MODELS 4, 6, 8 High-Capacity Strainers and Filters

Strainers or Bag Filters for Hydraulic Fluids and Other Oils

Strainer/filter housings are made in many sizes, and all can serve as basket strainers (for particle retention down to 74 micron size) or as bag filters (for particle retention down to 1 micron size). In all cases, coves are easily removed, without tools, and the basket or bag is easily cleaned or replaced.

FEATURES

- Large-area, heavy-duty baskets
- Low pressure drops
- Housings are permanently piped
- Covers are O-ring sealed
- Carbon steel, or stainless steel (304 or 316) housings
- All housings are electropolished to resist adhesion of dirt and scale
- Adjustable-height legs, standard on Models 6 and 8; optional extra on Model 4
- Easy to clean
- Liquid displacers for easier servicing (optional)

These filters meet the more exacting needs of hydraulic and lubricating fluid filtration.

Construction Materials

All housings and other wetted parts not otherwise specified can be ordered in carbon steel, 304 stainless steel, or 316 stainless steel. Four different materials can be ordered for all seals involved. All baskets and mesh linings are made of stainless steel. 304 stainless steel will be supplied with carbon and 304 housings, 316 stainless with 316 housings.

Choose a basket strainer or bag filter

Once the choice between straining a fluid (removing particles down to one 74 micron size) and filtering it (removing particles down to one micron) has been made, the choice of which size Flow Ezy filter model must be made. All three models (4, 6 and 8) and the baskets and bags that go in them, are of the same basic design. They differ in dimensions, capacities, maximum pressure ratings, and pipe size. Selection is based on these variables.

Pressure Drop

Basket strainers and bag filters are usually selected so that the pressure drop does not exceed 2 psi, when they are clean. Higher pressure drops may be tolerated when contaminant loading is low. That pressure drop information is accurate for all housings with strainer or filter bag baskets only. When filter bags are added, the total pressure drop becomes the sum of the existing pressure drop plus the pressure drop through the bag. Consult the factory for the formula to determine the pressure drop for your application.


Model 6


Model 4


Model 8

Additional sizes are available. Ask for our Bag Filter Catalog.

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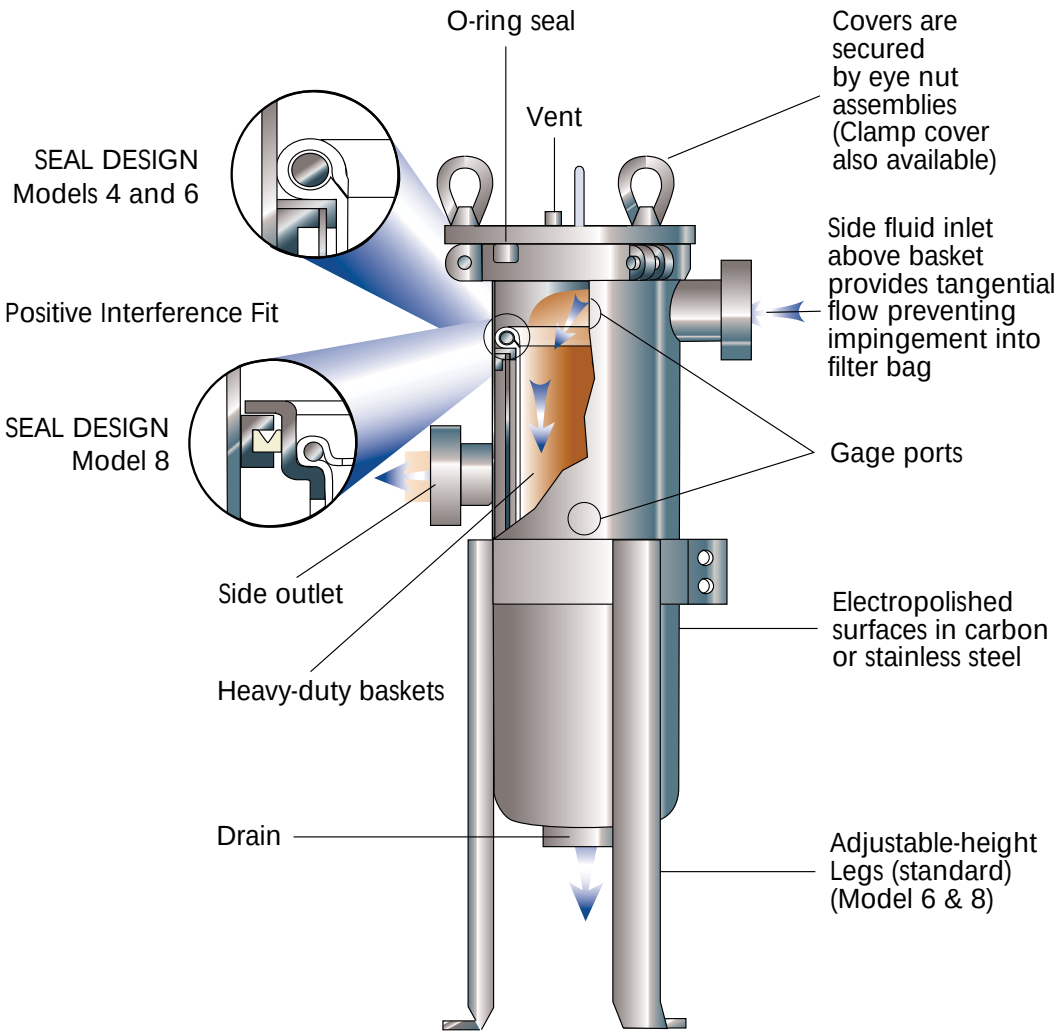
OPERATION

Unfiltered liquid enters the housing above the bag or basket and passes down through them. Solids are contained inside the bag or basket where they're easily and completely removed when the unit is serviced. A hinged basket bail is pushed down by the closed cover, to hold the basket against a positive stop in the housing. It helps prevent bypassing of unfiltered liquid.

Fluid bypass around the basket is prevented by an optional O-ring seal between the basket rim and the housing ID. This seal id required on Model 8 bag filters. Model 4 and 6 bag filters don't need this O-ring because the OD of the filter bag seals against the housing itself, rather than against the ID of the basket rim.

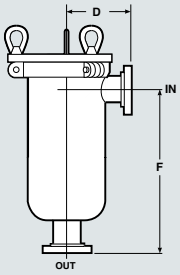
A single cover gasket is used to seal the opening, and covers can be installed and removed without tools.

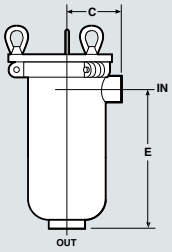


OUTLET STYLES

FLANGED (150 LB. ANSI) | THREADED (NPT)

Style 1





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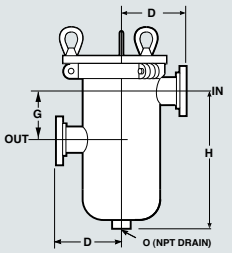
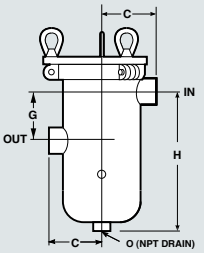
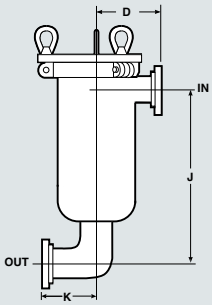
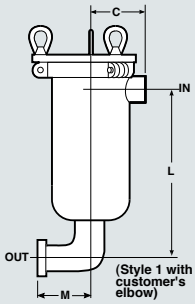




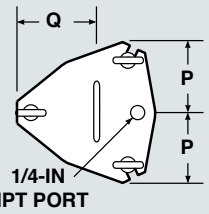
Style 3

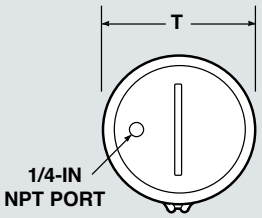


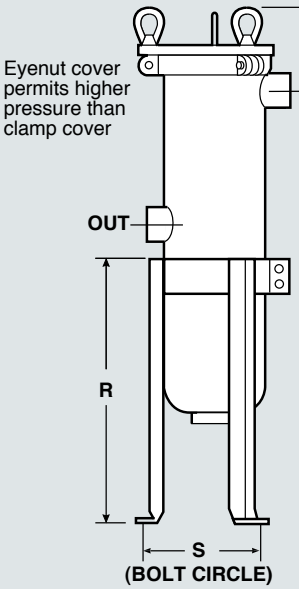


COVER TYPES

EYENUT COVER | CLAMP COVER





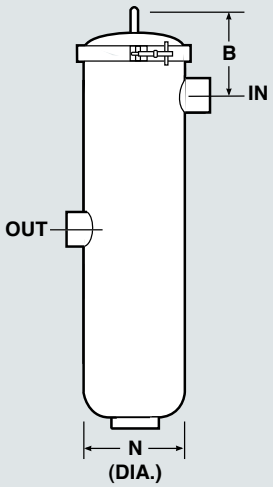


Eyenut cover permits higher pressure than clamp cover

A clearance distance equal to basket depth must be available above housing for basket removal.

Legs for Model 4 are optional at extra cost.

Rated 200 psi with NPT connections



DIMENSIONS (inches)

Model	Pipe Size	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S	T
4-6	3/4	5.5	5.2			10.1	12.0	3.0	10.1	10.4		11.2	1.3							
	1	5.5	5.2			10.1		3.0	10.1	10.9		11.5	1.5							
	1-1/4	6.0	5.8	3.5	5.0	9.4	12.0	4.3	9.5	10.5	4.0	11.1	1.8	4.5	1/2	3.5	3.6	14.0	6.8	5.6
	1-1/2	6.0	5.8			9.3		4.3	9.5	10.8		11.3	2.0							
	2	6.0	5.8			9.3		4.3	9.5	11.6		11.8	2.3							
4-12	3/4	5.5	5.2			16.1		3.0	16.1	16.4		17.2	1.3							
	1	5.5	5.2			16.1		3.0	16.1	16.9		17.5	1.5							
	1-1/4	6.0	5.8	3.5	5.0	15.4	18.0	4.3	15.5	16.5	4.0	17.1	1.8	4.5	1/2	3.5	3.6	14.0	6.8	5.6
	1-1/2	6.0	5.8			15.3		4.3	15.5	16.8		17.3	2.0							
	2	6.0	5.8			15.3		4.3	15.5	17.6		17.8	2.3							
6-12	1	6.1		4.3		17.3	19.8	4.3	17.3	18.1	5.0	18.6	1.5							
	1-1/4	6.1		4.3		17.3	19.8	4.8	17.3	18.4	5.0	19.0	1.8							
	1-1/2	6.1	N/A	4.3	6.0	17.3	19.8	4.8	17.3	18.8	5.0	19.3	2.0	6.0	3/4	5.0	5.3	18.0	9.5	N/A
	2	6.1		4.3		17.2	19.7	4.8	17.3	19.6	5.0	19.7	2.3							
	3	7.0		4.4		18.2	20.7	6.6	18.2	22.0	4.8	21.9	3.1							
6-18	1	6.1				23.3	25.8	4.3	23.3	24.1	5.0	24.6	1.5							
	1-1/4	6.1				23.3	25.8	4.8	23.3	24.4	5.0	25.0	1.8							
	1-1/2	6.1	N/A	4.3	6.0	23.3	25.8	4.8	23.3	24.8	5.0	25.3	2.0	6.0	3/4	5.0	5.3	18.0	9.5	N/A
	2	6.1				23.2	25.7	4.8	23.3	25.6	5.0	25.7	2.3							
	3	7.0				24.2	26.7	6.6	24.2	28.0	4.8	27.9	3.1							
6-30	1	5.5				35.3	37.8	4.3	35.3	36.1	5.0	36.6	1.5							
	1-1/4	6.0				35.3	37.8	4.8	35.3	36.4	5.0	37.0	1.8							
	1-1/2	6.1	N/A	4.3	6.0	35.3	37.8	4.8	35.3	36.8	5.0	37.3	2.0	6.0	3/4	5.0	5.3	18.0	9.5	N/A
	2	6.1				35.2	37.7	4.8	35.3	37.6	5.0	37.7	2.3							
	3	7.0				36.2	38.7	6.6	36.2	40.0	4.8	39.9	3.1							
8-15	2	6.6		5.9	7.5	20.9	23.5	4.8	21.0	23.2	3.3	23.1	2.3							
	3	7.4	N/A	6.8	7.5	36.7	39.6	6.6	36.9	40.5	4.8	40.9	3.1	8.6	1	5.8	6.3	22.0	12.0	N/A
	4	7.4		6.8	8.6	21.5	25.1	8.4	21.9	26.8	6.3	27.6	3.8							
8-30	2	6.6		5.9	7.5	35.9	38.5	4.8	36.0	38.2	3.3	38.1	2.3							
	3	7.4	N/A	6.8	7.5	39.6	39.6	6.6	36.9	40.5	4.8	40.9	3.1	8.6	1	5.8	6.3	22.0	12.0	N/A
	4	7.4		6.8	8.6	40.1	25.1	8.4	36.9	41.8	6.3	42.6	3.8							

HOW TO ORDER Build an ordering code as shown in the example

Example: HOUSING **8-15 -3P-** OPTIONS **1-150-C- B-S-M-200-D-C** OPTIONAL INNER BASKET **- 2M 50**

MODEL NO.
4 = **4**
6 = **6**
8 = **8**

HOUSING SIZE
6 inch = **6** (Model 4 only)
12 inch = **12** (Models 4 & 6 only)
18 inch = **18** (Model 6 only)
15 inch = **15** (Model 8 only)
30 inch = **30** (Models 6 & 8 only)

PIPE SIZE, NPT and FLANGED[1]
3/4-in. female NPT = **3/4P**
1-in. female NPT = **1P**
1-1/4-in. female NPT = **1-1/4P**
1-1/2-in. female NPT = **1-1/2P**
2-in. female NPT = **2P**
3-in. female NPT (Models 6 & 8 only) = **3P**
3/4-in. 150 class ANSI flange = **3/4F**
1-in. 150 class ANSI flange = **1F**
1-1/4-in. 150 class ANSI flange = **1-1/4F**
1-1/2-in. 150 class ANSI flange = **1-1/2F**
2-in. 150 class ANSI flange = **2F**
3-in. 150 class ANSI flange (Models 6 & 8 only) = **3F**
4-in. 150 class ANSI flange (Models 6 & 8 only) = **4F**
6-in. 150 class ANSI flange (Model 8 only) = **6F**

OUTLET STYLE
Bottom = **1**
Side = **2**
Bottom elbow = **3**

PRESSURE RATING[2]
150 psi (NPT or flanged) (Models 6 & 8 only) = **150**
200 psi (NPT) (Model LCO4 only) = **200**
210 psi (NPT) (Model 6 only) = **210**
300 psi (flanged) = **300**
500 psi (NPT) (Model 4 only) = **500**

HOUSING MATERIAL
Carbon steel = **C**
304 stainless steel = **S**
316 stainless steel = **S316**

COVER GASKET
Buna N = **B**
Ethylene Propylene = **E**
Viton® Fluoroelastomer = **V**
Teflon® Fluorocarbon Resin (300 psi only) = **T**

BASKET SEAL
S = Seal required (on strainer type baskets)
N = No seal (with bag type baskets)

BASKET TYPE
PB = Filter bag basket, 9/64 perforations[3]
P = Strainer basket, perforated metal
BM = Filter bag basket, perforated, mesh lined[3]
M = Strainer basket, perforated, mesh lined
HWM = Filter bag basket, heavy wire mesh[3]

Mesh sizes (for type M and BM baskets) 20, 30, 40, 50, 60, 70, 80, 100, 150, 200

BASKET, MEDIA SIZE-No symbol if type B basket was selected
Perforation diameters (for type P baskets) 1/4, 3/16, 9/64, 3/32, 1/16

DISPLACER
D = Displacer

ASME CODE STAMP
C = Code

FOR MODEL 8 ONLY

OPTIONAL INNER BASKET, MEDIA SIZE-No symbol if type 2B basket was selected

Perforation diameters (for type 2P baskets) 1/4, 3/16, 9/64, 3/32, 1/16

Mesh sizes (for type 2M and 2BM baskets)20, 30, 40, 50, 60, 70, 80, 100, 150, 200

OPTIONAL INNER BASKET TYPE
2B = Filter bag basket, 9/94 perforations[3]
2P = Strainer basket, perforated metal
2BM = Filter bag basket, perforated, mesh lined[3]
2M = Strainer basket, perforated, mesh lined

HOW TO ORDER FILTER BAGS

Build an ordering code as shown in the example

CONSTRUCTION

Felt Bags: Felt construction is generally chosen where smaller particle retention is required, in the 1 to 100 micron range. It offers higher solids loading capacity than mesh. General purpose felt bags are offered in polyester and polypropylene.
Mesh bags: Mesh is a woven construction, generally used where micron ratings of 5 to 800 (660 to 20 mesh) are required. Two types are offered.

The **multifilament** mesh is a low cost, disposable material, offered in polyester or nylon.

Monofilament mesh has higher strength, and is available in polypropylene or nylon. It should be considered cleanable.

FELT BAG FINISHES AND COVERS

Standard finish: Plain, as manufactured, without treatment or covers.

Glazed finish: The outermost surface fibers are melted by the momentary application of high heat. This bonds them to one another and effectively reduces the possibility of their breaking off. This finish is not available on high temperature bags.

Mesh Covers: Covers are available that completely encase the bag. Made of woven polyester mesh, nylon mesh, spun-bonded nylon (Cerex), or spun-bonded polyester (Remay), they act to contain any fibers that may separate from the filter bag.

DESIGN DETAILS

All Flow Ezy filter bags have a metal retaining ring at their opening. Standard ring material is cadmium-plated carbon steel, with 316 stainless steel optional. Heavy-duty handles, sewn to the reinforced bag lip, are a standard feature. They make bag removal faster and easier.

NOTE:

1. Flanges provided with the housing match the pressure rating of the vessel.
Housings rated 150 psi have 150 class flanges.
Housings rated 300 psi have 300 class flanges.
ANSI B16.5 Pressure-Temperature rating tables determine flange class for ASME code housings.
Consult factory.
2. Higher pressure ratings available. Consult factory.
3. Filter bags are specified separately.

Minimum quantity on non-standard sizes / materials. Consult factory.

Example: PE - 25 - P - 7 - S - SS

Fiber and Micron Ratings
Felt, polyester = **PE**
Microns: 1, 3, 5, 10, 15, 25, 50, 75, 100, 200

Felt, polypropylene = **PO**
Microns: 1, 3, 5, 10, 25, 50, 100

Felt, Oil-Adsorb, 25-micron = **OA 25**

Felt, Nomex = **HT**
Microns: 5, 10, 25, 50, 100

Felt, Teflon, 10-micron = **TE 10**

Mesh, monofilament = **NMO**
Microns: 5,10, 25, 50, 75, 100, 125, 150, 175 200, 250, 300, 400, 600, 800

Mesh, monofilament polypropylene = **PMO**
Microns: 300, 600

Mesh, multifilament polyester PEM
Microns: 75, 100, 125, 150, 200, 250, 300, 400, 800

Mesh, multifilament nylon (heavy) = **HNM**
Microns: 800

Inner Bags for Model 8 or Multibag Filters.
To order inner bags, use a second, separate ordering code.
It should be built using the system shown above, but prefixed by the symbol "IN". Example: IN–PE 25 P 2 S-SS

Additional Options
SS = Stainless steel ring

Bag Style
S = Plated ring

Bag Dimensions

Symbol	Dia. (in.)		Length (in.)	Housing Model
1 =	7-1/16	x	16-1/2	8-15
2 =	7-1/16	x	32	8-30
3 =	4-1/8	x	8	4-6
4 =	4-1/8	x	14	4-12
7 =	5-1/8	x	15	6-12
8 =	5-1/8	x	21	6-18
9 =	5-1/8	x	32	6-30
12 =	5-1/4	x	32	LCO

Bag Finish Or Cover
P = None (standard)
G = Fiber-free glazed finish
PEM = Polyester multifilament mesh cover
NM = Nylon multifilament mesh cover
C = Spun-bonded nylon (Cerex) cover
R = Spun-bonded polyester (Remay) cover

FILTER BAG SIZES

USED ON FLOW EZY MODEL NO.	BAG SIZE	LENGTH (inches)	DIAMETER (inches)	SURFACE AREA (sq. ft.)	BAG VOLUME (gallons)
4-6	3	8	4.12	0.5	0.5
4-12	4	14	4.12	1.0	1.0
6-12	7	15	5.10	1.3	1.3
6-18	8	21	5.10	2.0	1.5
6-30	9	32	5.10	3.4	2.8
	1	16.5	7.06	2.0	2.1
8-15	1 (inner)	14.5	5.75	1.6	1.7
8-30	2	32	7.08	4.4	4.5

PLEATED BAGS FOR BAG FILTERS

Flow Ezy's pleated bags give up to 12 times the filtration that normal filter bags do. They are easy to use, too. Also, when removing the dirty cartridge, the contamination does not wash or slide off. They are just like cartridge elements, providing more surface area, thus giving more dirt-holding capacity. When you have a filter that requires frequent changing, pleated bags are the best option.

The seams are not sewn, they are sonically welded to prevent leakage or any contamination bypass. The top sealing flange and the bottom flange are also sonically welded to the pleated cylinder.

The pleated filter bag is made of polyester or polyester micro-fiber media. It has ultrasonic bonded polypropylene end caps. The bottom has an extended polypropylene end with a male, polypropylene threaded bolt.

The pleated filter bag can then be turned clockwise to adjust the height. When the filter is at the proper height, the top flange will seat into the filter bag basket.

With the direction of the flow inside-out, all the pressure is pushing on the exterior walls and bottom of the pleated filter bag. Without the bolt configuration and the seat against the basket, the bottom seal would be broken rendering the filter useless and compromising the integrity of the filter and the health of the system.

BAG SIZE	STD. BAG SQ. FT.	PLEATED BAG SQ. FT.
1	2.3	15.0
2	4.4	25.0
3	0.5	2.9
4	1.0	6.2
7	1.3	8.0
8	2.0	11.5
9	3.4	18.5

HOW TO ORDER

Build an ordering code as shown in this example:

Order Code Example: PL - R2 - POMF - 8 - P2 - QTB

BAG SIZED PLEATED CARTRIDGE = **PL**

TOP SEALING RING DESIGN
- Flared polypropylene = **R1, R2**
- Solid polypropylene = **R3**
- Flared polypropylene = **FSI**

HIGH EFFICIENCY MATERIAL
- Micro-fiber polyester = **PEMF**
- Micro-fiber polypropylene = **POMF**
- Standard polyester = **PE**
- Standard polypropylene = **PO**

QTB = Quick Turn Bolt
(only available in sizes 1 and 2)

BAG SIZE
- **P1** = 7-1/16 x 11-1/8
- **P2** = 7-1/16 x 26-1/8
- **P3** = 4-1/8 x 5-1/16
- **P4** = 4-1/8 x 11-1/16
- **P8** = 5-5/8 x 16-1/8
- **P9** = 5-5/8 x 26-3/4

MICRON RATING
1, 3, 8, 19, 35, 48, 55, 65, 70, 90, 110
(see specific style above)