Simplex Bag Filters

Single or Double Length - PPL, PVDF

Features

- All-Plastic Construction
- PPL Offered in Single & Double Length; PVDF in Double Length
- Hand-Removable Cover
- Integral Mounting Flange
- External Cover Threads
- In-Line or Loop Flow
- FPM Seals

Options

- Flanged Connections
- EPDM Seals
- Pressure Differential Gauge and Switch
- Vent Gauge with Gauge Guard
- Multi-Vessel Manifolded Units
- 1/4″ NPT Differential Pressure Gauge Holes

Corrosion Is Never a Problem

A metal filter housing will ultimately rust or corrode and contaminate the process media. There is no danger of this happening with a Hayward All-Plastic Simplex Bag Filter. It will never rust or corrode and never compromise the quality of the process fluid.

Wide Range of Filter Bags

Non-woven polypropylene filter bags are available in 1, 5, 10, 25, 50, 100 and 200 micron sizes. The retaining basket that holds the bag has a unique, universal seat that works with almost any standard 7″ x 16″ or 7″ x 32″ filter bag.

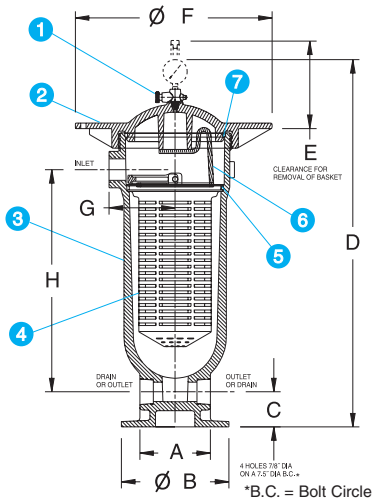
Extra Features, No Extra Cost

Features such as a vent/bleed valve installed on the cover of the polypropylene model and an integral mounting flange are all standard with every Hayward Simplex Bag Filter.

Easy Bag Change-Out

These filters are designed for easy service. A hand-removable cover and built-in basket and bag handles, make bag change-out fast and easy. No tools are needed and the filter is back in service in a matter of minutes. The external cover threads are not in contact with the process media – thus eliminating the need for cleaning each time the bag is changed. For extra strength the cover features specially designed buttress style threads.

Technical Information



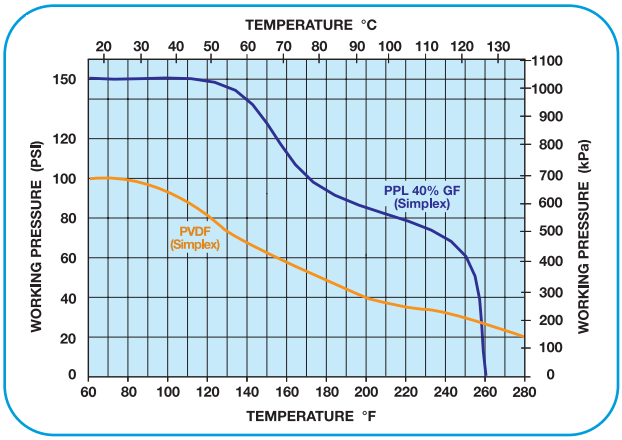
Parts List
Simplex Bag Filter

1. Vent Valve with Optional Gauge (PPL Vessels Only)
2. Cover
3. Body (PPL Double & Single Length, PVDF Double Length Only)
4. Basket
5. Viton O-Ring
6. Bag Retainer
7. Viton O-Ring

Dimensions - Inches / Millimeters

Vessel Size	A	B	C	D	E	F	G	H	J	K	Weight (lb / kg)
Single Length	6.50 / 165	10.00 / 254	3.25 / 83	34.10 / 866	20.00 / 508	18.30 / 465	6.13 / 156	20.75 / 527	11.5 / 292	8.75 / 222	60 / 27
Double Length	6.50 / 165	10.00 / 254	3.25 / 83	50.10 / 1273	36.00 / 914	18.30 / 465	6.13 / 156	36.75 / 933	11.5 / 292	8.75 / 222	80 / 36

Operating Temperature/Pressure



Technical Specifications

Material of Construction:	Glass-reinforced polypropylene – single & double length; PVDF – double length only
Piping Connections:	PPL: 2″ NPT threaded or 150# ANSI flange. PVDF: 2″ flange
Drain Connections:	PPL: 2″ NPT threaded or 150# ANSI flange. PVDF: 2″ flange
Bag Size:	Single length - 7″ x 16″, 2.0 square feet; double length - 7″ x 32″, 4.1 square feet, PPL fabric and ring
Pressure Rating:	PPL 150 PSI, PVDF 100 PSI
Seals:	Viton® (EPDM optional)
Nominal Bag Ratings:	1, 5, 10, 25, 50, 100, 150, 200, 400, 600 and 800 microns. Universal seat accepts most standard 7″ diameter bags
Flow Rate:	Single length, 50 gpm with clean bag double length, 100 gpm with clean bag

How to Select a Bag Filter

1. Check the Chart on the Right

…to make sure that the temperature/ pressure of the application falls within the OK range.

2. Determine the Flow Rate

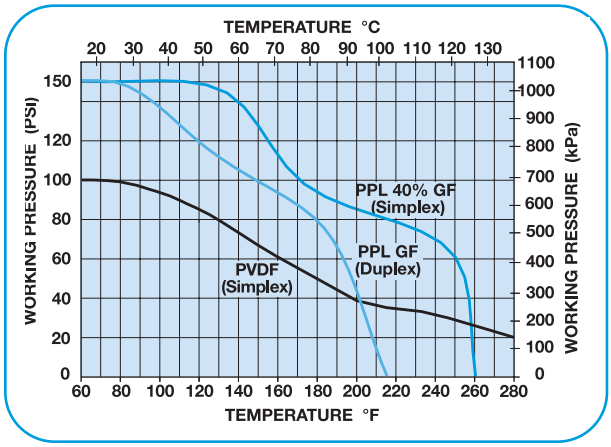
…in gpm, of the system into which the bag filter is to be installed. Hayward single and double-length bag filters work with flows of up to 100 gpm. If the system's flow rate is greater, consider using two or more filters manifolded together. For example, if the system flow rate is 150 gpm, using two manifolded filters would reduce the flow to a manageable 75 gpm through each.

3. Select the Bag

…Hayward bags are available in 5, 10, 25, 50 and 100 micron ratings. The bags are made from non-woven polypropylene felt material. They are double stitched and heat treated to minimize fiber migration. All bags are individually plastic wrapped and sealed to prevent contamination in shipping and handling. A single length bag has a surface area of 2.0 sq ft and a double length 4.1 sq ft.

4. Consider Startup 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. Remember that in most applications filtration efficiency falls off at about 8 to 10 PSI loss and bag changeout should take place before a 20 PSI loss is reached. When in doubt select the filter with the lowest pressure loss. The time between bag changeouts for a double length filter is more than twice that of a single length filter in the same application.



5. Calculate Startup 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 vessel without a bag and the bag loss.

First: Use the system flow rate and Chart Number One to determine the loss across the filter without a bag (single and double length filter vessels 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 One. Multiply the pressure drop by this factor.

Second: Single and double length filter bags have different pressure losses. Use Chart Number Two 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 ÷ 2.0) and 0.05 for a double length bag (0.2 ÷ 4.1). For fluids with viscosities other than water, select the correction factor from Table Two 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 x 50.0).

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

Chart Number One
Vessel Pressure Loss

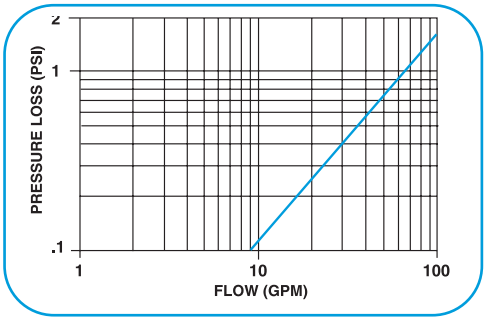


Chart Number Two
Bag Pressure Loss

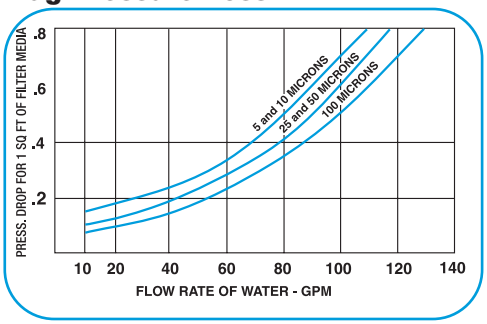


Table Number One
Vessel Viscosity Correction

Viscosity in CPS	200	400	600	800	1000	2000
Correction Factor	1.10	1.20	1.40	1.50	1.60	1.80

Pressure differential data determined by ISA S75.02 test procedure. It is shown only as a guide and may vary by application.

Table Number Two
Bag Viscosity Correction

Viscosity	Factor	Viscosity	Factor	Viscosity	Factor
Water 1	1.0	200	16.6	800	50.0
50	4.5	400	27.7	1000	56.2
100	8.5	600	38.9	2000	113.6