

# Baldwin Long Life Coolant Filters Protect Diesel Engine Cooling Systems

**Injection Molded Plastic Chamber** contains Controlled Release Coolant Pellets, which are located upstream of the filter media.

**Controlled Release Coated Pellets** diffuse SCAs into the system (when exposed to heat and coolant flow), which are then filtered, prior to entering the engine. BTE and BTA PLUS Supplemental Coolant Additives provide the best protection from cavitation, scale, rust and other forms of corrosion, while reducing the potential for water pump seal leaks.

**SCA Diffusion Control Orifice** meters diffusion of SCA chemical into coolant flow (to allow SCAs to be released in the amount required to maintain proper system balance) for up to 150,000 miles of service.

**Spring Protector** isolates dissimilar metals to prevent corrosion.

**Epoxy Coated Housing** reduces the possibility of corrosion during extended service intervals.

**Synthetic Media** is designed to withstand heat and degradation from long-term exposure to coolant flow. High capacity and efficiency allows media to trap contaminants that could reduce system efficiency.

**Flow Control Orifice** meters flow of coolant through filter.

**Heavy-Duty Baseplate** made from stamped steel, is designed to withstand extended service intervals.

**Double-rolled Tuck Lock Seam** prevents coolant leaks.



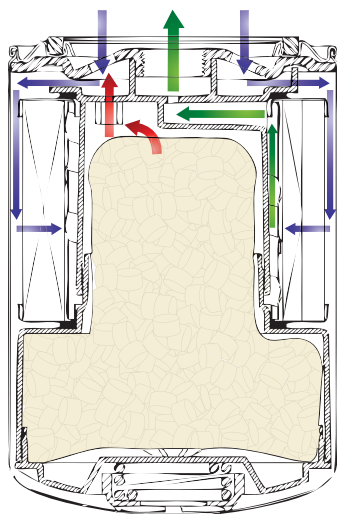
Baldwin offers a complete line of cooling system filtration products.

Baldwin Filters patented Controlled Release Coolant Filters contain Supplemental Coolant Additives (SCAs) to protect diesel engine cooling systems for one year or 150,000 miles. Contact your Baldwin Filters Distributor today and gain control of your Cooling System.

**BALDWIN**  
**Heavy-Duty Performance FILTERS**  
 a CLARCOR company

# Controlled Release Coolant Filters Outperform Competitors

**Baldwin Controlled Release Coolant Filter Flow Schematic**



■ Inlet Flow ■ Outlet Flow ■ Diffusing Chemical

The Baldwin Filters Controlled Release Coolant Filter utilizes a patented process that allows Supplemental Coolant Additives (SCAs) to be released into your coolant system only when heat and cooling flow are present. Our field tests show that the supplemental additives are released at an even rate. This is important because competitors' filters can "dump" all the additives at once, potentially overcharging the system, leading to additive drop out. The other extreme is

not releasing enough additives near the end of a maintenance period, leaving the system vulnerable to cavitation erosion and corrosion.

With the Baldwin product, all coolant is conditioned with coolant additives prior to being filtered. This ensures that no undissolved particles from the chemical mass can enter the system. It also ensures that the flow control orifice cannot be plugged. The competitive products have a flow pattern that routes the coolant through the filter element first, leaving the possibility that solids could plug the flow control orifice. This would disable the filter, stopping the SCAs from entering the system and leaving engine components unprotected.

Baldwin's media is a high capacity synthetic media designed to trap contaminants and maintain its structure through a long service interval. The high efficiency synthetic media, used in some competitive products, has very low capacity to hold contaminants before plugging, leaving the system vulnerable. Once the filter plugs, the flow stops and no SCAs are released to protect the system.

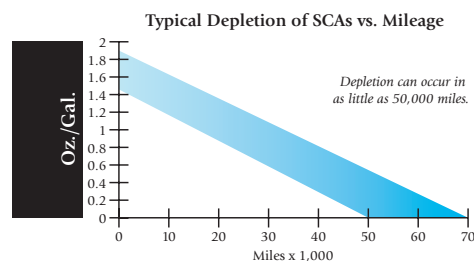
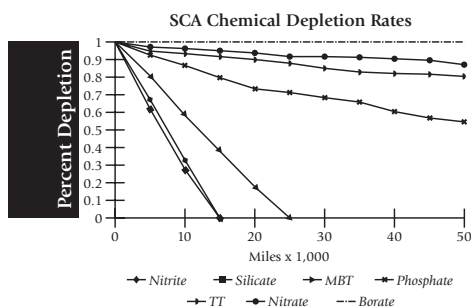
The media used in other primary competitor products is cellulose. On our simulated service laboratory test stand,

the media in the filter became soft and restrictive, significantly reducing the flow through the filter. Without flow, the SCAs contained within the filter cannot be released.

One competitive long life design relies on corrosive coolant to begin the process that releases the SCAs into the coolant system. In this process, a magnesium plate is in contact with a copper centertube that holds the SCA. When the coolant becomes corrosive enough, a reaction between the magnesium plate and the copper centertube occurs. As the magnesium corrodes, the SCAs are exposed to coolant and begin to dissolve into the system. It takes considerable time before the magnesium plate corrodes enough to allow the SCAs to enter the system. The cooling system is left corrosive and unconditioned for this long time interval.

There is no correlation between the corrosion of the magnesium plate and cavitation corrosion of wet sleeve liners. A system can have low enough SCA levels to promote cavitation corrosion in wet liners, and still not be corrosive enough to release the SCA chemical in the filter. This is why the competitor insists that you test your coolant additive level at every oil change interval and add liquid SCAs to the system.

## Test Prove Performance Superiority



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