



WATER MANAGEMENT

DOCUMENT CONTROL

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SUBMITTAL PACKAGE

HMWPE Flap Valves

Wall Mount Configurations

PROJECT INFORMATION

Project: _____

Location: _____

Engineer / Consultant: _____

Contractor: _____

Submitted By: _____

Submitted To: _____

Date: ___ / ___ / ____

Submittal No.: _____

PRODUCT SUMMARY

Product Family: Fernco HMWPE Flap Valves

Configurations: Wall mount

Size Range: 4"-24"

Materials: HMWPE body; stainless steel hardware (see cut sheets)

Standards: See included documentation

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1. Features and Product Overview
2. Design and Performance
3. Technical Specifications
4. Cut Sheets and Dimensional Drawings
5. Installation Instructions
6. Inspection and Maintenance
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FLAP VALVES

WALL MOUNT



FEATURES

PASSIVE BACKFLOW PROTECTION

Allows discharge under normal flow and closes against reverse flow conditions.

WALL-MOUNT CONFIGURATION

Mounts to headwalls and flat structures at stormwater outfall terminations.

EXCEEDS CLASS 5 PERFORMANCE

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

DURABLE MATERIALS

HMWPE body with 316 stainless steel hardware for long-term service.

PRODUCT OVERVIEW

Fernco Water Management Wall Mount HMWPE Flap Valves are passive, non-powered backflow devices for stormwater outfalls and drainage discharge points. The valve opens during normal discharge and closes when reverse flow occurs, helping reduce backflow into the upstream system. The wall-mount configuration attaches to headwalls and flat structures and includes an integrated seal designed for clean installation.

DESIGN & PERFORMANCE

Cracking Head Pressure

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

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

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.

Flap Valve Characteristics

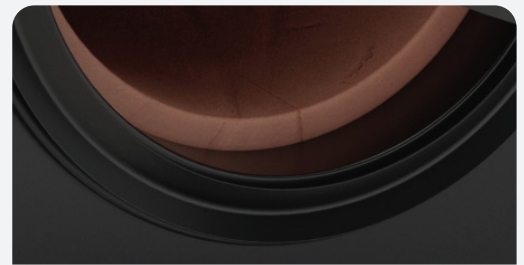
Integrated Handle

For easier handling and installation



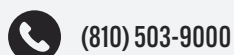
EPDM Co-Extrusion Seal

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



Product Specifications

Fernco HMWPE Flap Valves	
Product Code(s)	FVXXX
Description	Wall 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



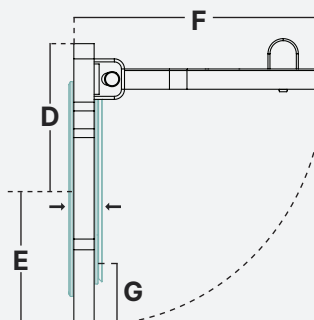
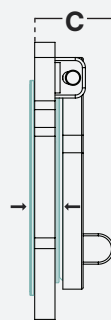
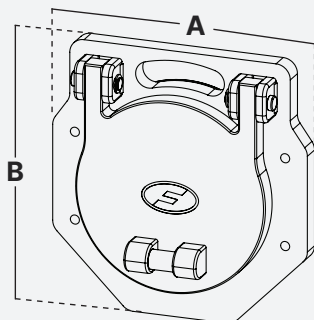
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Wall Mounted Flap Valves

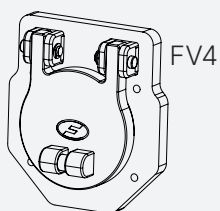
Technical Specifications



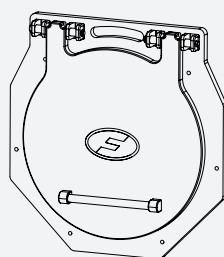
FV6



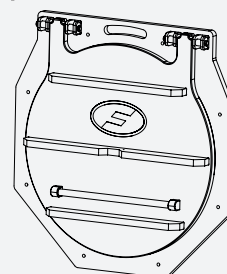
EPDM Co-Extrusion Seal (FV6+)



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

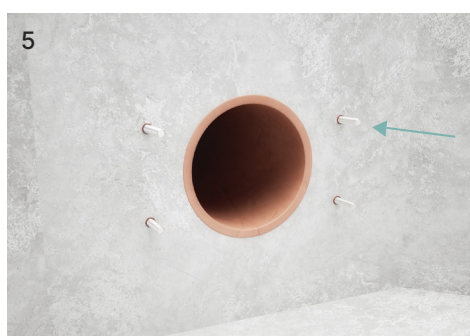
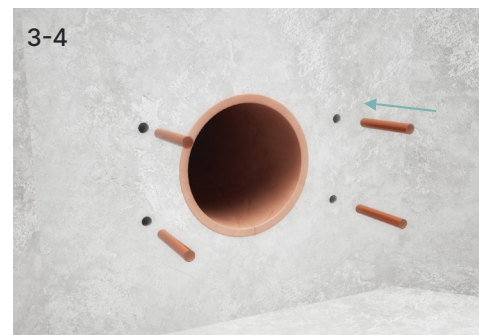
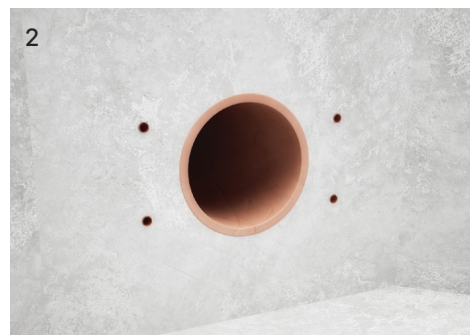
FVMS-01-US





Scan for
Installation Video

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



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INSPECTION & MAINTENANCE

HMWPE WALL MOUNT FLAP VALVES

PURPOSE

Periodic inspection and maintenance help support reliable flap valve operation by keeping the hinge area and sealing surfaces clear of debris and confirming the flap opens and closes freely.

RECOMMENDED FREQUENCY

- After installation and the first significant rain event
- Semi-annually (spring/fall)
- After major storm or flooding events
- More often where debris or sediment buildup is common

INSPECTION CHECKLIST

- Flap opens freely and closes fully
- Debris removed from the flap, hinge area, and sealing surface
- Seal/contact surface shows no damage, wear, or deformation
- Hardware is intact and secure
- Mounting surface and surrounding structure show no damage or deterioration
- Discharge side is clear of obstructions that could restrict closure

CLEANING

- Rinse with water; use a soft brush if needed
- Avoid damaging the sealing surface

SERVICE

- Replace worn or damaged components as required
- Contact Fernco for service parts and technical support

Follow site safety procedures and confined space requirements where applicable.



ORDERING INFORMATION AND CONTACTS

HMWPE Flap Valves

ORDERING AND FULFILLMENT

Fernco supports end users, municipalities, and engineering firms by confirming the correct flap valve configuration and sizing for the application.

SELECTION SUPPORT

To confirm the correct valve configuration and sizing, please provide:

- Configuration: Wall Mount or Spigot Mount
- Nominal size required
- Quantity
- Project location (City, State)

For Wall Mount

- Mounting surface type and available mounting area at the outfall/headwall

For Spigot Mount

- Pipe outside diameter (OD) and pipe inside diameter (ID)
- Pipe material

FULFILLMENT THROUGH DISTRIBUTION

Products are fulfilled through Fernco's network of authorized distributors and wholesalers. Fernco can coordinate ordering through a local authorized dealer, or the customer may purchase through their preferred Fernco distributor or wholesaler.

CONTACTS

Customer Service (General Information and Support)

Email: customer.service@fernco.com

Phone: (810) 503-9000

Technical Support (Sizing and Configuration)

Email: tyler.keller@fernco.com

Sales Support (Distributor Coordination)

Company: _____

Email: _____

Phone: _____

Web Resources



Scan to access submittals, installation instructions, and product resources.