



Acceptable Bag and Cartridge Filters

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We accept the following bag and cartridge filters for piloting or other state-approved field evaluations (WAC 246-290-676). Lab or field studies demonstrated that these filters remove acceptable levels of *Cryptosporidium* (or an acceptable surrogate) and meet the required material performance standard (WAC 246-290-220(1)).

Applicable Requirements

Our acceptance of these bag and cartridge filters does not diminish the need to conduct a pilot test or other state-approved field evaluation. We still require a predesign study to establish the best way to produce satisfactory finished water quality and to justify the choice of filtration technology (WAC 246-290-250).

Requirements that apply to each bag and cartridge filter listed below.

- Disinfection (WAC 246-290-662).
- Turbidity performance (WAC 246-290-660): ≤ 1.0 NTU in 95 percent of all measurements taken each month, never to exceed 5.0 NTU.
- Turbidity monitoring (WAC 246-290-664): Daily grab (minimum required frequency) or continuous (preferred) on the combined filter effluent.

Refer to the manufacturer’s product-specific information prior to design.

Manufacturer	Model			Log Removal Credit			Maximum Flow Module ¹	Maximum Differential Pressure ²	Last Review Date
	Prefilter	Main Filter	Housing	Crypto	Giardia	Viruses			
ANSI/NSF 53	Various models that demonstrated >3.3-log removal of <i>Cryptosporidium</i> are listed as point-of-entry devices but may be large enough to serve as centralized treatment for some very small systems.			2.0	2.0	0.0	Varies	Varies	Not Applicable
Harmsco	Not Applicable	HC/170-LT2	MUNI-1-2FL-304	2.0	2.0	0.0	100 gpm	30 psi ^A	3/2013
Rosedale	PS-520-PPP-241	GLR-PO-825-2	8-30-2P	2.0	2.0	0.0	12 gpm	20 psi ^B	8/2005
Strainrite	HPM99-CC-2-SR	HPM99-CCX-2-SR	AQ2-2	2.0	2.0	0.0	20 gpm	25 psi ^B	6/2008

¹The maximum flow rate listed for the bag and cartridge filter systems may not be economically viable (excessive filter change outs) and should be verified through piloting. Additional prefiltration components and low raw water turbidity are usually required to avoid excessive filter change outs. Systems consisting of more than one treatment module must have individual flow control and water meters for each module (used to ensure maximum treatment flow rates are not exceeded).

²Pressure gauges must be accurate to at least +/- 1.5% of the full scale value and must be verified (and calibrated if necessary) at least once per year. Systems consisting of more than one treatment module must have individual pressure gauges before and after each module. Valves or flow restrictors may not be located between the pressure gage and the upstream or downstream filter module.

^A Absolute pressure drop across the final filter.

^B Absolute pressure drop across both filters.

For more information

Our publications are online at doh.wa.gov/drinkingwater.

Contact our nearest regional office from 8 AM to 5 PM, Monday through Friday.

[Eastern Region](#), Spokane Valley 509-329-2100.

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