



ML3 True Effluent Filters



One Case. Interchangeable Cartridges.

The First True Effluent Filters

Six Filtration Sizes

Longer Service Life

Lower Maintenance

ML3 Filters - Progressive Protection for the Drainfield

Starts with the case...

The function of an effluent filter is to protect the drainfield, by preventing solids from leaving the pre-treatment tank. Our progressive lines of defense start with the specially designed case, because it's a key component of our system of true filtration, and not just housing a set of interior screens.

The ability to build a better effluent filter comes from the knowledge that a function of the case should be to first limit the volume of solids that even come in contact with the filter. (Figure 1) The ML3 filter case has a set of built-in baffles designed to divert solids and gases before they even enter into the case. Solids and gases that rise up out of the sludge at the bottom of the tank and do find their way into the case are then directed back into the tank via specially designed vents in the case's side.

If solids do make it past these first two lines of defense, they will meet another: an open area, or quiet zone, (Figure 2) within the case. This is radically different from other brands of filters currently being offered—all of them have restricted flow channels, but the ML3 includes in its design an area that actually works to slow down the movement of effluent, effectively promoting the settling of solids.

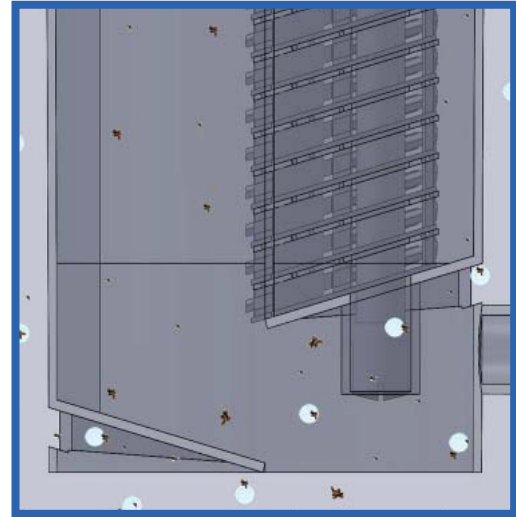


Figure 1

To understand this principle, consider what naturally happens in a creek, stream or river: when flow is restricted, such as when the channel narrows, the velocity of water increases to the point where even large boulders can be picked up by the force of the flow and carried downstream.

Conversely, when the channel widens, increasing the flow area, the velocity of the water slows down and sediment drops out and settles back to the bottom. ML3 designs take advantage of this natural principle that settling will occur when velocity is slowed.

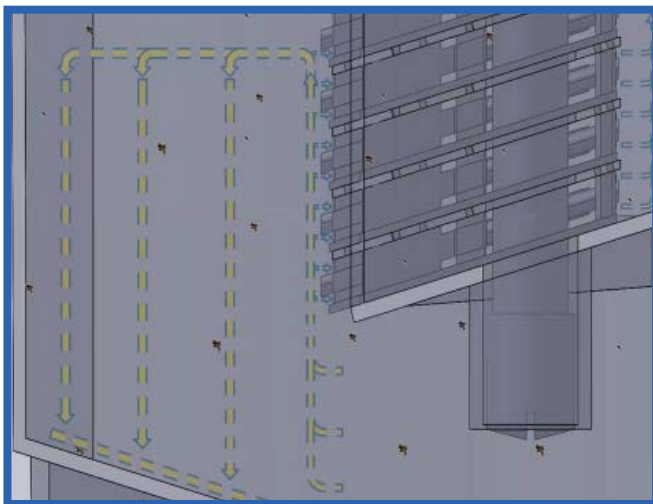


Figure 2

The importance of the case to our system of true filtration has been shown. The ML3 design continues inside the case with the first true gravity filter designed for effluent applications. Solids are exposed to the entire surface of an effluent filter at the back of the settling zone, (Figure 3) not to small flow channels that can become easily blocked by a single square of toilet paper or other solids commonly found in septic tanks.

In the ML3 filter, solids are exposed to all 123.94 square inches of filter cartridge interface, with 96.37 square inches below the outlet invert. With this much area of exposure, flow into the filter is passive and thus moves slowly into the filter. Again, slowing the passage of effluent allows solids to continue the settling process, again reducing the number of solids even entering the filter itself, which extends the life of the filter beyond other brands.

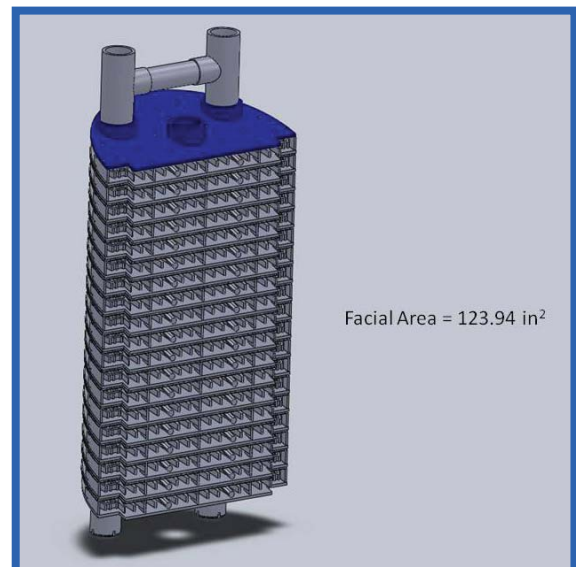


Figure 3

Ends with progressive filtration....

There's a big difference between the function of screens and the functions of a filter. The ML3 filters are the first true effluent filters in the onsite market, designed with a series of baffle walls that create three separate sets of weirs, both over and under, the baffle walls. Other brands offer a screen with one-size apertures, usually 1/8-inch or 1/16-inch. These single apertures are presented with all sizes of solids in the effluent—large, small and in-between. This shortens the service life of the product, by overwhelming the screen with all these different sizes of particles.

Bear Onsite's ML3 filters are designed to include three progressive stages of filtration. In the ML3-916 model (Figure 4), the first baffle wall blocks particles greater than 3/16-inch, allowing only particles smaller than this size to pass through to the second baffle wall. The second baffle wall blocks particles greater than 1/8-inch, allowing only particles smaller than that size to pass through to the third baffle wall. This third and final baffle wall blocks any remaining particles that are greater than 1/16-inch. It's like getting three filters for the price of one, and because fewer and fewer particles pass through from the first baffle wall to the second, and then to the third, the life of the filter is extended way beyond any other product in the marketplace.

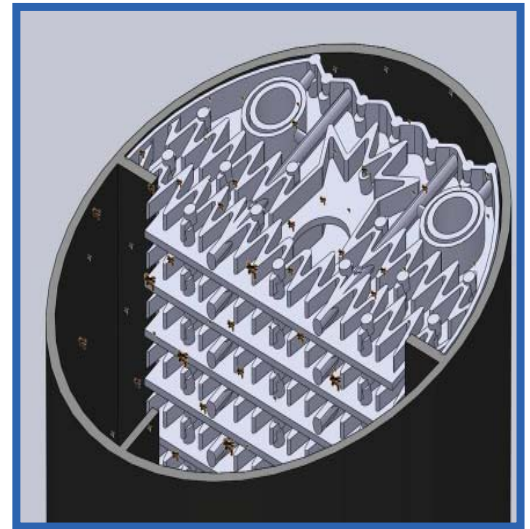


Figure 4

ML3 filtration better for the installer and homeowner...

The average homeowner doesn't want to take the time to understand how onsite septic systems are designed to work. Yet, they have an expectation that it WILL work, with a minimal amount of maintenance, service and expense. With this in mind, Bear Onsite's ML3 filter includes an alarm feature unlike any other in the marketplace. The housing for a Vertical Reed Switch is molded internally within the filter, protected from unfiltered effluent that could trigger false alarms. Therefore, when the alarm is triggered within a Bear Onsite ML3 filter, the homeowner can be assured there is truly a need for a service call.

Filter Sizing Chart

Case & Cartridge	Lid Color Code	Single Family Application in GPD	Other than single family applications in GPD			Primary Filtration Size	Secondary Filtration Size	Tertiary Filtration Size
			<300 CBOD ⁵	300 - 600 CBOD ⁵	601 + CBOD ⁵			
ML3-910		3350	3000	2500	2000	7/32 nd in	5/32 nd in	3/32 nd in
ML3-916		2750	2750	2000	1500	3/16 th in	1/8 th in	1/16 th in
ML3-925		2750	2750	2000	1500	~1/6 th in	~1/10 th in	~1/25 th in
ML3-932		2750	2750	1875	1500	1/20 th in	1/26 th in	1/32 nd in
ML3-948		n/a	3000 *	2000 *	1500 *	~1/25 th in	~1/36 nd in	~1/48 th in
ML3-964		n/a	2750 *	1875 *	1500 *	~1/29 th in	~1/45 th in	1/64 th in

* Audio Visual Alarm is recommended due to the extreme level of filtration and the subsequent short service interval for these commercial/industrial filters.

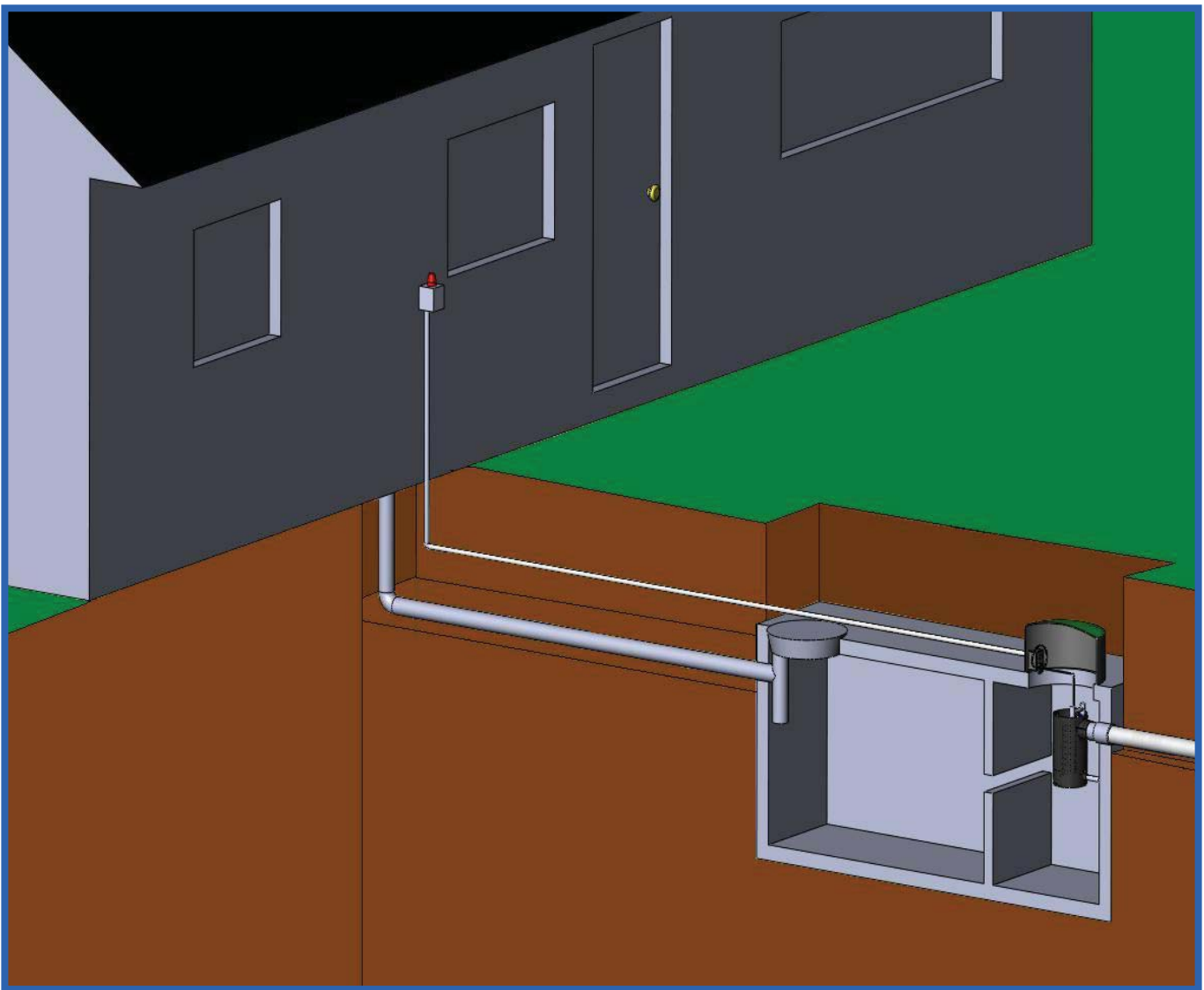
See the system in action by visiting www.BearOnsite.com

Warranty information available online at www.bearonsite.com/filters.htm
 Products shown protected by Patent No. 7,682,512. Other patents pending.



www.BearOnsite.com

877-MLFILTERS (653-4583)



**Onsite System protected by ML3-916 effluent filter
and BO-A-O-VRS alarm.**

Warranty information available online at www.bearonsite.com/filters.htm

All products as well as molds to produce products Made in the USA 

Products shown protected by Patent No. 7,682,512. Other patents pending.

www.BearOnsite.com

877-MLFILTERS (653-4583)

PO Box 507 Somerville, TN 38068