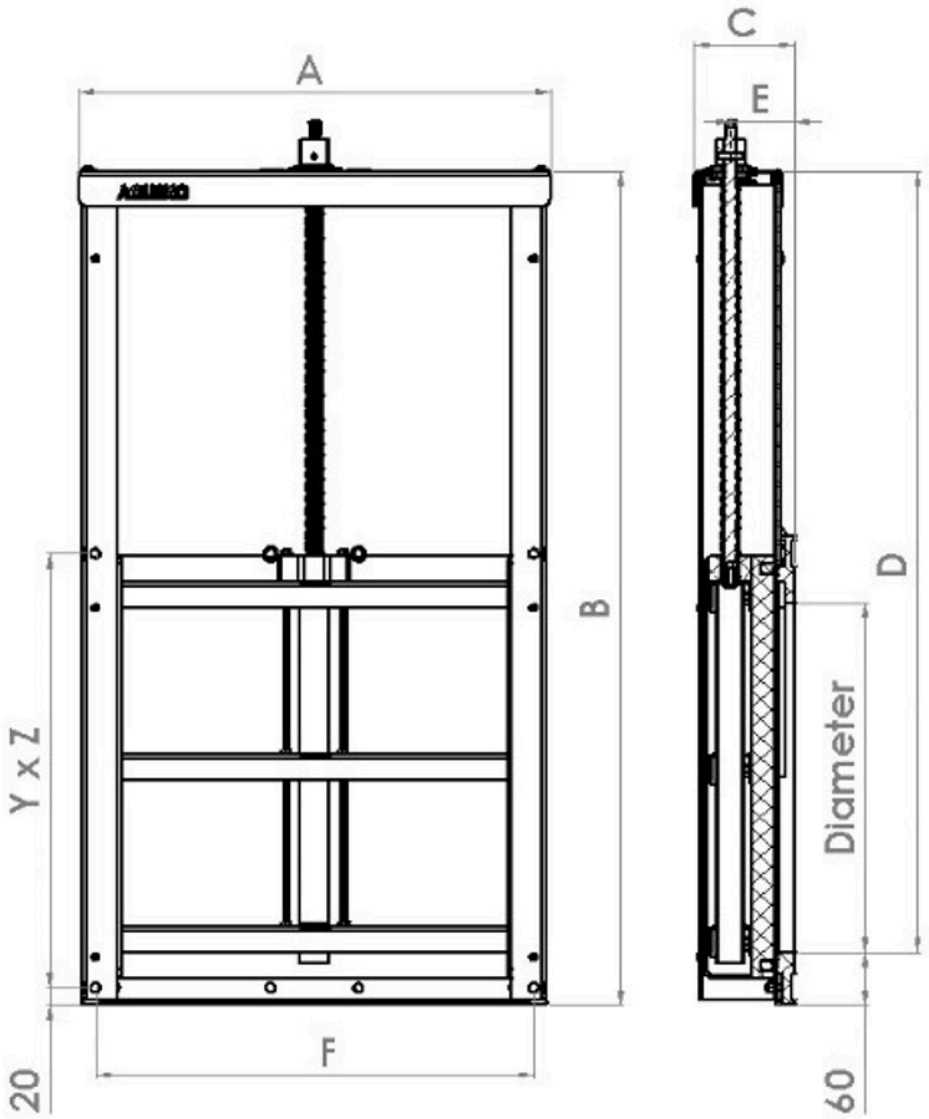

Diameter	A	B	C	D	E	F	G	Y	Z	Turns	Torque (Nm.)			Weight (KG.)
											Up	Down	Max.	
100	238	355	115	295	73	200	14	1	197	33	1	1	30	9
150	288	455	115	395	73	250	14	1	247	45	2	2	30	12
200	338	555	115	495	73	300	14	1	297	57	3	3	30	15
250	388	655	115	595	73	350	14	1	347	70	4	4	30	19
300	438	755	115	695	73	400	14	1	397	82	6	5	30	22
400	538	955	115	895	73	500	14	1	497	107	9	8	30	29
500	638	1156	118	1096	74	600	15	2	299	133	13	12	30	43
600	738	1356	118	1296	74	700	15	2	349	158	18	17	30	52
700	840	1641	143	1581	87	802	15	3	255	121	37	34	105	91
800	962	1843	146.25	1783	88	904	16	4	224	138	48	44	105	130
900	1110	2051	151	1991	93	1012	16	5	200	155	60	54	105	168
1000	1212	2301	179	2241	106	1114	17	5	222	147	87	76	210	266
1100	1312	2501	179	2441	106	1214	17	6	202	162	105	91	210	305
1200	1412	2701	179	2641	106	1314	17	7	187	176	124	108	210	346
1300	1512	2901	179	2841	106	1414	17	8	176	190	145	126	210	390
1400	1612	3101	179	3041	106	1514	17	8	189	204	167	146	210	423
1500	1712	3301	179	3241	106	1614	17	8	201	219	191	167	210	471

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Ancillaries

AQUIKO offers a full range of ancillaries to ensure you have everything you need for your project.

Handwheel

T-Key

S-Crank

Pedestal

Pedestal

Actuator

Ease Operation with the Torque Booster

The Torque Booster is a 7:1 planetary gearbox, reducing the torque on the spindle seven fold. It allows our full range of penstocks to be operated by either a brushless battery drill, the very smallest actuator or even by hand against the penstock full head of water. For Installation the Torque Booster is either fitted into one of the AQUIKO pedestals or mounted using a specially designed wall bracket.

Operation & Maintenance

Operation

NOTE: Do not over-tighten or force the manual winder- if resistance higher than the typical resistance required to operate the penstock is encountered, this indicates an obstruction or blockage, and to increase the force on the winder may damage the equipment.
The penstock is to be turned clockwise to close (lower) it and anticlockwise to open (raise) it, using a T Key, via the spindle extension if used.

Cleaning and Maintenance

The APS-PE is designed to require minimal maintenance, so no greasing is required. Grease can attract dirt and reduce the lifespan of the equipment. It is therefore initially advised to operate the APS-PE penstock annually to fully open and closed cycle.
NB: Each application requires site specific assessment relating to frequency of maintenance
The APS-PE 100-1500 range, requires occasional visual inspection only, to check for damage, obstruction etc. In certain environments, it may also require cleaning to prevent build up that could cause obstruction.

To clean the equipment, use clean water and a stiff brush.
Cleaning and Maintenance is not included in the purchase.

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Installation Guide

The below set of guidelines should be followed in the manner it is written.

Clean and check the mounting surface:

a. For sealing, this should be within a 2-3mm tolerance per metre and any pockets or lumps needs to be resolved, prior to installation
b. The surface should be vertical
c. Clean and, where possible, dry the surface to remove dirt and grease
d. Check all dimensions to ensure correct fit, prior to installation.

Prepare the APS for Installation:

a. Position the APS in place over the outfall, with the inverts of the outfall and APS backplate aligned
b. Ensure the APS is level and vertical and secure to prevent movement
c. Mark the mounting holes on the wall
d. Drill all fixing holes on the wall.
e. Clean out holes to remove dust and moisture.
f. Install plugs into the holes above and below the pipe/opening.
g. Clean the surface of the APS back plate to remove dirt, grease and water
h. Apply sealant in a continuous 5mm bead around the opening and around the fixing holes (take care not to smear this when moving the APS into position)
Note: When attaching to the wall, we recommend starting with the top corner fixings, and installing these bolts.
i. Re-position the APS as before, and install the top corner anchors as per the resin manufacturer's instruction (enclosed with fixing kit)
j. Continue to install the remaining side frame anchors in the wall
k. To ensure a good seal, check that no resin has exited the fixing hole; remove any resin that would prevent the frame sitting flat to the wall- there is a countersink on the back of the frame to help reduce this, however large amounts will cause leakage.
l. Once cured, secure the APS to the wall using a washer, spring washer and nut on each bolt
m. Screw the countersunk screws into the holes above and below the opening, ensuring these are flush with the back-frame. NOTE: If these are proud, or significantly recessed, this can damage the seal.
n. Tighten all fixings evenly, to the recommended torque.
o. Check operation.