FIG. 78FP Fire Check Valve

GRUVLOK®

The Gruvlok® 78FP UL/ULC Listed and FM Approved Check Valve is a compact, cost effective valve, designed for use in grooved-end pipe fire protection systems and related equipment. Valves are to be used in conjunction with grooved pipe and pipe couplings that are listed or approved for fire protection systems.

c UL us LISTED FM APPROVED

For Listings/Approval Details and Limitations, visit our website at www.anvilintl.com or contact an Anvil® Sales Representative.

PRESSURE RATING:

2" through 12" 78FP UL/FM Check Valves have a maximum working pressure of 300 PSI (20.7 bar).

DESIGN FEATURE:

The clapper design produces quick, non-slam closure before flow reversal can occur, providing a leak free sealing of back pressures as low as 1 PSI (0.07 bar) equivalent to 28" water head. Meets FM requirements for anti-water-hammer check valves.

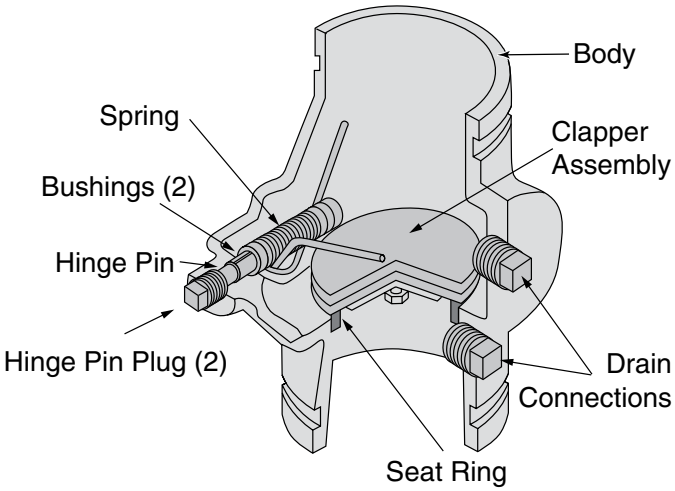
APPLICATIONS:

- Fire Department pumper to sprinkler systems
- Public water supplies to automatic sprinkler systems
- Fire pump discharges and by-pass
- Gravity and pressure tanks

INSTALLATION:

The 78FP UL/FM Check Valves can be installed vertically or horizontally. In a horizontal installation the Hinge Pin is to be located on top. Proper installation and maintenance should be in accordance to Gruvlok specifications, as well as being in compliance with the applicable standards of the National Fire Protection Association.

MATERIAL SPECIFICATIONS



BODY: Ductile Iron conforming to ASTM A 536, Grade 65-45-12

COATINGS: Rust inhibiting orange enamel paint on exterior and interior surfaces.

CLAPPER: 2"- 5" Type 304 or 302 stainless steel to ASTM A 167
6"- 8" Ductile iron conforming to ASTM A 536, Grade 65-45-12.

CLAPPER FACING: Grade "E" EPDM
-40°F to 230°F (Service Temperature Range)(-40°C to 110°C)
Recommended for water service, diluted acids, alkaline solutions, oil-free air and many chemical services.
NOT FOR USE IN PETROLEUM APPLICATIONS.

SEAT RING: Type 304 stainless steel to ASTM A 312

SPRING: Type 302 stainless steel to ASTM A 313

HINGE PIN: Type 304 or 302 stainless steel to ASTM A 580

HINGE PIN BUSHINGS: Sintered bronze to ASTM B 438

HINGE PIN PLUGS AND DRAIN PLUGS: Cast iron to ASTM A 126 Class A

PROJECT INFORMATION	APPROVAL STAMP
Project:	☐ **Approved**
Address:	☐ **Approved as noted**
Contractor:	☐ **Not approved**
Engineer:	**Remarks:**
Submittal Date:	
Notes 1:	
Notes 2:	

FIG. 78FP Fire Check Valve

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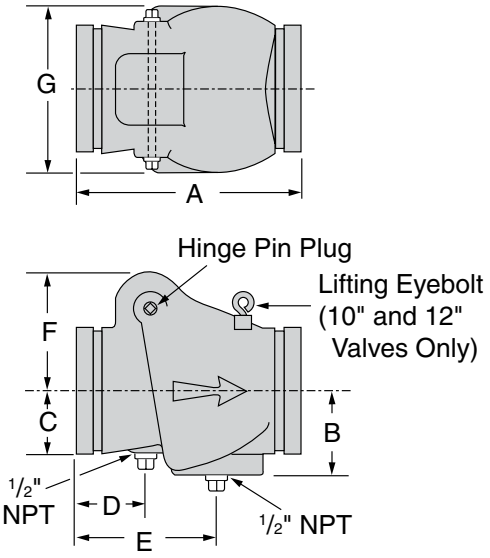


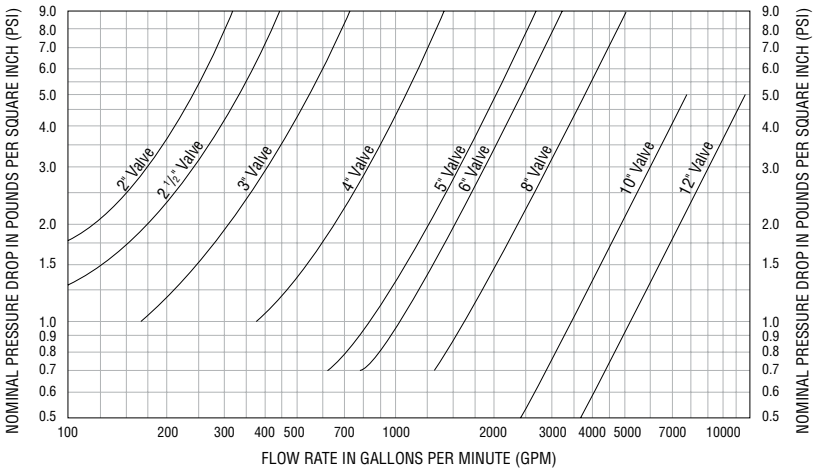
78FP UL/FM GRUVLOK CHECK VALVE

Valve Size	O.D.	Nominal Dimensions							Approx. Wt. Ea.
		A	B	C	D	E	F	G	
In./DN(mm)	In./mm	In./mm	In./mm	In./mm	In./mm	In./mm	In./mm	In./mm	Lbs./Kg.
2 50	2.375 60.3	6¾ 171	2⅜ 60	1 1/16 36	1¾ 44	4½ 114	3 3/16 81	4⅜ 111	7.5 3.4
2½ 65	2.875 73.0	7¼ 184	2 7/16 61	1 9/16 39	1¾ 44	3 13/16 96	3⅝ 92	4½ 114	10.5 4.8
3 80	3.500 88.9	7¾ 197	2⅝ 67	2 51	1 13/16 46	4 1/16 103	3 11/16 93	4 15/16 125	11.5 5.2
4 100	4.500 114.3	8⅛ 206	3⅛ 79	2¼ 57	2½ 64	5 1/16 128	4¼ 108	6 152	13.5 6.1
5 125	5.563 141.3	9¾ 248	3½ 89	2¾ 70	2 7/16 61	5 13/16 147	4⅝ 117	6¾ 171	19.0 8.6
6 150	6.625 168.3	12¾ 324	4¼ 108	3 5/16 84	3⅛ 79	6¼ 159	6¾ 171	8½ 216	33.5 15.2
8 200	8.625 219.1	14⅜ 365	5 1/16 128	3 15/16 100	4 102	5 15/16 150	8 203	10¼ 260	59.0 26.8
10 250	10.750 273.1	18 457	6 5/16 160	4 15/16 125	4 9/16 115	6⅞ 175	9 3/16 233	12 11/16 322	130.0 59.0
12 300	12.750 323.9	21 533	7 5/16 185	6 152	5 1/16 128	7¼ 184	10⅜ 264	14¾ 375	183.0 83.0

FLOW DATA - FRICTION LOSS (FT. OF PIPE)

Valve Size	O.D.	C=100			C=120		
		Sch. 10	Sch. 30	Sch. 40	Sch. 10	Sch. 30	Sch. 40
In./mm	In./mm	Ft./m	Ft./m	Ft./m	Ft./m	Ft./m	Ft./m
2 50	2.375 60.3	10 3.0	— —	8 2.4	14 4.3	— —	11 3.4
2½ 65	2.875 73.0	14 4.3	— —	10 3.0	20 6.1	— —	15 4.6
3 80	3.500 88.9	17 5.2	— —	12 3.7	23 7.0	— —	17 5.2
4 100	4.500 114.3	17 5.2	— —	13 4.0	23 7.0	— —	18 5.5
5 125	5.563 141.3	14 4.3	— —	11 3.4	20 6.1	— —	15 4.6
6 150	6.625 168.3	23 7.0	— —	19 5.8	33 10.1	— —	26 7.9
8 200	8.625 219.1	35 10.7	32 9.8	30 9.1	50 15.2	45 13.7	43 13.1
10 250	10.750 273.1	28 8.5	25 7.6	24 7.3	40 12.2	36 11.0	34 10.4
12 300	12.750 323.9	31 9.4	28 8.5	26 7.9	44 13.4	39 11.9	37 11.3

Friction Loss Series 78FP Check Valve (Water at 65°F)



FLOW DATA:

The approximate friction losses, based on the Hazen and Williams formula, expressed in equivalent length of pipe is given below. The friction losses have been calculated on the basis of flow rates typically used with each size valve.

IMPORTANT NOTE:

Check valve life may be shortened and system damage may occur if check valves are installed too close to a source of unstable flow.

Check valves must be installed at a reasonable distance away from pumps, elbows, expanders, reducers or other similar devices. Sound piping practices dictate a minimum of five (5) times the pipe diameter for general use. Distances between three (3) and five (5) diameters are allowable provided the flow velocity is less than 8 feet per second. Distances less than 3 diameters are not recommended.

Not for use in copper systems.