



## Grain Facility Achieves Greater Cost Savings by Switching to Dura-Life™ Filter Bags

**INDUSTRY:** Grain Handling

**PROBLEM:** Short filter life and excessive energy consumption.

**SOLUTION:** Donaldson Torit Dura-Life filter bags proved, in a side-by-side test with conventional polyester filter bags, to be the key to a potential \$60,000/year savings!

A large grain handling and oil seed processing facility on the U.S. Gulf Coast had 35 baghouse collectors of various sizes equipped with conventional polyester filter bags. The plant manager's challenge was to increase filter bag life and reduce overall energy costs.

After researching various filter media, the plant manager chose to install Donaldson® Torit® Dura-Life™ filter bags in one of the baghouse collectors to run a comparison test. Dura-Life is a higher-performance filter media made of hydroentangled felt. If the new Dura-Life filter bags performed as expected and reduced pressure drop across the filters by 2 inches water gauge, the resulting energy savings would be substantial.

### Significant Results with Dura-Life Filter Bags

Results of the comparison test were even better than expected. Besides maintaining a lower pressure drop, the Dura-Life filter bags also had *twice the filter life* of the conventional polyester filter bags. When the plant manager calculated everything—labor savings for fewer filter changeouts, longer filter life, lower energy usage, and the increased cost of the filter bags—the payback time was only 118 days.

The plant manager determined the facility could save over \$60,000 a year in reduced energy if all the collectors were retrofitted with Dura-Life filter bags and the fan speeds were managed. They immediately outfitted half of the baghouses with Dura-Life and plan to install Dura-Life bags in the remainder of the collectors as the other bags need replacement. He commented, “We are very happy with Dura-Life filter bags!”



Replacing conventional polyester filter bags with Dura-Life filter bags in this grain facility's baghouse collector resulted in lower pressure drop, resulting in lower fan energy consumption and lower energy costs. Dura-Life bags contributed to significant savings in energy usage, filter bag replacement, and labor costs.

	Conventional Filter Bags	Dura-Life Filter Bags
<b>Airflow</b>	12,900	12,900
<b>Pressure Drop</b>	5 "wg	3 "wg
<b>Fan Efficiency</b>	63%	63%
<b>Electrical Efficiency</b>	90%	90%
<b>Hours per Week</b>	168	168
<b>Weeks per Year</b>	51	51
<b>Cost per kW</b>	\$0.07	\$0.07
<b>Yearly Operation Cost</b>	\$8,007	\$4,805
<b>Annual Saving this Baghouse*</b>	—	<b>\$3,202</b>

Dura-Life bags are made with Durapex® media manufactured by Polymer Group, Inc.

\* Energy saving varied per baghouse because they are different sizes.

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