



R3f pricing provides significant water treatment advantage

Enprotec-Clow is a Cincinnati based provider of industrial waste water treatment equipment. The company has a fortune 500 client list and is proud of its 100% satisfaction rating and 14 years of servicing that distinguished client base. The company purchased the water treatment technology from Clow and Envirodyn in the early 1990's. Since that time the designs have been updated as a result of the tried and true method of experience.

Enprotec is proud to announce it has launched its **new technology** known as the radial flow fluidized filter (**R3f**) which was recognized by the AWWA in 2005 as a show case technology

This technology has recognized the best of two filtration concepts.....

Firstly ...the typical **downflow media** filter that is back washed in the opposite direction and the media is allowed to expand such that the media can be cleaned and reused

Secondly....the typical **radial flow** filter such as membranes or cartridges where the circumference is used as the application area which in turn allows for high application area per footprint.

The patented **R3f** technology uses a radial flow application area providing (3ft² of application per 6" diameter tube) but also provides a rapid backwash where the media is fluidized to the top of the 6" diameter column..... A very unique concept (see the attached brochure)

Think of the problems with membrane technology and the difficulty in backwashing a fixed membrane. The **R3f** uses a non bonded media typical of a downflow media filter but applies the liquid (water) to be filtered through the circumference of the column of media... the best of both concepts

The benefit of the **R3f** is that it can use a fine media (as low as 40 micron) and maintain reasonable pressure losses across the media (5 to 15 psi based on clean water).

The result is high levels of fine particle removal such as pathogens, low back wash volumes (1 to 3% of product throughput), small footprint and simple to use..... a wonderful benefit for the small community who has limited operations staff.

Consider the price advantage.

In comparison to multimedia filters.....

Cost Comparison of Filtration Alternatives

<i>Flow</i>	<i>Multimedia Filter</i>	<i>% backwash</i>	<i>R3f (single train)</i>	<i>% backwash R3f</i>
25 gpm	\$14,630	7%	\$18,786	2%
50 gpm	\$22,860	6%	\$24,941	1%
100 gpm	\$40,279	5%	\$32,222	1%
200 gpm	\$79,420	5%	\$47,806	1%
300 gpm	\$100,320	5%	\$63,833	1%
400 gpm	\$121,220	5%	\$85,914	1%

The **R3f** is the perfect solution to membrane prefiltration as it can be used in the same fashion as multimedia filters at a lower cost, and the operational benefits of simplicity, no loss of media and less back wash water. In addition if there is a need to improve on pre-treatment water quality then a smaller size media can be used or a second train in series can be applied. The ability to customize filtration needs is a clear advantage.

In comparison to membrane filtration.....

<i>Flow</i>	<i>Membrane (MF or UF) Filter</i>	<i>% backwash</i>	<i>R3f (dual train)</i>	<i>% backwash R3f</i>
25 gpm	\$88,000	15	\$37,536	4%
50 gpm	\$100,000	13%	\$49,883	3%
100 gpm	\$125,000	10%	\$64,445	2%
200 gpm	\$175,000	10%	\$95,612	2%
300 gpm	\$209,000	10%	\$127,666	2%
400 gpm	\$253,000	10%	\$171,828	2%

The R3f is the perfect solution for the small community potable water system.

- A higher level of filtration than multimedia filters and a lower cost than membrane systems
- Easier to operate than multimedia filters or membrane systems
- Less chance of fouling and if fouling occurs simple methods to clean the fouling
- Less backwash water
- No loss of media and easy to backwash/clean media... no CIP systems are required
- Small footprint
- (see attached brochure)



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