

# BERMAD BASKET STRAINER WITH IN-LINE FLUSHING VALVE

## Model FP-60F-DV-250

The BERMAD FP-60F-250-DV Basket Strainers are intended to be installed in fire protection pipelines primarily to prevent the clogging of fire sprinkler nozzles and other debris sensitive components in water based or foam fire systems.

The BERMAD FP-60F-250-DV is designed for in-line maintenance with a large diameter flushing valve installed at the flushing outlet, for easy screen cleaning, and when needed a simple screen basket extraction, requiring only cover removal.

The ratio of the FP-60F-250 strainer's basket screen area to the inlet pipe area is more than 10:1, ensuring continued system performance, a low pressure drop and longer intervals between cleaning.

NFPA 11, 13, 15 and 16 standards state that listed strainers shall be provided in the main pipeline of all systems using nozzles where the water is likely to contain obstructive material.



### Features & Benefits

- UL-Listed and ULC size
- Low Pressure Drop
- Quick and easy maintenance
- Clogging Prevention
- Large Screen Basket
- For Use with Corrosive Fluids and Harsh Environments
- Suitable for Potable or Municipal Potable-Water

### Typical Applications

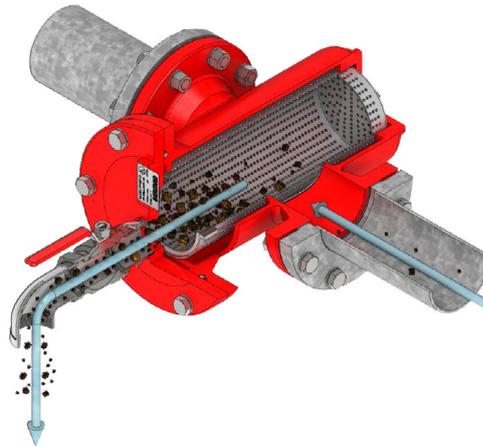
- Automatic water spray systems
- Foam balanced pressure proportioning systems
- Fire monitor installations
- Fusible plug loops
- Fire hydrant supply

### Approvals



UL-Listed 3" through to 16"  
Strainers, Pipeline (HLCV)

### Operation

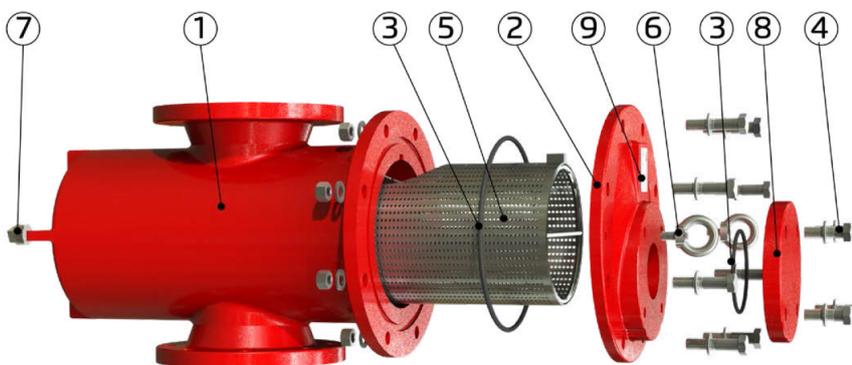


Cross Section Showing Inline Flushing of the Filter Screen

The flushing drain connection should be typically fitted with an appropriately sized normally closed valve and drain piping.

The FP-60F-DV-250 Basket Strainer sizes 3" to 12" are recommended to be installed in a horizontal position with the strainer cover and flushing valve to the side. To facilitate flushing for 14" and 16" sizes installation is recommended to be vertical. The strainers shall be installed and maintained in compliance with the NFPA-25 standard in the addition to the instructions given by the authorities having jurisdiction. The NFPA-11 standard requires that a listed strainer with a screen area to pipe cross section area ratio of 10:1 shall be used with foam proportioners or foam generators, and should be installed in the water pipeline upstream of the water control valve. The NFPA 13, 15 and 16 standards stipulate that a Listed Strainer shall be provided in the main pipeline of all systems utilizing nozzles with waterways less than 3/8" (9.5 mm) and for any system where the water is likely to contain obstructive material. Strainers shall be capable of removing from the water all solids of sufficient size to obstruct the nozzles.

### System P&ID



Components	
1	Body (Ductile Iron ASTM A536 65-45-12, Coated)
2	Cover (Ductile Iron ASTM A536 65-45-12, Coated)
3	O ring (EPDM, Asbestos Free)
4	Bolting (Stainless steel 304)
5	Screen (Stainless steel 316)
6	Lifting Eye (Stainless steel 304)
7	Drain Plug (Stainless steel 316)
8	N/A (flushing valve provided with 60F-DV-250)
9	Drain Plug (3 & 4") (2" ISO-7-Rp Stainless steel 316)
10	Data Plate (Stainless steel 304)

## System Installation

Provide basket removal clearances to enable strainer installation and extraction. Install the strainer with the flow arrow on the body pointing in the desired flow direction.

The strainer should be installed such that the flushing valve Drain Flange is at the lowest point of the strainer, 3" to 12" strainers have the flushing valve port on the cover that can be rotated to be at the lowest point, this is to facilitate efficient cleaning of the screen while flushing.

The strainer shall be installed on the pipeline upstream of the sprinklers, pressure control valve, deluge valve or any other sensitive system device. Install a listed isolating valve upstream of the strainer. An adequate support shall be provided to carry the system installation as well as the dynamic loads.

It is recommended to install a differential pressure gauge rooted to upstream and downstream of the FP-60F-250 strainer, in order to show the degree of strainer blockage. The maximum allowable differential pressure across the strainer is 7 psi or 0.5 bar at maximum system flow.

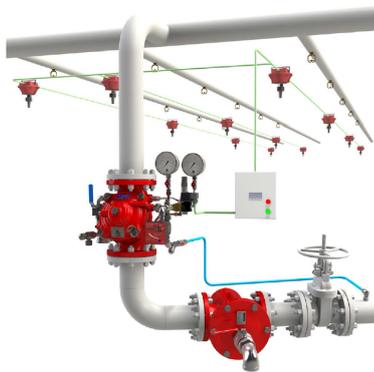
## Standard Pressure Reducing System

- The BERMAD FP-60F-250 strainer is ideal to be installed upstream of the BERMAD Pressure Control Valve, preventing the fouling of valve sealing surfaces and keeping the waterways clear from obstructions.



## Sprinkler / Deluge System

- The BERMAD FP-60F-250 strainer should be installed upstream of the Deluge, Foam system or Automatic Sprinkler system, preventing debris particles from clogging the nozzles and other sensitive devices.



## Suggested Specifications

The Fire Line Strainer shall be a basket type strainer UL listed.

The strainer shall be with high flow capacity and low pressure loss.

The strainer shall include a flushing valve capable of quickly and efficiently cleaning the strainer screen without removing the strainer cover, or closing system pressure.

The strainer body and cover shall be ductile iron ASTM A536 65-45-12 with anti-corrosion Fusion Bonded High Build Epoxy RAL 3002 coating internally and externally, all other wetted parts shall be stainless steel 316.

The strainer topcoat shall be suitable for potable water supply and certified by NSF, WRAS and DVGW.

The screen shall be inline removable basket type, made of stainless steel 316 with screen holes diameter of 3.2 mm (1/8"), meeting the requirements of the NFPA codes and standards. The Strainer basket screen area shall be at least 10:1 compared to the cross-sectional area of the pipeline.

Strainer maintenance, inspection or service shall be carried out in-line and without disassembly of the strainer body from the pipeline. The Strainer shall be supplied pre-assembled with stainless steel bolting and hydraulically tested by a factory certified by the ISO-9001 standard.

### Technical Data

**Available Sizes:**

Flanged- 3, 4, 6, 8, 10, 12, 14 and 16"

Grooved- N/A

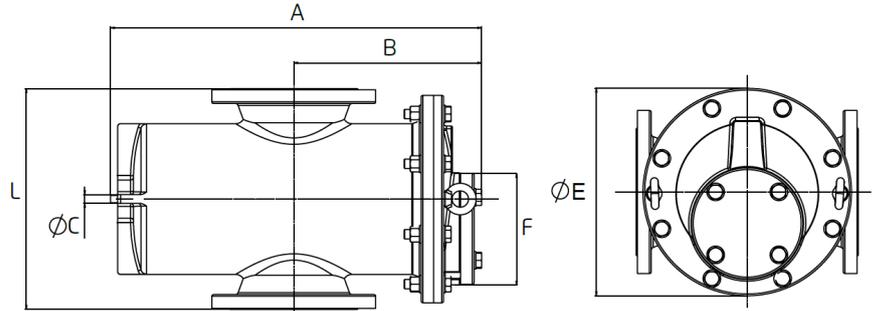
Threaded- N/A

**Pressure Rating:**

ANSI#150 - 17.2 bar

**Elastomer:**

EPDM, Asbestos free



Valve Size	L #150 (mm)	L Grooved (mm)	L #300 (mm)	A (mm)	B (mm)	C (mm)	øD(in)	E (mm)	F (mm)	G (mm)	Weight #150 (Kg)	Weight #300 (Kg)
DN80   3"	250	-	-	346	184	20	-	215	2" ISO-7-Rp	-	23	-
DN100   4"	292	-	-	440	228	25	-	280	2" ISO-7-Rp	-	42	-
DN150   6"	378	-	-	623	334	40	-	355	3" #150	-	70	-
DN200   8"	476	-	-	718	388	40	-	440	3" #150	-	130	-
DN250   10"	560	-	-	774	416	40	-	540	3" #150	-	190	-
DN300   12"	680	-	-	989	502	50	-	620	3" #150	-	285	-
DN350   14"	768	-	-	1125	515	50	-	665	4" #150	-	356	416
DN400   16"	845	-	-	1215	554	50	-	720	6" #150	-	531	-

### Flow Properties

Size	3"		4"		6"		8"		10"		12"		14"		16"	
	metric	US	metric	US	metric	US	metric	US	metric	US	metric	US	metric	US	metric	US
Kv <sup>(1)</sup> / Cv <sup>(1)</sup>	168	194	275	317	551	636	1001	1156	1665	1923	2027	2341	2534	2927	3339	3857
Leq <sup>(2)</sup> m / ft	9	30	14	46	28	93	36	118	43	140	70	228	73	240	85	279

Notes: <sup>(1)</sup> Flow coefficient Kv: flow in m<sup>3</sup>/h at 1 bar differential pressure, Cv: flow in gpm at 1 psi differential pressure; The pressure loss calculation formula:  $\Delta p = SG (Q/ Cv \text{ or } Kv)^2$   
<sup>(2)</sup> Leq: Equivalent pipe length for turbulent flow in clean commercial steel pipe (SCH 40)  
<sup>(3)</sup> Max allowable pressure drop: 7 psi (0.5 bar) across the strainer. Make sure that the strainer is sized so that the pressure drop at the designed flow rate, when the strainer is clean, is well below 7 psi (0.5 bar).

### Ordering Information

Size in/DN	FP-60F-DV Strainer w/Flushing Valve Code	Part Number
3"/80	FP-3"-60F-01-H-C-A5-DV-ER	60F03HCA5N00001-DV-ER-250
4"/100	FP-4"-60F-01-H-C-A5-DV-ER	60F04HCA5N00001-DV-ER-250
6"/150	FP-6"-60F-01-H-C-A5-DV-ER	60F06HCA5N00001-DV-ER-250
8"/200	FP-8"-60F-01-H-C-A5-DV-ER	60F08HCA5N00001-DV-ER-250
10"/250	FP-10"-60F-01-H-C-A5-DV-ER	60F10HCA5N00001-DV-ER-250
12"/300	FP-12"-60F-01-H-C-A5-DV-ER	60F12HCA5N00001-DV-ER-250
14"/350	FP-14"-60F-01-H-C-A5-DV-ER	60F14HCA5N00001-DV-ER-250
16"/400	FP-16"-60F-01-H-C-A5-DV-ER	60F16HCA5N00001-DV-ER-250