



LFX™ Series – Liquid Filtration Excellence Engineered for Results

LFX-BCL™ – Coolant & Lubricant Filter Bags Technical Overview

Filtracore Asia's **LFX-BCL™ Coolant & Lubricant Filter Bags** are engineered for demanding coolant and lubrication systems in machining, grinding, and general metalworking applications. Constructed from polypropylene or polyester felt, with optional multilayer polypropylene (MLPP) variants, these bags deliver staged depth filtration, stable micron accuracy, and **broad chemical compatibility across a wide range of coolants, lubricants, and cutting fluids (compatibility should be confirmed against specific fluid chemistry, temperature, and additive package).**

For applications requiring enhanced performance, MLPP bags incorporate a pre-filter felt,



oil-adsorbing polypropylene microfibre, and a spunbond polypropylene outer cover, providing longer service intervals and resistance to tramp oil fouling. Nylon monofilament mesh (NMO) variants are also available where coarse particle capture and reusable surface media are preferred.

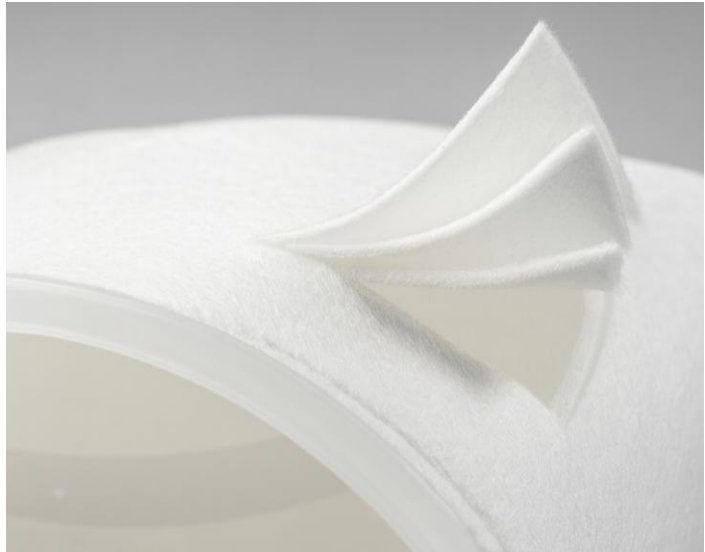
In practice, LFX-BCL™ delivers **predictable differential-pressure (ΔP) performance over the service cycle** while providing high solids capture efficiency from fine particulates to coarse chips, and reliable chemical resistance to coolants, emulsions, and lubricating fluids commonly used in machining and grinding operations. Operational life is further extended when the bags are paired with upstream ferrous fines removal solutions, such as magnetic separators from the ACCSX™ range, which help reduce premature blinding and maintain filter efficiency over time.

The LFX-BCL™ design is optimised for **recirculating coolant and lubricant systems** and integrates seamlessly into standard Size #1 and Size #2 bag filter housings. Custom dimensions and surface treatments are available for specialised systems requiring tailored performance.

Engineered for Load. Designed for Precision. Proven on the Line.

Technical Specifications

- **Material:** Polypropylene or Polyester felt (depth filtration); optional Multilayer Polypropylene (MLPP) with pre-filter, oil-adsorbing microfibre, and spunbond cover; Nylon Monofilament Mesh (NMO) available for coarse capture and reusability
- **Micron Ratings:** 1–200 µm standard; extended range on request
- **Weight (felt media):** Typically 350–500 gsm (single-layer), 600–900 gsm (multilayer)
- **Operating Temperature Limits:** Polypropylene up to 90 °C (continuous; define any short-term excursions if allowed); Polyester up to 135 °C (continuous); NMO up to 120 °C
- **pH Range:** pH 1–14 (non-oxidising); Polyester pH 3–11
- **Recommended Flow Rates:**
Approx. 10–20 m³/h for Size #1; 20–40 m³/h for Size #2 (clean water at 20 °C, ≈1 mPa·s; new bag; application dependent)
- **Initial Differential Pressure:** ≤ 0.07 bar across the bag at the above reference conditions
- **Change-Out Differential Pressure:** 0.7–1.0 bar (10–15 psi) recommended to avoid bypass or bag rupture
- **Construction:** Welded (Standard) or sewn seams; steel or plastic collars; reinforced bottoms available
- **Surface Treatments:** Options for oil repellency, silicone-free construction, or extended dirt-holding
- **Accessories:** Magnetic separator inserts (ACCSX™) available for upstream ferrous fines control



Nominal Dimensions & Effective Filter Area

Size Code	Nominal Dimensions (mm/inches)		Effective Filter Area (m ²)
Size 01	∅ 180 x 430	∅ 7 x 17	0.24
Size 02	∅ 180 x 810	∅ 7 x 32	0.48
Size 03	∅ 100 x 230	∅ 4 x 9	0.08
Size 04	∅ 100 x 380	∅ 4 x 15	0.16

Recommended vs. Maximum Flow Rates

Size Code	Recommended Flow Rates ² m ³ /h	Maximum Flow Rates ³ m ³ /h
Size 01	4.4 to 7.3	Up to 20
Size 02	8.2 to 14	Up to 40
Size 03	1.3 to 2.2	Up to 6
Size 04	2.1 to 3.6	Up to 12

¹ Compatibility may vary depending on housing configuration, ring type, or custom OEM specifications. Always verify dimensions and material compatibility before replacement.

² Recommended flow rates are based on standard conditions using water-like fluids at ambient temperature. Actual performance may vary depending on fluid viscosity, particulate load, system pressure, and micron rating selected. Maximum flow rates are provided for reference only and should not be used as a continuous operating benchmark. For optimal performance and bag longevity, follow recommended differential pressure guidelines and consult system-specific parameters.

³ Maximum flow rates assume coarse media and low system backpressure. These figures may be reached under optimal conditions, including: low-viscosity liquids, coarse micron ratings (≥100 μm), elevated system pressures, or short filter lifespans in properly sealed housing systems.

Actual performance depends on fluid viscosity, contaminant load, pressure differential, and system configuration. Operating above recommended flow may shorten filter life or reduce filtration efficiency.

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■ sales@filtracoreasia.com ■ www.filtracoreasia.com ■ +65 89-FILTER (+65 89-345837)

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