Alternative Treatment Technology Units Meeting Challenge Study Criteria

Oregon Administrative Rule 333-061-0050(4)(c)(I)

Oregon Health Authority, Drinking Water Services (DWS)

» MEMBRANE FILTERS «

(Other models not on this list may meet the criteria.
Contact DWS for details on verifications for units not listed.)

Manufacturer	Model	Log_{10} Removal Credit			Maximum Flux (gfd @ 20°C)	Maximum TMP (psi @ 20°C)	Maximum Flow/Module (gpm)	Minimum Static DIT[B] Pressure (psi)	Date Verified
		Crypto.	*Giardia*	Virus[A]					
Dow	XUSV-5203	3.5	3.5	0	60	30	23	30	2010 Feb
	SFD-2880XP	4.0	4.0	0	70	24	41	19	2010 Dec[C]
	SFD-2860XP	4.0	4.0	0	62	30	26	19	2010 Dec
	DW102-1100	4.0	4.0	0	70	30	50.2	30.25	2013 Jan[C]
GE Zenon	ZeeWeed 500C	4.0	4.0	0	60	12	10.4	10.29	2013 Oct
	ZeeWeed 500D	4.0	4.0	0	60	12	18.3	10.29	2013 Oct
	ZeeWeed 1000 V3	4.0	4.0	0	30	13	17	10	2009 July
	ZeeWeed 1000 V4	4.0	4.0	0	60	13	17.4	10	2013 Oct
DuPont inge (formerly BASF)	dizzer XL 0.9 MB 60 W	4.0	4.0	0	105	22	47	17.5	2015 Sept[C]
	dizzer XL 0.9 MB 70 WT	4.0	4.0	0	105	22	55	17.8	2015 Sept[C]
	dizzer XL 0.9 MB 80 WT	4.0	4.0	0	105	22	55	17.8	70 WT equiv.
Pall	UNA-620A	4.0	4.0	0	120	35	44	17.5	2010 Feb
	USV-6203	4.0	4.0	0	120	35	44	17.5	2010 Feb
	XUSV-5203	4.0	4.0	0	120	35	33	17.5	2010 Feb
Scinor	SMT 600-P50	4.0	4.0	0	120	43.5	46	21	2015 June[C]
	SMT 600-P80	4.0	4.0	0	120	43.5	72	21	P50 equivalent
	SMT 600-S26	4.0	4.0	0	106	11	23.5	15.9	2016 June[C]

[A] Virus removal credits are not available in Oregon due to lack of a direct integrity test for virus-sized particles. All approvals and removal credits are subject to change should information indicate the model is not capable of meeting regulatory requirements.

[B] DIT = Direct Integrity Test. Acceptable pressure decay rates during a DIT are, in part, a function of system volume and must be confirmed with DWS during plan review for each installation. Additionally, minimum static pressure may be higher than listed here if backpressure is above minimums.

[C] Verification via NSF 'Public Drinking Water Equipment Performance'

For more information, please call the OHA Drinking Water Services at ph. 971-673-0405 (8am-5pm PT, Mon-Fri)

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		Crypto.	*Giardia*	Virus[A]					
Seccua	Phoenix	4.0	4.0	0	47	72	42	22	2010 Aug
	Virex Pro	4.0	4.0	0	47	45	2.13	22	2010 Oct
Evoqua Water Technologies (formerly Siemens)	Memcor® S10N	4.0	4.0	0	80	22	14.2	11.4	2015 May
	Memcor® S10V	4.0	4.0	0	80	17.4	16.7	11.4[D]	2010 Nov
	Memcor® L10N	4.0	4.0	0	155	22	24.8	14	2012 Sept[C]
	Memcor® L20N	4.0	4.0	0	155	22	40.4	15	2012 Sept[C]
	Memcor® M10C	4.0	4.0	0	50	22	13	16.5[E]	2019 March
Toray	Torayfil HFS-2020	4.0	4.0	0	120	29	47	18	2012 Mar
	HFU-2020N	4.0	4.0	0	100	29	53.8 @ 20°C	18.3	2016 Mar
	HFUG-2020AN	4.0	4.0	0	120	29	80.75 @ 20°C	17.44	2019 Nov
	HFU-2020HN	4.0	4.0	0	100	29	53.8 @ 20°C	18.3	2020 Oct [F]
Polymem (aka Clean Membranes)	UF100XL PVDF Neophil	4.0	4.0	0	60	21.8	2.7	16.1	2017 May
	UF80 PVDF Neophil	4.0	4.0	0	60	21.8	18.9	16.1	100XL equiv.
	UF80G PVDF Neophil	4.0	4.0	0	60	21.8	32.4	17.4	2019 Jan
	UF120 PVDF Neophil	4.0	4.0	0	60	21.8	51.2	16.1	100XL equiv.
	UF240 PVDF Neophil	4.0	4.0	0	60	21.8	240.5	17.4	UF80G equiv.
	Polymem UF 120S2	4.0	4.0	0	27	21	48	16.3	2009 Aug

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[C] Verification via NSF 'Public Drinking Water Equipment Performance'

[D] Revised 22 March 2016 assuming contact angle of 50 degrees and backpressure of 2 psi.

[E] Assumes 2 psi backpressure and a contact angle of zero (0) degrees.

[F] The Toray HFU-2020HN verification is based on the challenge study for the HFU-2020N. The modules are identical with the exception of a reinforced inlet that allows the 2020HN to accommodate a higher feed pressure of up to 6 bar, while the 2020N is rated for a max feed pressure of 3 bar.

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Hydranautics Nitto Group Company	HYDRAcap® Max 40	4.0	4.0	0	120	30	46.7	Calculate[C]	2019 Apr[D]
	HYDRAcap® Max 60	4.0	4.0	0	120	30	70	Calculate[C]	Max 40 equiv.
	HYDRAcap® Max 80	4.0	4.0	0	120	30	94.2	Calculate[C]	Max 40 equiv.
	HYDRAcap® AM 2.5	4.0	4.0	0	120	30	44.9	Calculate[C]	Max 40 equiv.
Pentair (aka X-Flow B.V.)	XF40C	4.0	4.0	0	73.5	43	22	14.9	2021 Dec[D]

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[C] The minimum static pressure for DITs must be calculated using 15.1 psi plus the back pressure on the lowest elevation of exposed fiber (based on Standard 419 results).

[D] Verification via NSF 'Public Drinking Water Equipment Performance' Standard 419 (2015)

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