

Donaldson®  
Torit®

**DURA-LIFE™  
BAG FILTERS**



**READY  
2SHIP**

**DURA-LIFE™**  
**Twice The Life Filter Bags**

# MAKE A CHANGE TO THE BETTER

Can't think of a good reason to change your brand of bag filters? Donaldson Torit just provided the reason—Dura-Life bag filters that outlast, outperform and outvalue standard polyester.

## Dura-Life™ Bag Filters

- Breakthrough technology only from Donaldson® Torit®
- Dura-Life bag filters last 2 - 3 times longer than standard 16 oz. (453.6 g) polyester bags
- Energy savings due to lower pressure drop
- 30% fewer emissions based on EPA test procedure
- Dura-Life bag filters are standard on all Donaldson Torit baghouses
- Dura-Life bag filters are available as replacements for all brands of baghouse collectors

LASTS **2 TO 3**  
TIMES LONGER



# THE PROVEN PERFORMANCE OF DURA-LIFE™

## DURA-LIFE – A TECHNOLOGY BREAKTHROUGH FOR BAG USERS

Polyester bag filters have historically been produced with a needling process that creates large pores where dust can embed into the fabric, inhibiting cleaning and reducing bag life. Dura-Life bag filters are engineered with a unique hydroentanglement process that uses water to blend the fibers, resulting in:

- More uniform material with smaller pore size
- Better surface loading of dust that prevents penetration deep into the media
- Improved pulse cleaning and lower operating pressure drop
- Bags with longer life and greater value
- Available in polyester, oleophobic, epitropic (anti-static), and epitropic oleophobic
- FDA compliant versions available



**Needled Polyester Bag  
Clean Air Side  
(300x)**



**Dura-Life Bag  
Clean Air Side  
(300x)**

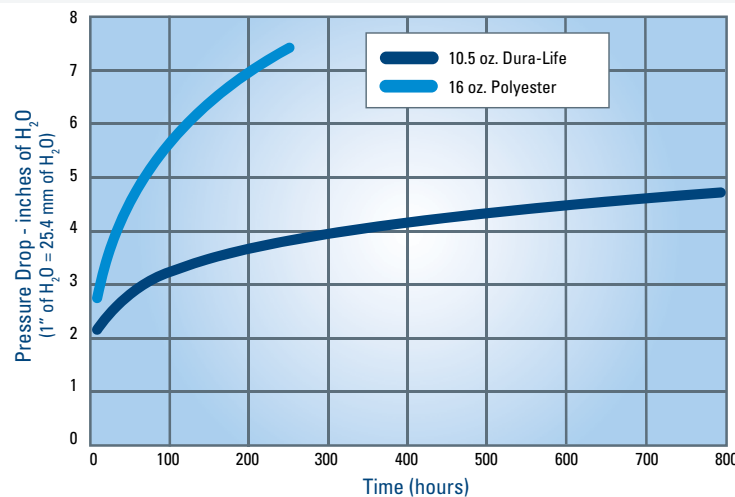
These photos were taken with a scanning electron microscope of bag media used in a collector that was filtering fly ash. The bags were removed after 2,700 hours of use. Air-to-media ratio was 4.5 to 1. Pressure drop after 2700 hours of operation was 6 in. (152.4 mm) on polyester bags and 2 in. (50.8 mm) on Dura-Life.

# DURA-LIFE™ IMPROVES THE BOTTOM LINE

## DURA-LIFE BAGS LAST 2–3 TIMES LONGER THAN STANDARD POLYESTER

Pressure drop increases at a faster rate with needled polyester bag filters due to dust embedding in the media, shortening bag life and forcing more frequent bag changes. Dura-Life filter bags, with surface loading of dust and better pulse cleaning, perform far longer than needled polyester filter bags when replacing due to excessive pressure drop.

### BETTER SURFACE LOADING RESULTS IN LONGER BAG LIFE

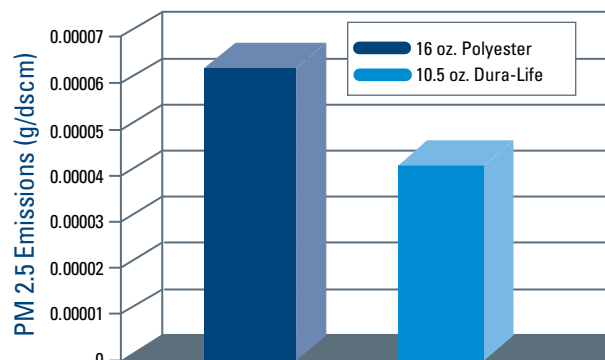


These results were derived in accelerated lab tests, which correlate to field tests results, showing that Dura-Life will provide 2-3 times more life than standard 16 oz. (453.6 g) polyester bag filters when replacing bags due to pressure drop.

## DURA-LIFE CLEARS THE AIR BETTER

Dura-Life bag filter media has been shown to produce lower emissions than the 16 oz. (453.6 g) needled polyester material used in most standard bags. Dura-Life media is more efficient at capturing dust, even 2.5 micron or smaller particles, reducing the amount of dust that escapes into the air. This helps to keep the workplace and environment cleaner.

### DURA-LIFE MEDIA PROVIDES LOWER EMISSIONS THAN STANDARD POLYESTER



# 30% FEWER EMISSIONS

These flat sheet results are based on independent lab tests using ASTM D 6830-02 per EPA PM 2.5 performance verification.

## DURA-LIFE BAGS ARE THE CLEAR CHOICE FOR SAVINGS

With Dura-Life, there are fewer bag changes, resulting in labor and replacement bag savings and less production downtime. Unique Dura-Life technology traps dust on the surface of the bag, allowing dust to be easily pulsed off during cleaning resulting in lower pressure drop and annual energy savings.

### ANNUAL ENERGY SAVINGS DUE TO REDUCED PRESSURE DROP

|                   | Standard Polyester Bags | Dura-Life Bags |
|-------------------|-------------------------|----------------|
| Bag Filters       | 484                     | 484            |
| Operating Delta P | 5" (127.0 mm)           | 3" (76.2 mm)   |
| ACFM              | 57,000                  | 57,000         |
| Motor             | 125 HP                  | 125 HP         |
| Break HP          | 55.4                    | 33.2           |
| Annual Energy Use | \$16,687                | \$10,000       |

This is one example; energy savings can further increase with larger collectors. These energy savings are calculated based on the following assumptions: Baghouse collector runs 2 shifts per day, 5 days a week (4,000 hours per year) and energy costs are 10.7 cents per kilowatt hour with Variable Frequency Drive and an EISA compliant motor.

ANNUAL ENERGY  
**SAVINGS OF**  
**\$6,687**  
OR MORE

### LABOR AND BAG COST SAVINGS DUE TO FEWER BAG CHANGES

| Number of Dura-Life Bags | Maintenance & Bag Cost Savings |
|--------------------------|--------------------------------|
| 484                      | \$3,708                        |
| 376                      | \$2,881                        |
| 276                      | \$2,114                        |
| 232                      | \$1,777                        |
| 156                      | \$1,195                        |
| 124                      | \$950                          |
| 72                       | \$551                          |

These calculations are based on the following assumptions: standard polyester bag filters are replaced annually, Dura-Life bag filters provide twice the life of standard polyester bag filters, time-and-a-half labor rate equals \$45/hr. including benefits, and a three-person crew can replace 40 bags/hr. Labor and bag cost savings can further increase with larger collectors.

LABOR & BAG COST  
**SAVINGS OF**  
**\$3,708**  
OR MORE  
Per Dura-Life Change-Out



# DURA-LIFE™ FILTER BAGS CONQUER SOY PROTEIN WITH MUSCLE

- INDUSTRY:** Grain – soy protein conveyor
- PROBLEM:** Oily & agglomerative dust caused short filter life & high emissions
- SOLUTION:** Donaldson® Torit® Dura-Life bag filters last 3x longer and exceed EPA emission standards

A Midwestern soybean processing plant uses a Donaldson Torit RF baghouse dust collector on a pneumatic receiver that regularly processes between 3 and 4 tons per hour of soy protein dust.

Soy protein tends to be oily and agglomerative, so it often builds up and blinds off conventional polyester bag filters early. The maintenance team had to replace their conventional polyester filter bags every 6 months. Now, after installing Donaldson Torit Dura-Life™ filter bags, they find filters last about 18 months—3x longer.

One of the company’s biggest concerns was their ability to meet EPA emissions standards of 0.05 gr/dscf\*. After testing Dura-Life, the company was pleased to discover that emissions are well below the EPA requirements — just 0.0028 gr/dscf. The maintenance supervisor reports that visual inspections of the ducts also appear much cleaner with Dura-Life, and ΔP measured 2-4” lower than with non-Dura-Life bags.

Longer filter life AND lower emissions? Now that’s tackling protein dust with muscle.



The Dura-Life bag filters in this Donaldson Torit RF Baghouse collector provide longer life and lower emissions at this Midwestern soybean processing plant.

## PROJECT STATISTICS

|                           |   |
|---------------------------|---|
| Dust/Contaminant          | Soy Protein   |
| Application               | Pneumatic conveying   |
| Dust Collector            | Donaldson Torit RF Baghouse, with 324 bag filters, Model 324RFW10 |
| Air Volume                | 35,000 cfm (59,453 m³/h)  |
| Dust Loading              | 5-8 grains/dscf   |
| Air-to-Media Ratio        | 7:1   |
| Hours of Operation        | 4-5 days/week, 24/hrs/day   |
| Polyester Bag Life        | 6 months @ 6.5” – 8.5” ΔP   |
| Dura-Life Bag Filter Life | 1½ years @ 4.5” ΔP  |
| Emission Test Results     | 0.0028 gr/dscf (well below EPA 0.05 gr/dscf requirement)          |

\* Grains/dscf = Grains per dry standard cubic foot. There are 7,000 grains in one pound.

## DURA-LIFE™ for baghouse collectors

Dura-Life filters ship in 24 hours and are available for all popular collectors.

- AZO®
- Buhler
- Carter Day
- DCE
- Flex-Kleen
- Golfetto
- Kice
- MAC
- MikroPul
- Murphy
- Pneumafil
- Steelcraft®
- Wheelabrator
- + Many others

**READY  
2SHIP**



2005 Readers' Choice Award Winner  
Power and Bulk Engineering  
February 2005



## Global Support

- Facilities in 37 countries
- 40 manufacturing plants and 14 distribution centers

## Leading Technology

- Over 1,000 engineers and scientists worldwide
- Broad range of innovative collectors and filters
- 100s of filter media formulations

## Experience and Service

- Technical expertise and support
- Ready-to-ship filters and parts within 24 hours
- 1,000,000+ dust, fume and mist collectors installed

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