Filtration Product Catalog

Sock / bag filter housing Sock / bag filter Cartridge filter housing Cartridge filter

Dynalene's filtration products offer a comprehensive particulate removal solution that can be tailored to any fluid application. The filter vessels are available in standard sizes and can be customized to meet the customer requirements with respect to the material of construction, fluid handling capacity and flow rate. The filtration systems are tested with the Dynalene fluid for compatibility and filtration efficiency.

DYC





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Bag / sock filter vessel



DYS Series

The DYS series sock or bag filter vessels are designed to work with a wide range of fluid flow rates from 15 to 100 gallons per minute. These heavy duty vessels are available in carbon steel and stainless steel with different options of inlet types and nozzle configurations. The vessels accommodate the standard BG series bag filters that Dynalene offers. The maximum pressure rating on our standard vessel design is 150 PSI and ASME code stamp can be provided on all of our products.

Features

- Standard models offer a single bag filter with a flow rate capability from 15 to 100 GPM.
- The pressure rating of the vessels are 150 PSI. ASME code stamping available.
- The vessels are available in Carbon Steel, 304SS and 316SS.
- Easy to use manual lid lift with swing bolt.
- Different sizes of NPT or flange connection configurations that fits diverse customer requirements.
- The vessels can be custom built to fit your specifications, which includes choice of pipe requirement, gasket material, number of bags and dimension of the support legs.

Housing material	Carbon Steel, 304 Stainless Steel and 316 Stainless Steel
Gasket material	Buna-N, Viton® and Teflon®
Maximum pressure rating	150 PSI
Number of bags	1 bag per vessel (Customization available)
Filter bag size	1, 2, 3, 4
Pipe connections	1, 2, 3, 4 inch
Inlet type	NPT and flange connection (Customization available)
Lid opening	Swing Bolt
Fluid flow rate	15 to 100 GPM
Basket material	316 stainless steel perforations with 9/64-inch perforations
Nozzle configuration	Side In/Bottom Out, Side In/Side Out, Offset, Side In/ Side out: same side
Support stand	Custom tripod leg assembly
Certification	ASME code stamping available

Customization

Along with the standard filter vessels, we can also custom build vessels that meet your requirements. Contact us today at 610.262.9686 or email at info@dynalene.com and discuss your application with Dynalene's fluid experts today.

Bag / sock filter vessels

Ordering information

	1	2	3	4	5	6	7	8	9	10	11	12
	DYS	01	А	15	F	02	F	02	S	В	01	U
1	Model N DYS	umber			5	Inlet Typ F = Flang N = Fema	e je ale NPT		9	Lid Openi S = Swing	ng Bolt	
2	Vessel Si . 01 = Bag 02 = Bag 03 = Bag 04 = Bag	ze size 1 size 2 size 3 size 4			6	Inlet Size 01 = 1 in 04) 02 = 2 in 02, 03 & 03 = 3 in 04	ch (DYS ch (DYS 04) ch (DYS	03 & 01, 03 &	10	Lid Seal B = Buna- V = Viton T = Teflon	N ® ®	
3	Vessel M A = Carb B = 304 S C = 316 S	a terial on Steel Stainless S Stainless S	Steel Steel		7	Outlet Ty F = Flang N = Fema	/pe je ale NPT		11	Nozzle Co 01 = Side 02= Side I 03= Side I	onfiguratio In/Bottom n/Side Ou n/ Side ou	on Out it, Offset it, same s
4	Vessel Pr 15 = 150	essure Ra PSI	ting		8	Inlet Size 01 = 1 in 04) 02 = 2 in 02, 03 & 03 = 3 in 04	ch (DYS ch (DYS 04) ch (DYS	03 & 01, 03 &	12	ASME Coc U = U star M = UM s N = No sta *For minia	le Stampi mp tamp* amp ature press	ng sure vesse

Nozzle Configuration



Sock filter vessel flow rate chart

Description	DYS1	DYS2	DYS3	DYS1
No of Bags	1	1	1	1
Bag Size	1	2	3	4
Max Flow Rate	50	100	15	30

Filter Bags



BG Series

The BG series felt bag filters are designed for efficient particulate removal from various fluid chemistries. They are available in nylon, polypropylene, polyester and Teflon® materials, with an option of 1, 5, 10 and 25 micron sizes. These bag filters are suitable to be used with the DYS series bag filter vessels and are designed to withstand up to twice the dirt holding capacity of a standard filter bag. The filter bags are systematically tested with the Dynalene fluid for compatibility and are available for purchase in small and large quantities.

Features

- Compatible with all the Dynalene fluids.
- Wide range of operating temperatures from -50°F to 450°F
- Highly efficient particle removal capability that is ideal for filtration in continuously operated fluid systems.
- Available in various micron ratings and material of construction.
- Suitable to use with DYS series bag / sock filter vessel.
- Withstands high solid loading, up to twice the dirt holding capacity of a standard filter bags.

Specification

Filter material	Nylon, polypropylene, polyester and Teflon
Filter bag size	1, 2, 3, 4
Micron size	1, 5, 10 and 25 μm
Ring	Nylon, polypropylene, polyester and Teflon
Operating temperatures	Wide operating temperature from -50°F to 450°F (-45°C to 232°C)

Customization

With our experience of handling fluids and understanding of filtration media, we will be able to help you design an appropriate filtration system that can meet your needs. Contact us today at 610.262.9686 or email at info@dynalene.com and discuss your application with Dynalene's fluid experts today.

Ordering information





The chart above provides the pressure drop values for Size 2 bag housing with various micron rating using DI Water

at 77°F

Desired fluid Correction Factor can be obtained by:

Correction Factor = (0.0407 x Viscosity) + 11.262

Pressure drop for the desired fluid can be calculated using the following equation:

Pressure drop for desired fluid = Pressure drop of water at $77^{\circ}F \times Correction Factor$

Note:

1. Viscosity of desired fluid should be in centipoise (cP) when calculating the correction factor

2. Viscosity values for Propylene Glycol, Ethylene Glycol, and HC can be found in the Appendix (Page 10)

Additionally, the pressure drop for different sized bags can be found below:

Pressure drop of desired bag filter = ΔP Factor x ΔP

Size:	ΔP Factor:
1	2.25
3	9.00
4	4.50



DYC Series

The DYC series cartridge filter vessels are designed to work with a wide range of fluid flow rates from 1 to 100 gallon per minute. These heavy duty vessels are available in carbon steel and stainless steel with different options of inlet types and nozzle configurations. The vessels accommodate the standard CD series cartridge filters that Dynalene offers. The maximum pressure rating on our standard vessel design is 150 PSI and ASME code stamp can be provided on all of our products. Cartridges can be custom designed to operate at higher flow rates and pressures.

Features

- Standard models offer flow rate capability from 1 to 100 GPM (customization available).
- The pressure rating of the vessels is 150 PSI. ASME code stamping available.
- The vessels are available in Carbon Steel, 304SS and 316SS.
- Easy to use manual lid lift with swing bolt.
- Different sizes of NPT or flange connection configurations that fits diverse customer requirements.
- The vessels can be custom built to fit your specifications, which includes choice of pipe requirement, gasket material, number of cartridges and dimension of the support legs.

Housing material	Carbon Steel, 304 Stainless Steel and 316 Stainless Steel
Gasket material	Buna-N, Viton® and Teflon®
Maximum pressure rating	150 PSI
Number of cartridges	1 to 15 cartridges (Customization available)
Filter cartridge size	10, 20, 30 , 40 inch
Pipe connections	1, 2, 3, 4 inch
Inlet type	NPT and flange connection (Customization available)
Lid opening	Swing Bolt
Fluid flow rate	1 to 100 GPM
Nozzle configuration	Side In/Bottom Out, Side In/Side Out, Offset, Side In/ Side out: same side
Support stand	Custom tripod leg assembly
Certification	ASME code stamping available

Specifications

Customization

Along with the standard filter vessels, we can also custom build vessels that meet your requirements. Contact us today at 610.262.9686 or email at info@dynalene.com and discuss your application with Dynalene's fluid experts today.

Cartridge Filter

CD Series

The DYC series cartridge filters protect processes by providing high efficiency filtration. These depth filters offer a choice of filtration media, support cores, and materials to enable compatibility with most applications. For potable water to aggressive chemicals, the DYC series cartridges provide progressive depth filtration with high sediment-holding-capacity. DYC series filter cartridges are available from 0.5 to 200 micron ratings for polishing to pre-filtration. Cartridges are available in continuous lengths from 10, 20, 30 and 40 inch height. These cartridges are systematically tested with the Dynalene fluid for compatibility and are available for purchase in small and large quantities.

Features

- Compatible with all the Dynalene fluids.
- Compatible with wide range of operating temperatures from –70°F to 450°F
- Highly efficient particle removal capability that is ideal for filtration in continuously operated fluid systems.
- Available in various micron ratings and material of construction.
- Suitable to use with DYC series cartridge filter vessel.

Specification

Filter material	Cotton, polypropylene, nylon , polyester, fiberglass, etc.
Filter size	10, 20, 30 and 40 inch
Micron size	0.5 to 200 micron ratings
Core	Stainless steel and polypropylene
Operating temperatures	Wide operating temperature from -70° F to 450° F (- 45° C to 232° C)

Customization

With our experience of handling fluids and understanding of filtration media, we will be able to help you design an appropriate filtration system that can meet your needs. Contact us today at 610.262.9686 or email at info@dynalene.com and discuss your application with Dynalene's fluid experts today.

Ordering information

1 CD	2 01	3 PO	4 10	5 PO	2	Cartridge Height 01 = 10 inch 02 = 20 inch 03 = 30 inch 04 = 40 inch	4	Micron Size 01 = 1 micron 05 = 5 micron 10 = 10 micron 25 = 25 micron	50 = 50 micron 75 = 75 micron 100 = 100 micron 200 = 200 micron	
		1	Model Number CD		3	Material N = Nylon PO = Polypropylene PE = Polyester F = Fiberglass CO = Cotton	5	Core A = Polypropylene B = 304 Stainless Steel C = 316 Stainless Steel		
www.dynalene.com				info	@dynalene.com	6	10.262.9686 / 1.877.2	244.5525	8	

Formula for Calculating Aqueous Fluids:

The following general formula can be used to calculate pressure drop (psi) for water based fluids:

$$\Delta P = \frac{Flow Rate \times Viscosity \times Flow Factor}{Length Factor \times Density \times Number of Cartridges}$$

Note:

- 1. Viscosity is in units of centipoise (cP)
- 2. Flow rate is in units of gallons per minute (GPM)
- 3. Density is in units of g/cm^3
- 4. Density and Viscosity for Propylene Glycol, Ethylene Glycol, and HC can be found in the Appendix (Page 10)
- 5. "Number of Cartridge" is the amount of cartridges in the filter vessel.

Micron	1	5	10	20	20 30		50	75	100
Flow Factor	2.0000	0.3636	0.1931	0.1075	0.0855		0.0709	0.0645	0.0624
Length (in.) of cartridge		10	10 20			40			
Length Factor		1	2	3		4			

Example

Calculating pressure drop of HC-40 at -40°F and 5 GPM with CD03CO10B (30 inch, Cotton wound, 10 micron and 304 SS core)

Flow Rate = 5 gpm Viscosity @ -40 °F = 14.9 cP Density @ -40 °F = 1.344 g/cm³ Flow Factor = 0.1931 Length Factor = 3 # of Cartridge = 1

Plug these values into the general formula to get a pressure drop for specific conditions:

$$\Delta P = \frac{5 \times 14.9 \times 0.1931}{3 \times 1.344 \times 1}$$
$$\Delta P = 2.233 \ psi$$

Dynalene Propylene Glycol Viscosity and Density

Dynalene Propylene Glycol Series, Viscosity (cP)										
Tomporature %	Volume									
remperature 'r	20%	30%	40%	50%	60%					
-30					498					
-20					299					
-10				96	183					
0			40.9	61.3	115					
10		13.4	27	40.6	74.2					
20	5.36	9.89	18.5	27.8	49.3					
30	4.23	7.46	13.1	19.7	33.7					
40	3.41	5.75	9.6	14.3	23.7					
50	2.79	4.52	7.21	10.7	17.1					
60	2.32	3.62	5.56	8.13	12.6					
70	1.95	2.94	4.38	6.34	9.51					
80	1.66	2.43	3.52	5.04	7.34					
90	1.43	2.04	2.88	4.08	5.77					
100	1.25	1.73	2.4	3.35	4.62					
120	0.97	1.3	1.73	2.36	3.11					
140	0.78	1.01	1.31	1.75	2.22					
160	0.64	0.82	1.04	1.35	1.66					
180	0.54	0.68	0.85	1.08	1.29					
200	0.46	0.58	0.71	0.88	1.04					
220	0.4	0.5	0.61	0.74	0.86					

Dynalene Propylene Glycol Series, Density (g/cm ³)										
Tomporature %	Volume									
remperature r	20%	30%	40%	50%	60%					
-30	0	0	0	0	1.073					
-20	0	0	0	1.063	1.071					
-10	0	0	0	1.062	1.069					
0	0	0	1.051	1.06	1.067					
10	0	1.04	1.05	1.058	1.065					
20	1.028	1.038	1.048	1.056	1.062					
30	1.026	1.037	1.046	1.053	1.06					
40	1.024	1.035	1.043	1.051	1.057					
50	1.023	1.032	1.041	1.048	1.054					
60	1.021	1.03	1.038	1.045	1.051					
70	1.019	1.028	1.036	1.042	1.048					
80	1.016	1.025	1.033	1.039	1.044					
90	1.014	1.023	1.03	1.036	1.041					
100	1.011	1.02	1.027	1.032	1.037					
120	1.006	1.013	1.02	1.025	1.029					
140	0.999	1.006	1.012	1.017	1.021					
160	0.992	0.999	1.004	1.008	1.012					
180	0.985	0.991	0.996	0.999	1.002					
200	0.977	0.982	0.986	0.989	0.992					
220	0.968	0.972	0.976	0.979	0.98					
240	0.959	0.962	0.965	0.968	0.969					

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Dynalene Ethylene Glycol Viscosity and Density

Dynalene Ethylene Glycol Series, Viscosity (cP)										
Tomporatura °E	Volume									
Temperature *F	20%	30%	40%	50%	60%					
-30					89.7					
-20				40.4	60.5					
-10				27.3	42.1					
0			13.8	19.3	30.1					
10		6.83	10.1	14.3	22.1					
20	3.9	5.38	7.74	10.9	16.6					
30	3.14	4.33	6.09	8.48	12.7					
40	2.59	3.54	4.91	6.77	9.9					
50	2.18	2.95	4.04	5.5	7.85					
60	1.86	2.49	3.38	4.55	6.33					
70	1.61	2.13	2.87	3.81	5.17					
80	1.41	1.84	2.46	3.23	4.28					
90	1.24	1.6	2.13	2.76	3.58					
100	1.11	1.41	1.87	2.39	3.03					
120	0.9	1.11	1.46	1.82	2.23					
140	0.74	0.9	1.17	1.43	1.69					
160	0.63	0.75	0.95	1.15	1.32					
180	0.54	0.63	0.79	0.94	1.06					
200	0.47	0.54	0.67	0.78	0.86					
220	0.41	0.46	0.57	0.66	0.72					

Dynalene Ethylene Glycol Series, Density (g/cm ³)										
Tomporatura 9E		Volume								
remperature -	20%	30%	40%	50%	60%					
-30					1.126					
-20				1.108	1.124					
-10				1.106	1.122					
0			1.087	1.104	1.119					
10		1.067	1.085	1.101	1.116					
20	1.046	1.065	1.082	1.099	1.114					
30	1.044	1.063	1.08	1.096	1.111					
40	1.042	1.06	1.077	1.093	1.108					
50	1.04	1.058	1.075	1.09	1.105					
60	1.037	1.055	1.072	1.087	1.102					
70	1.035	1.053	1.069	1.084	1.099					
80	1.032	1.05	1.066	1.081	1.095					
90	1.03	1.047	1.063	1.078	1.092					
100	1.027	1.044	1.06	1.075	1.088					
120	1.022	1.038	1.053	1.068	1.081					
140	1.016	1.032	1.047	1.06	1.074					
160	1.009	1.025	1.039	1.053	1.066					
180	1.002	1.017	1.032	1.045	1.057					
200	0.995	1.01	1.024	1.036	1.049					
220	0.988	1.002	1.015	1.028	1.04					

Dynalene HC Viscosity and Density

Dynalene HC Series, Viscosity (cP)							Dynalene HC Series, Density (g/cm³)					
Temperature °F	HC-10	HC-20	HC-30	HC-40	HC-50		Temperature °F	HC-10	HC-20	HC-30	HC-40	HC-50
-58					38.4		-58	0	0	0	0	1.374
-50					28.3		-50	0	0	0	0	1.371
-40				14.9	20.4		-40	0	0	0	1.344	1.37
-20			6.8	8.8	11.9		-20	0	0	1.296	1.338	1.363
0		4.3	5.3	6.1	7.7		0	0	1.253	1.29	1.331	1.357
20	2.8	3.4	4.2	4.5	5.4		20	1.198	1.246	1.285	1.325	1.35
40	2.3	2.8	3.4	3.5	4.2		40	1.194	1.242	1.278	1.32	1.344
60	1.9	2.3	2.7	2.9	3.4		60	1.189	1.235	1.274	1.314	1.338
80	1.6	1.9	2.3	2.4	2.9		80	1.184	1.23	1.267	1.307	1.333
100	1.4	1.6	1.9	2	2.4		100	1.178	1.224	1.262	1.301	1.326
120	1.2	1.4	1.6	1.7	2.1		120	1.173	1.218	1.256	1.294	1.32
140	1	1.2	1.4	1.5	1.8		140	1.168	1.213	1.251	1.288	1.314
160	0.9	1	1.2	1.3	1.6		160	1.163	1.206	1.245	1.282	1.307
180	0.79	0.93	1.1	1.2	1.4		180	1.158	1.202	1.24	1.277	1.301
200	0.71	0.82	0.95	1.1	1.3		200	1.154	1.195	1.234	1.27	1.294
220	0.63	0.73	0.85	0.95	1.2		220	1.149	1.189	1.229	1.264	1.29
240	0.57	0.66	0.76	0.86	1.1		240	1.144	1.184	1.222	1.258	1.283
260	0.52	0.6	0.69	0.79	0.97		260	1.138	1.178	1.216	1.251	1.277
280	0.47	0.54	0.62	0.72	0.89		280	1.133	1.173	1.211	1.245	1.27
300	0.44	0.5	0.57	0.66	0.82		300	1.128	1.166	1.205	1.238	1.264
320	0.4	0.46	0.52	0.61	0.76		320	1.123	1.162	1.2	1.232	1.258
340	0.37	0.42	0.48	0.56	0.7		340	1.118	1.155	1.194	1.227	1.253
360	0.34	0.39	0.44	0.52	0.65		360	1.114	1.149	1.189	1.221	1.246
380	0.32	0.36	0.41	0.49	0.61		380	1.109	1.144	1.182	1.214	1.24
400	0.3	0.34	0.38	0.45	0.57		400	1.102	1.138	1.178	1.208	1.234
420	0.28	0.32	0.36	0.42	0.53		420	1.098	1.133	1.171	1.202	1.227
425	0.28	0.31	0.35	0.42	0.53		425	1.098	1.131	1.17	1.202	1.226

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