

GRTB-Series

High Rigidity Polypropylene Meltblown Cartridge



Rigid depth filtration designed for strength, performance, and contaminant retention.

The GRTB-Series is engineered for demanding applications where strength, consistency, and contaminant retention are critical. Built with a highly rigid, all polypropylene construction, these cartridges help maintain structural integrity at elevated viscosity and high differential pressure environments while delivering reliable, high-performance depth filtration.

KEY HIGHLIGHTS

- Resists contaminant unloading, even at elevated differential pressures.
- Highly rigid construction offers collapse resistance in elevated viscosity applications.
- Precision process control of fiber diameters allow for layered density; optimizing loading capacity and overall performance.
- All polypropylene construction delivers excellent compatibility with a wide range of chemicals.
- All thermally-bonded end configurations available.
- Free of additives, wetting agents, binders and silicone.

PERFORMANCE & SPECIFICATIONS

Micron Rating	1, 5, 10, 25, 50, 75
Efficiency	High Performance Grade = 90%
Recommended Change-Out ΔP	35 PSID (2.4 bar)
Max Temperature	176°F (80°C)
Max Differential Pressure	60 PSID at 68°F (4.13 bar at 20°C)
Nominal Lengths	9.75 to 40 in (24.8 to 102 cm)
Outside Diameter	2.5 in (6.4 cm)
Inside Diameter	1.06 in (2.69 cm)

CONSTRUCTION MATERIALS

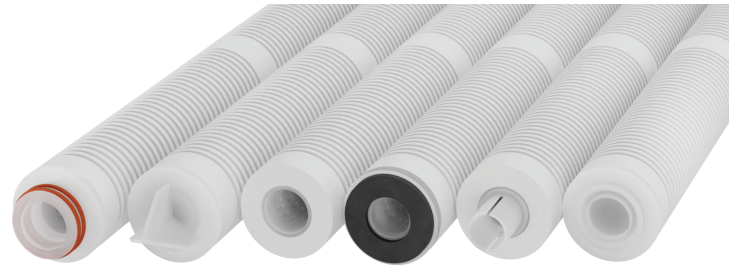
Filtration Media	Polypropylene
End Caps	Thermally Bonded Polypropylene
Core	Polypropylene
O-Rings/Gaskets	Buna, EPDM, Silicone, Viton®

COMPLIANCE

Materials of construction comply with FDA regulations for food and beverage contact use as detailed in the US Code of Federal Regulations, 21CFR. Materials used to produce filter media and hardware are deemed safe for use in contact with foodstuffs in accordance with EU Directives 1935/2004, and/or 10/2011.

The polypropylene used in these products meets requirements for biological safety per USP Class VI - 121°C for plastics.





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To demonstrate GRTB's extended service life, consistent filtration efficiency, and lower initial pressure drop, 5 µm samples were compared with equivalently-rated filters, including a resin-bonded filter, Competitor A (a similar high-rigidity, deep-groove filter), and Global's GCTB (standard polypropylene) depth filter.

Table 1: Life Comparison shows that the GRTB delivers strong service life performance compared to other 5 µm meltblown filter cartridges. While the resin-bonded filter demonstrates a similar lifespan, the GRTB significantly outperforms both Competitor A and the GCTB. This extended service life helps reduce filter change out frequency, minimizing line downtime and lowering overall operating costs.

Table 2: Efficiency Comparison highlights the GRTB's consistent particle retention performance across the full test range. From the initial reading through 5, 10, and 15 psi, GRTB maintains a steady efficiency profile, showing reliable contaminant removal as differential pressure increases without unloading. Compared to Competitor A, which starts much lower in initial efficiency, and GCTB, which shows slight variation across the test points, GRTB demonstrates the type of predictable, stable performance customers need to protect downstream equipment and maintain process quality.

Table 3: Flow Rate vs. Pressure Drop is where the GRTB shows its strongest advantage. The GRTB has the lowest initial pressure drop across the tested flow range, meaning it allows more efficient flow with less system resistance than the tested comparable cartridges. Lower pressure drop can contribute to improved energy efficiency, better system throughput, and higher overall throughput per changeout. When the three tables are viewed together, the story is clear: GRTB delivers reliable service life, consistent efficiency, and superior flow performance, making it the stronger overall choice for customers seeking a high-performance 5µ rigid depth meltblown polypropylene filter cartridge.

For customers seeking a rigid depth cartridge that balances performance and value, the GRTB stands out as a dependable solution with a clear advantage over competing products.

Table 1: Life Comparison

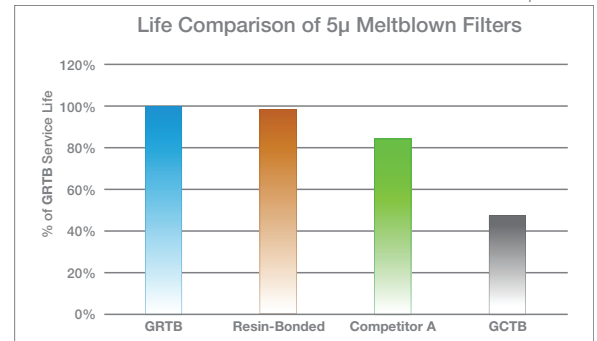


Table 2: Efficiency Comparison

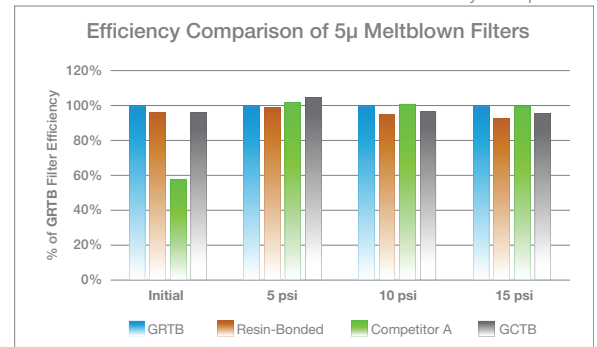


Table 3: Flow Rate vs. Pressure Drop

