AQUIKO

Water Flow Control

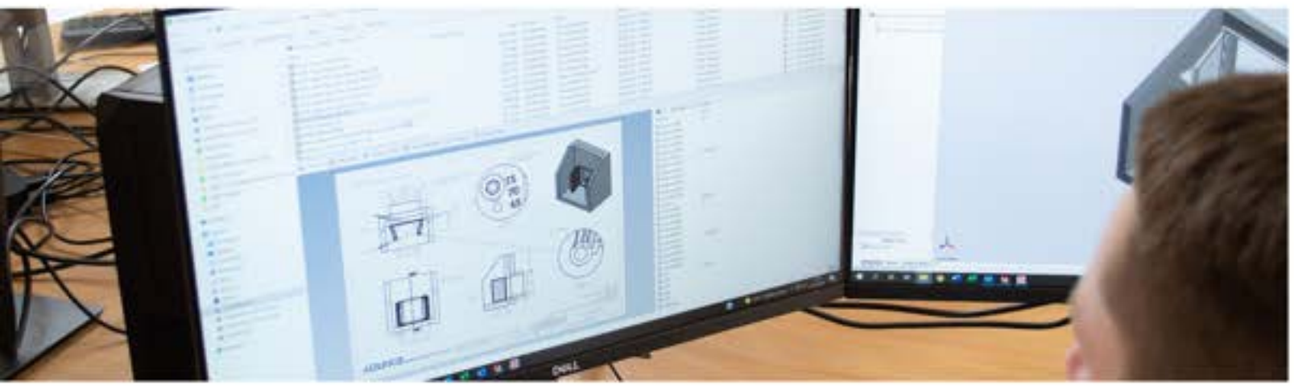
AQUIKO Water Flow Control

The AQUIKO product range has has been specifically designed to suit the UK market and our customers.

AQUIKO has been developed by Aquatic Control Engineering Ltd (ACE). ACE has over 25 years of experience in the supply and installation of specialist equipment to the drainage and water industry.

Over the years ACE's reputation and expertise has grown to us being the UK market leader in HDPE and Stainless Steel water flow control products.

It is this expertise that has driven the development of the AQUIKO product range. We tailor new designs to suit the UK market and our customers. The many years of our ACE team supplying and installing these products in the UK, has enabled us to work with improvements in materials, use intelligent design and develop innovative eco friendly solutions in our AQUIKO products.



Environmentally Aware Design

AQUIKO firmly believes in supplying the drainage and water industry with high quality solutions, producing a low carbon footprint.

We select materials with the lowest possible carbon footprint, whilst not compromising on quality or strength. The compact design of the AQUIKO product range ensures a reduction in the weight and size of our products, further reducing the carbon footprint. AQUIKO has engineered out, where possible, the need for welding. Making the product modular and therefore parts can be exchanged.

The One-Stop Shop - ORDER ONLINE TODAY!

Ordering your Flap Valves, Penstocks and WaStop Inline Non-Return Valves has never been easier.

AQUIKO has developed an e-commerce website to make ordering your required products quick, simple and hassle free. You simply register, shop then wait for your order to be delivered. Delivery can be the next day on the majority of our product sizes.

Pay on Account or Credit Card

Add products to your basket and we will invoice you at the end of the month. Alternatively, pay by credit card if that's easier for you.

Supporting Documents

The AQUIKO website provides you with all the supporting documentation you require. Drawings, datasheets and operation manuals are all in our documents section.

Self Service

With the "My Account" section you can review your previous order history, look after all of your delivery addresses and maintain your payment methods and credit limits.

Why Choose AQUIKO

- Designed and manufactured in the UK by a team of experts
- 6MwC pressure rating as standard (where applicable)
- AQUIKO Products comply with BS7775
- Next day delivery available on sizes up to 1,000mm
- An expert team on hand to help you find the right solution
- Environmentally aware design, little or no micro plastics & low CO_2
- All AQUIKO products are backed up and supported by calculations
- Design Life of 50 Years
- UKCA & CE compliant

Manufactured in the UK

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AQUIKO Water Flow Control

The complete range...

Penstocks

Wall Mounted Penstock
- Stock up to 1,500mm
- 6 MwC pressure rating

Lightweight Penstock
- Sizes up to 400mm
- 3 MwC pressure rating

Hand Stop
- Sizes up to 500mm
- 1 MwC pressure rating

Inline Penstock
- Sizes up to 600mm

Double Leaf Penstock
- Made bespoke per project

Channel Penstock
- Made bespoke per project

Weir Penstock
- Made bespoke per project

Non Return Valves

Wall Mounted Flap Valve
- Stock up to 1,500mm
- Bespoke sizes available

WaStop Inline Non Retrun Valve
- Sizes up to 2,040mm

Fish Friendly Flap Valve
- Made bespoke per project

Side Hung Doors

Side Hung Doors
- Made bespoke per project

Tilting Weirs

Tilting Weir
- Made bespoke per project

Stop Logs

Stop Logs
- Made bespoke per project

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AQUIKO

Wall Mounted PENSTOCK

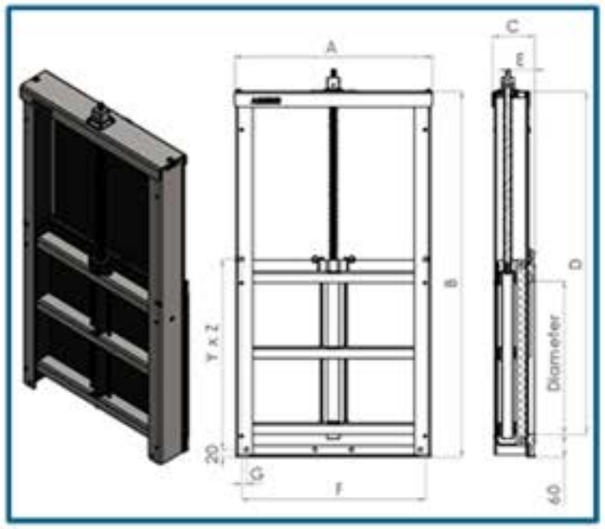
The AQUIKO Wall Mounted Penstock has been designed and manufactured in the UK using the most cutting-edge techniques. Our penstocks are made from HDPE and stainless steel 316 and have a design life of 50 years.

Due to the penstocks' unique compact design, the narrow frame ensures it fits in even the tightest spaces. This compact design is also a cut above the average penstock in strength being rated for a minimum 6MwC pressure as standard, including the ability to operate against the maximum head of water. With no metal on metal moving parts, there is virtually no chance of an AQUIKO penstock seizing, meaning AQUIKO penstocks require practically no maintenance, even greasing is not required. With no need for casting in or grouting, you can save hours in installation time, compared with stainless or cast-iron alternatives.

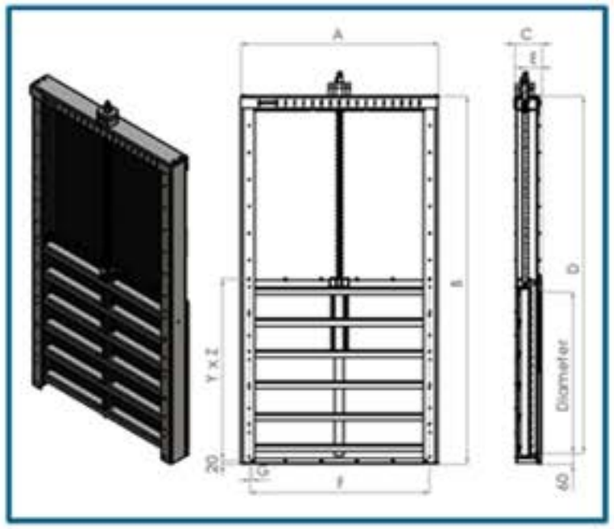
VIRTUALLY MAINTENANCE FREE

6MwC PRESSURE RATING AS STANDARD

QUICK INSTALLATION



APS-100mm up to 600mm



APS-700mm up to 1500mm

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

Varations Available on Request

Flush Invert Penstock

Pipe Mounted Penstock

Penstock: APS-100 up to 1500mm
Materials: SS316, HDPE, EPDM & POM
Pressure: 6MwC (Front & Back)
Note: Bespoke designs can be made for larger sizes or higher pressures

50 Year Design Life

The design process and materials used in the AQUIKO product range ensure that with minimal maintenance the product range has a **design life of 50 years.**

HDPE has the l**owest CO2 footprint** when compared to alternatives currently used for water flow control. HDPE is UV stable meaning little or **no micro plastics** unlike the coating systems on cast iron and steel.

The AQUIKO penstock range has been designed to be fully **operable even if against the maximum head** of 6MwC, both on and off seating.

All of our products can be backed up and supported by a set of calculations. Giving you peace of mind, **our assets do what we say they will!**

Manufactured in the UK

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Lightweight PENSTOCK

HAND STOP

The AQUIKO Lightweight Penstock has been designed and manufactured in the UK using the most cutting-edge techniques. Our penstocks are made from HDPE and stainless steel 316 and have a design life of 50 years.

The AQUIKO Lightweight Penstock range has been designed and engineered with a pressure rating of 3MwC, with leakage rates compliant to BS7775.

Due to the penstocks unique compact design, the narrow frame ensures it fits in even the tightest spaces. The Lightweight range is compatible with the AQUIKO Ancillary product range.

The AQUIKO Lightweight Penstock ranges from 100mm to 400mm and has a rising spindle. Ideal for smaller applications.

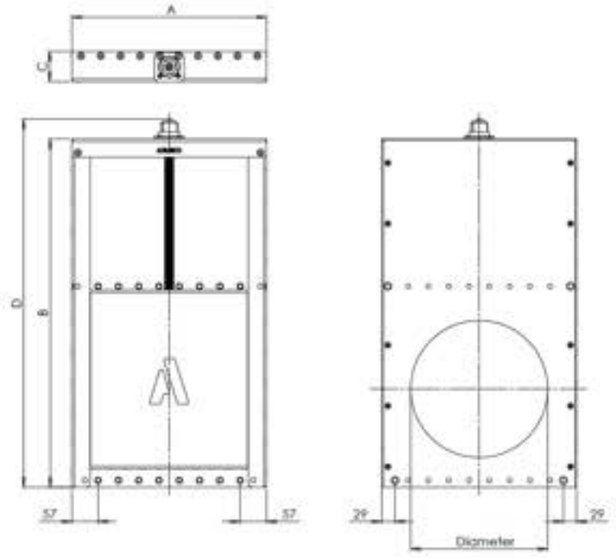
- 3MwC PRESSURE RATING
- SIMPLE OPERATION
- LIGHTWEIGHT & ROBUST
- EASY INSTALLATION
- ANCILLARY PACKAGE AVAILABLE
- MANUALLY OPERATED

The AQUIKO Hand Stop is a simple manually operated gate designed to isolate, control, and manage water levels up to 1m deep.

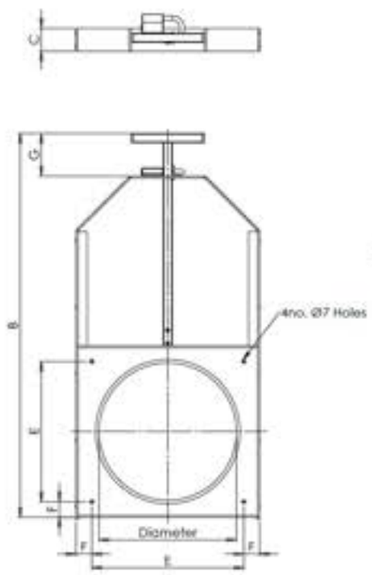
The entire range has been designed for easy lifting operation.

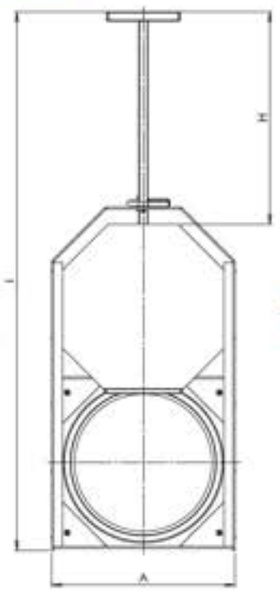
Our Hand Stop range is manufactured in HDPE and Stainless Steel 316, ensuring they are robust and lightweight.

The AQUIKO Hand Stop product sizes range from 100mm to 500mm.



Diameter	A	B	C	D	Weight (KG.)
100	226	363	66	406	7
150	276	463	66	506	10
200	326	563	66	606	13
250	376	662.5	66	706.15	16
300	426	763	66	806	19
400	526	963	66	1006	27





Diameter	A	B	C	E	F	G	H	I	Weight (KG.)
100	200	345	50	112	31	93	264	576	4.1
150	250	445	50	156	34	93	314	726	5.6
200	300	545	50	206	34	93	364	876	7.3
250	350	645	50	256	34	93	414	1026	9.2
300	400	745	50	306	34	93	464	1176	11.2
400	500	945	50	406	34	93	564	1476	15.9
500	600	1145	50	506	34	93	664	1776	21.3

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DOUBLE LEAF PENSTOCK

The AQUIKO Double Leaf Penstock allows for various methods of control, whether maintaining a water level or quick discharge for flood prevention.

The Double Leaf Penstock incorporates two weir plates or leaves, which can be moved independently of each other. The top leaf acts as a weir penstock to control water flowing over the top. Allowing a water level to be maintained upstream to a desired depth. The bottom leaf acts as a channel penstock and can be operated to move high volumes of water.

STRONG

ACCURATE

LOW MAINTENANCE

Ideal for use where summer and winter levels are required, as the penstock can be set to maintain a level when required, or opened fully to allow free flow. It can be used as an alternative to a tilting weir especially where space is restricted.

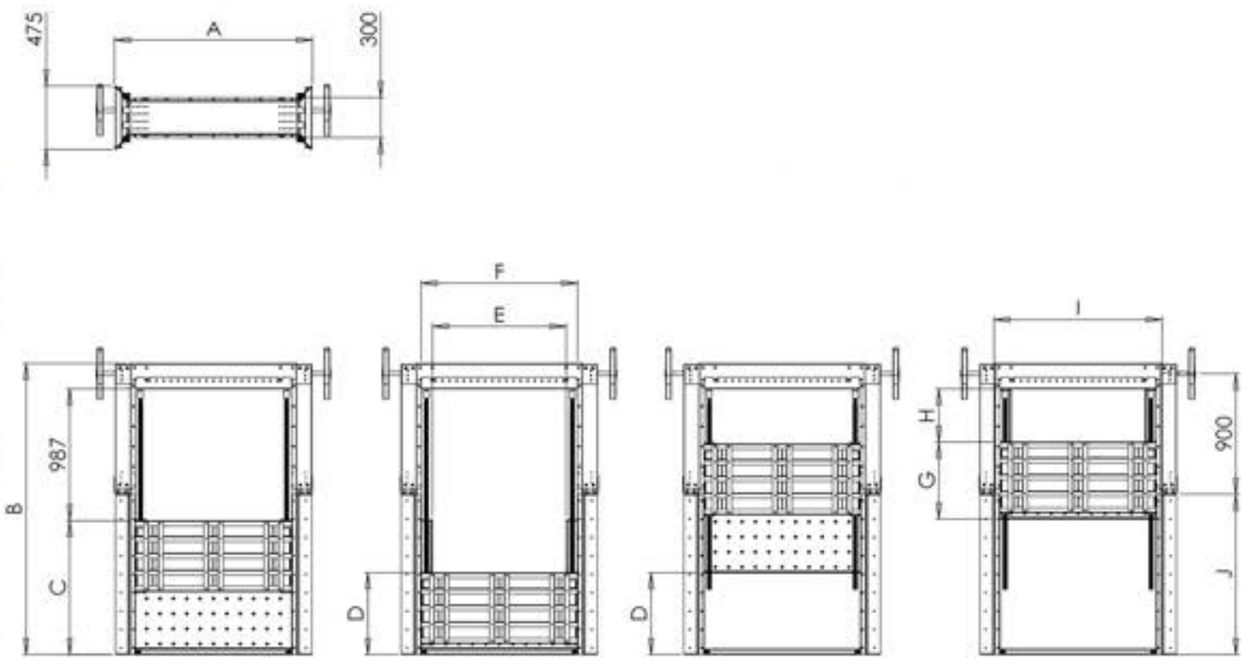
The Double Leaf Penstock ensures very accurate level control. They can be operated manually with a range of accessories or electrically using an actuator or our Compact Solar Control (CSC).

Made from stainless steel 316 and HDPE ensuring the product is very durable yet lightweight. The lightweight nature of the product means installation is easier than comparable products. As with all AQUIKO products the range has been designed to be as low maintenance as possible with no greasing required.

Double Leaf Penstocks can be wall, channel or rebate mounted. The majority of Double Leaf Penstocks can be bolted and sealed to the wall in less than a single shift. They are often used where space is of a premium and a tilting weir wouldn't fit.

AQUIKO Double Leaf Penstocks are built to suit the exacting requirements of each enquiry. The AQUIKO Double Leaf Penstock range is available in a wide range of sizes to suit your individual needs.

Below is a sample general arrangement (GA) drawing with three sample sizes shown in the table.



Maximum pen level | Minimum pen level | Flushing | Fully Open

Diameter	A	B	C	D	E	F	G	H	I	J
1000x1000	1481	2177	1000	611	1000	1170	575	398	1258	1200
1500x1500	1981	2677	1500	861	1500	1670	825	648	1758	1700
2000x2000	2481	3177	2000	1111	2000	2170	1075	898	2258	2200

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AQUIKO

Channel PENSTOCK

Weir PENSTOCK

AQUIKO Channel Penstocks are available in a number of forms, tailored to your requirements. The penstocks are manufactured in Stainless Steel 316L, making them lightweight for ease of handling and installation, without compromising strength.

The AQUIKO Channel Penstock comprises of a sluice gate that seals at the bottom, to allow water to flow over its crest when closed, or under-shoot when opened.

- BESPOKE DESIGNS
- ACCURATE LEVEL CONTROL
- LIGHTWEIGHT & ROBUST
- EASY INSTALLATION
- ANCILLARY PACKAGE AVAILABLE
- LOW MAINTENANCE

AQUIKO Channel Penstocks are available for wall mounting, either to a single face, to channel walls, or for rebate fixing; which requires grout. Installation remains a quick and simple process, using the fixings supplied.

Once installed, AQUIKO Channel Penstocks require very little attention, and the construction of the penstock gate is self-aligning, with no difficult wedges, and an integrated EPDM seal.

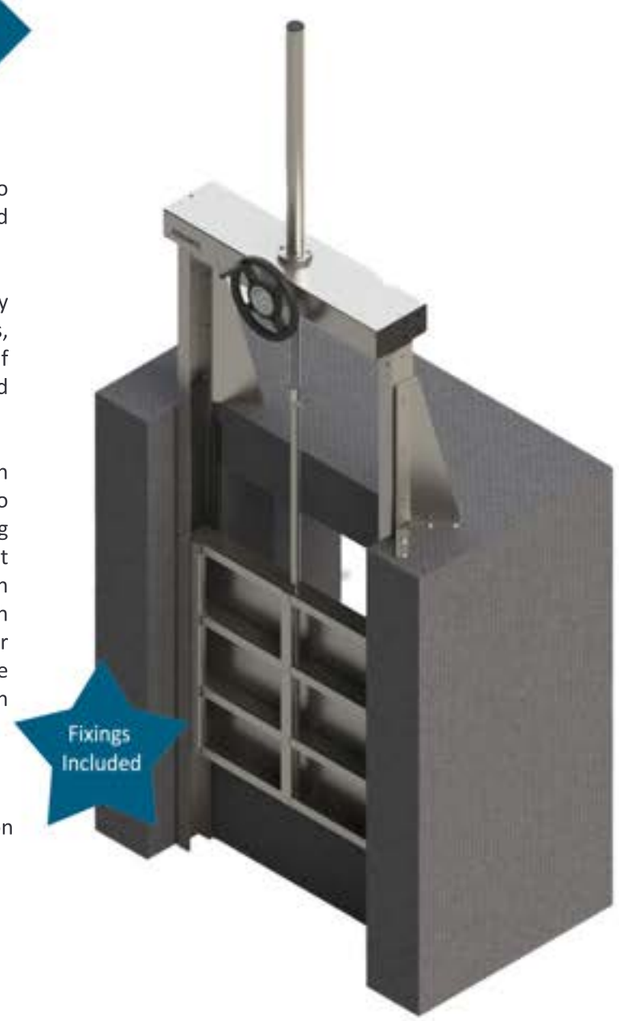
The AQUIKO Channel Penstock is available as standard with either a single, central spindle or twin spindles to prevent crabbing or to reduce snagging of floating debris. The AQUIKO Channel Penstock comes with rising spindles as standard, or rack and pinion drives, or hydraulics, and in all cases, the equipment can be manually driven, or electrically operated, along with automation if desired.

Common uses include:

- Quick isolation of plant for dewatering
- Penning of water to a known level
- Water level and/or flow control
- Flushing of silt

AQUIKO Weir Penstocks are an ideal way to accurately control water levels, adjust flow rates, or even divert floating debris away from operational equipment. The penstocks are manufactured in Stainless Steel 316L, making them lightweight for ease of handling and installation, without compromising strength.

The AQUIKO Weir Penstock comprises a sluice gate that moves vertically, adjusting the height of its crest to allow the water level upstream to be maintained.



AQUIKO Weir penstocks are wall-mounted, with no requirement for grouting, making them quick and simple to install.

Once installed, AQUIKO Weir Penstocks require very little attention, as greasing is not required in most cases, and the construction of the penstock gate is self aligning, with no difficult wedges, and an integrated EPDM seal.

The AQUIKO Weir Penstock is available as standard with either a single, central spindle or twin spindles to prevent crabbing or to reduce snagging of floating debris. Although the spindle is centrally positioned, it has a unique drive arrangement to prevent collision with debris. The AQUIKO Weir Penstock comes with rising spindles as standard, or rack and pinion drives, or hydraulics, and in all cases, the equipment can be manually driven, or electrically operated, along with automation if desired.

Common uses include:

- Fine accuracy water level control and flow diversion in-process applications
- Penning of differing winter and summer levels
- Decanting of scum and floating debris

Manufactured in the UK

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Inline PENSTOCK

PENSTOCK CHOICES

The AQUIKO Inline Penstock is designed with full through-flow and a self-cleansing function for debris to ensure total closing of the valve plate. The top of the valve can be removed for inspections. Lipped O-ring seals to stainless steel plate can be changed in larger valves.

The AQUIKO Inline Penstock series is supplied as two standard ranges: DN100-600 and DN700-1200

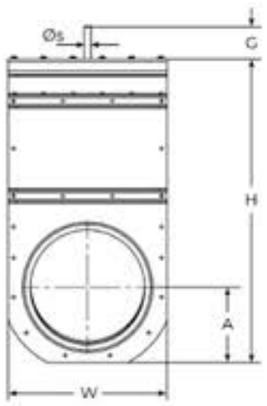
Areas of use: surface water, effluent, industrial water and in the fish-farming and agricultural industries.

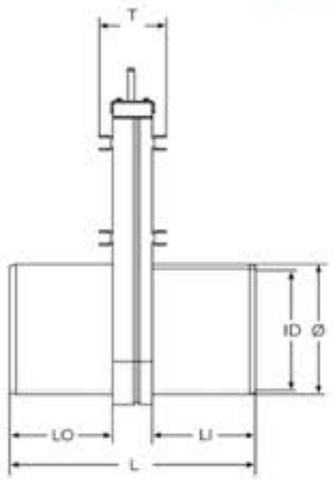
Variety of actuation options are available ie. manual, electric, pneumatic or hydraulic.

LONG OPERATING LIFE

SELF-CLEANSING FUNCTION

LOW TORQUE - EASY ACTIVATION





DN	Ø	ID	W	H	A	G	ØS	L	LO	LI	T	kg	bar	Pipe
100	110	96.8	206	382	99	250	16	376	178	198	162	10	4	SDR17
125	125	110.2	220	414	110	250	16	376	178	198	162	11	4	SDR17
150	160	141	250	480	122	250	16	396	188	208	162	14	4	SDR17
200	200	176.2	285	539	138	250	16	396	188	208	162	19	4	SDR17
250	250	220.4	330	636	158	250	16	596	288	308	162	26	4	SDR17
300	315	277.6	386	735	182	250	16	596	288	308	162	37	4	SDR17
400	400	369.4	486	925	228	250	18	796	388	408	164	56	2	SDR23
450	450	415.6	545	1030	259	250	18	796	388	408	164	67	2	SDR23
500	500	461.8	595	1087	273	250	18	796	393	403	218	89	2	SDR23
560	560	517.2	630	1256	330	250	25	996	493	503	228	146	2	SDR23
600	630	581.8	719	1350	342	250	25	1006	498	508	228	148	2	SDR23

The AQUIKO Penstock range has been designed to ensure we can offer a product best suited to our customer specific requirements.

The below table shows the feature of our various penstock products.

	Wall Mounted	Lightweight	Hand-Stop
Specification			
Head of Water (m)	6	3	1
Operational Against Head	Y	Y	Y
Off Seating	Y	Y	N
On Seating	Y	Y	Y
Max Pipe Diameter (mm)	1500	400	500
Material	HDPE/SS316	HDPE/SS316	HDPE/SS316
Operation			
Movement Mechanism	Non Rising (Rising Optional)	Rising	Rising
Operation Point	33mm Square	33mm Square	Hand
Handwheel Compatible	Y	Y (only with spindle)	N
T-Key Compatible	Y	Y	N
S-Crank Compatible	Y	N	N
Spindle Extension Compatible	Y	Y	N
Actuator Compatible	Y	Only with spindle extension	N
Pedestal Compatible	Y	Y	N

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AQUIKO

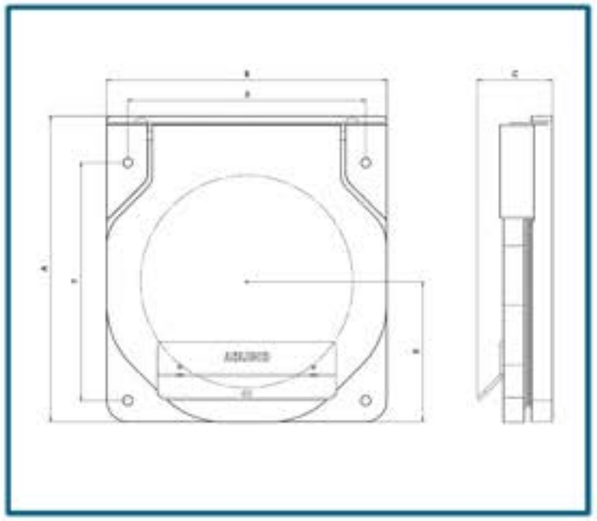
Wall Mounted FLAP VALVE

AQUIKO Wall Mounted Flap Valves offer a simple yet effective method of flood prevention. Installed in a variety of conditions to prevent backflow into outlets and minimise risk of flooding. The flap valve comprises of a door (the flap) with a hinge at the top which allows water to pass in one direction but not the other. The flap valve may seem simple, yet to make a simple solution brilliant requires a lot of thought. AQUIKO have given time to the flap valve, making a range in HDPE which is light, to reduce head loss, minimise opening pressures and ease installation. All AQUIKO Wall Mounted Flap Valves come with a minimum 8MwC (for up to 4 days) pressure rating as standard, with **bespoke** options available should a greater rating be required. With no need for casting in or grouting, you can save hours in installation time, compared with stainless or cast-iron alternatives.

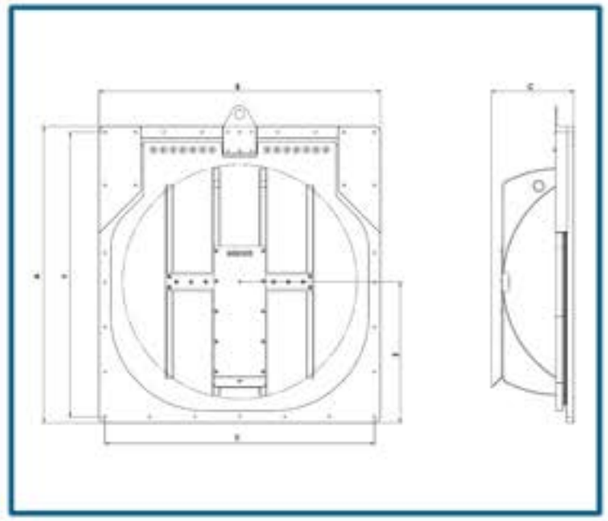
REDUCE HEAD LOSS

8MwC PRESSURE RATING AS STANDARD

QUICK INSTALLATION



ARF-100mm up to 500mm



ARF-600mm up to 1500mm

Diameter	A	B	C	E	X	Y	Weight (KG.)
100	180	210	80	90	150	150	1.7
150	230	260	80	115	200	200	2.5
200	280	310	80	140	230	230	3.4
250	330	360	90	165	280	280	5.1
300	380	410	90	190	330	330	6.2
400	510	480	105	240	420	420	11.2
500	610	580	105	290	520	520	15
600	865	800	250	400	750	815	42.9
700	965	900	275	450	850	915	54
800	1000	1065	300	500	950	1015	66
900	1100	1165	325	550	1050	1115	75
1000	1200	1265	350	600	1150	1150	93
1100	1300	1365	375	650	1200	1200	109
1200	1400	1465	400	700	1350	1350	125
1400	1600	1665	450	800	1550	1550	163
1500	1700	1765	475	850	1650	1650	184

Flap Valve: ARF-100 up to 1500mm
Materials: SS316, HDPE & EPDM
Pressure: 8MwC for up to 4 days

50 Year Design Life

The design process and materials used in the AQUIKO product range ensure that with minimal maintenance the product range has a **design life of 50 years.**

HDPE has the l**owest CO2 footprint** when compared to alternatives currently used for water flow control. HDPE is UV stable meaning little or **no micro plastics** unlike the coating systems on cast iron and steel.

Lightweight design **reduces headloss** and minimises opening pressures providing **efficient drainage**. The light weight design also reduces lifting equipment required for an **efficient install**.

All of our products can be backed up supported by a set of calculations. Giving you peace of mind, **our assets do what we say they will!**

Varations Available on Request

Pipe Mounted Flap Valve

Flange Mounted Flap Valve

Square Flap Valve

Manufactured in the UK

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WASTOP INLINE NON RETURN VALVE

Tidal Water, High Water Levels, Flow regulation, Surface water flooding, Protection from Animal Infestation, Odour control.

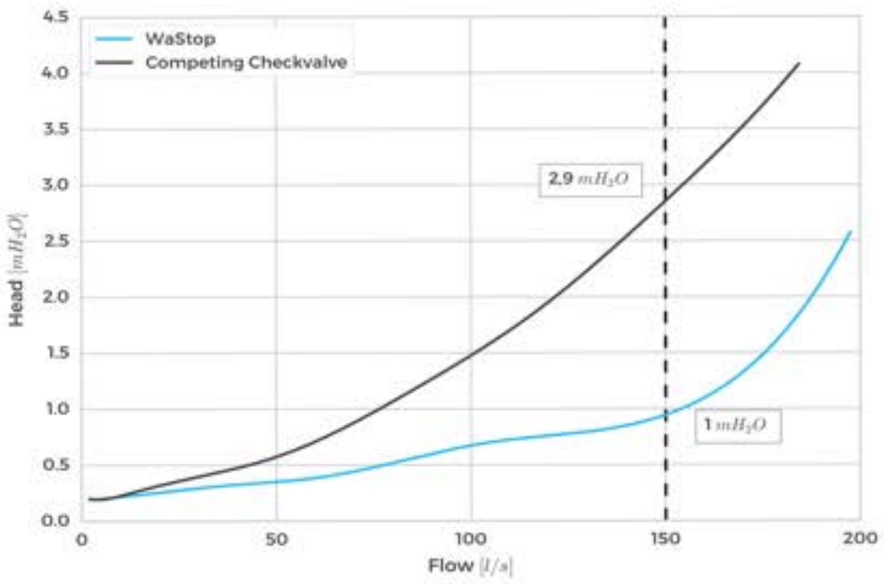
WaStop inline check valves have been an industry leader since their inception in 2000. WaStop's ingenious function combines common sense and simplicity, to provide the best possible protection against flooding, odour control and backflow.

- Lowest head loss amongst inline check valves
- Easy installation saving costs on installation
- Inherent automatic pulsating flow mechanism ensures the valve never gets silted open or closed

WaStop is available to fit most types of pipes from DN75 to DN1800 and is also available in an Access chamber for easy access from ground level. Exhibiting the lowest head loss on the market, 100% backflow prevention and a unique pulsating flow that keeps pipes both upstream and downstream clean and free from silt, shale and other debris which reduces maintenance costs substantially.

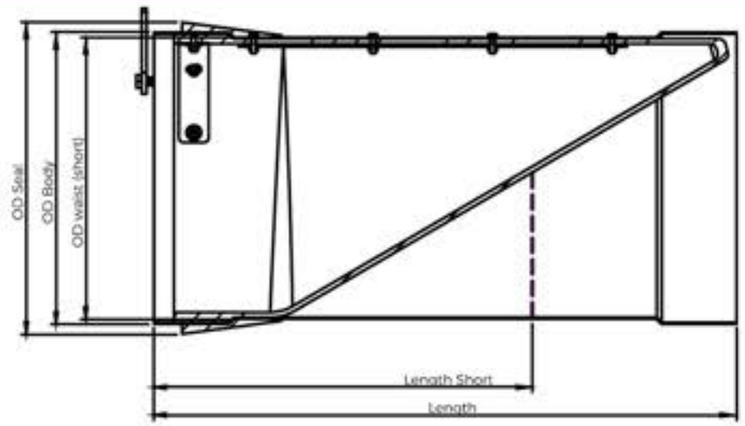
Lowest Head Loss

Comparing head loss data between competitors is difficult as the test procedure is rarely presented and there are multiple ways of displaying data. However, the test results shown below were conducted in the same facility with the same reference points and are therefore comparable. The test result shows that the WaStop has 65% lower head loss than a competing inline check valve at flow 150l/s. Both valves were tested in the same open air scenario. This often means that a competitors product needs to be larger to prvide similar performance. Making it more expensive to fit.



Advantages of WaStop

- Easy installation saving on construction & installation costs
- Superior construction materials
- Lowest headloss amongst inline check valves
- Low life cycle cost
- No moving parts - virtually maintenance-free
- Many dimensions 75-2000mm std & non-standard pipes
- Stops liquids, gases, odours, insects and small animals
- Stops backflow effectively even in low flow events



Model*	DN	Length	Length (Short)**	OD Seal	OD Body	OD Waist (OD Short)	Opening Pressure Standard***	Closing Pressure Standard	Installation Pipe		Weight (KG.)
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mmH2O)	(mmH2O)	Min	Max.	(KG)
WS97	100	210	160	102	97	93	180	70	99	101	0.7
WS101	110	215	165	105	100	96	190	60	101	104	0.8
WS116	125	230	160	120	115	111	250	90	117	120	0.9
WS146	150	300	200	160.5	144.5	138.5	230	80	146	159	2.4
WS193	200	395	275	211	191	183	210	110	193	210	5
WS215	225	480	300	235	215	207	220	130	216	233	5.5
WS240	250	520	350	260	240	232	190	110	242	258	7
WS290	300	600	400	310	290	280	220	160	293	307	10
WS340	350	700	500	352	340	328	360	220	343	349	18
WS390	400	750	500	414	390	378	310	190	393	411	24
WS440	450	840	560	467	443	431	210	140	446	464	28
WS490	500	900	600	506	490	474	270	180	493	503	29
WS590	600	1200	800	603	587	567	370	240	590	598	48
WS690	700	1300	870	710	690	670	280	180	695	705	63
WS750	750	1400	950	770	750	726	390	240	755	765	75
WS790	800	1500	1000	810	790	766	350	230	795	805	88
WS885	900	1700	-	915	885	855	400	270	890	910	116
WS985	1000	1800	-	1015	985	955	390	260	990	1010	141

*We have a standard set of sizes which can be customized, easily, to suit any application. Flanges on inlet, outlet or somewhere in between are all easily available, quickly. **Customized extra short valves are available. *** Open air. Standard membrane. Lower and higher opening pressures available.

Manufactured in the UK

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SIDE HUNG DOORS

AQUIKO Side Hung Doors are manufactured in HDPE and Stainless Steel 316. The intelligent material choice ensures they are lightweight, but not compromised when it comes to strength.

Side Hung Doors also offer the optimum fish freindly solution. In fact, The Environment Agency Guidelines state hinged side gates (side hung doors) provide the best option for eel passage over a range of flows and are considered to be the “Best Achievable Eel Protection (BAEP) installation choice.”

STRONG

FISH FRIENDLY

EA RECOMMENDED FOR
FISH & EEL PASSAGE

The AQUIKO Side Hung Doors offer a reliable and secure flood defence. However, unlike other forms of non-return valve they pose no barrier to fish migration.

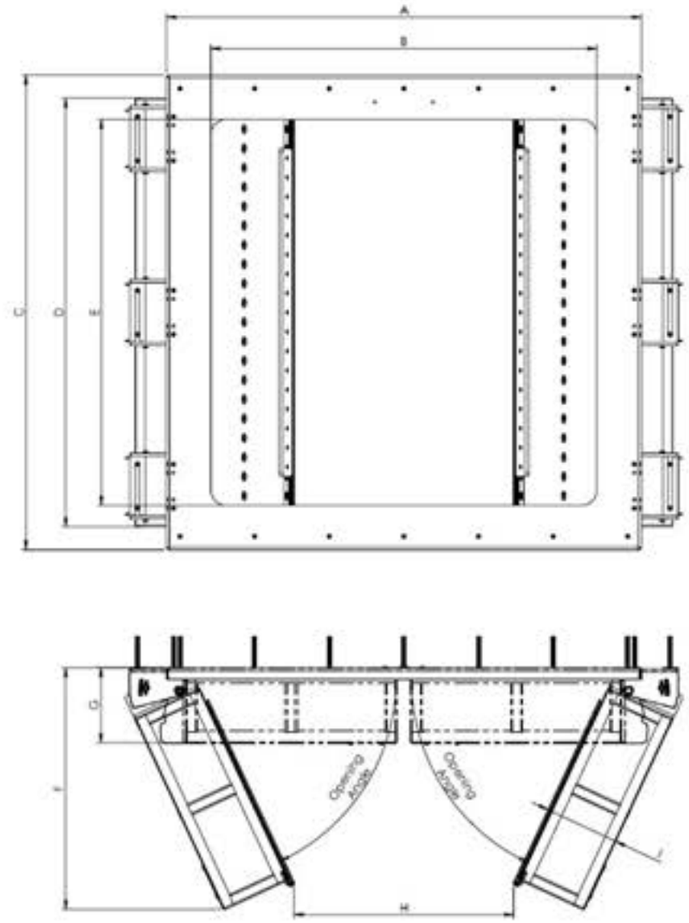
AQUIKO Side Hung Doors are a very simple yet effective concept. Based on traditional mitre door designs. The water flow pushes them open and closed depending on the flow. Once open, free flow between the two water bodies is possible.

As with all AQUIKO products we have made installation as easy as possible. Usually mounted to a bespoke frame or bolted to the mounting surface using resin anchors, therefore, no grouting is required. Usually fitted within a few hours they offer massive time and cost savings.

The AQUIKO Side Hung Doors only require occasional visual inspection. With self-lubricating hinges no additional greasing is required.

Each AQUIKO Side Hung Door set is built to suit the exacting requirements of each enquiry. The AQUIKO Side Hung Door range is available in a wide range of sizes to suit your individual needs.

Below is a sample general arrangement (GA) drawing with four sample sizes shown in the table.



Size	A	B	C	D	E	F	G	H	I	Weight (KG.)
500	730	500	730	610	500	396	185	280	184	66
1000	1230	1000	1230	1110	1000	627	195	569	194	150
1500	1730	1500	1730	1610	1500	880	257	858	256	323
2000	2230	2000	2230	2110	2000	1133	320	1146	319	559

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Fish Friendly FLAP VALVE

EEL DAMPERS

Flapped outfalls often pose a barrier to fish migration, particularly at the point of entry from the sea. AQUIKO offers a fish friendly flap valve to provide a window of opportunity for fish and eels to migrate naturally, without compromising flood defence.

AQUIKO Fish Friendly Flap Valves offer the same benefits as the standard flap valve range. An integrated float regulated portal allows a small opening for fish to use as the tide turns. Which then closes before a critical water level is reached.

EFFECTIVE FISH PASSAGE

LOW MAINTENANCE

QUICK INSTALLATION

The AQUIKO "Pet" flap fish-friendly flap valve is a standard flap valve, fitted with a custom-made float arm that lifts and closes the pet flap as the tide advances. This type is ideal for main river outfalls and has the benefit of an adjustable delay in closure to allow optimisation.

The pet flap systems are fitted to otherwise standard AQUIKO flap valves, meaning you still get all the benefits of their design - simple installation, low maintenance and excellent protection from flooding. The equipment is manufactured in the tried and tested HDPE and Stainless Steel 316 combination and can be manufactured to specific requirements.

AQUIKO Eel Dampers

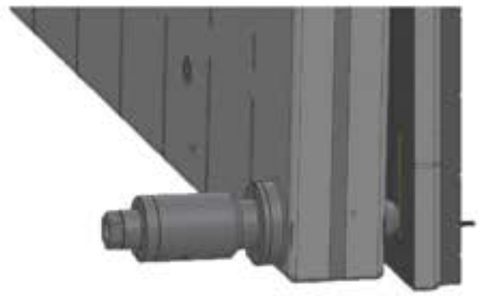
The Standard AQUIKO Flap Valve is designed to completely shut under equal pressures. The AQUIKO Eel Damper ensures the AQUIKO Flap Valve remains slightly open under equal pressure to allow eel and elver passage.

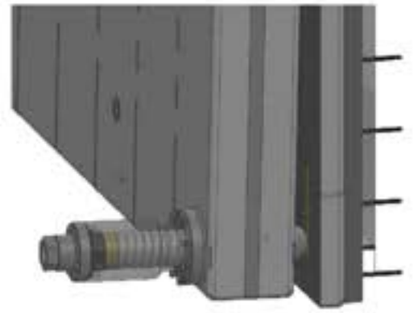
The exact closing level is dependant on the number of dampers fitted and can be calculated by the AQUIKO team. Eel dampers can be fiited to any size AQUIKO Flap Valve.

Bespoke Eel Dampers

For larger applications or where the force the flap valve will be subjected to is above the capabilities of the standard eel damper we have designed a spring damper system.

The spring on the damper system is an epoxy coated chromium-vanadium steel so will last longer than the standard eel dampers. To combat corrosion we designed the cassette to allow replacement of the springs. Due to the double hinge system, the door can move up and down a little, so we added bronze wearing plates for the pin to rub against. These have also been designed to be replaceable. The cassette is manufactured in stainless steel 316 with internal bronze bushes and allows adjustability in the spring compression so you have some flexibility as to when the valve is fully closed.





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TILTING WEIR

AQUIKO Tilting Weirs offer the ultimate variability and precision in water level management. A tilting weir is an adjustable weir that tilts rather that travelling vertically. The benefit of a tilting weir is that it has a compact and low profile design, and the ability to provide full control of the water level.

AQUIKO Tilting Weirs can either be operated manually or alternatively automated through the use of a Compact Solar Control (CSC).

STRONG

ACCURATE

MAINTENANCE FREE

50 Year Design Life

The design process and materials used in the AQUIKO product range ensure that with minimal maintenance the product range has a **design life of 50 years.**

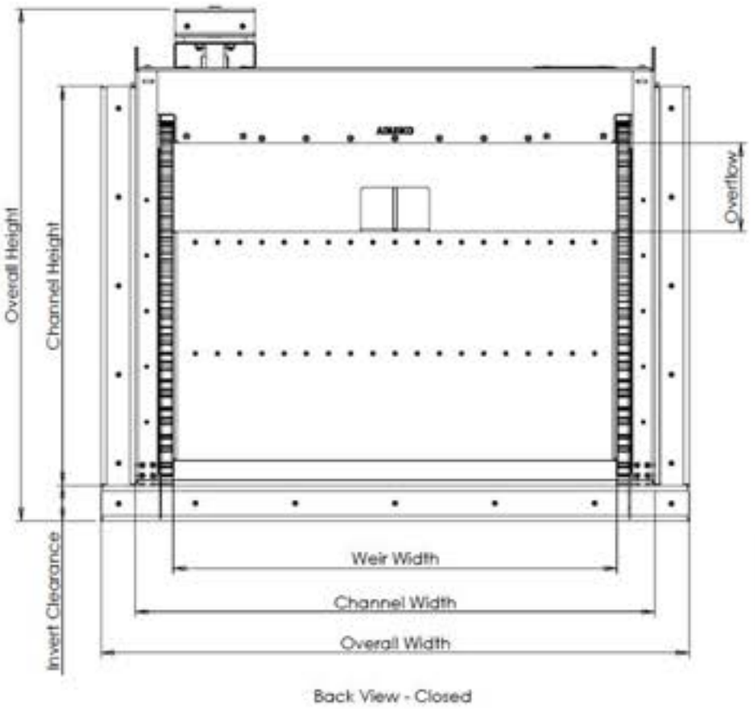
HDPE has the l**owest CO2 footprint** when compared to alternatives currently used for water flow control. HDPE is UV stable meaning little or **no micro plastics** unlike the coating systems on cast iron and steel.

The AQUIKO Tilting Weir range comes in **two significant variations.** One for water level management and one for flood alleviation.

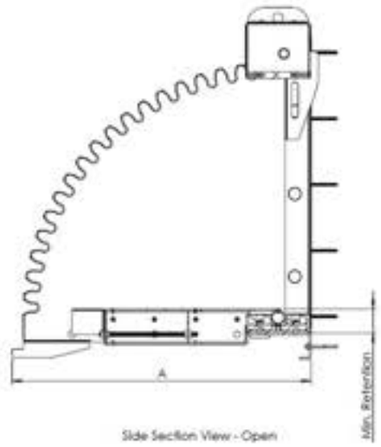
All of our products can be backed up supported by a set of calculations. Giving you peace of mind, **our assets do what we say they will!**

Each AQUIKO Tilting weir is built to suit the specific requirements of each enquiry. To ensure an accurate design can be acheived the information we need providing is channel width, channel height and weir height.

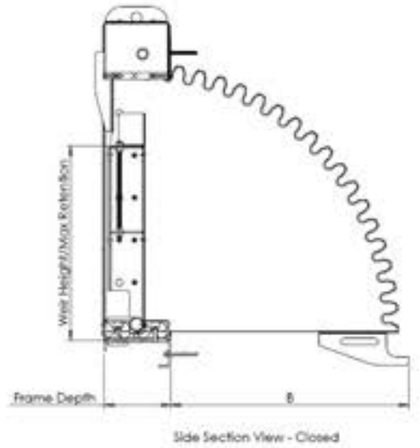
Below is a sample general arrangement (GA) drawing with four sample sizes shown in the table.



Back View - Closed



Side Section View - Open



Side Section View - Closed

Size (mm)	Overall Height	Invert clearance	Channel height	Weir width	Channel width	Overall width	A	Min. Retention	Max. Retention	Frame Depth	B	Mass (kg)
500x500	1154	80	900	500	671	825	907	72	575	197	705	157
1000x1000	1654	80	1400	1000	1171	1325	1408	72	1075	197	1205	307
1500x1500	2154	80	1900	1500	1671	1825	1909	72	1575	197	1705	498
2000x2000	5654	80	2400	2000	2171	2325	2409	72	2075	197	2205	722

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AQUIKO

STOPLOGS

AQUIKO stoplogs provide a simple yet instantly effective barrier to a watercourse, making them ideal for isolation of fixed plant for maintenance, or more long-term use as a fixed weir for control. Using lightweight materials such as aluminium, AQUIKO stoplogs are designed to be easy to handle and deploy, without compromising safety or durability.

The AQUIKO stoplogs are manufactured in marine grade Aluminium, fitting into Stainless Steel 316 frames with integral seals, making them ideal for either quickly deployed temporary barriers, or long-term penning of a watercourse. Other stoplog materials such as Stainless Steel, coated steel and composites, and bespoke designs are available on request.

LIGHTWEIGHT

DURABLE & REUSABLE

QUICK INSTALLATION

Lock Handles & Letterbox

AQUIKO Stoplog Types A, B and C (only) use lock handles (fig. 1) to compress the seals and ensure a secure fit. To ensure a solid seal, the full stack of logs will need to be used. The lock handle is attached to the top log, and as it is engaged, it applies pressure down the stack of logs completing the seal. This is also locked in place with all logs deployed as a secure storage feature.


fig. 1

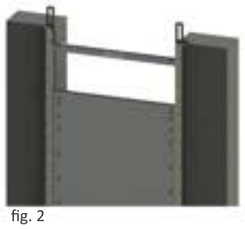


fig. 2


fig. 3

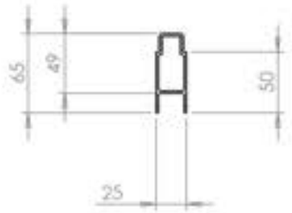
AQUIKO Stoplog Types A-D can be supplied with lifting poles. For the larger types of stoplogs we recommend the lifting beam. The lifting beam may also be appropriate with the larger Type D applications.

The lifting beam (fig. 3) has spring loaded lifting hooks, which must be activated by pulling a rope/chain from the surface. This means that the AQUIKO lifting beam stays secure until physically released. The stoplogs will not release even if tension is lost. Which is an exclusive function of AQUIKO stoplogs.

The lifting beam has adjusting blocks on it to allow it to be centred to the channel and easy to use. The letterbox (fig. 2) is used to complete the stack and can be placed lower, with logs stacked above if used for level control.

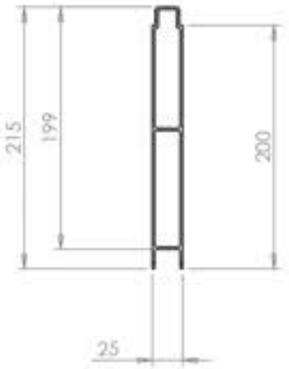
Stoplog Types

The AQUIKO Stoplog range comes in a variety of types to suit all situations. Each Stoplog type has various mounting options, which can be combined should the site require it. For types A-C a combination of types can be used to give a range of heights.

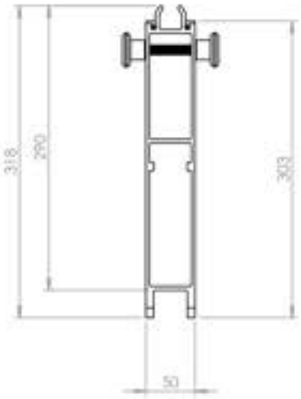


Type A
Weight/Metre: 0.95kg

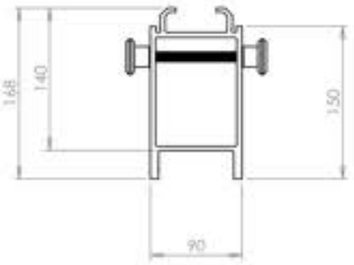
Type B
Weight/Metre: 1.5kg



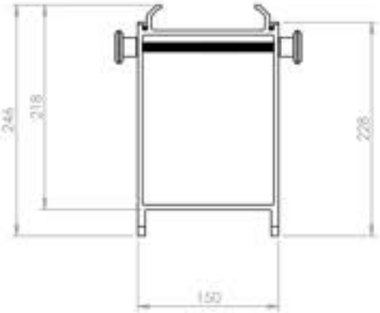
Type C
Weight/Metre: 2.75kg



Type D
Weight/Metre: 8.5kg



Type E
Weight/Metre: 7.25kg

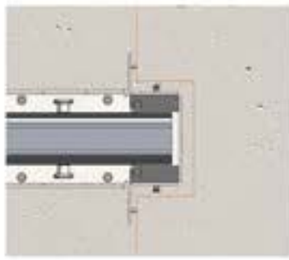


Type F
Weight/Metre: 11.1kg

Mounting Options

Typical arrangements may vary dependant on profile.

Channel Mounted



Rebate Mounted
(Requires Grouting)

Wall Mounted
(On/Off Seating)

Manufactured in the UK

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AQUIKO

ANCILLARIES

Compact Solar Control

The Compact Solar Control (CSC) is in essence an intelligent solar powered actuator. The CSC allows you to autonomously operate any of our products up to 150Nm.

The advantages of the Compact Solar Control

- Makes automated water management possible, especially when there is no mains electricity
- Communicates with various main Scada systems
- Various substations possible, including UDSO (standard) and LMX400
- Own energy supply, based on solar energy
- Easy installation on any existing product
- Low maintenance
- Standard 7” touchscreen for user-friendly operation and commissioning on site
- Controls adjustable via the display e.g upper level and lower level
- Powerful industrial motors, emergency/manual operation possible
- Standard 4-20 mA inputs available for connecting level measurements
- Anti-burglary and vandal-resistant solar panel.

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

Handwheel

- 400mm diameter

T-Key

- Sizes 1m or 1.5m

S-Crank

- Size 1m

Spindle Extension

- Available by the metre
- Complete with all brackets

Pedestal

- Available wall or floor mounted

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.

AQUIKO Bespoke Designs

Whilst AQUIKO have a large range of standard equipment, we regularly develop new designs for our customer specifications; whether they are small tweaks to make installation simpler or to provide a fully bespoke solution to meet your needs.

We can design a solution for any shape or size, to add strength, fit existing structures, or purely for improved appearance. AQUIKO use the latest 3D CAD technology including Solidworks to visualise designs, check fit and produce accurate bills of materials and to model forces, which guarantees strength without excessive material.

The use of 3D also makes our designs very easy to communicate with our customers, giving an accurate impression of the proposed finished solution.

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Top Up Sluice

The AQUIKO Top Up Sluice can be used as a fully automated intake structure that will ensure the lower level is kept at the required height. The unit incorporates two chambers; a float chamber which holds a float operating the downstream (carrier) water level and a flow chamber holding a valve which isolates the feed and carrier levels.

When the carrier level drops, this opens the valve in the flow chamber to allow water into the carrier, in effect topping up the level. When the carrier level is reached, the valve closes, stopping the flow from the feed level. This system allows the lower level to be maintained without electricity, regardless of the water height on the upstream side.

Penflap

AQUIKO can also supply combination products if required. Such as a penstock combination flap valve (Penflap).

The Penflap has both a penstock and a flap valve inside the same frame. These are ideal if you require water to reverse through the structure.

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ACE Trading as Aquatic Control Engineering Ltd

AQUIKO