

# VP Series Carbon Filters

# SIEMENS

**Siemens Water Technologies Value Packaged (VP) Series carbon filters offer a low cost, reliable and efficient way to remove chlorine and reduce organics from your feed water. Available in diameters from 24" to 72" (610 mm to 1829 mm), with flow rates up to 300 gallons per minute (68 m<sup>3</sup>/hr), these rugged, pre-engineered, pre-assembled units minimize installation and start up costs. Whether you require boiler feed, process water or rinsewater, the VP Series carbon filters will meet your needs.**

VP series carbon filters consist of a steel pressure vessel that contains granular activated carbon media. The carbon filter has two modes of operation, service and backwash. The automated backwash sequence can be initiated via a timeclock or by differential pressure (requires ordering optional DP kit). The backwash mode has two steps, backwash and rinse. Step times for the backwash mode are easily adjustable.

VP series carbon filters are available in simplex and duplex configurations. Duplex systems will operate in a parallel fashion, with both filters in service mode. At the pre-determined time or event, each filter will backwash independently, maintaining at least one filter in the service mode. This provides a continuous, uninterrupted supply of filtered water.



### Standard VP Series Features:

- **VPEC denotes Non-ASME code vessels offered with express delivery**
- **VPAC denotes ASME code vessel with stamp available**
- **100 psig (689 kpa) vessel rating offers added strength and integrity**
- **Seismic zone 4 structural steel legs provide rigid support of vessel for safety**
- **Highly reliable backwash and regeneration controls**
- **Schedule 80 PVC piping for enhanced corrosion-resistance or piping and process compatibility**
- **Optional metallic piping ensures long life and durability**
- **Standard epoxy internal and external coating extend vessel life**

## Specifications

Model No.	Flow Rates gpm (m <sup>3</sup> /hr)			Flow Rate gpm (m <sup>3</sup> /hr)		Media (ft <sup>3</sup> )	Shipping Weight lbs (kgs)		Operating Weight lbs (kgs)	
	Good	Better	Best	Backwash	Rinse		Simplex	Duplex	Simplex	Duplex
VPEC/VPAC-024	32 (7.3)	16 (3.6)	8 (1.8)	31(7.0)	19 (4.3)	8	1000 (454)	2000 (908)	1800 (817)	3600(1633)
VPEC/VPAC-630	48 (10.9)	24 (5.5)	12 (2.7)	49 (11.1)	29 (6.6)	12	1380 (626)	2760 (1252)	2580 (1171)	5160 (2341)
VPEC/VPAC-636	72 (16.4)	36 (8.2)	18 (4.1)	71 (16.1)	42 (9.5)	18	2190 (994)	4380 (1987)	4340 (1969)	8680 (3938)
VPEC/VPAC-742	96 (21.8)	48 (10.9)	24 (5.5)	96 (21.8)	58 (13.1)	24	3160 (1433)	6320 (2866)	6090 (2762)	12180 (5524)
VPEC/VPAC-648	128 (29.1)	64 (13.6)	32 (7.3)	126 (28.6)	75 (17.0)	32	4040 (1833)	8080 (3666)	7940 (3602)	15880 (7204)
VPEC/VPAC-754	160 (36.3)	80 (14.5)	40 (9.1)	159 (36.1)	95 (21.6)	40	5550 (2517)	11100 (5034)	10570 (4794)	21140 (9588)
VPEC/VPAC-760	200 (45.5)	100 (22.7)	50 (11.3)	196 (44.5)	118 (26.8)	50	7065 (3205)	14130 (6410)	13275 (6021)	26550 (12042)
VPEC/VPAC-772	300* (68.1)	150 (34.1)	75 (17.0)	283 (64.3)	170 (38.6)	75	10210 (4631)	20420 (9262)	19200 (8709)	38400 (17418)

\*Rating for metallic piping only. Plastic piping requires deration due to line velocities.

## Dimensions\*

Model No.	Pipe Size	Column Size (D x H)		Overall Dimensions Simplex (H x W x D)		Overall Dimensions Duplex (H x W x D)	
		inch	cm	inch	cm	inch	cm
VPEC/VPAC-024	1-1/2"	24 x 48	61 x 122	76 x 43 x 41	193 x 110 x 104	80 x 97 x 41	204 x 247 x 104
VPEC/VPAC-630	1-1/2"	30 x 60	77 x 153	90 x 43 x 48	229 x 110 x 122	94 x 97 x 48	239 x 246 x 122
VPEC/VPAC-636	2"	36 x 60	92 x 153	96 x 45 x 54	244 x 114 x 137	100 x 97 x 54	254 x 246 x 137
VPEC/VPAC-742	2"	42 x 72	107 x 183	112 x 47 x 58	285 x 119 x 147	116 x 133 x 58	295 x 338 x 147
VPEC/VPAC-648	2-1/2"	48 x 60	122 x 153	106 x 54 x 65	269 x 137 x 165	110 x 133 x 66	279 x 338 x 168
VPEC/VPAC-754	3"	54 x 72	139 x 183	121 x 61 x 75	307 x 155 x 191	127 x 158 x 75	323 x 401 x 191
VPEC/VPAC-760	3"	60 x 72	153 x 183	125 x 64 x 81	318 x 163 x 206	131 x 158 x 81	333 x 401 x 206
VPEC/VPAC-772	3"	72 x 72	183 x 183	129 x 72 x 93	328 x 183 x 236	136 x 158 x 93	345 x 401 x 236

\* Approximate

A highly reliable solid-state controller (right) is used to control the operational sequences and monitor performance of the carbon filter. It is fully programmable and provides the ability to fine-tune operations to meet your application requirements.



## Design Parameters:

Configuration	Simplex or duplex
Feed Water Temperature	60°F (16° C)
Feed Pressure	45 PSIG (310 KPA)
Maximum Inlet Turbidity	5 NTU
Sizing:	
Service Flow Rate	Good: 4 gpm/ft <sup>3</sup> Better: 2 gpm/ft <sup>3</sup> Best: 1 gpm/ft <sup>3</sup>
Backwash Flow Rate	10 gpm/ft. <sup>2</sup> at 60°F
Rinse Flow Rate	6 gpm/ft <sup>3</sup>
Filter Bed Depth	30"
Freeboard	29% minimum
Media	12x40 mesh, granular activated carbon
Support Bed	Three inch depth of #4 quartz (1.54 mm average size) 1/4"x1/8" quartz to fill bottom head and 2" over laterals

## Operating Limits:

Feedwater Temperature	45° F
Minimum	95° F for PVC piping systems
Maximum	120° F for steel piping systems
Feedwater Pressure (+/- 5 psig)	45 psig
Minimum	100 psig (for ASME, 90 psig maximum recommended to prevent premature discharge of required PSV)
Maximum	

The information provided in this brochure contains merely general descriptions or characteristics of performance which in actual case of use do not always apply as described or which may change as a result of further development of the products. An obligation to provide the respective characteristics shall only exist if expressly agreed in the terms of contract.

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