



# FLV Series Bag and Cartridge Filter Product Guide

define  
design

deliver

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## Hayward® Flow Control - Define, Design, Deliver...

For more than 60 years, Hayward Flow Control's leading thermoplastic fluid handling products and solutions have proven to excel in the harshest environments. Thousands of customers worldwide have installed our products into aggressive and corrosive systems, as well as delicate life support systems where the strictest chemical balance is required. We understand the rigorous demands of industrial piping and are committed to offering advantageous products for your application that will keep your systems working.

Unlike traditional metal and plastic filters, Hayward's patent pending GFPP FLV Series Bag Filter features a one-piece injection molded thermoplastic glass filled polypropylene body with true union end connections, ergonomic cover design with liquid displacing dome, vent valve and drain plug. Available in simplex through quadplex assembly, the FLV Series can accommodate filter bags, a single 7" cartridge or five 2-1/2" cartridges. The FLV Series also features multiple end connection options including threaded, socket, flanged and socket fusion ends.

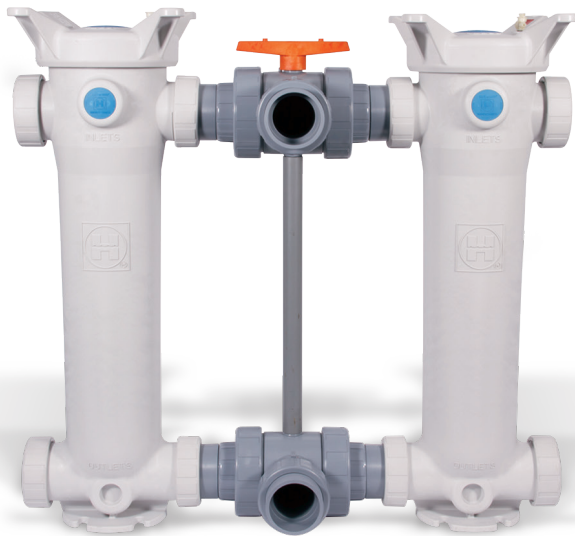
Hayward's industry leading thermoplastic Basket and Y-Strainers protect pipeline system components and maintenance facilities from dirt and debris while allowing process media to flow freely. Simplex and duplex strainers are manufactured in PVC, CPVC, GFPP and clear Eastar™, and are available with thermoplastic, stainless steel or alloy, perf and mesh lined baskets in a wide range of sizes. Our Y-Strainers are offered in PVC, clear PVC or CPVC, with FPM or EPDM seals.

Hayward Flow Control products carry an industry-leading, full Three-Year Warranty. As an ISO 9001:2015 certified company, we strive for the highest quality product possible for use in a wide range of demanding applications.



\*Units with CPVC Ends





DOUBLE LENGTH, DUPLEX



SINGLE LENGTH, DUPLEX



SINGLE LENGTH, SIMPLEX



DOUBLE LENGTH, SIMPLEX

## FLV Series Bag and Cartridge Filters - Overview

ALL THERMOPLASTIC, GLASS FILLED POLYPROPYLENE INJECTION MOLDED CONSTRUCTION, FOR SUPERIOR CORROSION RESISTANCE PERFORMANCE

FILTERS

### HOW TO SELECT A PART NUMBER

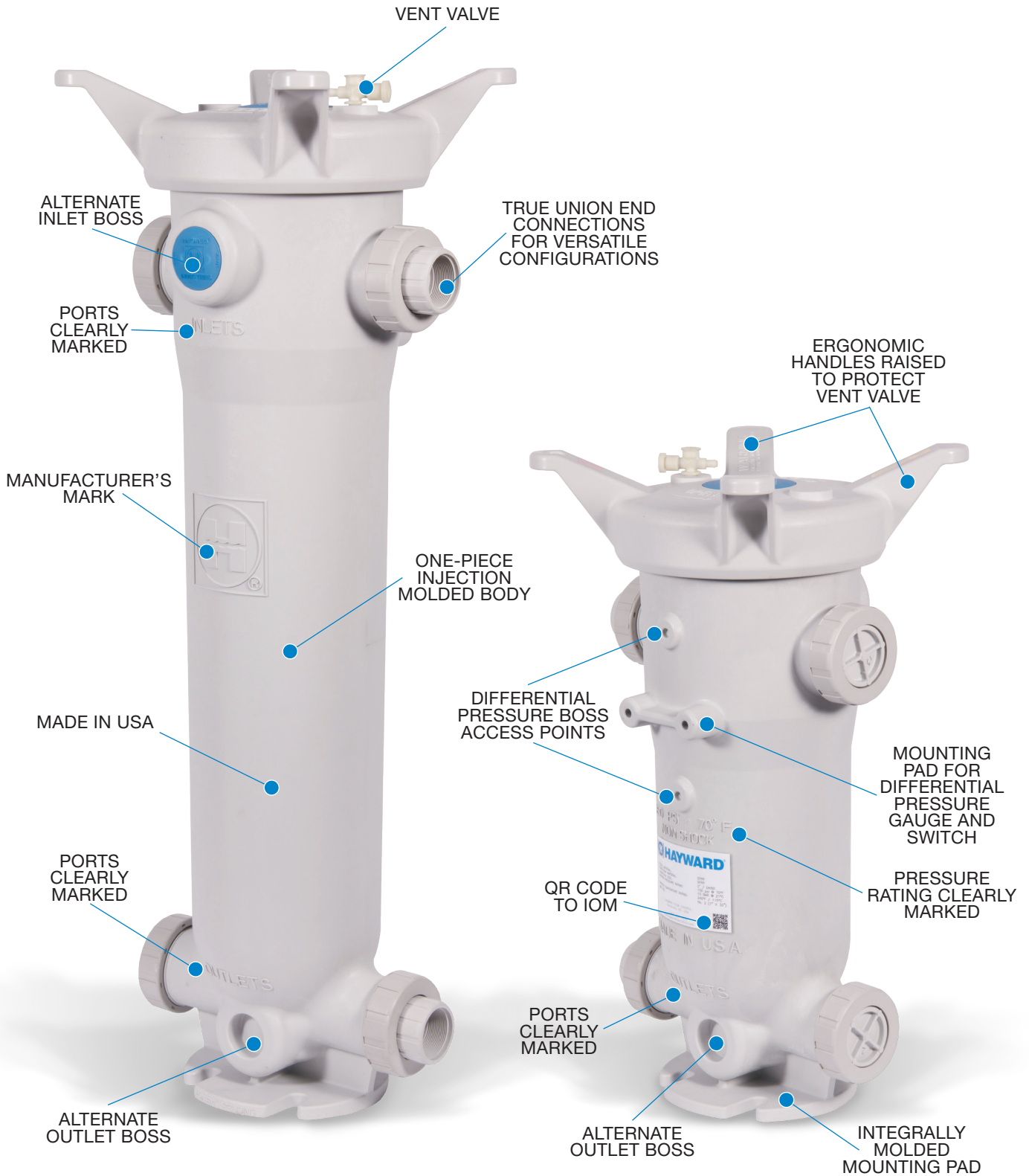
SERIES	PREFIX	MATERIAL	VESSEL SIZE	STYLE	PIPE CONNECTION SIZE	TRUE UNION CONNECTION TYPE	END CONNECTOR MATERIAL	O-RINGS	BASKET									
Vessel with Basket - No Bag	FLV	Platinum GFPP	4P	Simplex	16"	1	S	1-1/4"	12	Threaded	T	PVC	1	FPM	V	Solid	S	
Vessel - Cartridge Ready	CFLV			Duplex	32"	2	D	1-1/2"	15	Socket	S	CPVC	2	EPDM	E	Hinged	L	
				Triplex			T	2"	20	Flanged	F	PP	3					
				Quadplex			Q	2-1/2**	25	Female Thread	D	GFPP	4					
						3**	30	BSPT	B									
						4**	40											
						32mm	3M											
						40mm	4M											
						50mm	5M											
						63mm*	6M											
					80mm*	8M												
					100mm*	1M												
EXAMPLE	FLV		4P		1		S		20		T		4		V		S	

To find your part number, please select your Series, Material, Color, etc., and place the corresponding identifier (FLV, 4, P, etc.) in the boxes below.

Chart may not represent all available combinations. Please consult factory for questions on choices not shown here.

\* Sizes available in double length only

# FLV Series Filters, OVERVIEW



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“Patented” Pat. No.:9,630,127

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 Canada: 1.888.238.7665 • Fax: 1.905.829.3636 • 2880 Plymouth Drive • Oakville, ON L6H 5R4 • Email: hflowcanada@hayward.com  
 Visit us at: haywardflowcontrol.com

## FLV Series Filters, *KEY FEATURES*

### COVER

- Ergonomic Handles Raised to Protect the Vent Valve
- Integral Pressure Relief Valve Threads in Cover
- Vent Valve Provided with Every Filter
- Solid, Buttress Threads
- Liquid Displacing Dome Inside Cover
- Cover Retains Pressure with Hand-Tight Seal (No Additional Tools Necessary)



### BODY

- Self-Draining O-Ring Groove Directs Overflow Back Inside Filter
- Pressure Energized Face-Style Seal Prevents Basket Sticking
- No Internal Threads
- Chamfered Interior Shoulder Surface Ensures Basket Sealing
- Molded-In Legs Assure Proper Basket Placement Within Filter
- Drill and Tap Locations and Mounting Pads for Differential Pressure Gauges
- Optional Drill and Tap NPT (Offset) Ports Available (Must be Ordered) for Alternate Configurations
- Integrally Molded True Union End Connections
- QR Code on Filter Label Leads Directly to Online IOM



## BASKET (BAG FILTER ONLY)

- Heavy Duty Solid Basket Standard
- Optional Hinged Basket can be Fully Opened for Bag Replacement
- Optional Stainless Steel Basket available for High Cv and High Differential Pressure
- Ergonomically Molded Basket Lockdown Handle
- Basket Lockdown Handle and Ring Secures Bag Within Filter
- Vertical Flute Slots in GFPP Basket Prevent Bag Catching and Allow More Open Flow Area



## TRUE UNION END CONNECTIONS

- Allows for Various Sizes and Options Which Includes Socket, Threaded, Socket Fusion and Flanged
- Makes Disconnect of Filter from the Line Easier for Replacement or Maintenance
- Versatile Flow Path for In-line or Loop Configurations (Easily Changed by User)
- Size range of 1-1/4" – 4" / DN32-DN100
- No Direct Threading into the Filter Housing Required



## MOUNTING PAD

- Features Same Footprint as Previous Generation
- Stand-Alone Mounting Capabilities
- Slotted for Easy Installation



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## FLV Series Filters, BAG CARRIER OPTIONS

**NEW**

ERGONOMIC,  
LOCKDOWN HANDLE  
SECURES BAG  
WITHIN BASKET

BAG RETAINING RING  
PREVENTS BY-PASS OF  
BAG AND DIRECTS FLOW  
TO CENTER OF BAG

O-RING ASSURES  
FACE-STYLE SEAL  
AGAINST CHAMFERED  
FILTER INTERIOR

CHAMFERED  
FILTER INTERIOR

VERTICAL  
FLUTED SLOTS  
PREVENT BAG  
SNAG AND  
ALLOW MORE  
OPEN FLOW  
AREA

HINGED DESIGN  
ALLOWS  
ANY DEGREE  
OF BASKET  
OPENING

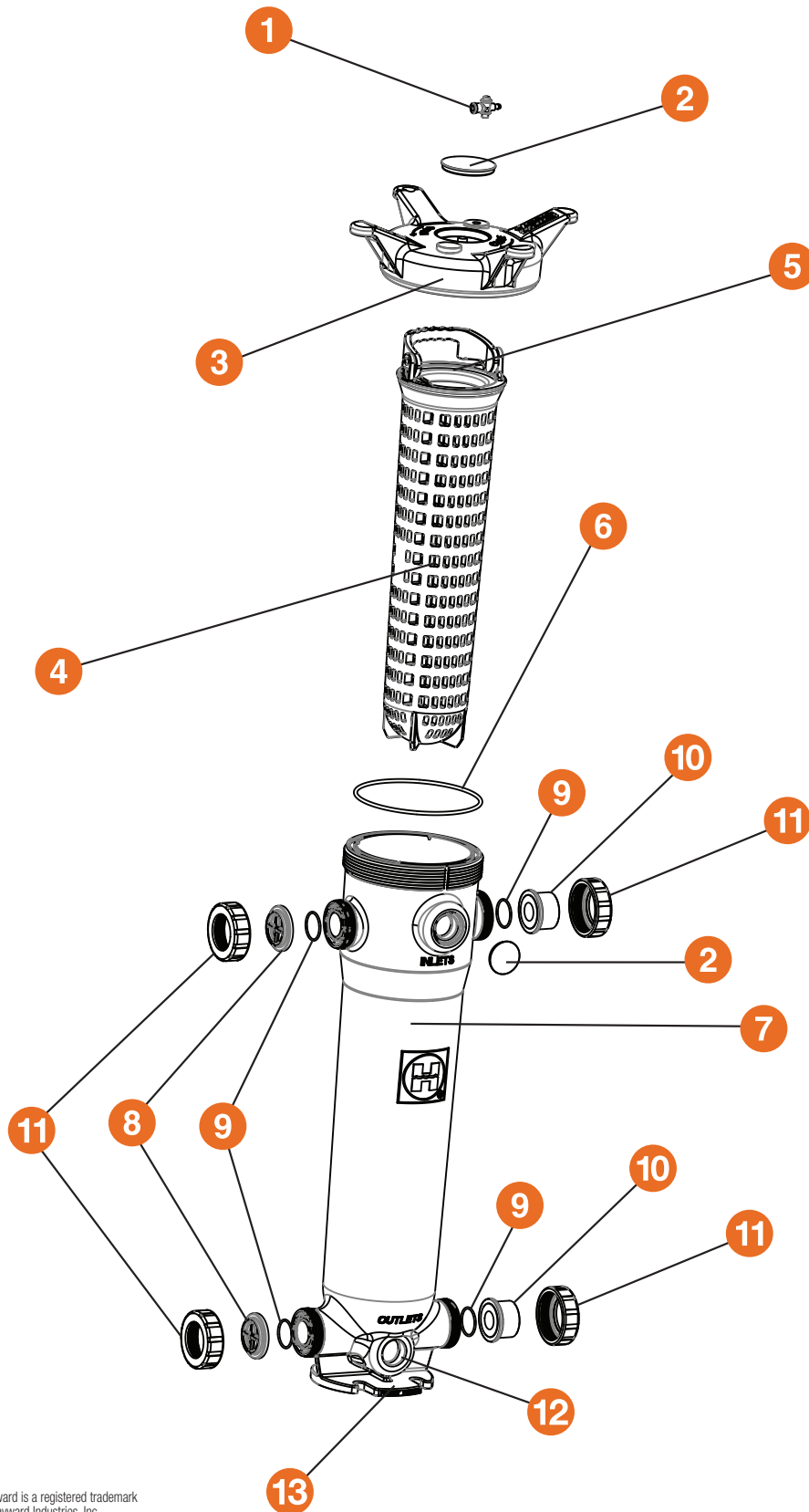
MOLDED-IN  
LEGS ALLOW  
BASKET TO  
STAND FREELY

GFPP HEAVY DUTY SOLID BASKET  
STANDARD

GFPP HINGED DESIGN  
OPTIONAL

316 STAINLESS STEEL  
OPTIONAL

# FLV Series Filters, EXPLODED VIEW



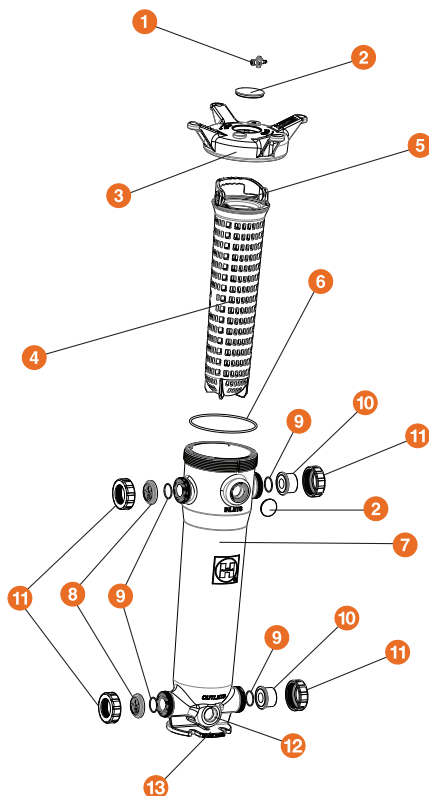
## PARTS LIST

1. Vent Valve (Included)
2. Hayward Bezel
3. Cover
4. Heavy Duty Solid Basket
5. Bag Retaining Ring
6. Cover O-Ring
7. Filter Body
8. End Cap
9. End Connector O-Ring
10. End Connector
11. Assembly Nut
12. Alternate 2" NPT Ports (Optional)
13. Integrally Molded Mounting Pad





### EXPLODED VIEW



## FLV Series Simplex Bag Filters

DOUBLE LENGTH – 32" GFPP  
1-1/4" TO 2" PIPE SIZES

### KEY FEATURES

- Platinum Glass Filled Polypropylene
- One-Piece Injection Molded Construction
- Hand Removable, Ergonomic Cover with Liquid Displacing Dome
- Vent Valve Included on Cover
- Rated up to 100 GPM
- True Union Socket, Threaded or Flanged End Connections
- In-Line or Loop Flow Configurations
- Heavy Duty Solid Basket
- Drain Port at Bottom
- Integral Mounting Base
- Easier Installations Due to True Union Connectivity
- Vertical Flow Flutes in Basket, No Bag Snag and More Flow Area

### OPTIONS

- Gauge with Gauge Guard
- Pressure Differential Gauge and Switch
- EPDM Seals
- Cartridge Adapters
- Hinged Basket
- 316 Stainless Steel Basket

### MATERIALS

- GFPP per ASTM D4101, Cell Class 85580
- FPM Standard O-Ring Seals

## TECHNICAL INFORMATION

### SELECTION CHART

SIZE*	MATERIAL	END CONNECTIONS	PIPING SIZES	SEALS	FLOW RATE	PRESSURE RATING
Double Length 7" x 32"	GFPP	GFPP (Threaded and Flanged), PVC/CPVC (Socket and PP Socket Fusion)	1-1/4" – 2" (DN32–DN50)	FPM or EPDM	100 GPM	150 PSI @ 70°F 10 Bar @ 21°C Non-Shock

\* PVC and CPVC socket ends available to ISO 727-1 and threaded ends to BS21.  
PP socket fusion ends per ASTM F2389 and threaded ends per BS21.  
Flanged ends available in DIN/EN PN10.

"Patented" Pat. No.: 9,630,127

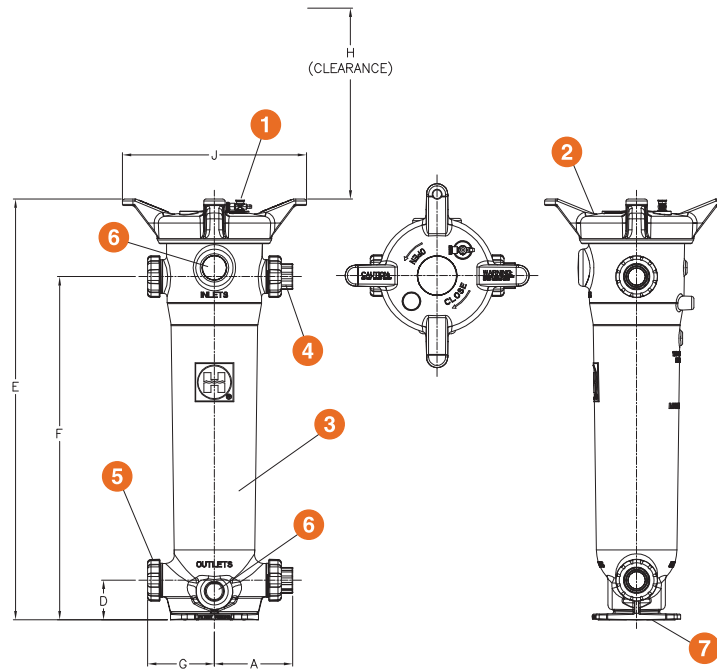
# FLV Series Simplex Bag Filters

DOUBLE LENGTH – 32" GFPP  
1-1/4" TO 2" PIPE SIZES

## TECHNICAL INFORMATION, CONTINUED

### PARTS LIST\*

1. Vent Valve (Included)
2. Cover
3. Filter Body
4. End Connector
5. Assembly Nut
6. Alternate 2" NPT Ports
7. Integrally Molded Mounting Pad



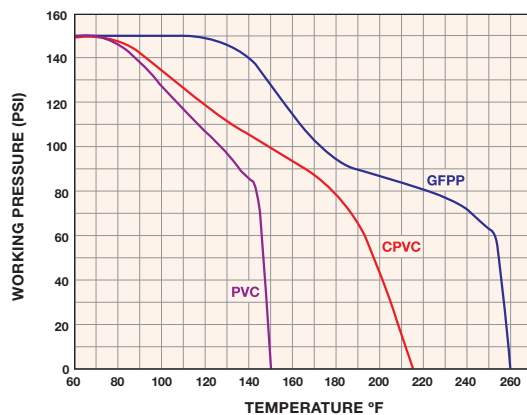
### DIMENSIONS

FILTER SIZE in / DN	A in / mm	D in / mm	E in / mm	F in / mm	G in / mm	H* in / mm	J in / mm
1-1/4" / 32	8.86 / 225	4.50 / 114	47.83 / 1215	39.00 / 991	7.60 / 193	31.25 / 794	20.93 / 532
1-1/2" / 40	8.86 / 225	4.50 / 114	47.83 / 1215	39.00 / 991	7.60 / 193	31.25 / 794	20.93 / 532
2" / 50	8.91 / 226	4.50 / 114	47.83 / 1215	39.00 / 991	7.60 / 193	31.25 / 794	20.93 / 532

Dimensions are subject to change without notice – consult factory for installation information

\* Clearance from top for basket removal

### OPERATING TEMPERATURE / PRESSURE



Hayward recommends that you monitor your pressure differential with a differential gauge or pressure gauges

### SPECIFICATIONS

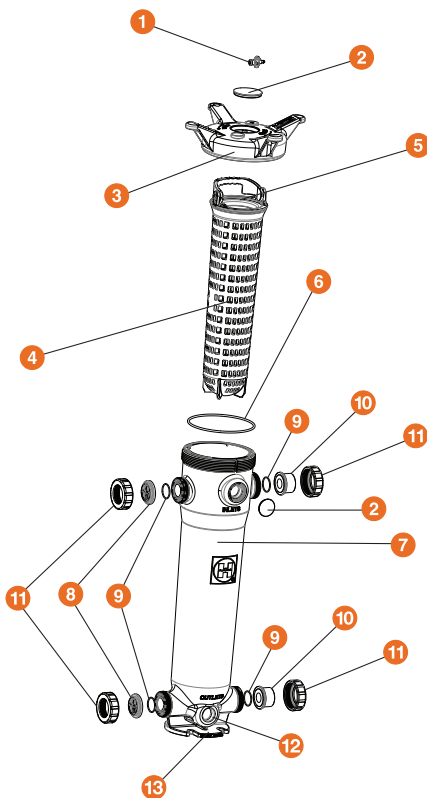
- Material of Construction:** GFPP
- Inlet Connections:** GFPP (Threaded or Flanged)  
PVC (Socket)  
CPVC (Socket)
- Outlet Connections:** GFPP (Threaded or Flanged)  
PVC (Socket)  
CPVC (Socket)
- Bag Size:** Bag Size #2: 7" x 32"
- Pressure Rating:** 150 PSI @ 70°F Non-Shock
- O-Ring Seals:** FPM or EPDM
- Bag Ratings:** 1, 5, 10, 25, 50, 100, 150, 200, 400, 600 and 800 Microns
- Flow Rate:** 100 GPM (May be Limited by Pipe Size or Bag Choice)
- Weight:** 66.4 lbs.



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### EXPLODED VIEW



## FLV Series Simplex Bag Filters

DOUBLE LENGTH – 32" GFPP  
2-1/2" TO 4" PIPE SIZES

### KEY FEATURES

- Platinum Glass Filled Polypropylene
- One-Piece Injection Molded Construction
- Hand Removable, Ergonomic Cover with Liquid Displacing Dome
- Vent Valve Included on Cover
- Rated up to 150 GPM
- True Union Socket, Threaded or Flanged End Connections
- In-Line or Loop Flow Configurations
- Heavy Duty Solid Basket
- Drain Port at Bottom
- Integral Mounting Base
- Easier Installations Due to True Union Connectivity
- Vertical Flow Flutes in Basket, No Bag Snag and More Flow Area

### OPTIONS

- Gauge with Gauge Guard
- Pressure Differential Gauge and Switch
- EPDM Seals
- Cartridge Adapters
- Hinged Basket
- 316 Stainless Steel Basket

### MATERIALS

- GFPP per ASTM D4101, Cell Class 85580
- FPM Standard O-Ring Seals

## TECHNICAL INFORMATION

### SELECTION CHART

SIZE*	MATERIAL	END CONNECTIONS	PIPING SIZES	SEALS	FLOW RATE	PRESSURE RATING
Double Length 7" x 32"	GFPP	GFPP (Threaded and Flanged), PVC/CPVC (Socket and PP Socket Fusion)	2-1/2" – 4" (DN65–DN100)	FPM or EPDM	150 GPM	150 PSI @ 70°F 10 Bar @ 21°C Non-Shock

\* PVC and CPVC socket ends available to ISO 727-1 and threaded ends to BS21.  
PP socket fusion ends per ASTM F2389 and threaded ends per BS21.  
Flanged ends available in DIN/EN PN10.

"Patented" Pat. No.: 9,630,127

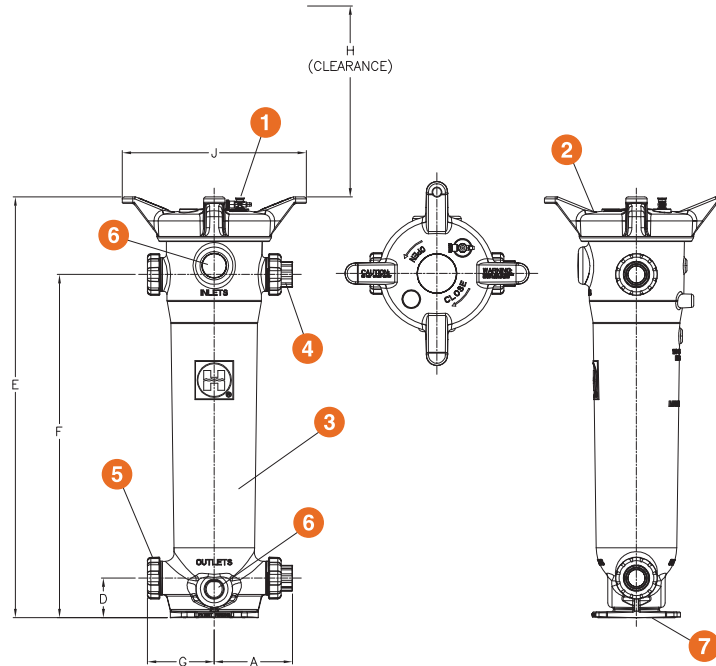
# FLV Series Simplex Bag Filters

DOUBLE LENGTH – 32" GFPP  
2-1/2" TO 4" PIPE SIZES

## TECHNICAL INFORMATION, CONTINUED

### PARTS LIST\*

1. Vent Valve (Included)
2. Cover
3. Filter Body
4. End Connector
5. Assembly Nut
6. Alternate 2" NPT Ports
7. Integrally Molded Mounting Pad



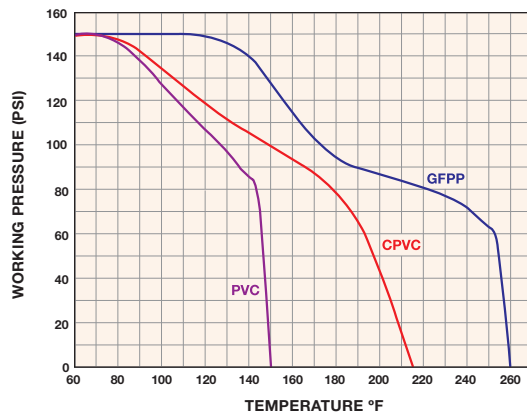
### DIMENSIONS

FILTER SIZE in / DN	A in / mm	D in / mm	E in / mm	F in / mm	G in / mm	H* in / mm	J in / mm
2-1/2" / 65	9.79 / 249	4.50 / 114	47.83 / 1215	39.00 / 991	8.38 / 213	31.25 / 794	20.93 / 532
3" / 80	9.73 / 247	4.50 / 114	47.83 / 1215	39.00 / 991	8.38 / 213	31.25 / 794	20.93 / 532
4" / 100	10.17 / 258	4.50 / 114	47.83 / 1215	39.00 / 991	8.38 / 213	31.25 / 794	20.93 / 532

Dimensions are subject to change without notice – consult factory for installation information

\* Clearance from top for basket removal

### OPERATING TEMPERATURE / PRESSURE



Hayward recommends that you monitor your pressure differential with a differential gauge or pressure gauges

### SPECIFICATIONS

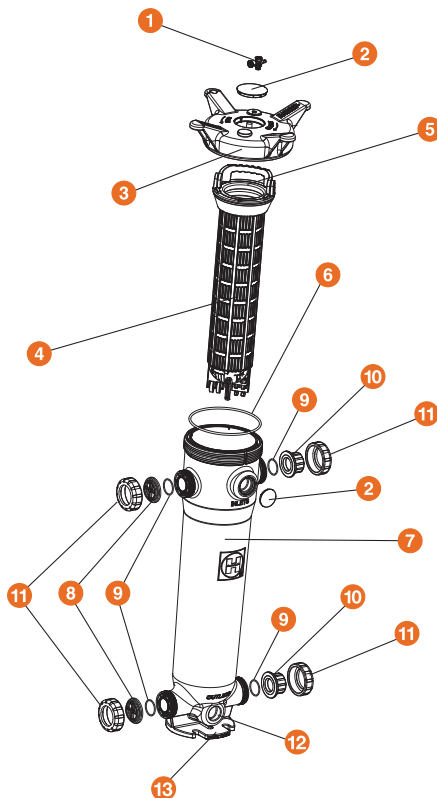
- Material of Construction:** GFPP
- Inlet Connections:** GFPP (Threaded or Flanged)  
PVC (Socket)  
CPVC (Socket)
- Outlet Connections:** GFPP (Threaded or Flanged)  
PVC (Socket)  
CPVC (Socket)
- Bag Size:** Bag Size #2: 7" x 32"
- Pressure Rating:** 150 PSI @ 70°F Non-Shock
- O-Ring Seals:** FPM or EPDM
- Bag Ratings:** 1, 5, 10, 25, 50, 100, 150, 200, 400, 600 and 800 Microns
- Flow Rate:** 150 GPM (May be Limited by Pipe Size or Bag Choice)
- Weight:** 71.4 lbs.



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### EXPLODED VIEW



## FLV Series Simplex Bag Filters

SINGLE LENGTH – 16" GFPP  
1-1/4" TO 2" PIPE SIZES

### KEY FEATURES

- Platinum Glass Filled Polypropylene
- One-Piece Injection Molded Construction
- Hand Removable, Ergonomic Cover with Liquid Displacing Dome
- Vent Valve Included On Cover
- Rated up to 100 GPM
- True Union Socket, Threaded or Flanged End Connections
- In-Line or Loop Flow Configurations
- Hinged Basket
- Drain Port at Bottom
- Integral Mounting Base
- Easier Installations Due to True Union Connectivity
- Vertical Flow Flutes in Basket, No Bag Snag and More Flow Area

### OPTIONS

- Gauge with Gauge Guard
- Pressure Differential Gauge and Switch
- EPDM Seals
- Cartridge Adapters
- 316 Stainless Steel Basket

### MATERIALS

- GFPP per ASTM D4101, Cell Class 85580
- FPM Standard O-Ring Seals

## TECHNICAL INFORMATION

### SELECTION CHART

SIZE*	MATERIAL	END CONNECTIONS	PIPING SIZES	SEALS	FLOW RATE	PRESSURE RATING
Single Length 7" x 16"	GFPP	GFPP (Threaded and Flanged), PVC/CPVC (Socket and PP Socket Fusion)	1-1/4" – 2" (DN32 – DN50)	FPM or EPDM	100 GPM	150 PSI @ 70°F 10 Bar @ 21°C Non-Shock

\* PVC and CPVC socket ends available to ISO 727-1 and threaded ends to BS21.  
PP socket fusion ends per ASTM F2389 and threaded ends per BS21.  
Flanged ends available in DIN/EN PN10.

"Patented" Pat. No.: 9,630,127

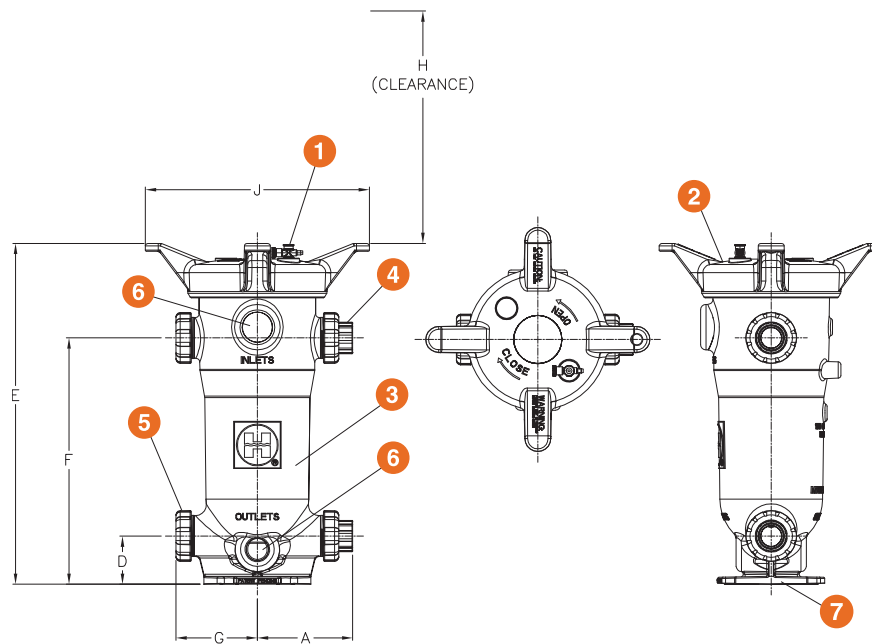
# FLV Series Simplex Bag Filters

SINGLE LENGTH – 16" GFPP  
1-1/4" TO 2" PIPE SIZES

## TECHNICAL INFORMATION, CONTINUED

### PARTS LIST\*

1. Vent Valve (Included)
2. Cover
3. Filter Body
4. End Connector
5. Assembly Nut
6. Alternate 2" NPT Ports
7. Integrally Molded Mounting Pad



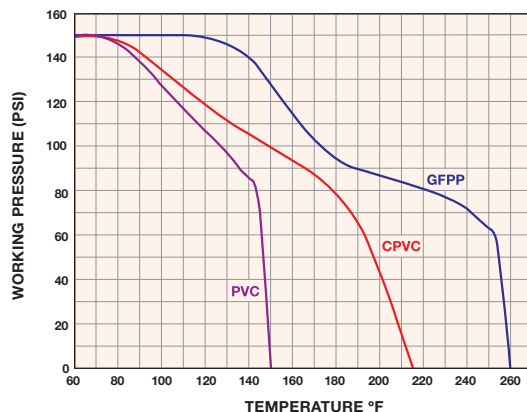
### DIMENSIONS

FILTER SIZE in / DN	A in / mm	D in / mm	E in / mm	F in / mm	G in / mm	H* in / mm	J in / mm
1-1/4" / 32	8.86 / 225	4.50 / 114	31.83 / 808	23.00 / 584	7.60 / 193	15.25 / 387	20.93 / 532
1-1/2" / 40	8.86 / 225	4.50 / 114	31.83 / 808	23.00 / 584	7.60 / 193	15.25 / 387	20.93 / 532
2" / 50	8.91 / 226	4.50 / 114	31.83 / 808	23.00 / 584	7.60 / 193	15.25 / 387	20.93 / 532

Dimensions are subject to change without notice – consult factory for installation information

\* Clearance from top for basket removal

### OPERATING TEMPERATURE / PRESSURE



Hayward recommends that you monitor your pressure differential with a differential gauge or pressure gauges

### SPECIFICATIONS

- Material of Construction:** GFPP
- Inlet Connections:** GFPP (Threaded or Flanged)  
PVC (Socket)  
CPVC (Socket)
- Outlet Connections:** GFPP (Threaded or Flanged)  
PVC (Socket)  
CPVC (Socket)
- Bag Size:** Bag Size #1: 7" x 16"
- Pressure Rating:** 150 PSI @ 70°F Non-Shock
- O-Ring Seals:** FPM or EPDM
- Bag Ratings:** 1, 5, 10, 25, 50, 100, 150, 200, 400, 600 and 800 Microns
- Flow Rate:** 100 GPM (*May be Limited by Pipe Size or Bag Choice*)
- Weight:** 47.8 lbs.



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## FLV Series Duplex Bag Filters

DOUBLE LENGTH – 32" GFPP  
2" TO 4" PIPE SIZES

### KEY FEATURES

- Platinum Glass Filled Polypropylene
- One-Piece Injection Molded Construction
- Hand Removable, Ergonomic Cover with Liquid Displacing Dome
- Vent Valve Included on Cover
- Rated up to 100 GPM – 2"
- Rated up to 150 GPM – 3" to 4"
- True Union Socket, Threaded or Flanged End Connections
- In-Line or Loop Flow Configurations
- Heavy Duty Solid Basket
- Drain Port at Bottom
- Integral Mounting Base
- Easier Installations Due to True Union Connectivity
- Vertical Flow Flutes in Basket, No Bag Snag and More Flow Area

### OPTIONS

- Gauge with Gauge Guard
- Pressure Differential Gauge and Switch
- EPDM Seals
- Cartridge Adapters
- Hinged Basket
- 316 Stainless Steel Basket

### MATERIALS

- CPVC per ASTM D1784, Cell Class 23447
- GFPP per ASTM D4101, Cell Class 85580
- FPM Standard O-Ring Seals

## TECHNICAL INFORMATION

### SELECTION CHART

SIZE*	MATERIAL	END CONNECTIONS	PIPING SIZES	SEALS	FLOW RATE	PRESSURE RATING
Double Length 7" x 32"	GFPP	CPVC (Socket, Threaded or Flanged)	2" (DN50)	FPM or EPDM	100 GPM	150 PSI @ 70°F 10 Bar @ 21°C Non-Shock
			2-1/2" – 4" (DN80 - DN100)		150 GPM	

\* PVC and CPVC socket ends available to ISO 727-1 and threaded ends to BS21.  
PP socket fusion ends per ASTM F2389 and threaded ends per BS21.  
Flanged ends available in DIN/EN PN10.

"Patented" Pat. No.: 9,630,127

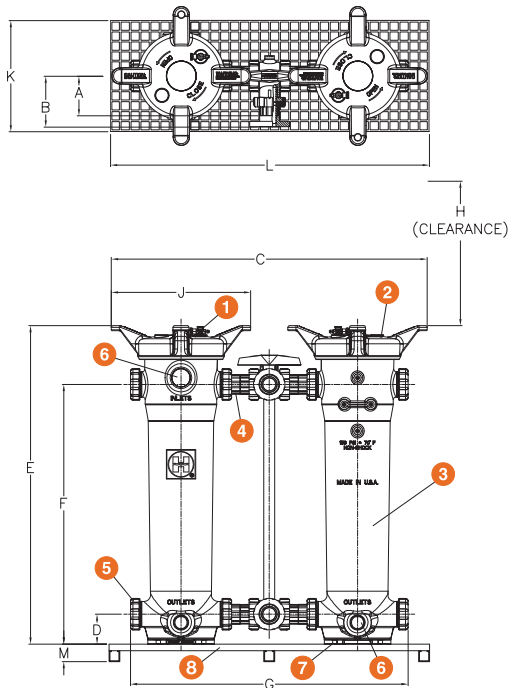
# FLV Series Duplex Bag Filters

DOUBLE LENGTH – 32" GFPP  
2" TO 4" PIPE SIZES

## TECHNICAL INFORMATION, CONTINUED

### PARTS LIST\*

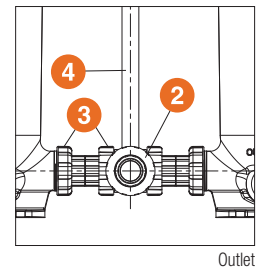
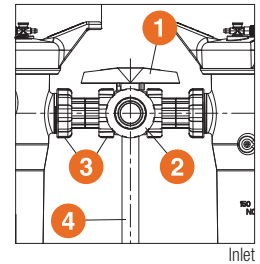
1. Vent Valve (Included)
2. Cover
3. Filter Body
4. End Connector
5. Assembly Nut
6. Alternate 2" NPT Ports
7. Integrally Molded Mounting Pad
8. Base Plate



### PIPING

#### PARTS LIST

1. Handle
2. Hayward® LA Series Three-Way Lateral Valve
3. Spool Assembly (Each Side)
4. Drive Shaft



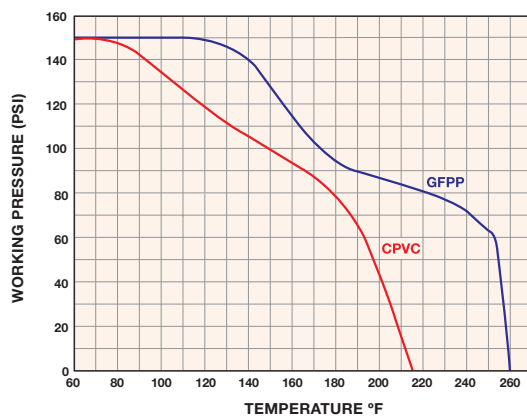
### DIMENSIONS

FILTER SIZE	A	B	C	D	E	F	G	H*	J	K	L	M
in / DN	in / mm	in / mm	in / mm	in / mm	in / mm	in / mm	in / mm	in / mm	in / mm	in / mm	in / mm	in / mm
2" / 50	6.00 / 152	7.77 / 197	47.44 / 1205	4.50 / 114	47.83 / 1215	39.00 / 991	41.70 / 1059	31.25 / 794	20.93 / 532	16.75 / 425	48.00 / 1219	2.62 / 67
3" / 80	7.60 / 193	9.85 / 205	55.17 / 1401	4.50 / 114	47.83 / 1215	39.00 / 991	50.99 / 1295	31.25 / 794	20.93 / 532	16.75 / 425	48.00 / 1219	2.62 / 67
4" / 100	9.33 / 237	11.76 / 299	55.17 / 1401	4.50 / 114	47.83 / 1215	39.00 / 991	50.99 / 1295	31.25 / 794	20.93 / 532	16.75 / 425	48.00 / 1219	2.62 / 67

Dimensions are subject to change without notice – consult factory for installation information

\* Clearance from top for basket removal

### OPERATING TEMPERATURE / PRESSURE



Hayward recommends that you monitor your pressure differential with a differential gauge or pressure gauges

### SPECIFICATIONS

- Material of Construction:** GFPP
- Inlet Connections:** GFPP (Threaded or Flanged)  
CPVC (Socket, Threaded or Flanged)
- Outlet Connections:** GFPP (Threaded or Flanged)  
CPVC (Socket, Threaded or Flanged)
- Bag Size:** Bag Size #2: 7" x 32"
- Pressure Rating:** 150 PSI @ 70°F Non-Shock
- O-Ring Seals:** FPM or EPDM
- Bag Ratings:** 1, 5, 10, 25, 50, 100, 150, 200, 400, 600 and 800 Microns
- Maximum Flow Rates:** 100 GPM – 2"  
(May be Limited by Pipe Size or Bag Choice)  
150 GPM – 3" to 4"  
(May be Limited by Pipe Size or Bag Choice)
- Mounting Base:** Fiberglass
- Hardware:** Stainless Steel
- Weight:** up to 2" – 136.6 lbs. / 3" to 4" – 149.6 lbs.

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Canada: 1.888.238.7665 • Fax: 1.905.829.3636 • 2880 Plymouth Drive • Oakville, ON L6H 5R4 • Email: hflowcanada@hayward.com  
Visit us at: haywardflowcontrol.com





## FLV Series Duplex Bag Filters

SINGLE LENGTH – 16" GFPP  
2" PIPE SIZE

### KEY FEATURES

- Platinum Glass Filled Polypropylene
- One-Piece Injection Molded Construction
- Hand Removable, Ergonomic Cover with Liquid Displacing Dome
- Vent Valve Included on Cover
- Rated up to 100 GPM
- True Union Socket, Threaded or Flanged End Connections
- In-Line or Loop Flow Configurations
- Hinged Basket
- Drain Port at Bottom
- Integral Mounting Base
- Easier Installations Due to True Union Connectivity
- Vertical Flow Flutes in Basket, No Bag Snag and More Flow Area

### OPTIONS

- Gauge with Gauge Guard
- Pressure Differential Gauge and Switch
- EPDM Seals
- Cartridge Adapters
- 316 Stainless Steel Basket

### MATERIALS

- CPVC per ASTM D1784, Cell Class 23447
- GFPP per ASTM D4101, Cell Class 85580
- FPM Standard O-Ring Seals

## TECHNICAL INFORMATION

### SELECTION CHART

SIZE*	MATERIAL	END CONNECTIONS	PIPING SIZES	SEALS	FLOW RATE	PRESSURE RATING
Single Length 7" x 16"	GFPP	CPVC (Socket, Threaded or Flanged)	2" (DN50)	FPM or EPDM	100 GPM	150 PSI @ 70°F 10 Bar @ 21°C Non-Shock

\* PVC and CPVC socket ends available to ISO 727-1 and threaded ends to BS21.  
PP socket fusion ends per ASTM F2389 and threaded ends per BS21.  
Flanged ends available in DIN/EN PN10.

"Patented" Pat. No.: 9,630,127

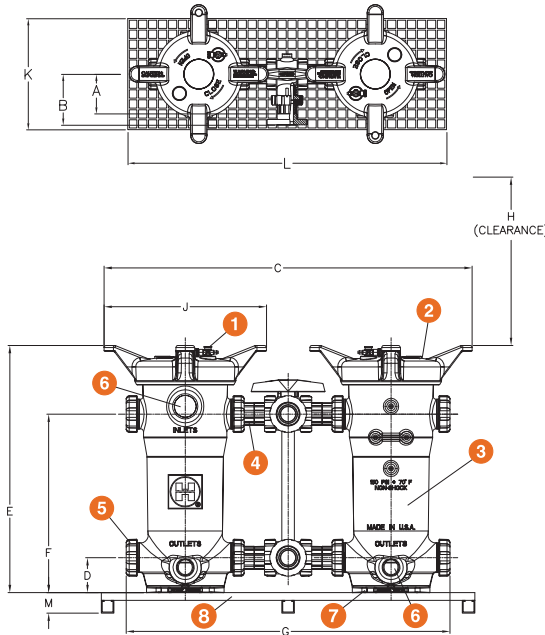
# FLV Series Duplex Bag Filters

SINGLE LENGTH – 16" GFPP  
2" PIPE SIZE

## TECHNICAL INFORMATION, CONTINUED

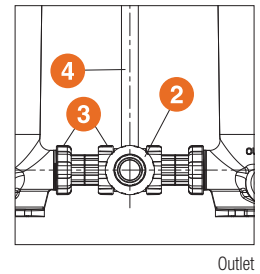
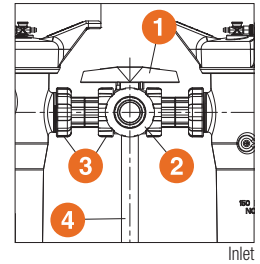
### PARTS LIST\*

1. Vent Valve (Included)
2. Cover
3. Filter Body
4. End Connector
5. Assembly Nut
6. Alternate 2" NPT Ports
7. Integrally Molded Mounting Pad
8. Base Plate



### PIPING PARTS LIST

1. Handle
2. Hayward® LA Series Three-Way Lateral Valve
3. Spool Assembly (Each Side)
4. Drive Shaft



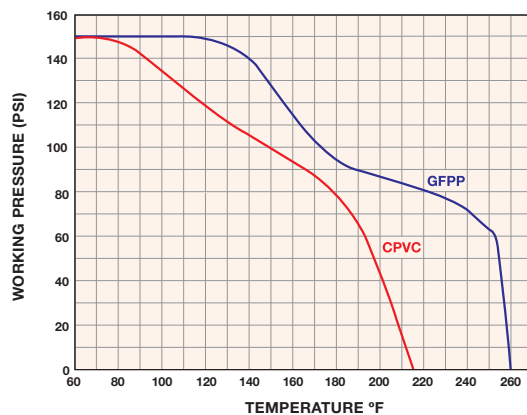
### DIMENSIONS

FILTER SIZE in / DN	A in / mm	B in / mm	C in / mm	D in / mm	E in / mm	F in / mm	G in / mm	H* in / mm	J in / mm	K in / mm	L in / mm	M in / mm
2" / 50	6.00 / 152	7.77 / 197	47.44 / 1205	4.50 / 114	31.83 / 808	23.00 / 584	41.70 / 1059	15.25 / 387	20.93 / 532	16.75 / 425	48.00 / 1219	2.62 / 67

Dimensions are subject to change without notice – consult factory for installation information

\* Clearance from top for basket removal

### OPERATING TEMPERATURE / PRESSURE



Hayward recommends that you monitor your pressure differential with a differential gauge or pressure gauges

### SPECIFICATIONS

- Material of Construction:** GFPP
- Inlet Connections:** GFPP (Threaded or Flanged)  
CPVC (Socket, Threaded or Flanged)
- Outlet Connections:** GFPP (Threaded or Flanged)  
CPVC (Socket, Threaded or Flanged)
- Bag Size:** Bag Size #1: 7" x 16"
- Pressure Rating:** 150 PSI @ 70°F Non-Shock
- O-Ring Seals:** FPM or EPDM
- Bag Ratings:** 1, 5, 10, 25, 50, 100, 150, 200, 400, 600 and 800 Microns
- Maximum Flow Rate:** 100 GPM (May be Limited by Pipe Size or Bag Choice)
- Mounting Base:** Fiberglass
- Hardware:** Stainless Steel
- Weight:** 100.0 lbs.



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## Needled Felt and Monofilament Mesh Filter Bags

HEAVY-DUTY POLYPROPYLENE, POLYESTER AND NYLON FILTER BAGS

### KEY FEATURES

- All Bag Materials Silicone-Free
- Size 1 – Single Length 7" x 16"
- Size 2 – Double Length 7" x 32"
- Sewn or Welded Construction
- Size 1 – Maximum Flow Rate 90 GPM
- Size 2 – Maximum Flow Rate 180 GPM
- Sewn Bags Have Sewn-In Cloth Handles
- Flanged Bags Have Molded-In Handles

### BENEFITS

- Easy Change-Out Reduces Down Time
- Compact, for Easy Disposal
- Versatile Micron Ratings Will Accommodate Most Applications

### TYPICAL APPLICATIONS

- Water and Wastewater Treatment
- Desalinization, RO and Deionized Water Systems
- Chemical Processing
- Food and Beverage
- Aquatic and Animal Life Support Systems
- Metal Finishing and Plating
- Marine and Corrosive Environments

### MICRON RATINGS

- 1 Micron (Material – Polypropylene and Polyester Needled Felt)
- 5 Microns (Material – Polypropylene and Polyester Needled Felt)
- 10 Microns (Material – Polypropylene and Polyester Needled Felt)
- 25 Microns (Material – Polypropylene and Polyester Needled Felt)
- 50 Microns (Material – Polypropylene and Polyester Needled Felt)
- 100 Microns (Material – Polypropylene and Polyester Needled Felt)
- 150 Microns (Material – Polypropylene and Nylon Monofilament Mesh)
- 200 Microns (Material – Polypropylene and Polyester Needled Felt)
- 400 Microns (Material – Polypropylene and Nylon Monofilament Mesh)
- 600 Microns (Material – Polypropylene and Nylon Monofilament Mesh)
- 800 Microns (Material – Polypropylene and Nylon Monofilament Mesh)

### MATERIALS

- Glazed Polypropylene Needled Felt - Rated up to 200°F
- Singed Polyester Needled Felt - Rated up to 300°F
- Polypropylene Monofilament Mesh - Rated up to 200°F
- Nylon Monofilament Mesh - Rated up to 325°F

# Needled Felt and Monofilament Mesh Filter Bags, *CONTINUED*

## How to Order Filter Bags

### HOW TO SELECT A PART NUMBER

MATERIAL		MICRON RATING		FINISH		BAG SIZE		BAG STYLE*		OPTIONS	
Glazed Polypropylene Needled Felt	PO	1 Micron	001	Glazed Needled Felt	G	16"	1	PP Ring	PR	Sewn with Handle	SH
Polypropylene Monofilament Mesh	PMO	5 Microns	005	Singed Needled Felt	S	32"	2	PP Flange	PF	Welded with Flange	WF
Singed Polyester Needled Felt	PE	10 Microns	010	Monofilament Mesh	M						
Nylon Monofilament Mesh	NMO	25 Microns	025								
		50 Microns	050								
		100 Microns	100								
		150 Microns	150								
		200 Microns	200								
		400 Microns	400								
600 Microns	600										
800 Microns	800										
To find your part number, please select your Material, Micron Rating, Finish, etc., and place the corresponding identifier (PO, 001, G, etc.) in the boxes below.											
EXAMPLE	PO	100		G		1		PR		SH	

\* Carbon Steel and Stainless Steel rings are available upon request – consult factory for information

### STANDARD FIBER AND MICRON RATINGS

FIBER CONSTRUCTION	MATERIAL	AVAILABLE MICRON RATINGS										
		1	5	10	25	50	100	150	200	400	600	800
Needled Felts	Polypropylene	●	●	●	●	●	●		●			
	Polyester	●	●	●	●	●	●		●			
Monofilament Meshes	Polypropylene							●		●	●	●
	Nylon							●		●	●	●

### COMPATIBILITY AND TEMPERATURE LIMITS

FIBER	COMPATIBLE WITH								Temperature Limits (Max °F)
	Organic Solvent	Animal, Vegetable and Petro Oils	Microorganisms	Alkalies	Organic Agents	Oxidizing Agents	Mineral Acids		
Polyester	A	A	A	B	B	B	B		300
Polypropylene	A	A	A	A	A	C	C		200
Nylon	A	A	A	B	C	D	D		325

A Excellent     
 B Good     
 C Fair     
 D Poor


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## Needed Felt and Monofilament Mesh Filter Bags, *CONTINUED*



### SINGLE AND DOUBLE LENGTH

All bags are made with silicone-free material. Bags are made in two lengths. Type 1 single length is 7" x 16" and Type 2 double length is 7" x 32". Both industry standard bag sizes fit Hayward's single or double length filter.



### SEWN CONSTRUCTION

A sewn bag has the strength of a mechanically secure, sewn seam. These bags have two sewn lines to make sure that certain particles do not pass through the filter bag. These bags are made from media that is silicone free and are sewn with silicone free thread so that the filtrate is not contaminated.



### WELDED CONSTRUCTION

Welded construction filter bags have the fabric fused together to form the bag and secure the sealing ring. Modern fabric welding technology provides a strong seal that won't leak or come apart in the flow.



### SEWN-IN BAG RING

Another construction consideration is the type of sealing ring. This is a ring at the opening of the bag that helps seal it to the housing. It can be made of plastic or metal. The ring material is important not only for chemical compatibility, but also for disposal purposes. If the bag is going to be disposed of by incineration, it's important that the ring be plastic, and not metal. Hayward bags are made with a sewn-in PP ring.



### PP FLANGE RING

Consider the ring material of the bag when looking at chemical compatibility of the application. Hayward flanged bags have a PP flange ring.

### PP FLANGE HANDLES

Flanged bags have PP handles at the top to make removal easier. Other bags have a sewn-in cloth handle for removal.

# Needled Felt and Monofilament Mesh Filter Bags, *CONTINUED*

## GLAZED\* POLYPROPYLENE AND SINGED\*\* POLYESTER NEEDLED FELT FILTER BAGS:

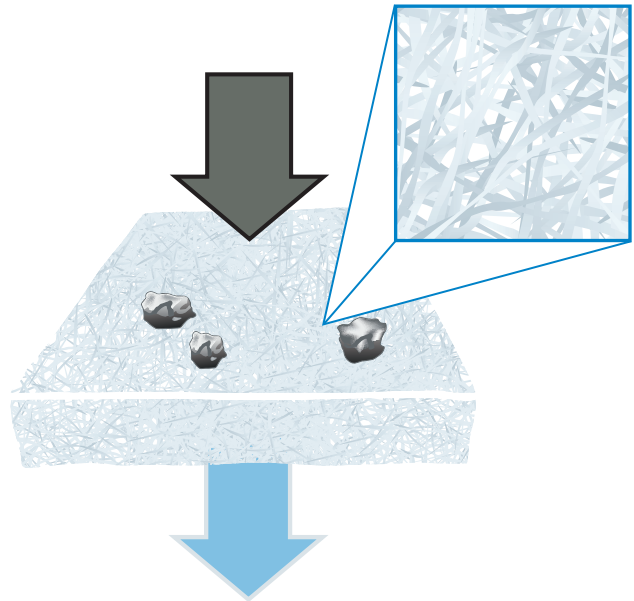
Felt material offers particle filtration by a depth process. Particles larger than the felt openings are trapped against the surface as particles that are smaller are forced into the material and trapped by the fibrous web. This three-dimensional media filtration is effective at removing both solid and gelatinous particles and is available in silicone-free polypropylene and polyester materials. Bags are available in 1 to 100 and 200 microns.

### KEY FEATURES

- Needled Felt Structure
- Silicone-Free Material
- Suitable to Lower Viscosity Fluid
- Stable Filtration with High-Flow Velocity
- No Chemical or Fiber Release
- Temperature for Polypropylene: up to 200°F
- Temperature for Polyester: up to 300°F
- Chemical Resistance: Water, Aromatics, Weak Acids, Alkali

### SPECIFIC APPLICATIONS

- Prefiltration in Water Treatment
- Amine Filtration in Petroleum Industries
- Electrophoretic Paint Filtration in Automotive Industries
- Syrup Filtration
- Raw Medicine Filtration
- Recycled Water Filtration in Electronics Industries



\*Glazed: This process involves putting the felt media through heated rollers to melt back the loose surface fibers to prevent process fluid contamination

\*\*Singed: This process involves exposing the felt media to an open flame to melt back the loose fibers to prevent process fluid contamination

## POLYPROPYLENE AND NYLON MONOFILAMENT MESH FILTER BAGS:

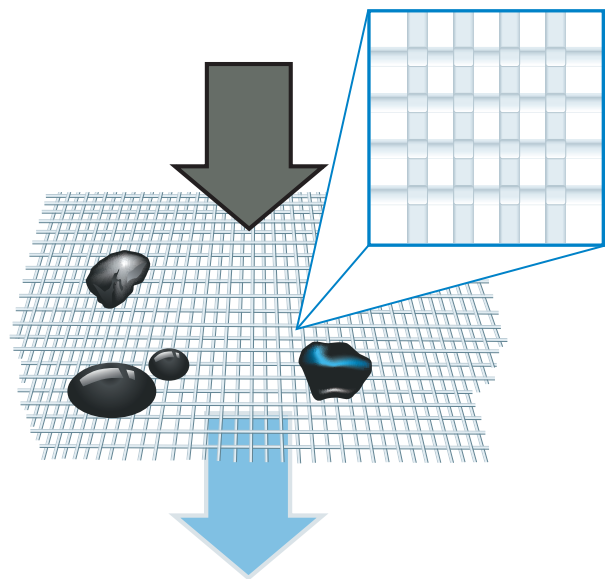
Monofilament mesh offers particle filtration on the surface of a single interwoven fiber. All the holes are uniform providing the same filtration from top to bottom and are fusion welded for strength. Filtration is available at 150 microns and 400 to 800 microns.

### KEY FEATURES

- Monofilament Mesh Structure
- Silicone-Free Material
- Fixed Aperture
- Good Stretch-Proof Performance
- Suitable to Intercept Rigid Impurity and High Viscosity Fluid
- Easy to Clean
- Temperature for Polypropylene: up to 200°F
- Temperature for Nylon: up to 325°F
- Chemical Resistance: Water, Aromatics, Aliphatic, Alkali

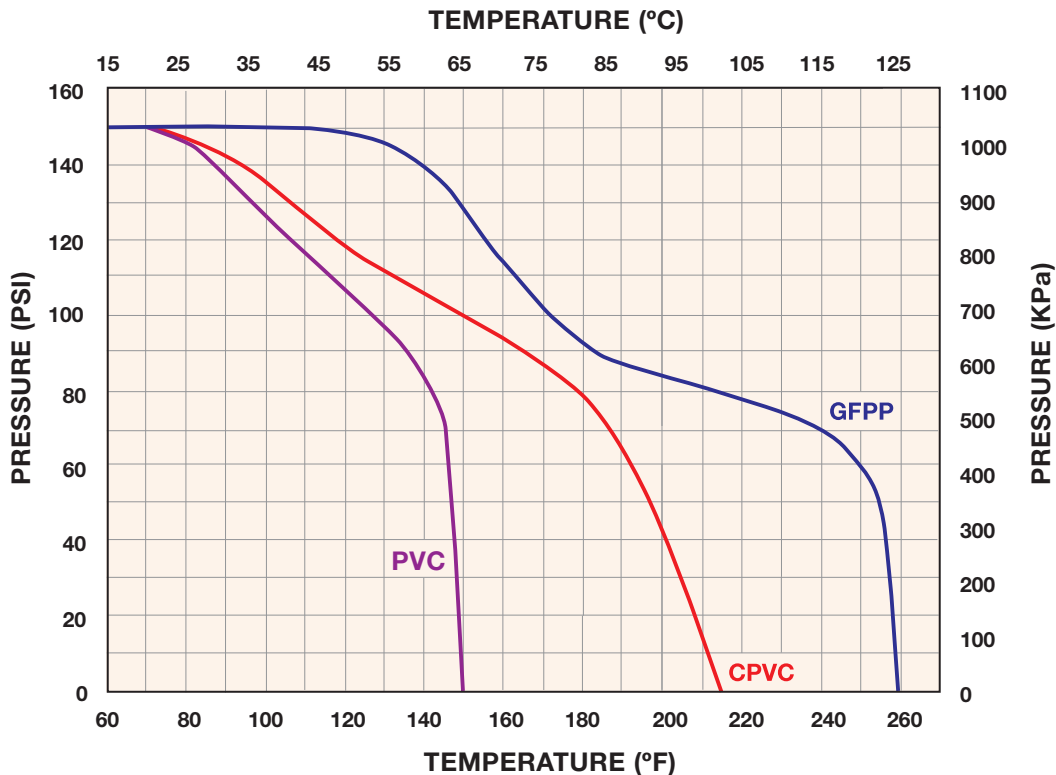
### SPECIFIC APPLICATIONS

- Prefiltration in Metallurgy Industries
- Degreasing in Automotive Industries
- Raw Water Filtration in Water Treatment Industries
- Coolant Filtration in Paint Industries
- Cutting Fluid Filtration in Machine Industries
- Coarse Filtration in Chemical Industries
- Recycled Water Filtration in Paper Mills



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## How to Select a Bag Filter



### 1. CHECK THE TEMPERATURE AND PRESSURE RATING OF THE MATERIAL OF CONSTRUCTION

To make sure that the temperature/pressure of the application falls within the OK range, see the chart on each individual catalog page or check the chart above for FLV Series Filters.

### 2. DETERMINE THE FLOW RATE

In GPM, of the system into which the bag filter is to be installed. Hayward® single and double length bag filters work with flows of up to 150 GPM. If the system's flow rate is greater, consider using two or more filters manifolded together in parallel. For example, if the system flow rate is 150 GPM or higher, using two manifolded filters would reduce the flow to a manageable 75 GPM through each. Constantly running the flow through the filters at their maximum rating limit is not recommended.

### 3. SELECT THE BAG

Hayward bags are available from 1 to 800 microns. The bags are made from several types of materials and are either of a sewn or welded construction. All bags are sold in Carton Quantities. A single length bag has a surface area of 2.0 sq ft and a double length of 4.1 sq ft.

### 4. CONSIDER START-UP PRESSURE LOSS

Bag filters are typically sized so that there is a 2 PSI or less pressure loss across them with a clean bag installed. Keep in mind that this is just a guide. The time between bag change-outs for a double length filter is more than twice that of a single length filter in the same application.

# How to Select a Bag Filter, *CONTINUED*

## 5. CALCULATE START-UP PRESSURE LOSS

To figure the total pressure loss across the filter with a clean bag requires making two pressure loss calculations and adding them together:  
The loss across the filter without a bag and the bag loss.

**First:** Use the system flow rate and Chart 1 to determine the loss across the filter without a bag (single and double length filters have virtually the same pressure loss without a bag). Example: A flow rate of 30 GPM results in a 0.4 PSI pressure loss. If the process media is water or has a viscosity less than 200 CPS, that's it. If the viscosity is greater, select the correction factor that matches the process media viscosity in CPS units from Table Number 1. Multiply the pressure drop by this factor.

Table 1 – Filter Viscosity Correction

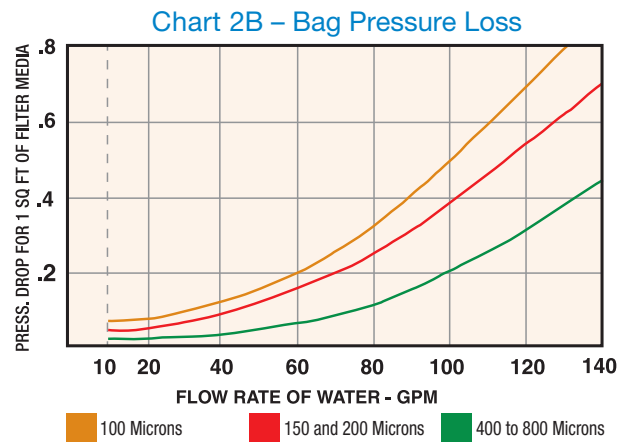
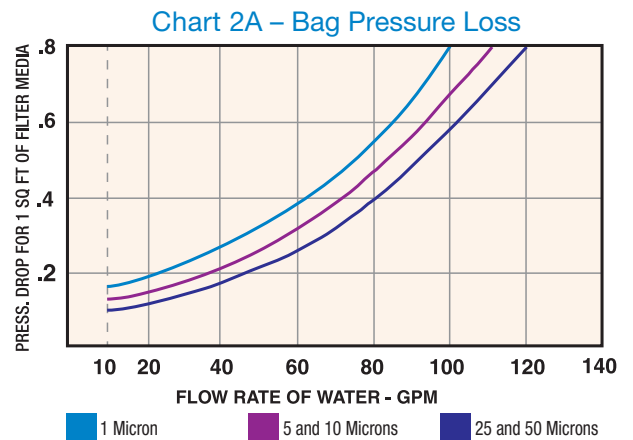
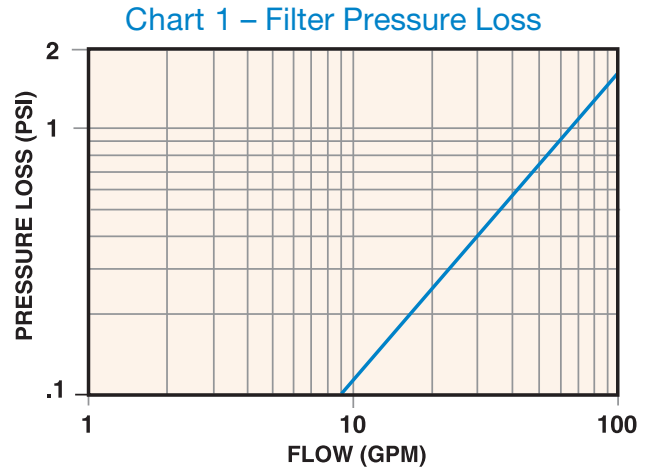
VISCOSITY IN CPS	200	400	600	800
CORRECTION FACTOR	1.10	1.20	1.40	1.50

**Second:** Single and double length filter bags have different pressure losses. Use Charts 2A and 2B to determine the pressure loss per square foot of bag surface. Example: with a system flow rate of 30 GPM, a 5 or 10 micron bag would have a 0.2 PSI loss per square foot. This loss is divided by 2.0 for a single length bag or 4.1 for a double length bag. These factors are the respective surface areas of the bags in square feet. The loss for a single bag would be 0.1 PSI ( $0.2 \div 2.0$ ) and 0.05 for a double length bag ( $0.2 \div 4.1$ ). For fluids with viscosities other than water, select the correction factor from Table 2 and multiply the pressure drop by it. Example: If the fluid viscosity were 800 CPS, the pressure loss for a single length bag would be 5.0 ( $0.1 \times 50.0$ ).

**Last:** Add the pressure loss of the filter and the bag together to get the pressure loss across the filter with the bag installed.

Table 2 – Bag Viscosity Correction

VISCOSITY IN CPS	Water	1	50	100	200	400	600	800
CORRECTION FACTOR	1.00	4.50	8.50	16.60	27.70	38.90	50.00	







## CFLV Series Cartridge Filters

SINGLE AND DOUBLE LENGTH

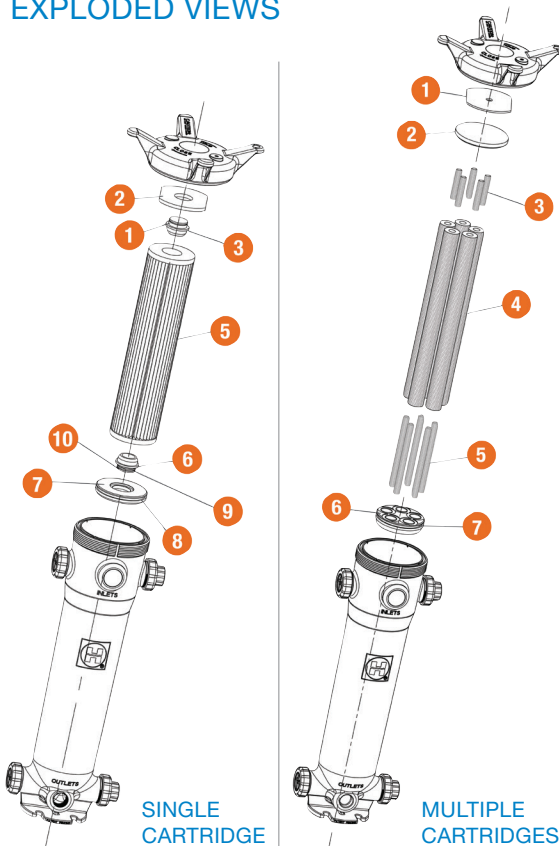
### KEY FEATURES

- Platinum Glass Filled Polypropylene
- One-Piece Injection Molded Construction
- Allows for Single 7" or Multiple (5) 2-1/2" Cartridges
- Ideal for Pleated, Meltblown or Spin Wounded Cartridges
- True Union Design with Multiple End Connection Options
- Hand Removable Ergonomic Cover with Liquid Displacing Dome
- Vent Valve on Cover
- In-Line or Loop Configuration
- Drain Port at Bottom
- Integral Mounting Base

### OPTIONS

- Duplex or Other Manifold Systems
- Vent Gauge with Gauge Guard
- Pressure Differential Gauge and Switch
- EPDM Seals
- Multiple Cartridge Adapters Options

### EXPLODED VIEWS



SINGLE CARTRIDGE

MULTIPLE CARTRIDGES

## TECHNICAL INFORMATION

### SELECTION CHART

SIZE*	MATERIAL	END CONNECTIONS	PIPING SIZES	SEALS	FLOW RATE	PRESSURE RATING
Single Length 7" x 16"	GFPP	GFPP (Threaded and Flanged), PVC/CPVC (Socket and PP Socket Fusion)	1-1/4" – 2" (DN32 – DN50)	FPM or EPDM	100 GPM	150 PSI @ 70°F 10 Bar @ 21°C Non-Shock
Double Length 7" x 32"			2-1/2" – 4" (DN65 – DN100)		150 GPM	

\* PVC and CPVC socket ends available to ISO 727-1 and threaded ends to BS21.  
PP socket fusion ends per ASTM F2389 and threaded ends per BS21.  
Flanged ends available in DIN EN PN10.

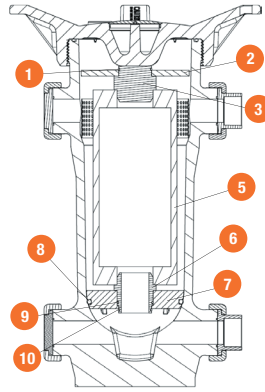
# Cartridge Filter Adapter Kits, *CONTINUED*

FOR SINGLE AND MULTIPLE CARTRIDGES (cartridges not included)

## TECHNICAL INFORMATION, *CONTINUED*

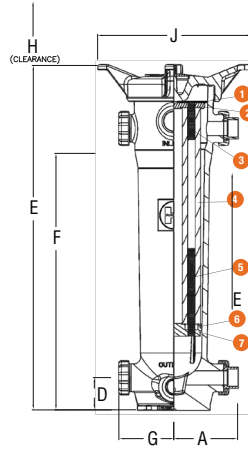
### SINGLE CARTRIDGE PARTS LIST

1. Cartridge Connector Retaining O-Ring
2. Upper Plate
3. Cartridge Connector (Upper)
5. Cartridge (not included in kit)
6. Cartridge Connector (Lower)
7. Lower Plate
8. Lower Plate Seal
9. Cartridge Connector Sealing O-Ring
10. Cartridge Connector Retaining O-Ring



### MULTIPLE CARTRIDGE PARTS LIST

1. Anti-Rotation Ring
2. Upper Plate
3. Perforated Tube (Short)
4. Cartridge (not included in kit)
5. Perforated Tube (Long)
6. Lower Plate Seal
7. Lower Plate



### DIMENSIONS – SINGLE LENGTH

FILTER SIZE in / DN	A in / mm	D in / mm	E in / mm	F in / mm	G in / mm	H* in / mm	J in / mm
1-1/4" / 32	8.86 / 225	4.50 / 114	31.83 / 808	23.00 / 584	7.60 / 193	15.25 / 387	20.93 / 532
1-1/2" / 40	8.86 / 225	4.50 / 114	31.83 / 808	23.00 / 584	7.60 / 193	15.25 / 387	20.93 / 532
2" / 50	8.91 / 226	4.50 / 114	31.83 / 808	23.00 / 584	7.60 / 193	15.25 / 387	20.93 / 532

Dimensions are subject to change without notice – consult factory for installation information

\* Clearance from top for basket removal

### DIMENSIONS – DOUBLE LENGTH

FILTER SIZE in / DN	A in / mm	D in / mm	E in / mm	F in / mm	G in / mm	H* in / mm	J in / mm
1-1/4" / 32	8.86 / 225	4.50 / 114	47.83 / 1215	39.00 / 991	7.60 / 193	31.25 / 794	20.93 / 532
1-1/2" / 40	8.86 / 225	4.50 / 114	47.83 / 1215	39.00 / 991	7.60 / 193	31.25 / 794	20.93 / 532
2" / 50	8.91 / 226	4.50 / 114	47.83 / 1215	39.00 / 991	7.60 / 193	31.25 / 794	20.93 / 532
2-1/2" / 65	9.79 / 249	4.50 / 114	47.83 / 1215	39.00 / 991	8.38 / 213	31.25 / 794	20.93 / 532
3" / 80	9.73 / 247	4.50 / 114	47.83 / 1215	39.00 / 991	8.38 / 213	31.25 / 794	20.93 / 532
4" / 100	10.17 / 258	4.50 / 114	47.83 / 1215	39.00 / 991	8.38 / 213	31.25 / 794	20.93 / 532

Dimensions are subject to change without notice – consult factory for installation information

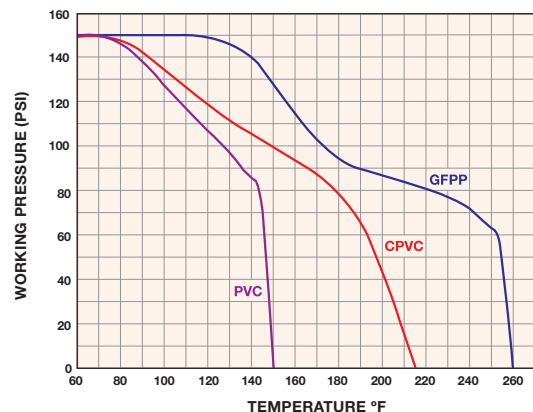
\* Clearance from top for basket removal

### CARTRIDGE ADAPTER SELECTION CHART

CARTRIDGE TYPE	AVAILABLE YES / NO	
	CFLV SINGLE LENGTH	CFLV DOUBLE LENGTH
2-1/2" – 2-3/4" DOE/222XCAP	Yes	Yes
4-1/2" DOE/222XCAP	Yes	Yes
Hayward 7"x16" DOE	Yes	No
Hayward 7"x16" DOE (Double Stacked)	No	Yes
Hayward 7"x30"	No	Yes
7-3/4" DOE	Yes	Yes

Consult Hayward for Available Cartridges.

### OPERATING TEMPERATURE / PRESSURE



## Pleated Filter Cartridges

HIGH CAPACITY/EFFICIENCY

### KEY FEATURES

- Multiple Micron Ratings for High Efficiency Filtration
- For use with Single (7" diameter) and Multiple (2-1/2" diameter) Cartridge CFLVs (Single and Double Length)
- High Surface Area Design Provides Excellent Flow Rates and Comprehensive Service Life
- Thermally Bonded DOE End-Caps, Core and Filter Media

### BENEFITS

- Low Pressure Drop
- Multiple Layered Media Construction Guarantees Dependable Performance

### TYPICAL APPLICATIONS

- Water and Wastewater Treatment
- Desalination, RO and Deionized Water Systems
- Chemical Processing
- Food and Beverage
- Aquatic and Animal Life Support Systems
- Metal Finishing and Plating
- Marine and Corrosive Environments

### MATERIALS

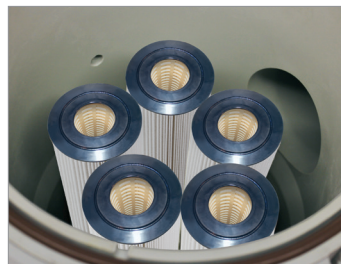
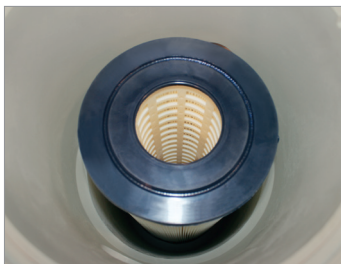
- PP Media
- Cellulose Media
- Plastisol PVC
- PP Core
- ABS Core

### OPERATING CHARACTERISTICS

- Max. ΔP: 40 PSI at maximum recommended temperature of 140°F
- Change-out recommended at 20 PSID



SINGLE AND MULTIPLE CARTRIDGE VIEWS



## TECHNICAL INFORMATION

### COMPATIBILITY AND TEMPERATURE LIMITS

FILTER LENGTH	CARTRIDGE SIZE, RATING AND MATERIAL			
	Single Cartridge	Multiple Cartridge	Micron	Material
SINGLE (SIZE 1)	7 x 16	2-1/2 x 10	5	Cellulose
		2-1/2 x 20	1,5, 10 or 30	PP
DOUBLE (SIZE 2)	7 x 30	2-1/2 x 30	1,5, 10 or 30	PP

# Pleated Filter Cartridges, *CONTINUED*



## CARTRIDGE FILTER ADAPTER KITS FOR INSTALLATION OF SINGLE (1) CARTRIDGES/HAYWARD

PART NUMBER	DESCRIPTION
CFLVKIT716	Cartridge Adapter, For Single Length Series Cartridge Filter, Cartridge 7" x 16" (DOE)
CFLVKIT732	Cartridge Adapter, For Double Length Series Cartridge Filter, Cartridge 7" x 16" (DOE) Double Stacked
CFLVKIT730	Cartridge Adapter, For Double Length Series Cartridge Filter, Cartridge 7" x 30" (DOE)



## CARTRIDGE FILTER ADAPTER KITS FOR INSTALLATION OF SINGLE (1) CARTRIDGES/OTHER MANUFACTURERS\*\*\*\*

PART NUMBER	DESCRIPTION
CFLVKIT410	Cartridge Adapter, For Single Length Series Cartridge Filter, Cartridge 4-1/2" x 10"*** (DOE, 222 CAP or FIN)*
CFLVKIT430	Cartridge Adapter, For Double Length Series Cartridge Filter, Cartridge 4-1/2" x 30"*** (DOE, 222 CAP or FIN)*
CFLVKIT810	Cartridge Adapter, For Single Length Series Cartridge Filter, Cartridge 7-3/4" x 10"**** (DOE)
CFLVKIT830	Cartridge Adapter, For Double Length Series Cartridge Filter, Cartridge 7-3/4" x 30"**** (DOE)



## CARTRIDGE FILTER ADAPTER KITS FOR INSTALLATION OF MULTIPLE (5) CARTRIDGES/HAYWARD AND OTHER MANUFACTURERS\*\*\*\*

PART NUMBER	DESCRIPTION
MFLVKIT210	Cartridge Adapter, For Single Length Series Cartridge Filter, Cartridge 2-1/2"-2-3/4" x 10"*** (DOE, 222 CAP or FIN)*
MFLVKIT230	Cartridge Adapter, For Double Length Series Cartridge Filter, Cartridge 2-1/2"-2-3/4" x 30"*** (DOE, 222 CAP or FIN)*

- Consult factory for other cartridge kit sizes.
- Some kits contain dual purpose components.
- Cartridges shown are sold separately. Kits do not include cartridges.

\* Designated adapters are designed to work with DOE and 222 End Connectors.

\*\* ID minimum of 1".

\*\*\* ID minimum of 2-5/8".

\*\*\*\* When using non-Hayward manufactured cartridges, it is suggested to check cartridge dimensions and/or consult factory for proper fit.



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# Flow of Water Through Schedule 80 Plastic Pipe

DISCHARGE			VELOCITY IN SCHEDULE 80 PLASTIC PIPE FOR WATER @ 60°F/16°C								
GALLONS / MINUTE	CUBIC METER / HOUR	CUBIC FEET / SECOND	VELOCITY								
			FEET/SECOND	FEET/SECOND	FEET/SECOND	FEET/SECOND	FEET/SECOND	FEET/SECOND	FEET/SECOND	FEET/SECOND	FEET/SECOND
				1/4" / DN8	3/8" / DN10	1/2" / DN15	3/4" / DN20	1" / DN25	1-1/4" / DN32	1-1/2" / DN40	
0.2	0.05	0.000446	—	0.824	—	—	—	—	—	—	—
0.3	0.07	0.000668	—	1.237	0.651	0.392	—	—	—	—	—
0.4	0.09	0.000891	—	1.646	0.867	0.529	—	—	—	—	—
0.5	0.11	0.00111	—	2.061	1.083	0.653	0.359	—	—	—	—
0.6	0.14	0.00134	—	2.476	1.303	0.782	0.431	—	—	—	—
0.8	0.18	0.00178	—	3.295	1.728	1.043	0.574	—	—	—	—
1	0.23	0.00223	—	4.122	2.167	1.311	0.718	0.435	—	—	—
2	0.45	0.00446	—	8.245	4.335	2.609	1.432	0.871	0.525	—	—
3	0.68	0.00668	—	12.381	6.502	3.919	2.161	1.306	0.788	0.538	—
4	0.91	0.00891	2"	16.502	8.671	5.218	2.876	1.747	1.051	0.717	—
5	1.14	0.01114	—	—	10.837	6.528	3.592	2.181	1.313	0.896	—
6	1.36	0.01337	0.65	2-1/2"	13.005	7.827	4.308	2.614	1.579	1.076	—
8	1.82	0.01782	0.86	—	—	10.448	5.741	3.482	2.105	1.434	—
10	2.27	0.02228	1.08	0.752	3"	13.057	4.351	2.632	2.632	1.798	—
15	3.41	0.03342	1.61	1.134	—	—	10.778	6.531	3.941	2.697	—
20	4.54	0.04456	2.15	1.505	0.986	—	—	8.712	5.252	3.596	—
25	5.68	0.0557	2.69	1.886	1.238	—	—	10.881	6.574	4.484	—
30	6.81	0.06684	3.23	2.256	1.476	—	—	13.062	7.884	5.383	—
35	7.95	0.07798	3.78	2.638	1.726	—	—	15.232	9.193	6.282	—
40	9.09	0.08912	4.32	3.009	1.976	—	—	17.413	10.515	7.171	—
45	10.22	0.1003	4.84	3.391	2.215	—	—	—	11.838	8.069	—
50	11.36	0.1114	5.39	3.761	2.465	—	—	—	13.147	8.969	—
60	13.63	0.1337	6.47	4.513	2.953	—	—	—	15.779	10.778	—
70	15.90	0.156	7.55	5.266	3.453	—	—	—	—	12.577	—
80	18.17	0.1782	8.62	6.018	3.942	—	—	—	6" / DN150	14.36	—
90	20.44	0.2005	9.69	6.771	4.442	—	—	—	—	16.162	—
100	22.71	0.2228	10.77	7.523	4.931	—	—	—	—	17.96	—
125	28.39	0.2785	13.48	9.409	6.168	—	—	—	—	22.445	—
150	34.07	0.3342	16.18	11.284	7.395	—	—	—	—	—	—
175	39.75	0.3899	18.87	13.171	8.633	—	—	—	—	—	—
200	45.43	0.4456	21.56	15.068	9.861	—	—	—	—	—	—
225	51.10	0.5013	—	16.943	11.098	—	—	—	—	—	—
250	56.78	0.557	—	—	12.325	—	—	—	—	—	—
275	62.46	0.6127	—	—	13.563	—	—	—	—	—	—
300	68.14	0.6684	—	—	14.768	—	—	—	—	—	—
325	73.82	0.7241	—	—	16.041	—	—	—	—	—	—
350	79.49	0.7798	—	—	—	—	—	—	—	—	—
375	85.17	0.8355	—	—	—	—	—	—	—	—	—
400	90.85	0.8912	—	—	—	—	—	—	—	—	—
425	96.53	0.9469	10" / DN250	—	—	—	—	—	—	—	—
450	102.21	1.003	—	—	—	—	—	—	—	—	—
475	107.88	1.059	2.199	—	—	—	—	—	—	—	—
500	113.56	1.114	2.229	—	—	—	—	—	—	—	—
550	124.92	1.225	2.459	—	—	—	—	—	—	—	—
600	136.28	1.337	2.679	12" / DN300	—	—	—	—	—	—	—
650	147.63	1.225	2.899	—	—	—	—	—	—	—	—
700	158.99	1.56	3.129	2.205	—	—	—	—	—	—	—
750	170.34	1.671	3.349	2.359	—	—	—	—	—	—	—
800	181.70	1.56	3.569	2.513	—	—	—	—	—	—	—
850	193.06	1.782	3.799	2.677	—	—	—	—	—	—	—
900	204.41	2.005	4.019	2.831	—	—	—	—	—	—	—
950	215.77	2.117	4.239	2.984	—	—	—	—	—	—	—
1000	227.13	2.228	4.469	3.149	—	—	—	—	—	—	—
1100	249.84	2.451	4.919	3.458	—	—	—	—	—	—	—
1200	272.55	2.674	5.359	3.775	—	—	—	—	—	—	—
1300	295.26	2.896	5.809	4.093	—	—	—	—	—	—	—
1400	317.98	3.119	6.259	4.401	—	—	—	—	—	—	—
1500	340.69	3.342	6.698	4.718	—	—	—	—	—	—	—
1600	363.40	3.565	7.148	5.037	—	—	—	—	—	—	—
1800	408.83	4.01	8.038	5.662	—	—	—	—	—	—	—
2000	454.25	4.456	8.938	6.228	—	—	—	—	—	—	—
2500	567.81	5.57	11.168	7.868	—	—	—	—	—	—	—
3000	681.38	6.684	13.396	9.437	—	—	—	—	—	—	—
3500	794.94	7.798	15.637	11.006	—	—	—	—	—	—	—
4000	908.50	8.912	17.866	12.587	—	—	—	—	—	—	—
4500	1022.06	10.13	20.106	14.156	—	—	—	—	—	—	—
5000	1135.63	11.14	—	—	—	—	—	—	—	—	—
6000	1362.75	13.37	—	—	—	—	—	—	—	—	—
7000	1589.88	15.6	—	—	—	—	—	—	—	—	—
8000	1817.00	17.82	—	—	—	—	—	—	—	—	—
9000	2044.13	20.05	—	—	—	—	—	—	—	—	—
10000	2271.25	22.28	—	—	—	—	—	—	—	—	—
12000	2725.50	26.74	—	—	—	—	—	—	—	—	—

The following wave surge constants may be used to quickly calculate pressure rise due to water hammer where: "C" = the wave surge constant from the table below multiplied by "V" the line velocity in feet per second. The resultant number is then added to the line pressure to determine the resulting wave surge (Water Hammer Effect).

Pipe Size	1/4"	1/2"	3/4"	1"	1-1/2"	2"	3"	4"	6"	8"	10"	12"
Constant	40	35	32	31	27	25	23	23	21	20	19	19

Maximum recommended fluid velocity is 8 feet per second (solenoid valves 5 feet per second)

# Notes

A large grid of graph paper for taking notes, consisting of 20 columns and 30 rows of small squares.

# Other Filtration & Strainer Solutions from Hayward Flow Control...

## PVC & CPVC FLV SERIES BAG FILTERS

- Available in PVC or CPVC Materials
- True Union End Connections - Socket, Threaded or Flanged
- Hand Removable, Ergonomic Cover with Liquid Displacing Dome
- Vent Valve Included on Cover
- Rated up to 100 GPM Flow Rates
- Solid 1-Piece Basket
- In-Line or Loop Flow Configurations
- Drain Port at Bottom
- Integral Mounting Base



## SB SERIES SIMPLEX/DUPLEX BASKET STRAINERS

- Available in PVC, CPV, GFPP and Eastar
- Ergonomic Hand Removable Cover
- In-Line or Loop Connections
- External Cover Threads
- Integral Flat Mounting Bases
- PVC, CPVC and PP Baskets Standard
- Optional Stainless Steel, MonelR, HastelloyR and Titanium Strainer Baskets
- Duplex Configurations Available



## HCF SERIES COMMERCIAL SAND FILTER

- Ideal for Fresh Water Systems
- UV-Protectant Gel Coat Protects Filter From Elements
- Transparent Manway Design Simplifies Operation and Improves Durability
- Commercial-grade PVC and ABS Injection Molded Internals With 360° Slotted Laterals
- Industrial Valve and Pressure Gauge
- Available in 30", 34" and 36" sizes
- Flow Rates up to 143GPM
- NSF/ANSI 50 Listed



## YS SERIES Y-STRAINERS

- Available in PVC, CPV, Clear PVC and PVDF
- Threaded, Socket or True Union Connection
- Horizontal or Vertical Installation
- 2:1 Open Area Ratio
- Hex Cap for Easy Access to Screen
- Standard Screen Has 1/32" Perforation\*\*
- Stainless Steel Perf or Mesh Strainer Screens Available in Various Sizes



\*\*Excluding PVDF

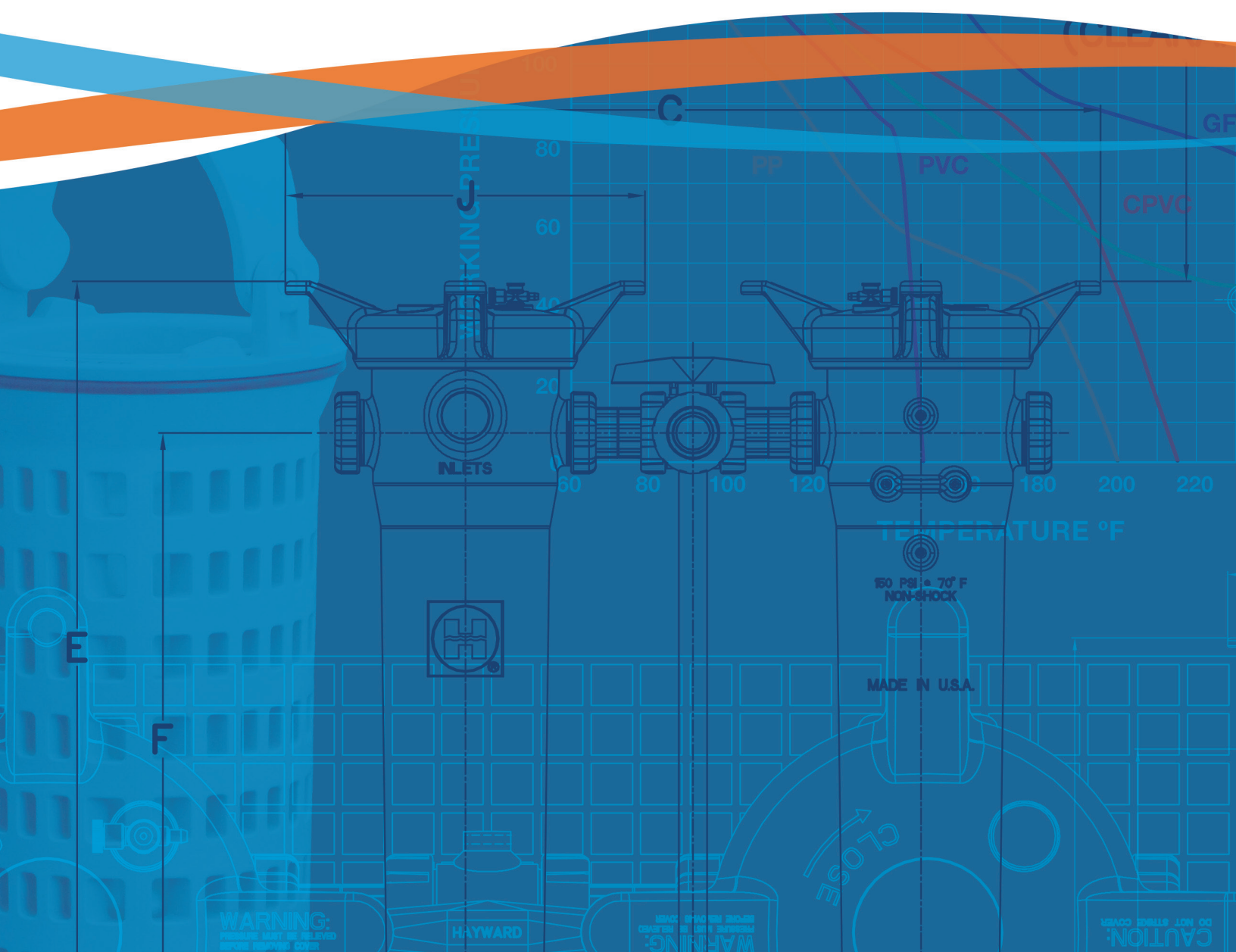
## LS SERIES AQUATIC SAND FILTER

- Ideal for Sensitive Aquatic Environments or Salt Water Systems
- All Wetted Hardware Manufactured from 316 Stainless Steel
- Corrosion Resistant Thermoplastic Housing and Base
- Durable Flanged Inspection Cover
- Integral Top Diffuser
- Efficient, Multilateral Underdrain Assembly
- Integral Molded Drain Plug



## SYSTEM PROTECTION

Hayward offers a full line of Pressure Differential Gauge kits to help better protect your vital systems from damage. Pressure Differential Gauges indicate when to clean, change or replace your bag filter or strainer.



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