



LFX™ Series – Liquid Filtration Excellence Engineered for Results

LFX-CCL™ – Meltblown Polypropylene Coolant & Lubricant Depth Filter Cartridges Technical Overview

FiltraCore Asia's **LFX-CCL™ Meltblown Polypropylene Coolant & Lubricant Depth Filter Cartridges** are engineered for **precision fluid control** in demanding machining and metalworking environments. Constructed from **graded-density meltblown polypropylene with a rigid polypropylene core**, the media provides **progressive depth filtration**, capturing both coarse swarf and fine particulates through the fibre matrix to maintain **stable differential pressure** and **predictable retention efficiency** over extended operating cycles.



The **all-polypropylene design** offers **broad chemical compatibility** with aqueous coolants, semi-synthetic emulsions, and straight oils, eliminating risks of **fibre migration** or **extractables**. **Thermal bonding** ensures media integrity without adhesives or binders, a critical factor in **high-circulation systems** where shear forces and pressure cycling accelerate filter fatigue.

LFX-CCL™ cartridges are deployed where **finer control than bag filters** is required, particularly for **sub-10 µm polishing**, controlled clarity in centralised systems, and compact housings where bag filters are impractical. With **continuous service capability up to 80 °C** and **differential pressure ratings to 3.4 bar (50 psi)**, they provide reliability in high-load operations while maintaining **cost efficiency** compared with resin-bonded or pleated alternatives.

By integrating LFX-CCL™ into coolant and lubrication loops, engineering teams can ensure **consistent tool protection, extended fluid life, and predictable change-out schedules** that reduce downtime and operational variability.

Engineered for Endurance. Trusted in Production. Built for Clean Performance.

Technical Specifications

- **Media:** Graded-density meltblown polypropylene (standard); multilayer depth and high-efficiency variants available
- **Micron Ratings:** 1 µm to 100 µm (nominal); tighter control for polishing grades
- **Construction:** All-polypropylene design, thermally bonded to prevent fibre migration and eliminate adhesives/binders
- **Surface Finish Options:** Coarse Surface for high mechanical strength, smooth surface for low fibre shedding and fine polishing, deep groove for higher flow and extended dirt-holding capacity and minigroove for high filtration efficiency in critical polishing applications
- **Elastomers / gaskets:** EPDM (standard); Silicone; NBR (Buna-N); FKM (Viton®)
- **Length Options:** 10", 20", 30", 40" industry-standard cartridge sizes with optional 4-7/8", 9.75", 19.5" and 29.25" for legacy housings
- **End Cap Configurations:** DOE, 222/Flat, 222/Fin, 226/Flat, 226/Fin, customised options available
- **Surface Finish Options:** Coarse Surface for high mechanical strength, smooth surface for low fibre shedding and fine polishing, deep groove for higher flow and extended dirt-holding capacity and minigroove for high filtration efficiency in critical polishing applications
- **Outer Diameter:** 63 mm (2.5" standard) or 114 mm (4.5" Big Blue format)
- **Operating Temperature:** Continuous service up to 80 °C in aqueous coolants and lubricants
- **Differential Pressure Rating:** Recommended operation ≤ 2.4 bar (35 psi); maximum 3.4 bar (50 psi) at 25 °C
- **Flow Direction:** Outside-to-inside filtration
- **Chemical Compatibility:** Excellent with aqueous coolants, semi-synthetic emulsions, and many straight oils; verify compatibility for high-aromatic and chlorinated hydrocarbons, and de-rate at elevated temperature
- **Service Life:** Extended under staged depth loading; recommended change-out at 2.4 bar (35 psi) differential
- **Compliance:** Food-contact compliant variants available (FDA 21 CFR; EU 1935/2004 & 10/2011)

Nominal Dimensions & Effective Filter Area

Recommended vs. Maximum Flow Rates – LFX-CCL™ (per 2.5" Ø cartridge)

Length (in)	Recommended Flow Rate ¹ (ℓ/min)	Maximum Flow Rate ² (ℓ/min)	Effective Filter Area ³ (m ²)
10	3.0 to 4.5	Up to 7.5	0.45 – 0.55
20	6.0 to 9.0	Up to 15	0.90 – 1.10
30	9.0 to 13.5	Up to 22	1.35 – 1.65
40	12.0 to 18.0	Up to 30	1.80 – 2.20

¹ Values are based on clean water at 20 °C (1 cP viscosity), initial differential pressure of 0.07 bar (1 psi), and typical meltblown media construction. Actual flow will vary with fluid viscosity, particulate load, micron rating, and system design.

² Maximum values are short-term clean water ratings under controlled conditions. Operation at maximum flow may significantly reduce cartridge life and increase differential pressure. System designers should size filters within the recommended operating range for stable performance.

³ Nominal surface area values are dependent on media density and fibre construction. Meltblown cartridges operate by graded depth filtration rather than fixed pleated geometry; values shown are approximate.

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.

All OEM product names are trademarks of their respective holders. Use of these names does not imply affiliation or endorsement.



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

All information and recommendations appearing in this brochure concerning the use of products described herein are based on tests believed to be reliable. However, it is the user's responsibility to determine the suitability of such products for their own use. Since actual use is beyond our control, no guarantee, expressed or implied, is made by FiltraCore Asia regarding the effects or results of such use. FiltraCore Asia assumes no liability arising from the use of these products. This document is not to be construed as complete, as additional information may be necessary under specific conditions or due to applicable laws and regulations.

© 2025 FiltraCore Asia. All rights reserved. All trademarks and registered trademarks are the property of their respective owners.