

**Breakthrough in baghouse technology:  
Dura-Life bags.**

- ▶ Advanced hydroentanglement technology extends bag life
- ▶ Maintenance costs are reduced with longer bag life
- ▶ Energy savings result from lower pressure drop
- ▶ Smaller particles are captured with greater efficiency
- ▶ 99.9% efficiency helps provide a cleaner, safer environment



**Donaldson. And everything just got better.**

**Total Filtration Management**

▶ Donaldson offers a wide variety of solutions to reduce your energy costs, improve your productivity, guarantee production quality and help preserve the environment.

**Filtration, Sterile Filtration, Process Filtration, Refrigerant Drying, Adsorption Drying, Condensate Drains, Condensate Purification Systems, Water Chillers, Air / Oil Separation, Dust and Fume Removal, Process Air and Gas Processing, Oil Mist Separation**

**Total Filtration Service**

▶ A comprehensive range of services especially designed to keep your production at peak performance and at the lowest total cost of ownership.

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**Breakthrough in baghouse technology: Dura-Life™ bags.**

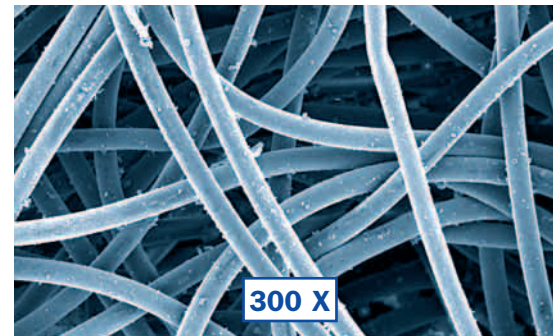
- ▶ Dura-Life bags are standard on Donaldson Torit DCE bag collectors and available as replacement for all brands of baghouse collectors.

# Dura-Life™ : The filter which lasts 2 to 3 times longer.

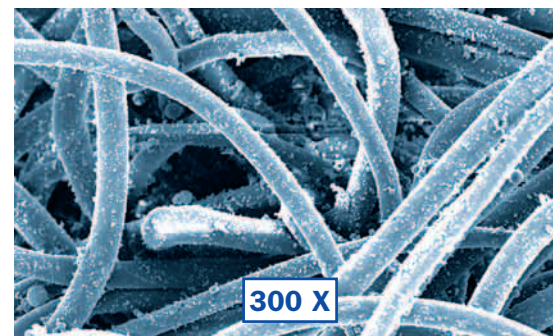
## Dura-Life – A breakthrough for bag users.

► Polyester bags are woven with a needling process that creates larger pores where dust can embed into the fabric, inhibiting cleaning and reducing bag life. Dura-Life bags are engineered with a unique hydro-entanglement 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 media
- Improved pulse cleaning and lower pressure drops
- Bags with longer life and greater value



Dura-Life Bag-Clean Air Side



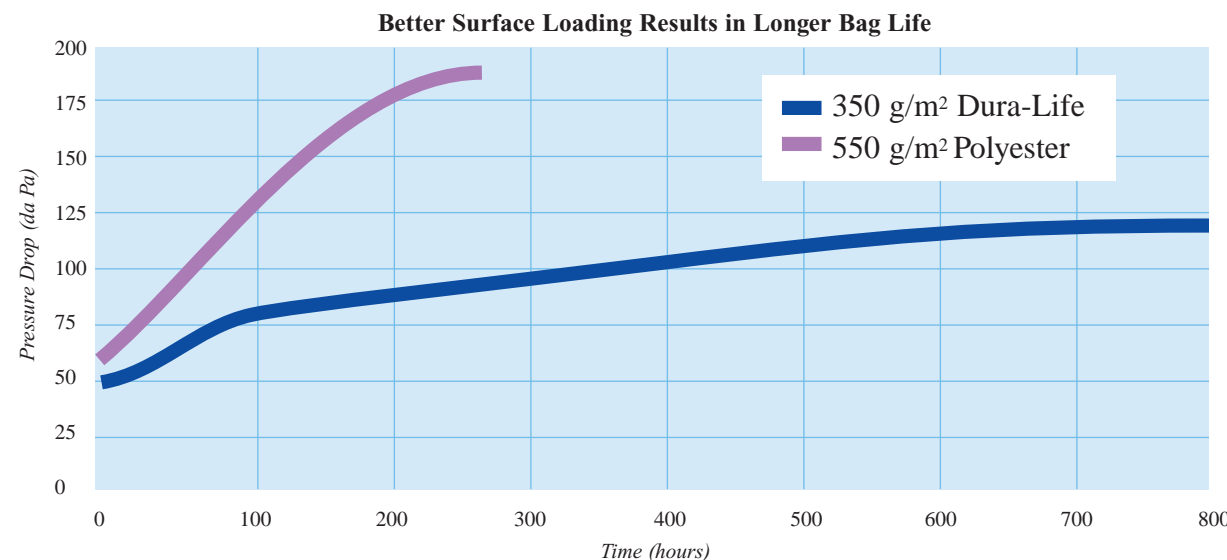
Polyester Bag-Clean Air Side

These photos were taken with a scanning electron microscope of bag media within a collector that was filtering fly ash. The bags were removed after 2.700 hours of use. Air-to-media ratio was 1.4 m<sup>3</sup>/min. Pressure drop was 152 da Pa on polyester bags and 51 da Pa on Dura-Life.

## Dura-Life bags last 2-3 times longer than standard polyester.

► Pressure drop increases at a faster rate with polyester bags due to dust embedding in the media, shortening bag life and forcing more frequent bag

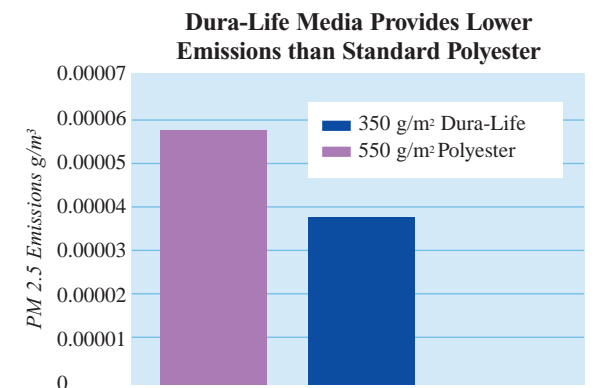
changes. Dura-Life bags, with surface loading of dust, better pulse cleaning and a lower pressure drop, perform far longer than polyester bags.



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 550 g/m<sup>2</sup> polyester bags in most applications.

## Dura-Life provides 30% fewer emissions.

► Durapex media used in Dura-Life bags has been shown to produce lower emissions than the 550g/m<sup>2</sup> polyester material used in most standard bags. Dura-Life's Durapex 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's Durapex media has been tested and received EPA PM 2.5 performance verification from the Environmental Technology Verification (ETV) Program via ASTM D 6830-02.



These flat sheet results are based on independent lab tests using ASTM D 6830-02 EPA PM 2.5 performance verification from the Environmental Technology Verification (ETV) Program comparing Durapex media from PGI vs. standard 550 g/m<sup>2</sup> polyester.

## Dura-Life bags are the clear choice for savings.

► With Dura-Life, there are fewer bag changes, resulting in labour 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.

### Labour and Bag Cost Savings Due to Fewer Bag Changes

Number of Dura-Life Bags	Maintenance & Bag Cost Savings
500	4.195,-
400	3.355,-
300	2.517,-
200	1.678,-
100	839,-
60	504,-
30	252,-

Labour & Bag Cost Savings of **4.195,- €** or more per Dura-Life change-out

### Annual Energy Savings Due to Reduced Pressure Drop

	Standard Polyester Bags	Dura-Life Bags
Filter Bags	500	500
da Pa	125	75
m <sup>3</sup> /h	97.000	97.000
Motor KW	90	90
Consumed KW *	45	27
Annual Energy Use	12.600	7.560

\* Consumed KW to overcome the operating Delta P

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 7 cents/Euro per kilowatt hour.

These calculations are based on the following assumptions: standard polyester bags are replaced annually, Dura-Life bags provide twice the life of standard polyester bags, time-and-a-half labour rate equals 55,-€/hr including benefits, and a three-person crew can replace 40 bags/h. Labour and bag cost savings can further increase with larger collectors.