



Breakthrough in baghouse technology: Dura-Life® bags.

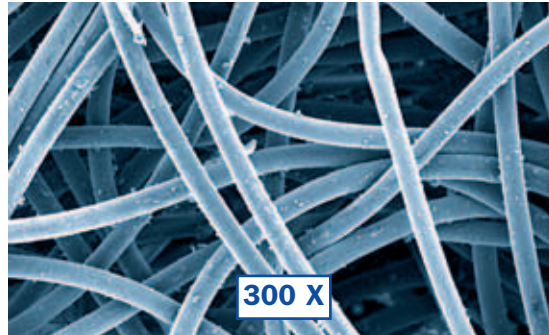
- ▶ **Dura-Life® bags are standard on Donaldson Torit® DCE® bag collectors and available as replacement for all brands of baghouse collectors.**

Dura-Life® : The filter which

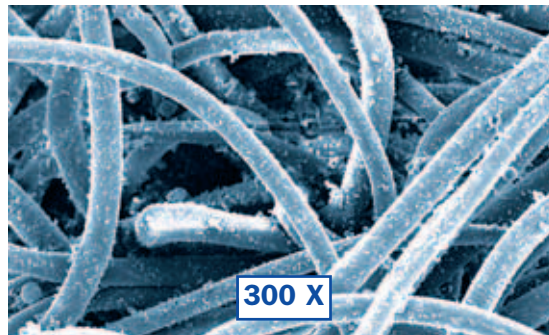
Dura-Life® – A breakthrough for bag users.

► 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 fibres, 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



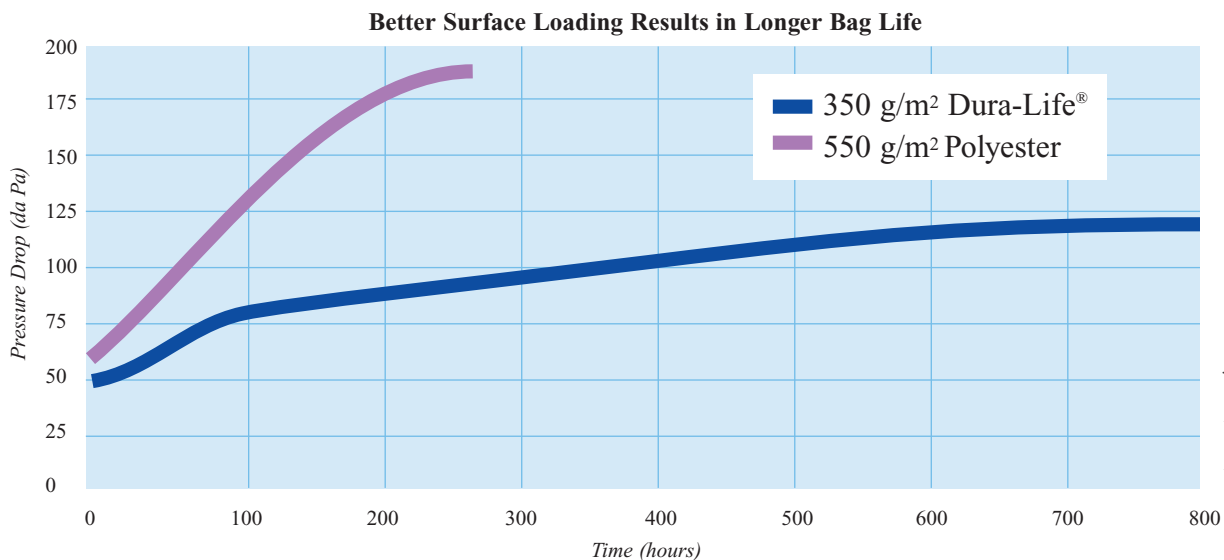
Polyester Bag-Clean Air Side

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 m³/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.

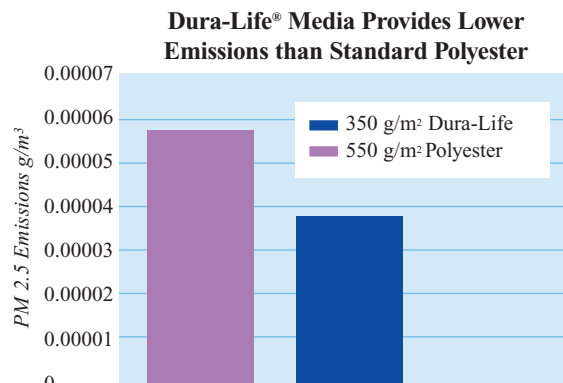


These results were derived in accelerated lab tests, which correlate to field tests results, showing that Dura-Life® will provide 2-3 times more life than standard 550 g/m² polyester bags in most applications.

lasts 2 to 3 times longer.

Dura-Life® provides 30% fewer emissions.

► Dura-Life bags have been shown to produce lower emissions than the 550g/m² 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 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 accomplished 2001 using ASTM D 6830-02 EPA PM 2.5 performance verification from the Environmental Technology Verification (ETV) Program comparing Dura-Life media from PGI vs. standard 550 g/m² 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 of **5.040,- €** or more

Annual Energy Savings Due to Reduced Pressure Drop

| | Standard Polyester Bags | Dura-Life Bags |
|-------------------|-------------------------|----------------|
| Filter Bags | 500 | 500 |
| da Pa | 125 | 75 |
| m ³ /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.

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



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