

HDPE Flap Valve



A flap valve is a simple, one-way valve used in surface water drainage associated with rivers, estuaries and seawater outfalls.

Flap valves are designed to operate under very low heads of water, in gravity flow applications, at ambient conditions between -65° and +85° C. The valve prevents backwater via a weighted flap placed across the opening of a pipe, tube or duct.

In Flexseal Flap Valves, the flap and back plate are manufactured in HDPE, with a stainless steel 316 hinge-pin, counterweight and attachments. Due to the specific gravity of the HDPE, a stainless steel counterweight is fitted to ensure closure when back-pressure is present; however very low heads of water are required to open the flap, as the design is such that the counterweight balances the flap correctly.

The Flap Valve incorporates a lip seal, to provide the seal between the flap and frame, and also a self-adhesive neoprene seal to install between the frame and wall, which is fitted to prevent leakage.

Flexseal offers wall-mounted flap valves up to and including 1000mm in size and spigot-mounted flap valves up to and including 600mm. Flange-mounted and bespoke flap valves are available on request.

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HDPE Flap Valves

Benefits

- High quality range manufactured in the UK, already supplying to the Environment Agency and Water Companies
- Lighter weight than traditional cast iron flap valves, leading to easier installation and lower installation costs
- Heavy duty HDPE will withstand being struck by rocks and other debris, present in marine and river environments, which would shatter lighter weight plastics
- Waterproof qualities all the way through, not reliant on maintaining an added layer
- Not at risk from theft as no inherent scrap value
- Stainless steel hinges require minimum maintenance
- All models up to DN400 can withstand a constant pressure of 6 mwc as standard
- Technical support available from both the Flexseal and Waterfront Fluid Controls teams
- 25 year minimum life expectancy
- Manufactured to DIN 19569-4
- Our flap valves are supplied in accordance with ISO 9001:2008 requirements.

HDPE Flap Valves - Cracking Head

Standard Flap Valves				Tidal Flap Valves			
Nominal Diameter	Opening Pressure (Cracking Head) Above Water (mm)	Opening Pressure (Cracking Head) Under Water (mm)	Inclination (°)	Nominal Diameter	Opening Pressure (Cracking Head) Above Water (mm)	Opening Pressure (Cracking Head) Under Water (mm)	Inclination (°)
100	10	10	0	100	20	10	10
125	10	10	0	125	20	10	10
150	10	10	0	150	20	10	10
200	10	10	0	200	20	10	10
250	10	10	0	250	20	10	10
300	10	10	0	300	20	10	10
400	10	10	0	400	20	10	10
500	10	10	0	500	20	10	10
600	10	10	0	600	20	10	10
700	75	20	0	700	75	40	10
800	75	20	0	800	75	40	10
900	75	20	0	900	75	40	10
1000	100	30	0	1000	75	40	10

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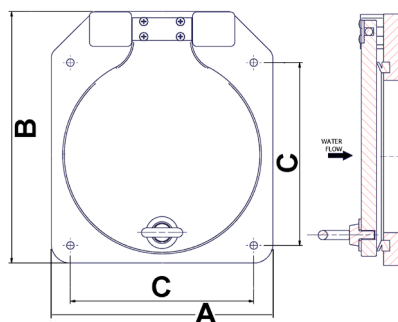
Wall-mounted Flap Valves

Characteristics

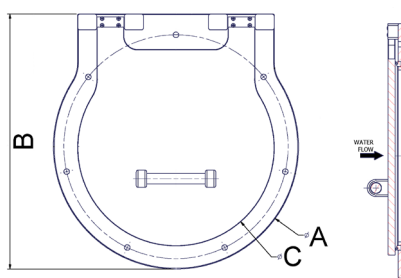
- Sizes available: 125 - 1260mm
- Can be mounted on flat structures of PVC or concrete or onto an internal rounded pit
- Superior mounting kits (available separately) include long bolts for secure installation
- Lip seal between flap and frame, for a watertight seal
- Supplied with self-adhesive neoprene seal

Product Code	Description	A Total Valve Width (mm)	B Total Valve Height (mm)	C Flap width (mm)	Pressure (mwc)	Weight (Kg)
FV100	100mm Wall Mounted Flap Valve	190	230	145	10	1.7
FV125	125mm Wall Mounted Flap Valve	215	255	165	15	2.0
FV150	150mm Wall Mounted Flap Valve	240	280	190	10	2.2
FV200	200mm Wall Mounted Flap Valve	290	330	240	10	2.8
FV250	250mm Wall Mounted Flap Valve	340	380	290	10	3.5
FV300	300mm Wall Mounted Flap Valve	390	430	340	10	4.3

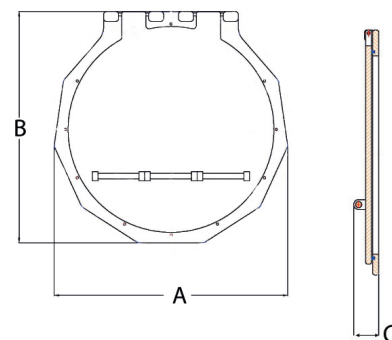
Product Code	Description	A Total Valve Circumf. (Ø)	B Total Valve Height (mm)	C Flap Circumf. (Ø)	Pressure (mwc)	Weight (Kg)
FV400	400mm Wall Mounted Flap Valve	610	640	470	6	9.3
FV500	500mm Wall Mounted Flap Valve	710	740	570	4	12.1
FV600	600mm Wall Mounted Flap Valve	810	855	670	3	15.6



DN100 - 300 version



DN400 - 600 version



DN700 - 1000 version

Product Code	Description	A Total Valve Width (mm)	B Total Valve Height (mm)	C Total Valve Depth (mm)	Pressure (mwc)	Weight (Kg)
FV700	700mm Wall Mounted Flap Valve	960	960	165	4	29
FV800	800mm Wall Mounted Flap Valve	1056	1087	165	3	34
FV900	900mm Wall Mounted Flap Valve	1150	1180	165	2.5	41
FV1000	1000mm Wall Mounted Flap Valve	1274	1274	165	2	47

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Wall-mounted Flap Valves - Mounting Sets

Product Code	Description	Bolts (qty)	Chemical Anchor Capsules (qty)	EPDM Seal (mm)
FVMS100	100mm Flap Valve Mounting Set	4	4	50 x 5 x 700
FVMS125	125mm Flap Valve Mounting Set	4	4	50 x 5 x 900
FVMS150	150mm Flap Valve Mounting Set	4	4	50 x 5 x 1000
FVMS200	200mm Flap Valve Mounting Set	4	4	50 x 5 x 1100
FVMS250	250mm Flap Valve Mounting Set	4	4	50 x 5 x 1300
FVMS300	300mm Flap Valve Mounting Set	4	4	50 x 5 x 1600
FVMS400	400mm Flap Valve Mounting Set	6	6	50 x 5 x 1800
FVMS500	500mm Flap Valve Mounting Set	6	6	50 x 5 x 2100
FVMS600	600mm Flap Valve Mounting Set	8	8	50 x 5 x 2500
FVMS700	700mm Flap Valve Mounting Set	8	8	50 x 5 x 3000
FVMS800	800mm Flap Valve Mounting Set	10	10	50 x 5 x 3400
FVMS900	900mm Flap Valve Mounting Set	10	10	50 x 5 x 3900
FVMS1000	1000mm Flap Valve Mounting Set	12	12	50 x 5 x 4400

Mounting Sets include:

- M8 capsules & fixings for DN100-300 sizes or M12 capsules & fixings for DN400 sizes and larger;
- Chemical resin capsules;
- Stainless Steel 1.4401 (316) anchor fixings;



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Spigot-mounted Flap Valves

Characteristics

- Sizes available: 125 - 600mm
- Flap valve pushes into host pipe
- Supplied with self-adhesive neoprene seal, to install onto spigot
- Also available: angled spigot-mounted flap valves to prevent chattering in marine applications



Product Code	Description	H (mm)	W (mm)	D (mm)	Weight (Kg)
FV125S	125mm Spigot Mounted Flap Valve	255	215	250	4
FV150S	150mm Spigot Mounted Flap Valve	280	240	250	4
FV200S	200mm Spigot Mounted Flap Valve	330	290	250	5
FV225S	225mm Spigot Mounted Flap Valve	380	340	250	7
FV250S	250mm Spigot Mounted Flap Valve	380	340	250	7
FV300S	300mm Spigot Mounted Flap Valve	430	390	250	8
FV350S	350mm Spigot Mounted Flap Valve	640	610	250	11
FV400S	400mm Spigot Mounted Flap Valve	640	610	250	11
FV450S	450mm Spigot Mounted Flap Valve	740	710	250	14
FV500S	500mm Spigot Mounted Flap Valve	740	710	250	14
FV600S	600mm Spigot Mounted Flap Valve	850	810	250	18

Other flap valves available from Flexseal



Flange-mounted flap valves



Bespoke flap valves



Fish-friendly flap valves

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