



**Channel Flow®**

*Innovative Filtration Solutions*

## *Baldwin's Channel Flow Air Filters...*

# A Stronger Design For Outstanding Protection

### **Improved Engine Protection**

Design traps contaminants within the filter, preventing them from being passed on to the engine.

### **Straight-Through Air Flow Pattern**

Reduces the amount of space, up to 50%, of traditional filters and allows for new installation possibilities.

### **Durable Frame**

The Channel Flow frame fully encloses the filter, protecting the media from damage during installation and preventing air from being drawn in through the sides of the filter.



### **Compact, Lightweight**

Allows for easier installation and service in tight, compact areas.

### **Environmentally Friendly**

Non-metal filter elements allow for easier, more environmentally friendly disposal and are fully incinerable.

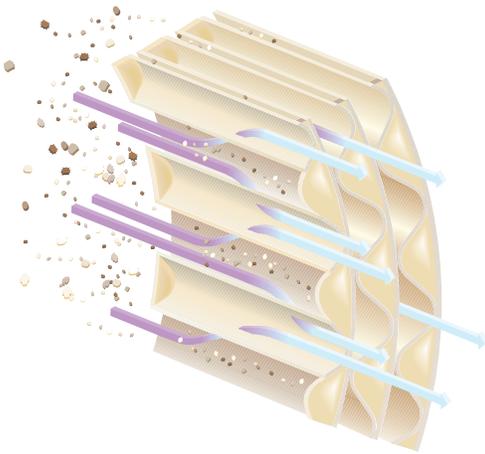
## **Channel Flow Air Filters Meet High Performance Demands**

With the continued demand for higher performance engines, along with stricter emission regulations, leading construction and agricultural manufacturers are designing vehicles with more compact air intake systems. These innovative designs mean better performance, but have less installation space under the hood.

Baldwin Filters' patent pending Channel Flow® air filters provide superior filtration solutions in a lightweight, compact design for easy installation in less space. This new straight-through air flow technology not only allows for less installation space, but also offers manufacturers flexibility in design configuration.

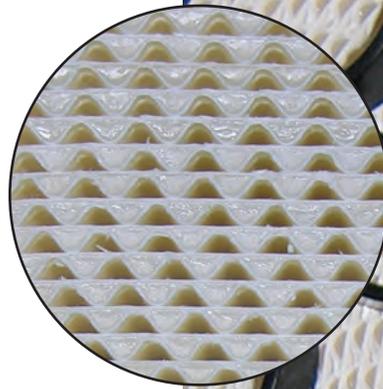
### Stronger Media Pack

The flat and corrugated media — in either a rolled or stacked format — is inherently strong, eliminating the need for a centertube and wrapper used in traditional air filters.



### Alternately Closed Channels

Air enters the open channels, trapping contaminants inside the filter and allowing clean air to flow through the filter media and out the open channels on the opposite end.



## Channel Flow vs. Traditional Filters

### More Surface Area

Baldwin's Channel Flow filter has more surface area than a traditional air filter, while requiring the same or less installation space. The Channel Flow media is formed by layering alternating rows of flat sheets and corrugated media. When completed, the media resembles a honeycomb network of channels. As the media pack is formed, alternating channels are sealed with a bead of adhesive. Air enters open channels and flows through the media and out through adjacent open channels.

### Increased Capacity

Traditional air filters have an average capacity of about 1 unit of contaminant per unit volume, whereas the Channel Flow filter holds 2 units of contaminant per unit volume. This gives Channel Flow twice the capacity of traditional air filters.

### High Efficiency

Tests show Channel Flow filters have an average efficiency of 99.99%. This means for every 10,000 units of contaminant introduced to the filter, only one makes its way through. This is comparable to the efficiency of Baldwin Filters' traditional heavy-duty air filters.

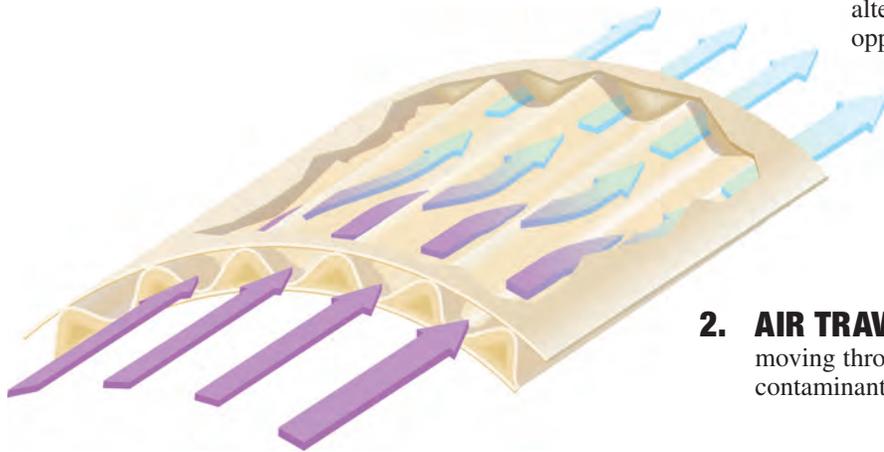
### Decreased Flow Resistance

Increased air flow is needed for higher performance engines. Increased air flow is also needed to meet tougher exhaust emission standards. With a traditional air filter, air typically enters through the side of the filter housing. The air must then work its way around the filter element, pass through the media, then turn 90° to exit the filter. By eliminating the turns the air needs to make in a traditional air filter, in-line air filters reduce restriction.

### Stronger Media Support

Provides essential support when the pressure differential across the element increases due to moisture or contamination. Increased differential pressure can cause the element to "telescope," which can damage the filter.

# How Channel Flow Filters Work



**1. DIRTY AIR** enters the Channel Flow filter through alternately opened channels on the intake side.

- 2. AIR TRAVELS** toward the engine, moving through the media where contaminants are trapped.
- 3. CLEAN AIR** exits the filter through alternately opened channels on the opposite end.

## How Baldwin Can Help You



Baldwin has been a leader in mobile filtration for over seventy years.

Baldwin's manufacturing operation is vertically integrated – meaning we manufacture nearly every component used in our filters.

Baldwin's team of engineers, using the latest technology in 3-D CAD modeling and stereo lithographic prototyping, continue to identify

innovative solutions for our customer's filtration needs.

Baldwin's state-of-the-art technical center performs extensive testing in the lab and in the field.

With the largest Sales Force in the industry, and Customer Service and Technical Support Groups on hand, Baldwin's team of professionals is here to assist you with all your needs.

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