

PLASTIC FOOT VALVES

Foot valves are also referred to as one-way or non-return valves. Foot valves are commonly used with shallow/deep well jet, piston, centrifugal pump installations and various other applications. Their purpose is to prevent reverse flow and maintain system pressure in pressurized pumping systems. They are installed on the end of the suction line of any suction pump. The foot valve not only prevents fluid / water from flowing backward when the pump is off, the valve also keeps the fluid trapped in the suction pipe when the pump stops, sustaining the prime for the pump, and preventing pump burnout. Foot valves work automatically, opened by the pump's suction pulling the valve poppet/flapper open against a low tension spring or with gravity, normally ½ PSI or less cracking pressure (cracking pressure is the pressure it takes to open the valve). When the pump stops, the valve starts closing automatically with assistance of the spring or gravity as the flow slows, and is completely sealed before it comes to a full stop. This eliminates flow reversal which would cause the poppet/flapper to slam against the seat causing hydraulic shock or water hammer. Without a foot valve, gravity would cause the water or fluid to flow in the reverse direction resulting in the loss of prime and system pressure.



Available in
3/4"-2" sizes



Available in 2-1/2"-6"
sizes



Available in
3/8" and 1/2"
sizes

***When selecting a valve it is crucial to maintain flow velocity that does not exceed 5-7 feet per second.**

****In horizontal applications, check for "This side up" and place at the top and centered when installed****

**For use with ASTM-D2239
Polyethylene (PE) pipe**

Flow Rate/Velocity Chart For Foot Valve Selection*					
Nominal		Min 5ft./sec.		Max 7ft./sec.	
in	mm	GPM	LPM	GPM	LPM
3/4	19.05	7.00	26.50	9.00	34.07
1	25.40	13.00	49.21	17.00	64.35
1-1/4	31.75	19.00	71.92	27.00	102.21
1-1/2	38.10	28.00	105.99	39.00	147.63
2	50.80	49.00	185.49	69.00	261.19
2-1/2	63.50	77.00	291.48	107.00	405.04
3	76.20	110.00	416.40	154.00	582.95
4	101.60	196.00	741.94	274.00	1037.20
6	152.40	441.00	1669.37	617.00	2335.60

Flow Coefficient (CV) is the flow rate through a valve in the fully open position, which will produce a differential pressure of 1 PSI.

It is defined as the volume of water in US gallons per minute (GPM) at 60°F (15.5°C)

TEMPERATURE CORRECTION FACTOR FOR PVC VALVES

As temperature increases, working pressure decreases. The optimal working pressure for PVC valves is 150 PSI @ 73°F (22°C)

If the temperature increases above 73°F (22°C), use the PVC correction factor to determine working pressure.

Multiply the maximum working pressure by the correction factor.

Temperature	73°F (22°C)	90°F (32°C)	100°F (38°C)	110°F (44°C)	120°F (49°C)	130°F (54°C)	140°F (60°C)	150°F (66°C)
PVC Correction Factor	1.00	0.75	0.62	0.50	0.40	0.30	0.22	Not Recommended

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193D SERIES - POPPET TYPE PLASTIC FOOT VALVES (SPRING ASSIST CLOSING)

FEATURES:

- One piece polyacetal plastic body and integral strainer
- 60% open area
- Spring loaded poppet check design for positive sealing and low headloss
- Stainless steel spring for corrosion resistance
- Replaceable seal to simplify maintenance
- Low headloss

SPECIFICATIONS:

- One-piece Polyacetal body and strainer
- FPT threads conform to ASME /ANSI B1.20.1 Pipe Threads, General Purpose, Inch
- Stainless steel spring and hardware
- FKM Sealing Gasket ensures a positive seal

CERTIFICATIONS:

- NSF/ANSI Standard 372 Certified (Drinking Water System Components - Lead Content)

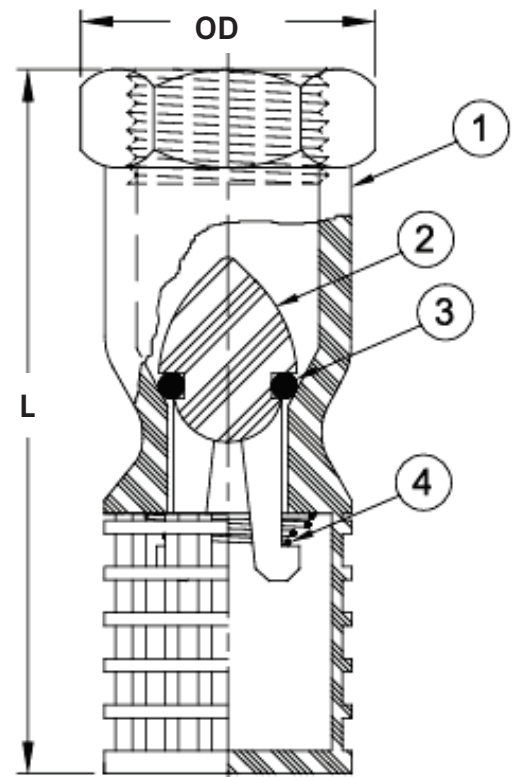
RATINGS:

- Max Pressure Rating: 150 PSI (10 bar) (For anything over 150 PSI @ 73°F, refer to the Temperature Correction Factor Chart)
- Cracking Pressure is equal to or less than 1/2 PSI
- Max temperature rating: 140°F (60°C)

MATERIAL LIST		
No	Part Name	Material
1	Body	Polyacetal
2	Poppet	Polyamid
3	Seal	Fluoroelastomer (FKM)
4	Spring	304 Stainless Steel

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**FLOMATIC®
VALVES**



DIMENSIONS									
Part No.	Size	Connection	Flow Coefficient (CV)	L		OD		Weight	
				in	mm	in	mm	lbs	grams
175619	3/8"	FPT	1	2.32	58.93	0.91	23.11	0.03	13.61
175620	1/2"		2.8	2.32	58.93	0.95	24.13	0.04	18.14

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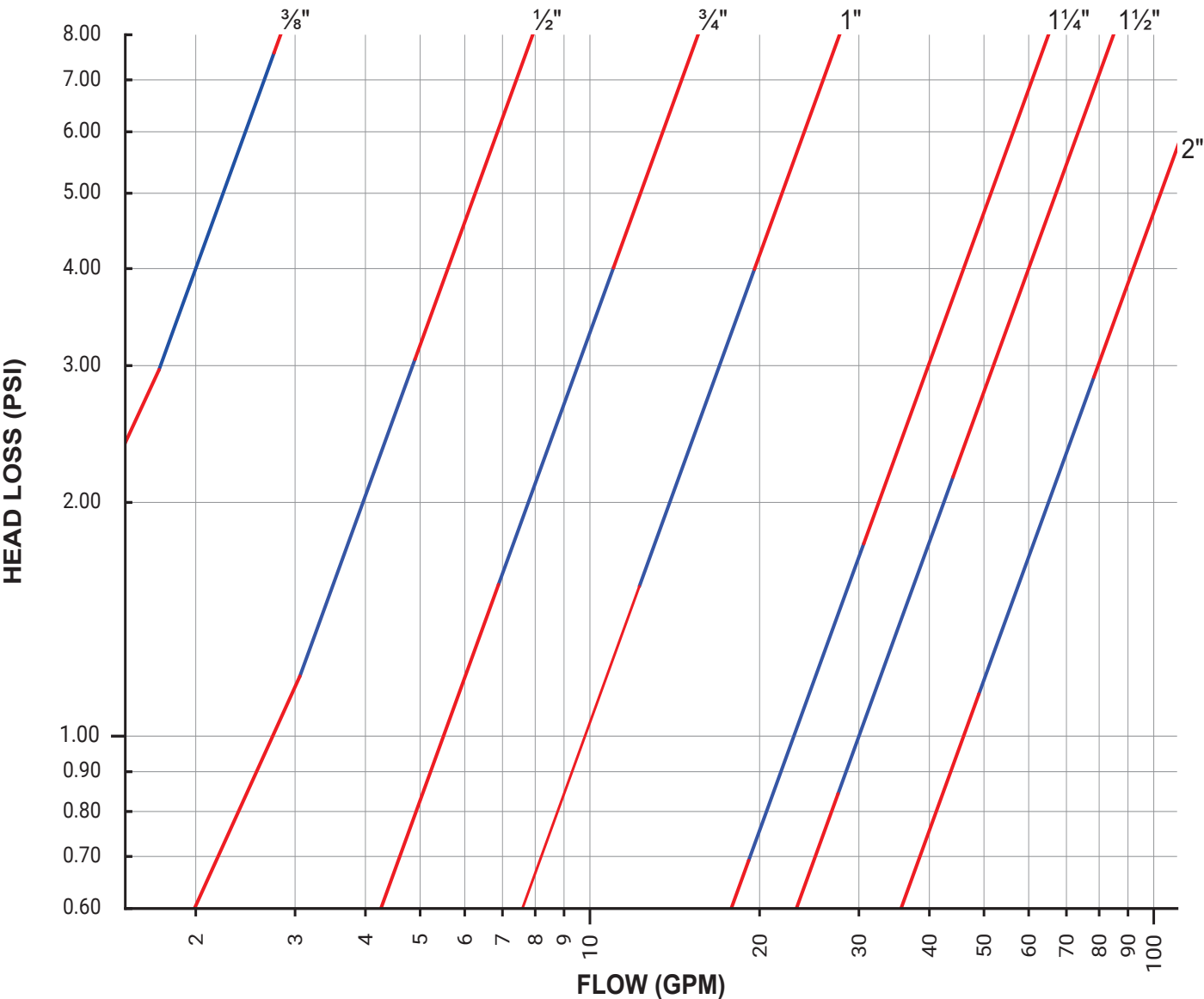
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Head Loss Chart - Model 193D



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