



WATER MANAGEMENT

DOCUMENT CONTROL

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SUBMITTAL PACKAGE

HMWPE Flap Valves

Spigot 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: Spigot mount

Size Range: 4"-24"

Materials: HMWPE body; stainless steel hardware, Strong Back RC coupling (see cut sheets)

Standards: See included documentation

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2. Design and Performance
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4. Cut Sheets and Dimensional Drawings
5. Installation Instructions
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FLAP VALVES

SPIGOT MOUNT



FEATURES

PASSIVE BACKFLOW PROTECTION

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

SPIGOT MOUNT CONFIGURATION

Installs at the pipe end for outfalls and discharge points where wall mounting is not used.

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 HMWPE Spigot Mount 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 to help reduce backflow into the upstream system. The spigot-mount configuration installs at the pipe end and is selected by pipe OD, with pipe ID recommended to confirm fit and specify the correct configuration.

DESIGN & PERFORMANCE

Cracking Head Pressure

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

* 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)	FVSXXX
Description	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

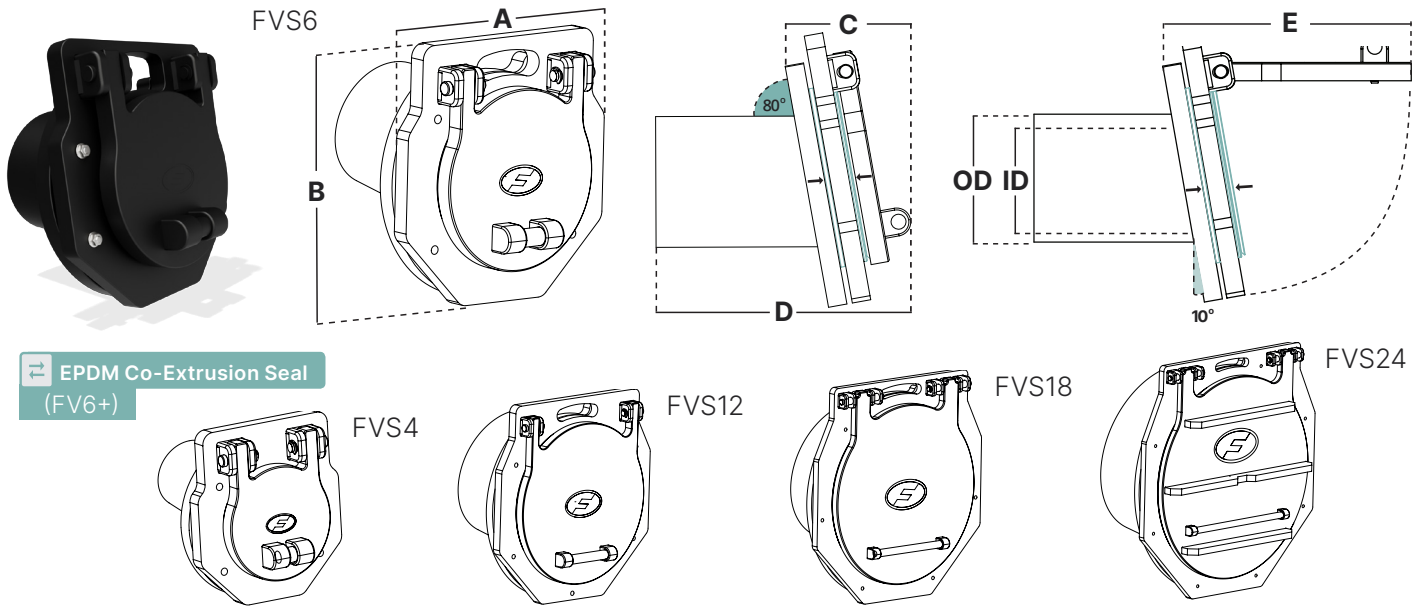
www.fernco.com



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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

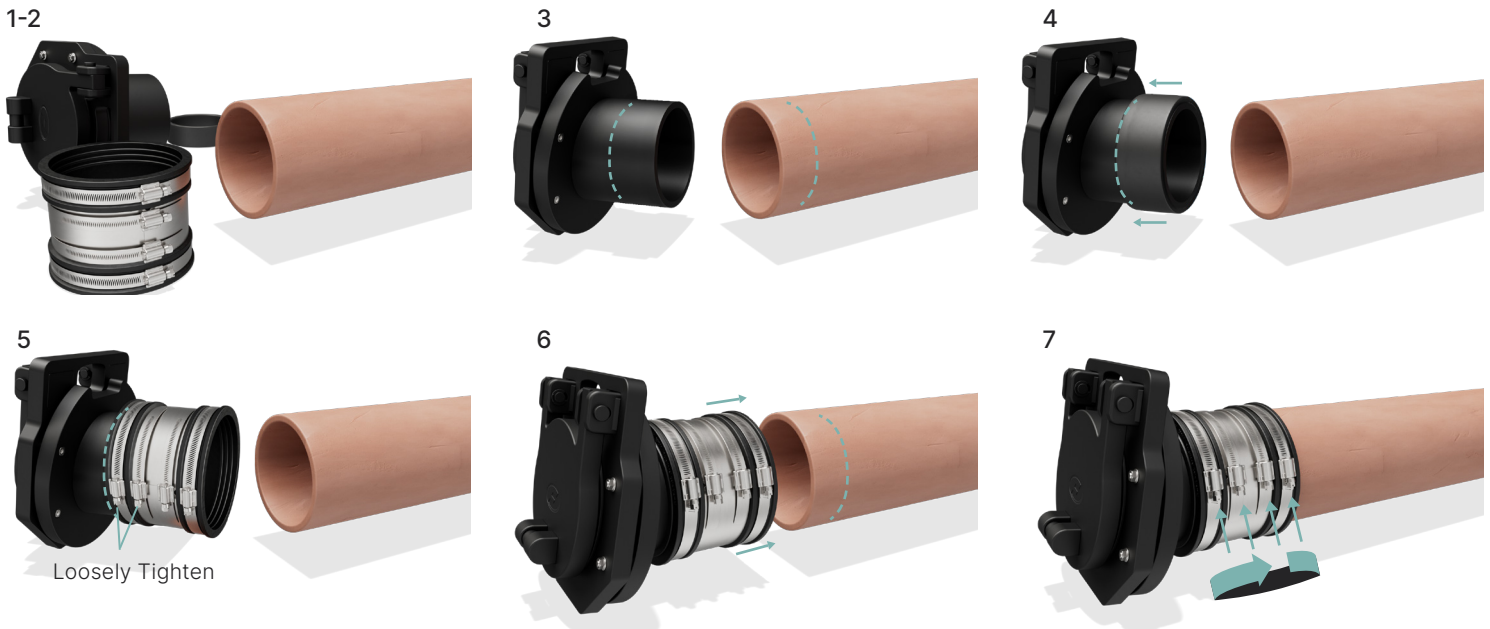
Spigot-mount flap valves are sold separately from the connecting **Fernco Strong Back RC shielded coupling**, which is required to complete the installation and provide a rigid, shear-resistant connection at the pipe end. Coupling selection is based on the pipe's outside diameter (OD), with pipe material used for confirmation. Select sizes 14" and larger are offered in two versions to accommodate the OD and ID differences between iron pipe and ductile iron pipe — typically a -1 for iron and -2 for ductile, though these are not absolutes. Reference the individual cut sheets and provide pipe OD, ID and material when contacting Fernco so the correct valve and coupling configuration can be specified for purchase through distribution.





Scan for
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.



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INSPECTION & MAINTENANCE

HMWPE SPIGOT 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.