



LFX™ Series – Liquid Filtration Excellence Engineered for Results

LFX-SS™ – Stainless Steel Mesh Filter Bags Technical Overview

Filtracore Asia's **LFX-SS™ Stainless Steel Mesh Filter Bags** are engineered for **demanding liquid and gas filtration** environments where conventional polymer bags cannot withstand **chemical, thermal, or abrasive stress**. Constructed from **premium 304 or 316 stainless steel woven mesh**, these bags provide **stable pore geometry, high tensile strength, and resistance to corrosive fluids**.

Designed for **repeatable service life**, LFX-SS™ bags can be **regenerated through**



backflushing, ultrasonic baths, or chemical cleaning, delivering **consistent performance across multiple cycles**.

They maintain **low pressure drop, precise micron retention, and minimal deformation** even under **elevated flow and temperature conditions**.

Commonly applied in **solvent recovery, high-temperature CIP lines, acid processing,**

metalworking fluids, and abrasive slurries, LFX-SS™ offers **reliable throughput stability** in aggressive operating environments.

Manufactured in **trade sizes #01–#04**, LFX-SS™ bags are **dimensionally compatible¹ with industry-standard housings** and can be specified as **alternatives to stainless steel mesh bags offered by leading OEMs**, ensuring **robust, reusable filtration solutions without system modifications**.

Engineered Fit. Reliable Seal. Trusted in Every Cycle.

Technical Specifications

- **Material:**
Woven stainless-steel mesh in 304 or 316/316L grades (316/316L recommended for chloride-bearing or more aggressive service).
- **Micron ratings (surface-rated):**
5 μm to 2,000 μm . Retention is defined by weave/opening and wire diameter; select by target cut-point and allowable ΔP . *“Absolute” performance must be verified by test data for the specific mesh.*
- **Operating temperature:**
Mesh is stable at elevated temperatures; practical limits are governed by the collar/gasket and housing. As guidance, up to $\sim 260\text{ }^{\circ}\text{C}$ continuous is typical when all-metal interfaces are used; derate when polymer collars/gaskets are present.
- **Construction:**
Sewn, hemmed or spot-welded mesh body with bound edges; all-metal welded constructions available for high-temperature/sterile applications. Supplied passivated; electropolished finish available on request.
- **Collar / ring options:**
304 or 316 stainless-steel snap-ring (standard) with gasket; all-metal collars/flanges or PTFE-lined interfaces available on request to match housing and chemistry.
- **Surface characteristics:**
Rigid, non-shedding woven mesh with stable pore geometry for repeatable surface filtration.
- **Compliance:**
Food-contact-compliant variants available (FDA 21 CFR; EU 1935/2004), subject to material/lot certification and gasket/elastomer approval.
- **Recommended ΔP change-out:**
 $\sim 1.0\text{--}2.0$ bar, application- and fouling-dependent (use lower end for fine mesh or viscous service).
- **Maximum differential pressure:**
Up to 3.0 bar at $20\text{ }^{\circ}\text{C}$, limited by housing/basket and seam/attachment; derate at elevated temperature.
- **Chemical compatibility (summary):**
Excellent resistance to solvents, hydrocarbons, and many diluted acids/alkalis. Avoid strong oxidisers (e.g., hot concentrated nitric acid) and chloride-induced pitting/crevice/SCC – prefer 316/316L and confirm CIP cleaner compatibility.
- **Add-ons:**
Custom micron/open-area specifications, spot-welded lifting handles, batch coding/RFID, high-temperature ID tags, and custom labelling/packaging.



Nominal Dimensions & Effective Filter Area

Size Code	Nominal Dimensions (mm/inches)		Effective Filter Area ² (m ²)
Size 01	ø 180 x 430	ø 7 x 17	0.15
Size 02	ø 180 x 810	ø 7 x 32	0.30
Size 03	ø 100 x 230	ø 4 x 9	0.05
Size 04	ø 100 x 380	ø 4 x 15	0.09

Recommended vs. Maximum Flow Rates

Size Code	Recommended Flow Rates ³ (m ³ /h)	Maximum Flow Rates ⁴ (m ³ /h)
Size 01	5.5 to 10	Up to 28
Size 02	10 to 18	Up to 55
Size 03	1.5 to 3.0	Up to 8
Size 04	2.5 to 5.5	Up to 16



¹ Compatibility is based on industry-standard bag sizes (Size 01/02/03/04), mesh weave construction (e.g., 100, 200, 400 μm), and standard top-ring or flange configurations. LFX-SS™ bags are reusable, corrosion-resistant, and suitable for CIP (clean-in-place) operations. Always verify micron rating, weave type, and fluid compatibility prior to deployment.

² Unlike felt bags (depth filtration), stainless steel mesh bags rely solely on surface area, so their effective filtration area is typically lower per volume because there is no depth loading. These values reflect actual exposed mesh surface area and account for open area ratio, weave structure, and welded seam exclusions.

³ Recommended flow rates assume clean water (~1 mPa-s) at 20 °C with a new bag and proper restrainer basket.

⁴ Maximum flow is the housing's reference capacity, not a continuous operating target. Derate by 20–40 % for hot service (≥ 80 °C), high viscosity, or ≤ 10 μm micron ratings to maintain ΔP and capture efficiency.

Actual flow depends on micron rating, mesh grade, viscosity, inlet pressure, and application type. 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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