

Flap Valves

LIGHTWEIGHT | QUICK INSTALLATION | MAINTENANCE FREE



LIGHTWEIGHT – made from high specification, innovative HDPE material and tested for strength.

QUICK INSTALLATION – no grouting required and lighter HDPE material compared to traditional cast iron flap valves.

MAINTENANCE FREE – No lubrication required. Zero chance of materials seizing. No requirement for protective coatings.

SPECIAL REQUIREMENTS – standard sizes in stock for immediate dispatch and can also develop bespoke flap valves to suit unique requirements.

ACE provides high quality KWT flap valves for a simple yet effective method of flood prevention. Available in a range of styles and installed in a variety of conditions to prevent backflow into outlets and minimise risk of flooding.

Flap valves comprise of a sturdy flap hinged at the top to a mounting frame. Water passing from the outlet opens the flap, however when pressure increases from downstream the flap is pressed shut, forming an on-seated seal to the front of the pipe and preventing backflow. As HDPE is buoyant neutral in water, a counterweight is fitted to ensure a good seal.

Contents are accurate at the time of production, however are for illustration only. For critical technical information, please contact ACE for assistance.

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Aquatic Control Engineering have been market leaders of innovative water flow control for 20 years. Using high spec HDPE products from KWT in Holland, we are proud to supply our customers with high quality innovative solutions and high standard installation services.

Why use HDPE Flapvalves?



SHATTERPROOF – Many materials such as GRP and cast iron are inherently brittle, whereas HDPE is much more shock absorbent.

UV STABLE – HDPE is proven not to break down with prolonged UV exposure, so has a much longer life than plastics such as PVC or Coplastic

ZERO OSMOSIS – Many other materials are susceptible to osmosis when submerged over time. This can cause them to break down.

NEUTRAL BOUYANCY – ACE flapvalves are weighted to ensure a good seal, but balanced to ensure minimal pressure to open (see page 4)

QUICK INSTALLATION – No grouting is required and lighter materials reduce lifting risk and cost when compared to traditional materials.

VIRTUALLY NO MAINTENANCE- No lubrication required, won't seize up, even if used infrequently. No protective coatings required.

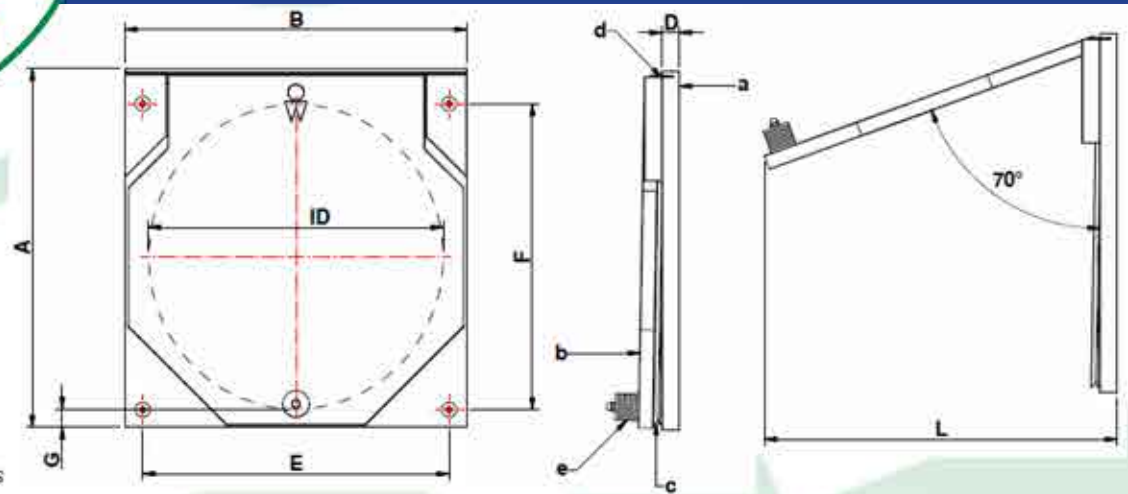
EASILY CUSTOMISED- Fabrication methods allow special shapes, customised fixing arrangements and up-rating quick and easy.



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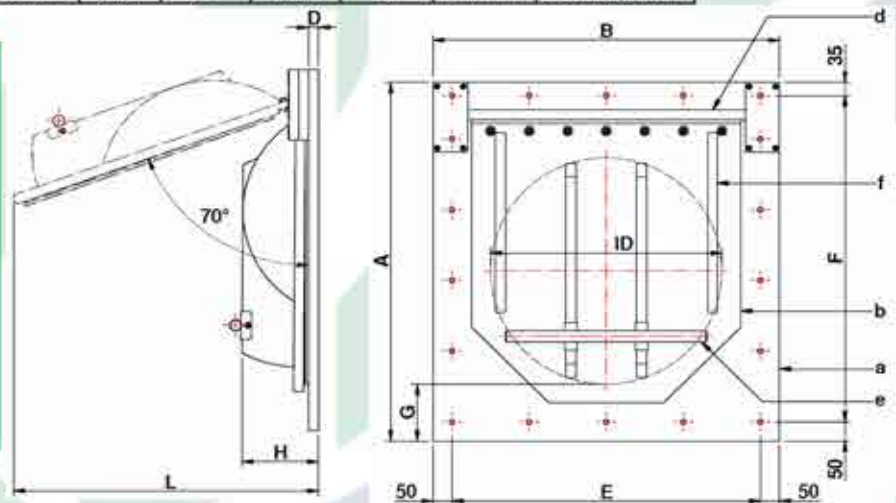
Flap Valves-Details



Data (mm) · Informations · Daten · Gegevens

KWT item number	DN	ID Ø	A	B	D	E	F	G	L	KG	bol	Wrench
101Z0100	DN100	110	220	190	25	150	150	38	230	2	4 x M8	880.101Z0100
101Z0125	DN125	125	235	205	25	155	155	38	245	2	4 x M8	880.101Z0125
101Z0150	DN150	160	270	240	25	180	180	37	275	3	4 x M8	880.101Z0150
101Z0200	DN200	200	310	280	25	230	230	36	310	4	4 x M8	880.101Z0200
101Z0250	DN250	250	360	330	25	280	280	36	360	5	4 x M8	880.101Z0250
101Z0300	DN300	315	425	395	25	330	330	34	420	6	4 x M8	880.101Z0300
101Z0400	DN400	400	510	480	30	420	420	33	505	9	4 x M8	880.101Z0400
101Z0500	DN500	500	610	580	30	520	520	31	600	13	4 x M8	880.101Z0500

Sizes: Ø100 mm to Ø1500 mm
Operating pressure: 1.25MwC constant, 5MwC short term
Valve cover angle: Vertical, 15° optional
Materials: HDPE, SS316, EPDM seal
Connections: headwall, pipe, flange
Custom flap valves available at higher pressures and larger dimensions for special requirements



Data (mm) · Informations · Daten · Gegevens

KWT item	DN	IDØ	A	B	D	E	F	G	H	L	KG	bol	Wrench
101Z0600	DN600	600	950	900	25	800	865	150	222	760	33	18 x M10	880.101Z0600
101Z0700	DN700	710	1050	1000	25	900	965	150	244	855	45	22 x M10	880.101Z0700
101Z0800	DN800	800	1150	1100	25	1000	1065	150	273	950	56	22 x M10	880.101Z0800
101Z0900	DN900	900	1250	1200	25	1100	1165	150	298	1030	69	26 x M10	880.101Z0900
101Z1000	DN1000	1000	1350	1300	25	1200	1265	150	292	1145	89	26 x M10	880.101Z1000
101Z1100	DN1100	1100	1450	1400	25	1300	1365	150	263	1230	105	30 x M10	880.101Z1100
101Z1200	DN1200	1200	1550	1500	25	1400	1465	150	346	1315	122	30 x M10	880.101Z1200
101Z1250	DN1250	1250	1600	1550	30	1450	1565	150	371	1365	132	32 x M10	880.101Z1250
101Z1500	DN1500	1500	1900	1800	30	1660	1760	150	391	1715	230	30 x M10	880.101Z1300

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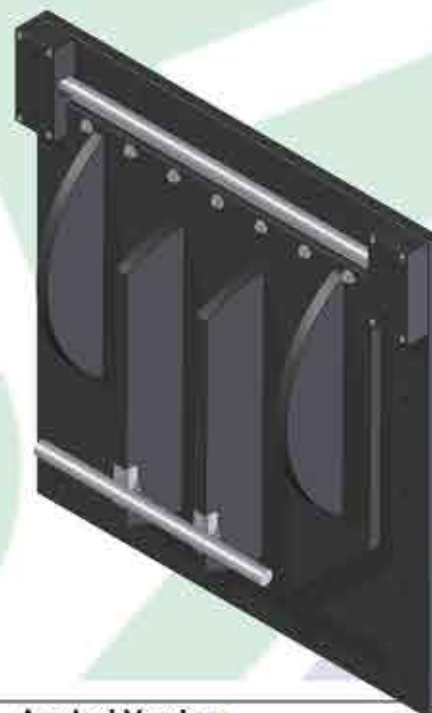
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Flap Valves

KWT Flapvalves are manufactured in HDPE, which has a specific density of 0.94, meaning it floats in water. During construction, the flap is fitted with a Stainless Steel ballast weight, which acts to balance the buoyancy of the material, ensuring that the flap closes when there is no flow, but opens with absolute minimum flow when needed. The figures below indicate the differential head between upstream and downstream to open the flapvalve. NOTE: When the flaps are fully submerged, less head differential is required to open the flap due to the natural buoyancy mentioned above.

Standard- Vertical Mounting		
D	Opening Pressure mm(above water)	Opening Pressure mm (submerged)
100	15	5
125	15	5
150	20	10
200	20	10
250	25	15
300	30	20
400	45	20
500	52	28
600	110	42
700	120	45
800	130	47
900	130	50
1000	140	53
1200	155	57
1250	160	60
1500	180	62



Angled Versions		
D	Opening Pressure mm(above water)	Opening Pressure mm (submerged)
100	30	15
125	30	15
150	40	20
200	40	20
250	50	20
300	55	30
400	60	30
500	100	39
600	140	57
700	146	61
800	155	64
900	166	68
1000	172	72
1200	180	77
1250	193	81
1500	206	86

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