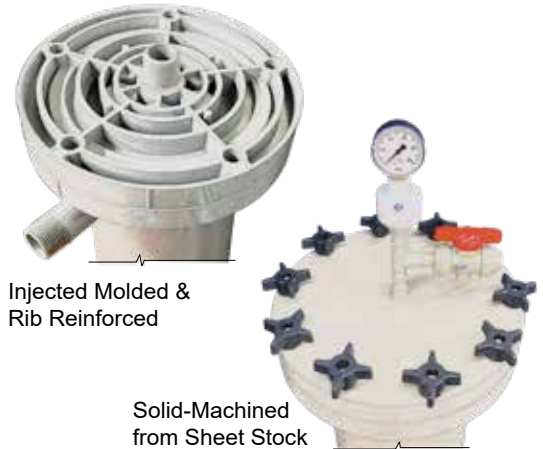


Penguin manufactures Series C, CN, cartridge chambers and Series CB, CBK bag chambers for particulates removal, and Series CT bulk GAC chambers for adsorption and reduction of organics from both alkaline and acidic aqueous solutions containing a variety of chemistries. Carbon tubes may also be used in place of particulate filters for organics removal. Particulate cartridge types include depth string, melt-blown, or spun polypropylene, as well as high flow surface pleated cartridges and bags. Various materials are available for construction, including natural polypropylene, copolymer high-density polypropylene, CPVC, and PVDF that can handle temperatures to 240° F and pressures to 100 psi@ambient temperature. Tops & manifolds are available in two options: injection molded and machined from sheet stock. Select the material that will meet your application requirements. All chambers are available in various mounting configurations from in-tank or out-of-tank to parallel for additive flow rates or in series for 2-stage prefiltration. Filter Pump chambers are designed for employment in the surface and metal finishing, plating, and aerospace industries. Application types are unlimited. Review our Chamber Selection Guide for assistance.

General Features:

- CPVC/Polypropylene/PVDF Materials to insure Process Compatibility
- Select large models can be manufactured to accommodate filter bags or cartridges
- Solid tops for higher temperature.
- Cartridge options include DOE, 222, and 226 end treatments
- Multi-round chambers utilized double labyrinth O-Ring Seals.
- All models have standard NPT threaded inlet/outlet. Flange options available on request.
- First delivery includes initial filter cartridge(s) or bag installed.
- Bleed valve, pressure gauge and guard assembly standard on multi round models.
- In-tank mounting available for most models.



Model 3C-1A Model 3C-1B Model 3C-1C



Model 4C-1A Model 4C-1B Model 4C-1C



Model 12C-36A



Model 8C-10A



Model 6C-9A



Model 8CN-10A



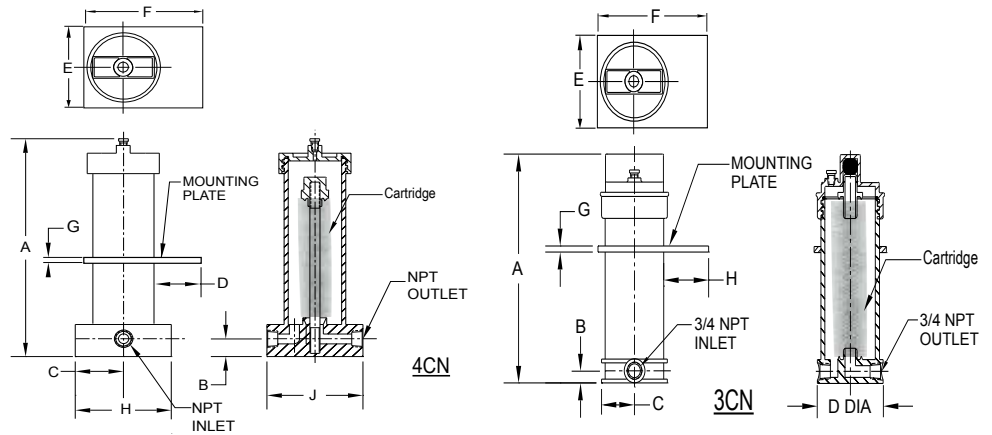
Model 2-12C-36A

Series C

Single Cartridge Chambers



Model 3C-1A (CPVC/EPR) Model 3C-1B (Polypropylene/EPR) Model 3C-1C (PVDF/Viton)



Model 4C-1A (CPVC/EPR) Model 4C-1B (Polypropylene/EPR) Model 4C-1C (PVDF/Viton)

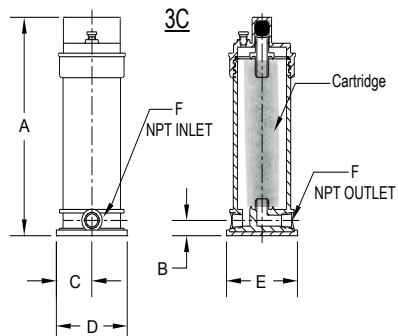
Series C & CT - Specifications						Series C & CT - Dimensions					
Chamber Style	GPH based on 70° Water (String)	No. & Length of Cartridge (String/Carbon)	Pleated Cartridge*		Connections Inlet/Outlet NPT	Dimensions (inches)					Ship. Wght.
			DOE	SOE		A	B	C	D	E	
3C-6	0-160	1-6"	1-6"	N/A	3/4"	10-1/2	1	2-5/8	5-1/4	5-1/4	3
3C-1	150-300	1-10"	1-10"	N/A	3/4"	14-1/2	1	2-5/8	5-1/4	5-1/4	4
3C-2	300-540	1-20"	1-20"	N/A	3/4"	24-1/2	1	2-5/8	5-1/4	5-1/4	6
3C-3	450-720	1-30"	1-30"	N/A	3/4"	34-1/2	1	2-5/8	5-1/4	5-1/4	8

Series C - Specifications						Series C - Dimensions					
Chamber Style	GPH based on 70° Water (String)	No. & Length of Cartridge (String/Carbon)	Pleated Cartridge*		Connections Inlet/Outlet-NPT	Dimensions (inches)					Ship. Wght.
			DOE	SOE		A	B	C	D	E	
4C-1	150-300	1-10"	1-10"	1-10"	1"	18-1/4	1-3/8	3-1/2	7	7	7
4C-2	300-570	1-20"	1-20"	1-20"	1"	28-1/4	1-3/8	3-1/2	7	7	10
4C-3	450-810	1-30"	1-30"	1-30"	1"	38-1/4	1-3/8	3-1/2	7	7	13

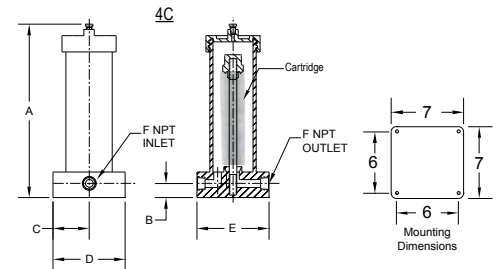
Add Bracket to make a CN



Model 3CN-2B



4CN In-Tank Filter Chambers

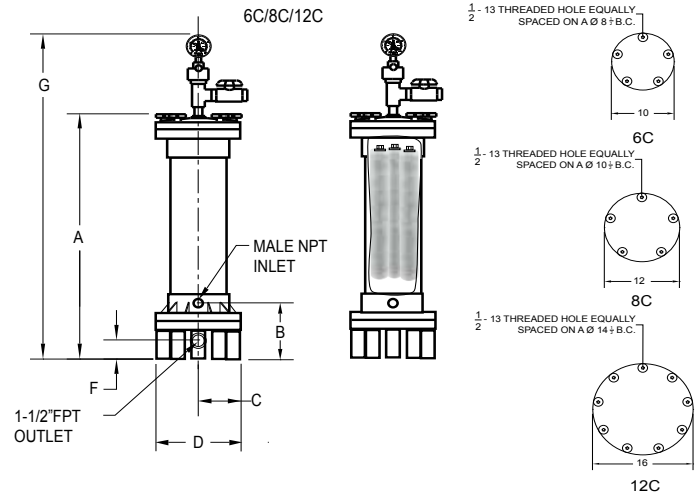


Model 4CN-2B

Series CN- Specifications						Series CN-In Tank Filter Chamber Filters-Dimensions									
Chamber Style	GPH based on 70° Water (String)	No. & Length of Cartridge (String)	Pleated Cartridge		Connections Inlet/Outlet NPT	Dimensions (inches)								Apprx. Ship. Wght in lbs	
			DOE	SOE		A	B	C	D	E	F	G	H		
3CN-1	150-300	1-10"	1-10"	NA	3/4" NPT	14-1/4	3/4	2-3/8	4-3/4	5	8	3/8	3-1/4	4	
3CN-2	300-540	1-20"	1-20"	NA		24-1/4	3/4	2-3/8	4-3/4	5	8	3/8	3	6	
3CN-3	450-770	1-30"	1-30"	NA		34-1/4	3/4	2-3/8	4-3/4	5	8	3/8	3	8	

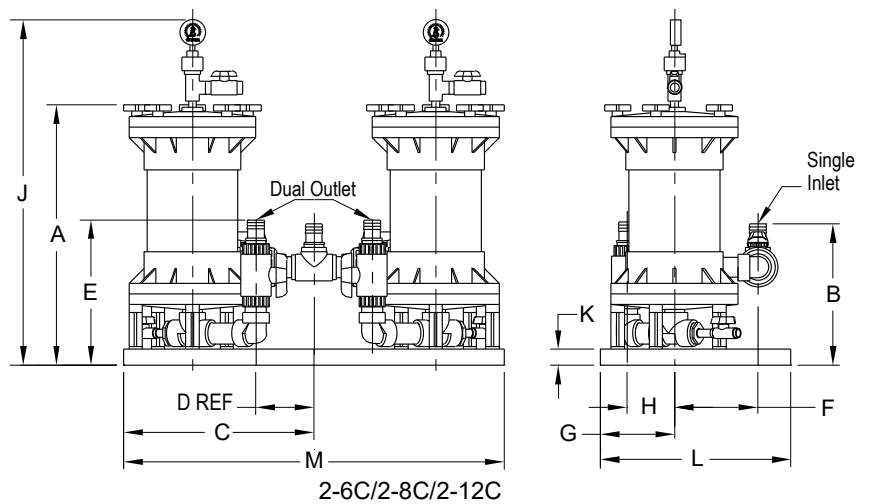
Series CN - Specifications						Series CN-In Tank Filter Chamber- Dimensions										
Chamber Style	GPH based on 70° Water (String)	No. & Length of Cartridge (String)	Pleated Cartridge		Connections Inlet/Outlet-NPT	Dimensions (inches)										Ship. Wght.
			DOE	SOE		A	B	C	D	E	F	G	H	J		
4CN-1	150-300	1-10"	1-10"	1-10"	1"	18-1/4	1 3/8	3 1/2	4-3/8	6	10	3/4	7	7	7	
4CN-2	300-570	1-20"	1-20"	1-20"	1"	28-1/4	1 3/8	3 1/2	4-3/8	6	10	3/4	7	7	10	
4CN-3	450-810	1-30"	1-30"	1-30"	1"	38-1/4	1 3/8	3 1/2	4-3/8	6	10	3/4	7	7	13	

Series C



Series C - Specifications						Series C - Dimensions									
Chamber Style	GPH based on 70° Water (String)	No. & Length of Cartridge (String)	Pleated Cartridge*		Connections		Dimensions (inches)							Ship. Wght.	
			DOE	SOE	Inlet NPT	Outlet NPT	A	B	C	D	E	F	G		
6C-3	450-900	3-10"	3-10"	2-10"	1"	1"	22-1/2	7-3/4	5	10	N/A	NA	32	27	
6C-6	900-1620	3-20"	3-20"	2-20"	1"	1"	32-1/2	7-3/4	5	10	N/A	NA	42	36	
6C-9	1350-2160	3-30"	3-30"	2-30"	1"	1"	42-1/2	7-3/4	5	10	N/A	NA	52	45	
6C-12		3-40"	3-40"	2-40"	1"	1"	52-1/2	7-3/4	5	10	N/A	NA	62	54	
8C-5	750-1500	5-10"	5-10"	4-10"	1-1/2" *	1-1/2" *	23	8-1/8	6	12	N/A	NA	32-1/2	33	
8C-10	1500-2700	5-20"	5-20"	4-20"	1-1/2" *	1-1/2" *	33	8-1/8	6	12	N/A	NA	42-1/2	45	
8C-15	2250-3600	5-30"	5-30"	4-30"	1-1/2" *	1-1/2" *	43	8-1/8	6	12	N/A	NA	52-1/2	57	
8C-20	3000-4800	5-40"	5-40"	4-40"	1-1/2" *	1-1/2" *	53	8-1/8	6	12	N/A	NA	62-1/2	69	
12C-12	1800-3600	12-10"	12-10"	9-10"	1-1/2" *	1-1/2" *	24-3/8	10	8	16	N/A	3-1/2	33-7/8	70	
12C-24	3600-5760	12-20"	12-20"	9-20"	1-1/2" *	1-1/2" *	34-3/8	10	8	16	N/A	3-1/2	43-7/8	90	
12C-36	5400-7560	12-30"	12-30"	9-30"	1-1/2" *	1-1/2" *	44-3/8	10	8	16	N/A	3-1/2	53-7/8	110	
12C-48	7200-8640	12-40"	12-40"	9-40"	1-1/2" *	1-1/2" *	54-3/8	10	8	16	N/A	3-1/2	63-7/8	130	

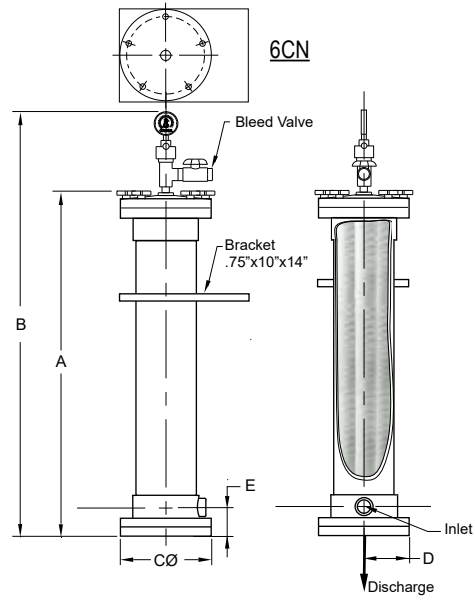
Dual Cartridge Chambers



Series C - (Dual) Specifications						Series C - (Dual) Dimensions													
Chamber Style	GPH based on 70° Water (String)	No. & Length of Cartridge Wound Cartridge	Pleated Cartridge*		Connections		Dimensions (inches)										Ship. Wght.		
			DOE	SOE	Inlet	Outlet	A	B	C	D	E	F	G	H	J	K		L	M
2-6C-6	1350-2430	6-20"	6-20"	4-20"	1-1/2"NPT	(2)1"NPT	34	13-1/4	18	5-1/2	12-7/8	7 1/4	5-1/2	5	40-7/8	1-1/2	18	36	90
2-6C-9	32025-3240	6-30"	6-30"	4-30"	1-1/2"NPT	(2)1"NPT	44	13-1/4	18	5-1/2	12-7/8	7 1/4	5-1/2	5	50-7/8	1-1/2	18	36	110
2-8C-10	42250-4050	10-20"	10-20"	8-20"	2"NPT	(2)1-1/2"NPT	34-1/2	13-1/2	20	5-1/2	13-3/4	7 7/8	6-1/2	5	42-1/2	1-1/2	20	40	130
2-8C-15	3375-5400	10-30"	10-30"	8-30"	2"NPT	(2)1-1/2"NPT	44-1/2	13-1/2	20	5-1/2	13-3/4	7 7/8	6-1/2	5	52-1/2	1-1/2	20	40	144
2-12C-24	5400-8640	24-20"	24-20"	18-20"	3"NPT	(2)1-1/2"NPT	35-7/8	13-1/2	20	5-1/2	13-3/4	7 7/8	8-1/2	5	42-1/4	1-1/2	24	40	210
2-12C-36	8100-11340	24-30"	24-30"	18-30"	3"NPT	(2)1-1/2"NPT	45-7/8	13-1/2	20	5-1/2	13-3/4	7 7/8	8-1/2	5	52-1/4	1-1/2	24	40	250



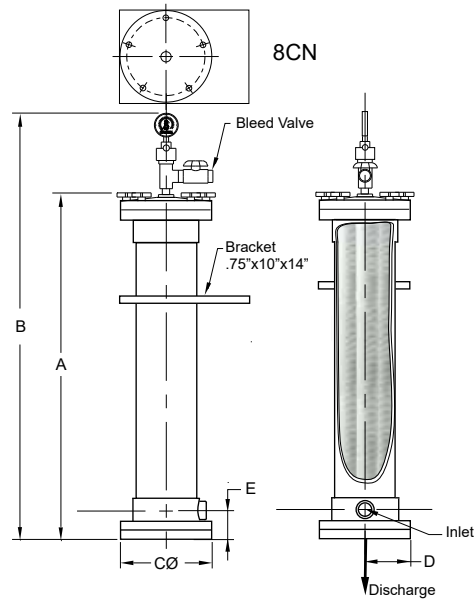
Model 6CN-6A



Series CN - Specifications						Series CN-In Tank Filter Chamber- Dimensions										
Chamber Style	GPH based on 70° Water (String)	No. & Length of Cartridge (String)	Pleated Cartridge		Connections	Dimensions (inches)										Ship. Wght.
			DOE	SOE	Inlet /Outlet-NPT	A	B	C	D	E	F	G	H	J		
6CN-3	450-900	3-10"	3-10"	2-10"	1"	18-3/16	28-3/4	10	5	3-3/16	-	3/4	10	14	27	
6CN-6	900-1620	3-20"	3-20"	2-20"	1"	28-3/16	38-3/4	10	5	3-3/16	-	3/4	10	14	36	
6CN-9	1350-2160	3-30"	3-30"	2-30"	1"	38-3/16	48-3/4	10	5	3-3/16	-	3/4	10	14	45	
6CN-12		3-40"	3-40"	2-40"	1"	48-3/16	58-3/4	10	5	3-3/16	-	3/4	10	14	54	

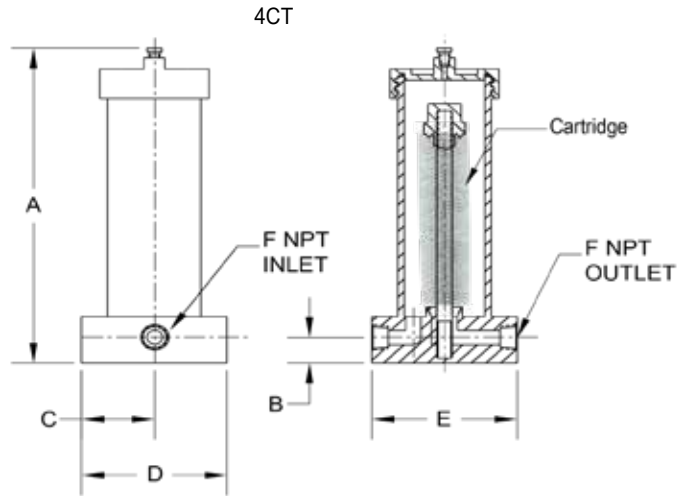
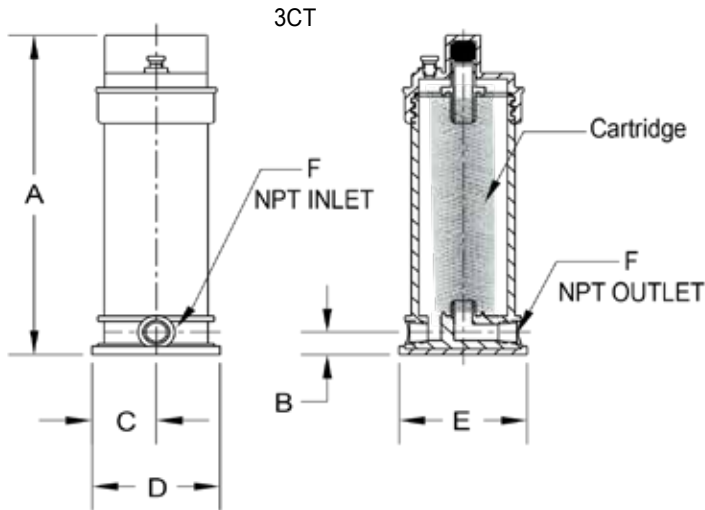


Model 8CN-5A



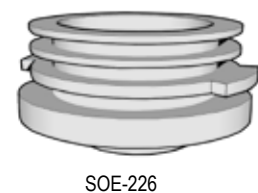
Series CN - Specifications						Series CN-In Tank Filter Chamber- Dimensions										
Chamber Style	GPH based on 70° Water (String)	No. & Length of Cartridge (String)	Pleated Cartridge		Connections	Dimensions (inches)										Ship. Wght.
			DOE	SOE	Inlet /Outlet-NPT	A	B	C	D	E	F	G	H	J		
8CN-5	750-1500	5-10"	5-10"	4-10"	1 1/2" *	20-5/16	29-3/4	12	6	4-3/8	-	3/4			33	
8CN-10	1500-2700	5-20"	5-20"	4-20"	1 1/2" *	30-5/16	39-3/4	12	6	4-3/8	-	3/4			45	
8CN-15	2250-3600	5-30"	5-30"	4-30"	1 1/2" *	40-5/16	49-3/4	12	6	4-3/8	-	3/4			57	
8CN-20	3000-4800	5-40"	5-40"	4-40"	1 1/2" *	50-5/16	59-3/4	12	6	4-3/8	-	3/4			69	

Series CT



Series CT - Specifications				Series CT - Dimensions							
Chamber Style	GPH based on 70° Water (String)	No. & Length of Cartridge (String/Carbon)	Pleated Cartridge*		Connections Inlet /Outlet-NPT	Dimensions (inches)					Ship. Wght.
			DOE	SOE		A	B	C	D	E	
3CT-6	0-90	1-6"	NA	NA	3/4"	10-1/2	1	2-5/8	5-1/4	5-1/4	3
3CT-1	60-150	1-10"	NA	NA	3/4"	14-1/2	1	2-5/8	5-1/4	5-1/4	4
3CT-2	120-300	1-20"	NA	NA	3/4"	24-1/2	1	2-5/8	5-1/4	5-1/4	6
3CT-3	180-450	1-30"	NA	NA	3/4"	34-1/2	1	2-5/8	5-1/4	5-1/4	8
4CT-1	60-150	1-10"	NA	NA	1"	18-1/4	1-3/8	3-1/2	7	7	7
4CT-2	120-300	1-20"	NA	NA	1"	28-1/4	1-3/8	3-1/2	7	7	10
4CT-3	180-450	1-30"	NA	NA	1"	38-1/4	1-3/8	3-1/2	7	7	13

Cap Configuration	
Single Open End (SOE) Double Open End (DOE)	Description
DOE	Flat Gasket
SOE-222	External Double 222 O-rings/ button end cap
SOE-226	External Double 226 O-rings/ button end cap



Series C/CT



Model 6CT-9A

Series CT Specifications						Series CT Dimensions							
Model	GPH (70° Water)	Cartridge Option	Carbon Cartridge w/ Carbon Bag Option		Connections Inlet /Outlet NPT	Dimensions (inches)							Shipping Weight
		Qty-Lgth	Cartridges Qty-Lgth	Bulk Carbon Weight lbs.		A	B	C	D	E	F	G	
6CT-3	280-450	3-10"	NA	NA	1"	22	3 3/8	5	10	N/A	22 3/4	28 1/2	27
6CT-6	300-540	3-10"	3-6"	5	1"	32	3 3/8	5	10	N/A	32 3/4	38 1/2	36
6CT-9	450-720	3-10"	3-10"	10	1"	42	3 3/8	5	10	N/A	42 3/4	48 1/2	45
6CT-12		3-10"	3-10"	15	1"	52	3 3/8	5	10	N/A	52 3/4	58 1/2	54

Series CT Specifications					Series CT Dimensions								
Model	GPH (70° Water)	Cartridge Option	Carbon Cartridge w/ Carbon Bag Option		Connections Inlet /Outlet NPT	Dimensions (inches)							Shipping Weight
		Qty-Lgth	Cartridges Qty-Lgth	Bulk Carbon Weight lbs.		A	B	C	D	E	F	G	
8CT-5	300-750	5-10"	NA	NA	1 1/2"	23 1/8	2 3/8	6	12	N/A	25	31	33
8CT-10	500-900	5-10"	5-6"	9	1 1/2"	33 1/8	2 3/8	6	12	N/A	35	41	45
8CT-15	750-1200	5-10"	5-10"	18	1 1/2"	43 1/8	2 3/8	6	12	N/A	45	51	57
8CT-20		5-10"	5-10"	25	1 1/2"	53 1/8	2 3/8	6	12	N/A	55	61	69



Model 8CT-10A

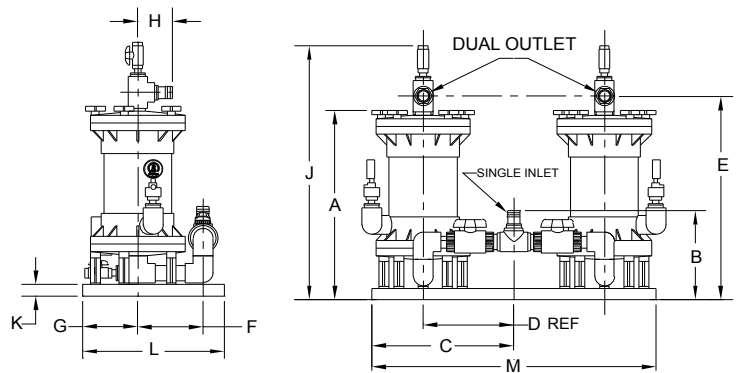


Model 12CT-36A

Series CT Specifications					Series CT Dimensions								
Model	GPH (70° Water)	Cartridge Option	Carbon Cartridge w/ Carbon Bag Option		Connections Inlet /Outlet NPT	Dimensions (inches)							Shipping Weight
		Qty-Lgth	Cartridges Qty-Lgth	Bulk Carbon Weight lbs.		A	B	C	D	E	F	G	
12CT-12	720-1800	12-10"	NA	NA	1 1/2"	22 3/4	2 1/4	8	16	N/A	24 3/4	30 3/4	70
12CT-24	1200-1920	12-10"	12-6"	35	1 1/2"	32 3/4	2 1/4	8	16	N/A	34 3/4	40 3/4	90
12CT-36	1800-2520	12-10"	12-10"	50	1 1/2"	42 3/4	2 1/4	8	16	N/A	44 3/4	50 3/4	110
12CT-48		12-10"	12-10"	70	1 1/2"	52 3/4	2 1/4	8	16	N/A	54 3/4	60 3/4	130



2-6CT/2-8CT/2-12CT



Series CT -Dual Chamber Specifications					Series CT -Dual Chamber Dimensions														
Model	GPH (70° Water)	Carbon Bag Chamber w/Cartridges		Connections		Dimensions (inches)													Shipping Weight
		Qty-Lgth	Carbon Weight	Inlet NPT	Outlet NPT	A	B	C	D	E	F	G	H	J	K	L	M		
2-6CT-6	450-810	6-6"	10lbs.	1-1/2"	2 1"	33 1/2	13 5/8	18	11 1/2	34 1/4	7 3/4	5 1/2	3 3/4	40	1 1/2	18	36	90	
2-6CT-9	675-1080	6-10"	20lbs.	1-1/2"	2 1"	43 1/2	13 5/8	18	11 1/2	44 1/4	7 3/4	5 1/2	3 3/4	50	1 1/2	18	36	110	
2-8CT-10	750-1350	10-6"	18lbs.	2"	2 1-1/2"	34 5/8	14 1/4	20	11 1/2	36 1/2	8 3/4	6 1/2	4 1/2	42 1/2	1 1/2	20	40	130	
2-8CT-15	1125-1800	10-10"	36lbs.	2"	2 1-1/2"	44 5/8	14 1/4	20	11 1/2	46 1/2	8 3/4	6 1/2	4 1/2	52 1/2	1 1/2	20	40	144	
2-12CT-24	1800-2800	24-6"	70lbs.	3"	2 1-1/2"	34 3/8	15 1/8	20	11 1/2	36 1/4	10 3/4	6 1/2	4 1/2	42 1/4	1 1/2	24	40	210	
2-12CT-36	2700-3780	24-10"	100lbs.	3"	2 1-1/2"	44 3/8	15 1/8	20	11 1/2	46 1/4	10 3/4	6 1/2	4 1/2	52 1/4	1 1/2	24	40	250	

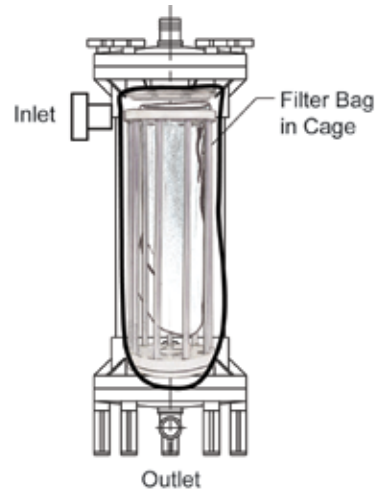
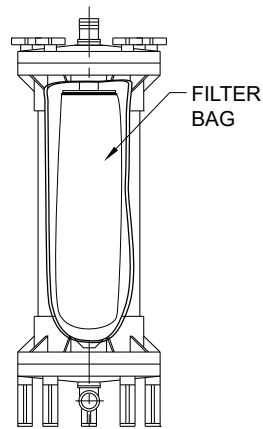
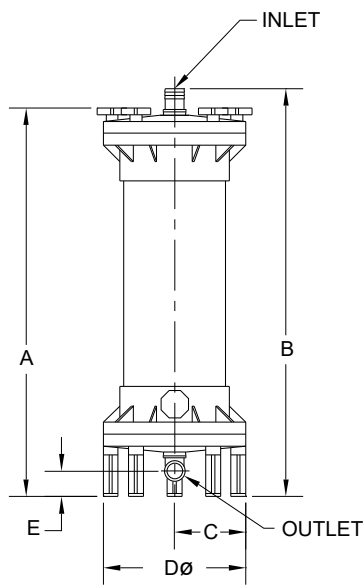
CB/CBK Filter Bag Chambers



Model CB



Model CBK



Series CB Specifications				Series CB Dimensions							
Chamber Model	GPH based on 70° Water	Filter Bag		Connection		Dimensions					Shipping Weight
		Bag Diameter	Bag Length	Inlet	Outlet	A	B	C	D	E	
6CB-6	up to 1500	5"	20"	1"	1"	32-1/2	32-7/8	5	10	NA	36
6CB-9	up to 3000	5"	30"	1"	1"	42-1/2	42-7/8	5	10	NA	45
8CB-10	up to 2400	7"	16"	1 1/2"	1 1/2"	33	34 7/8	6	12	NA	45
8CB-15	up to 4800	7"	32"	1 1/2"	1 1/2"	43	44 7/8	6	12	NA	57
8CBK-10	up to 2400	7"	16"	1 1/2"	1 1/2"	33	34 7/8	6	12	NA	45
8CBK-15	up to 4800	7"	32"	1 1/2"	1 1/2"	43	44 7/8	6	12	NA	57

Penguin

Temperature Correction Factors

Temperature (°F) vs Pressure*			
Operating Temp. 0°F	Correction Factors		
	CPVC	POLYPRO	PVDF
73	1.0	1.0	1.0
80	0.94	0.93	0.93
90	0.86	0.83	0.87
100	0.78	0.71	0.82
110	0.71	0.66	0.76
120	0.64	0.58	0.71
130	0.57	0.51	0.65
140	0.50	0.40	0.61
150	0.43	0.38	0.57
160	0.37	0.23	0.54
180	0.20		0.47
200			0.41
210			0.38
220			0.35
240	N/R	N/R	0.31
250			0.22
280			
290			N/R



6C-3-HOLE MANIFOLD-DOE



8C-5 HOLE MANIFOLD-DOE



12C-12 HOLE MANIFOLD-DOE



6C-2 HOLE MANIFOLD-SOE



8C-4 HOLE MANIFOLD-SOE



12C-9 HOLE MANIFOLD-SOE

Filter Chamber Recommended Operating Pressures (psi)*

Chamber	Maximum Operating Pressure Based on 73°F Water		
	CPVC	POLYPRO	PVDF
3	80psi	40psi	80psi
4	80psi	40psi	80psi
6	70psi	40psi	N/A
8	70psi	40psi	60psi
12	60psi	40psi	60psi

Chamber	DOE	SOE
6C/6CN	3	2
8C/8CN	5	4
12C/12CN	12	9

Nomenclature

Vessel	Chamber Diameter	Chamber Series	Size of Filters in Chamber	Construction Material	O-ring Material	End Cap Configuration
No symbol = single chamber	3=3	C=Filter	1=10"	A = CPVC	E=EPR	DOE = Blank
2 = chambers manifolded together in parallel / individually valved (single inlet/dual outlet)	4=4	CB=Filter bag	2=20"	B = Polypropylene	V=Viton	SOE-222
	6=6	CT=Carbon Treatment	3=30"	C = PVDF		SOE-226
	8=8	CN=In-Tank	5=10"			
	12=12	CBK=Filter bag W/ Basket	6=6"			
			10=20"			
			12=10"			
			15=(5)30"			
			24=(12)20"			
			36=(12)30"			
			48=(12)40"			