



HMWPE

FLAP VALVES

ENGINEERED FOR STORMWATER RELIABILITY

4" - 24" Range

Covers common outfall diameters across stormwater systems.

Wall or Spigot Mounting

Simplifies specifying across structures and pipe-end connections.

HMWPE Construction

Durable, lightweight, and resistant to corrosion and chemicals.



WATER MANAGEMENT



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FLAP VALVES

SPIGOT & WALL MOUNT

FEATURES

SPEC-FRIENDLY SIZING

Covers the most common municipal outfall and drainage diameters.

RIGHT FIT, RIGHT MOUNT

Wall Mount + Spigot Mount options for headwalls, pipe ends, and retrofits.

QUICK, CONSISTENT SEALING

Co-extrusion seal installs clean—no added tapes or sealants.

EXCEEDS CLASS 5 PERFORMANCE

Surpasses the leakage rate requirements of DIN 19569-4 and BS 7775.

BUILT FOR THE LONG RUN

Marine grade 316 stainless steel hardware engineered for long service life.

DESIGN & PERFORMANCE

Cracking Head Pressure

Nominal Diameter	Wall Mounted		Spigot Mounted	
	Maximum Opening Pressure (Cracking Head) Above Water* (in)	Inclination (°)	Maximum Opening Pressure (Cracking Head) Above Water* (in)	Inclination (°)
4"	0.04	0	0.08	10
6"	0.04	0	0.08	10
8"	0.03	0	0.08	10
10"	0.03	0	0.08	10
12"	0.03	0	0.08	10
14"	0.03	0	0.08	10
15"	0.03	0	0.08	10
16"	0.03	0	0.08	10
18"	0.03	0	0.09	10
20"	0.03	0	0.1	10
21"	0.03	0	0.11	10
24"	0.06	0	0.11	10

* These values do not take into account any disturbing external factors such as currents or bulky debris.

Flap Valve Characteristics

Integrated Handle

For easier handling and installation



EPDM Co-Extrusion Seal

(Flap Valves below 6" consist of an EPDM front seal and a rear EPDM sponge gasket)



HMWPE Benefits

- Superior impact and weather resistance, engineered for long-term outdoor exposure, debris strikes, and ice-loading conditions in cold climates.
- Enhanced abrasion and stress crack resistance supports long-term durability in cyclic loading and sediment-laden flows.
- Won't rust, pit, or seize, ideal for corrosive outfall environments and submerged, tidal, and maritime installations.
- Broad chemical resistance to compounds commonly found in stormwater, wastewater, and combined sewer overflow (CSO) environments, with UV-stable material that helps resist sun-related degradation.
- Lightweight versus cast iron or stainless designs, supporting safer handling, easier installation, and reduced installed cost, while low scrap value helps reduce theft risk at accessible sites.

Product Specifications

Fernco HMWPE Flap Valves	
Product Code(s)	FVXXX, FVSXXX
Description	Wall & Spigot Mounted Flap Valves
Size Range	4" to 24"
Materials	<ul style="list-style-type: none"> • Body/Backplate: HMWPE • Seal: EPDM (BS EN 681-1:1996) • Counterweight & Hardware: 316 SS • Hinges and Other Components: Glass-filled nylon (GFN)
Standards	Exceeds the leakage rate and manufacturing requirements of BS 7775 and Class 5 of DIN 19569-4.
Recommended Max Temperature	Constant 120°F Intermittent 180°F



(810) 503-9000

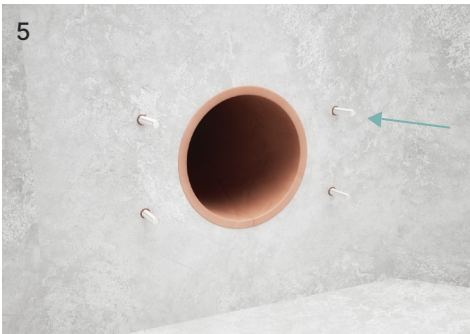
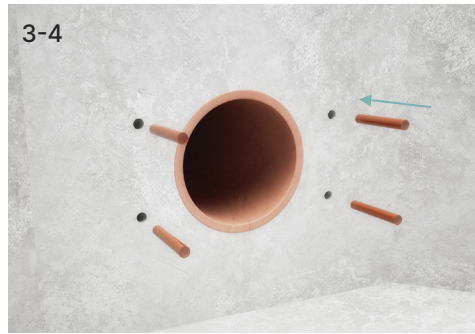
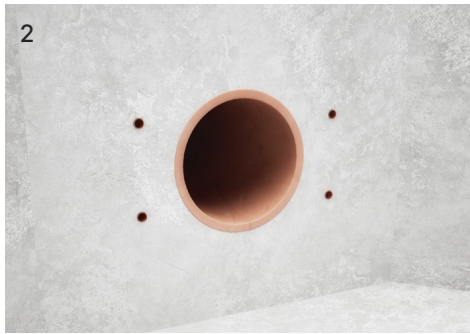
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WALL MOUNTED FLAP VALVES



Installation Guide

1. Position the Flap Valve against the wall in the desired mounting location, ensuring the hinges are at the 12-o'clock position. Use a level to confirm the Flap Valve is straight, then mark the drilling locations using the wall mounting holes.
2. Remove the Flap Valve and drill the marked holes using a suitable drill. Use the drill bit size as shown in the table below. Drill to the hole depth indicated in the table below.
3. Clean all dust and debris from the drilled holes and the wall surface.
4. Insert the chemical capsules into each hole.
5. Using a suitable drill, drive the supplied bolts into the holes and chemical capsules until the full hole depth is reached. Detach the drill from the bolt and remove any excess residue around the hole. Allow the chemical to cure; curing time is shown in the table below.
6. Place the Flap Valve over the bolts, then install the supplied washers and nuts. Tighten to the recommended torque shown in the table below.

Wall Mounting Kit Installation Requirements

Bolt Size	Drill Bit Required	Drilled Depth	Recommended Torque
M8	10 mm	3.15 in (80 mm)	35 in-lbs
M12	14 mm	3.94 in (100 mm)	70 in-lbs

Chemical Capsule Cure Time

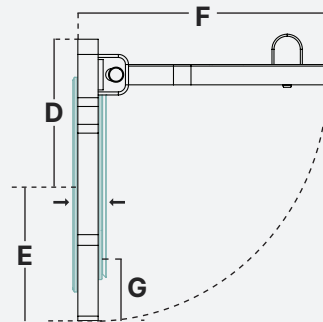
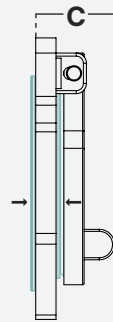
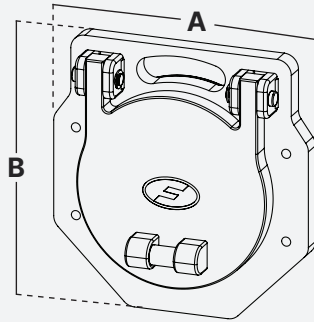
Temp	5°F to 14°F	15°F to 23°F	24°F to 32°F	33°F to 41°F	42°F to 50°F	51°F to 68°F	69°F to 86°F	87°F to 104°F
Cure Time	30 hr	16 hr	10 hr	45 min	30 min	20 min	5 min	3 min

Wall Mounted Flap Valves

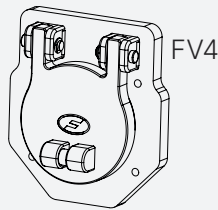
Technical Specifications



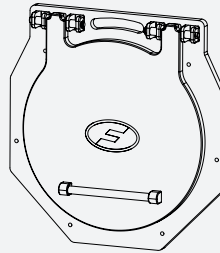
FV6



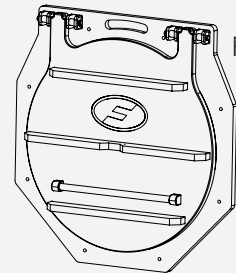
EPDM Co-Extrusion Seal (FV6+)



FV4



FV15



FV24

Product Code	Pipe Size (in)	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	G (in)	Mounting Hole PCD (in)	Head Pressure (ft)	Weight (lbs)
FV4	4	8.32	9.23	3.00	5.08	4.17	8.07	2.20	7.20	25.0	3.20
FV6	6	10.78	11.43	3.07	6.06	5.39	9.73	2.44	9.45	25.0	4.60
FV8	8	13.39	13.72	3.07	7.05	6.69	11.71	2.80	12.28	25.0	6.40
FV10	10	14.90	15.40	3.05	7.95	7.48	13.56	2.56	13.78	25.0	7.90
FV12	12	16.87	17.39	3.05	8.98	8.43	15.55	2.56	15.75	25.0	9.70
FV14*	14	21.40	22.22	3.11	11.53	10.70	20.54	2.82	20.28	25.0	15.43
FV15*	15	21.40	22.22	3.11	11.53	10.70	20.54	2.82	20.28	25.0	15.43
FV16*	16	23.37	24.19	3.11	12.51	11.68	22.49	2.82	22.24	25.0	17.64
FV18*	18	25.53	26.26	3.11	13.49	12.77	24.47	2.92	24.41	25.0	22.05
FV20*	20	29.67	29.31	2.84	14.50	14.81	26.35	3.97	28.54	25.0	28.66
FV21*	21	29.67	30.30	3.05	15.46	14.83	28.35	3.02	28.54	25.0	30.86
FV24*	24	35.24	40.58	5.27	22.96	17.62	37.83	3.84	33.46	25.0	81.57

* **Special Order:** Lead time and minimum quantities may apply—confirm at time of order.

Ask us about custom sizes

Mounting Sets

Flap Valve	Mounting Holes	Part Code	Description
FV4-FV8	4	FVMS-01-US	Flap Valve Mounting Set A4 Stainless Steel Bolts and Chemical Anchors 4xM8
FV10 - FV12	5	FVMS-02-US	Flap Valve Mounting Set A4 Stainless Steel Bolts and Chemical Anchors 5xM8
FV14 - FV16	6	FVMS-03-US	Flap Valve Mounting Set A4 Stainless Steel Bolts and Chemical Anchors 6xM8
FV18 - FV21	8	FVMS-04-US	Flap Valve Mounting Set A4 Stainless Steel Bolts and Chemical Anchors 8xM8
FV24	14	FVMS-06-US	Flap Valve Mounting Set A4 Stainless Steel Bolts and Chemical Anchors 14xM12

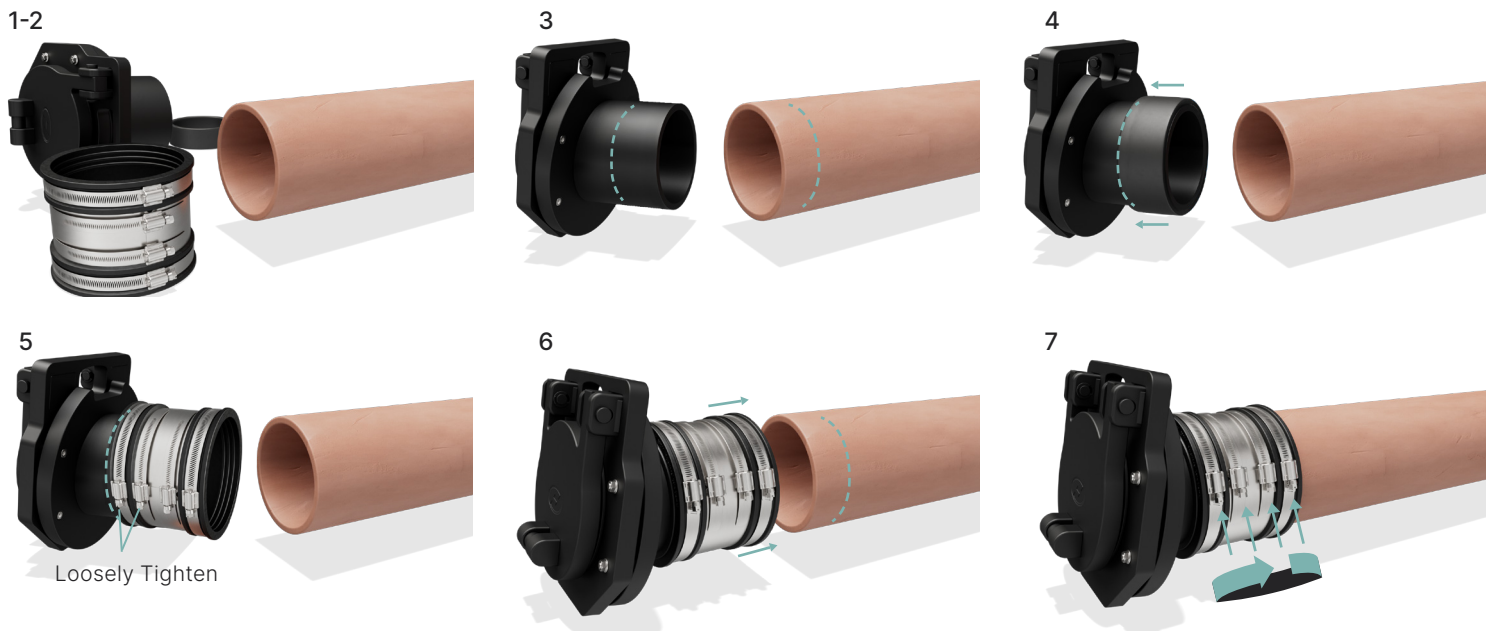
FVMS-01-US





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Installation Video

SPIGOT MOUNTED FLAP VALVES



Installation Guide

1. Ensure the pipe has a straight, square end.
2. Clean the outside surface of the pipe so it's smooth and free of dirt, scale, or debris—this helps the coupling seal properly.
3. Measure the coupling width and mark half of that measurement on both the Flap Valve spigot and the connecting pipe.
4. If using a bushing, slide the bushing onto the Flap Valve spigot until the edge of the bushing is flush with the marked line.
5. Slide the Fernco Strong Back RC coupling over the bushing until the end faces are flush, then hand-tighten the end clamp. If no bushing is required, slide the Strong Back RC coupling onto the spigot until the edge of the coupling is flush with the marked line, then hand-tighten the end clamp.
6. Butt the Flap Valve spigot up to the main pipe. The coupling should now align with the line previously marked on the pipe. Confirm the Flap Valve is oriented correctly (hinge mechanism at the 12 o'clock position), then hand-tighten the remaining end clamp.
7. Tighten all clamp bands to the recommended torque (see coupling label), tightening in sequence across the width of the coupling and starting with the center shear band.

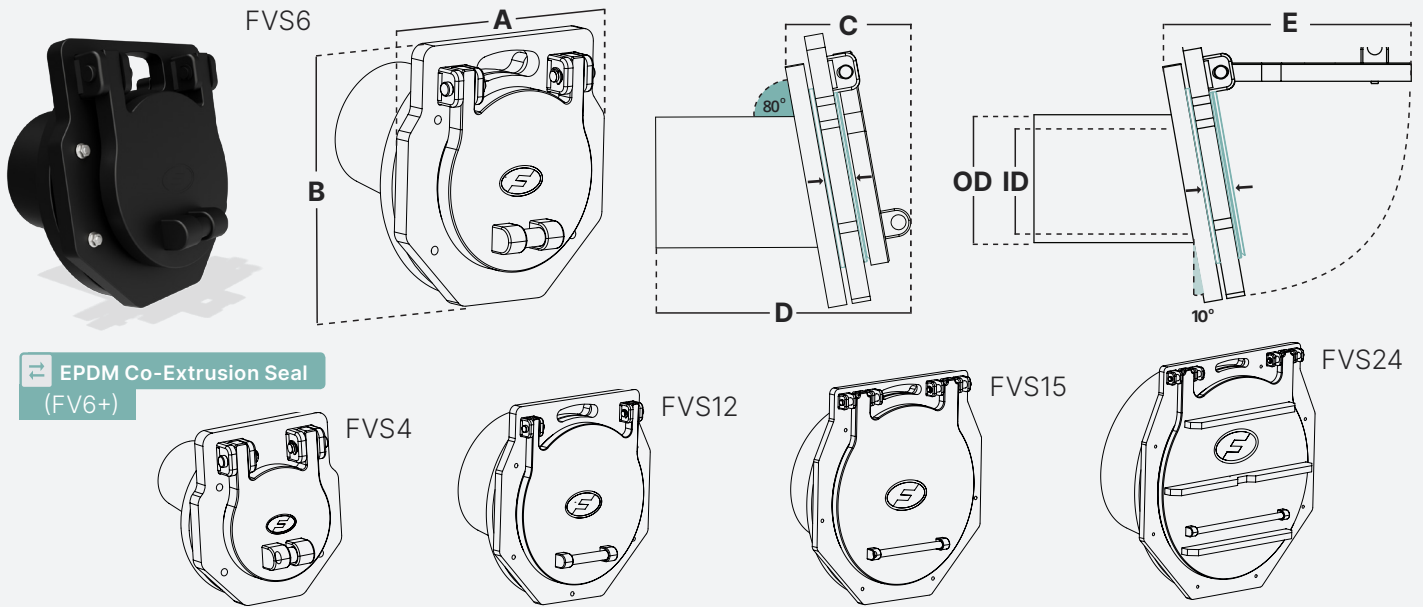
Pipe Material Connection Types

- ABS
- Cast Iron
- Clay
- Concrete
- Corrugated Polyethylene
- Ductile Iron
- HDPE
- SCH. 40 PVC
- SDR-35 PVC
- Steel
- Western Clay

PLEASE NOTE: Spigot mount flap valve selection requires pipe OD and ID. Please confirm both and have them available when contacting Fernco so the correct valve configuration can be specified.

Spigot Mounted Flap Valves

Technical Specifications



Product Code	Pipe Size (in)	Spigot OD (in)	Spigot ID (in)	A (in)	B (in)	C (in)	D (in)	E (in)	Head Pressure (ft)	Weight (lbs)
FVS4	4	4.33	4.00	8.32	9.23	4.91	10.50	9.10	25.0	6.10
FVS6	6	6.30	5.81	10.78	11.43	5.16	10.85	10.83	25.0	10.10
FVS8	8	8.86	8.31	13.39	13.72	5.61	11.08	12.86	25.0	16.30
FVS10	10	11.02	10.35	14.90	15.40	5.35	11.63	14.78	25.0	19.50
FVS12	12	12.40	11.80	16.87	17.39	6.16	11.77	16.71	25.0	23.70
FVS14-1*	14	13.98	13.11	21.40	22.22	6.69	12.27	21.41	25.0	22.05
FVS14-2*	14	15.75	14.76	21.40	22.22	6.69	12.27	21.41	25.0	28.66
FVS15*	15	15.75	14.76	21.40	22.22	6.69	12.27	21.41	25.0	28.66
FVS16-1*	16	15.75	14.76	21.40	22.22	6.69	12.27	21.41	25.0	28.66
FVS16-2*	16	17.72	16.61	23.37	24.19	7.02	14.56	23.49	25.0	33.07
FVS18-1*	18	17.72	16.61	23.37	24.19	7.02	14.56	23.49	25.0	33.07
FVS18-2*	18	19.69	18.46	25.53	26.26	7.23	14.41	25.48	25.0	39.68
FVS20-1*	20	19.69	18.46	25.53	26.26	7.23	14.41	25.48	25.0	39.68
FVS20-2*	20	22.05	20.67	29.67	30.30	7.31	14.94	26.51	25.0	44.09
FVS21*	21	22.05	20.67	29.67	30.30	7.31	14.94	26.51	25.0	44.09
FVS24*	24	24.80	23.27	30.65	31.38	7.49	14.64	29.27	25.0	57.32

* **Special Order:** Lead time and minimum quantities may apply—confirm at time of order.

Spigot Mount: Specify Required Coupling

Spigot mount flap valves are sold separately from the **Fernco Strong Back RC shielded coupling** required to complete the installation and provide a rigid, shear-resistant connection at the pipe end. Coupling selection is based on the pipe's outside diameter (OD), with pipe material used for confirmation. Select sizes 14" and larger are offered in separate versions to accommodate the OD differences between iron pipe (IPS) and ductile iron pipe (DIPS). When contacting Fernco, reference the individual cut sheets and provide pipe OD, ID, and material so the correct valve and coupling configuration can be specified for purchase through distribution.





WATER MANAGEMENT

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