Graver Technologies

FILTRATION | SEPARATION | PURIFICATION

QSL™ Series Filter Cartridges

Serial Layered Design for Optimized Prefiltration

Product Specifications

Media: Polypropylene & Polyethersulfone

Inner core, end caps, cage: Polypropylene

Gaskets/O-Rings:
Buna-N, EPDM, Silicone, Teflon Encapsulated Viton, Viton

Micron rating: 0.5

End styles: P (DOE), P2 (226/flat), P3 (222/flat), P7 (226/fin), P8 (222/fin), AM, NPC

Dimensions

Nominal lengths:
5", 9.75", 10", 19.5", 20", 29.25", 30", 39", 40" *(12.7, 24.8, 25.4, 49.5, 50.8, 74.3, 76.2, 99.1, 101.6 cm)*

Outside diameter: 2.7" (6.86 cm)

Inside diameter: 1.0" (2.54 cm)

Surface Area: 7.0 ft^2 (0.65 m^2)

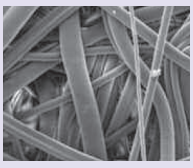
Operating Parameters

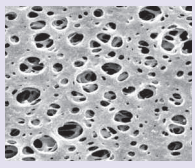
Maximum operating temperature:
176°F (80°C)

Maximum differential pressure:
75 psid @ 70°F (5.2 bar @ 21°C)
30 psid @ 176°F (2.0 bar @ 80°C)

Maximum reverse pressure:
40 psid @ 70°F (2.8 bar @ 21°C)

Recommended change-out pressure:
35 psid (2.4 bar)





Incorporating a polypropylene microfiber media over a polyethersulfone membrane, the serial layered QSL cartridge design offers excellent retention characteristics and extended life to provide long lasting protection of downstream final filters. By preventing early blockage of downstream filters, the QSL contributes significantly to an economical overall design of your filtration system.

FEATURES & BENEFITS

- Serial layered design — enhances capacity and simplifies prefiltration requirements
- Absolute rated (99.98%) at 0.5 micron — acts as an ideal prefilter for 0.2 micron and 0.45 micron membrane filters
- Fixed pore construction — resists dirt unloading at maximum differential pressure
- High surface area — high flow rate, and long service life — minimize maintenance cost
- Available with various gasket/O-ring materials — compatible with many fluids

CERTIFICATIONS

- USP Class VI: Meets USP Class VI Biological Test for Plastics
- FDA Listed Materials: All materials comply with FDA Title 21 of the Code of Federal Regulations Sections 174.5, and 177.1520, as applicable for food and beverage contact.
- European Directive for Direct Food Contact: European Regulation No. 1935/2004 and European Regulation 10/2011: Tested for migration behavior and is suitable for contact with all kinds of foodstuffs with minimal rinse-up. Data available upon request.

TYPICAL APPLICATIONS

- Wine/beer bottling
- Aqueous solutions
- Culture Media
- Bottled water
- Active Intermediates
- Cosmetics
- Process water
- Diagnostic Reagents

PERFORMANCE SPECIFICATIONS

- Cleaning/Sanitization: Compatible with most common chemical cleaning, sanitizing and sterilizing agents and with pH range from 1–14. Consult factory for specific compatibility information. Cartridge will withstand hot water at 176°F (80°C) at 5 psid (0.35 bar) for 30 minutes.
- Steam/Autoclave: Cartridges may be autoclaved for 30 minutes at 250 °F (121°C) under no end load conditions. Cartridges fitted with steam insert may be steamed for at least 10 thirty minute cycles @ 275°F (135°C) not to exceed 3 psid (0.21 bar).

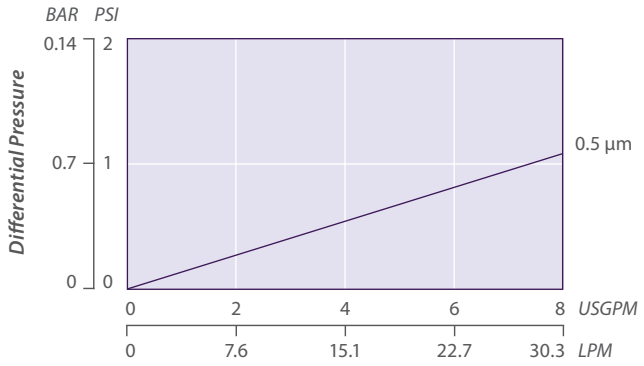
QSL NOMENCLATURE INFORMATION

Filter Type	Retention Rating (microns)	Nominal Length (inches)	End Configuration	Gasket or O-Ring	Options
QSL Series	**0.5**	**–5** **–29.25** **–9.75*** **–30** **–10** **–39** **–19.5** **–40** **–20**	**P** Double Open End **P2** 226/Flat Single Open End **P3** 222/Flat Single Open End **P7** 226/Fin Single Open End **P8** 222/Fin Single Open End **AM** Single Open End, Internal O-Ring **NPC** Double Open End, Internal O-Ring	**B** Buna-N **E** EPDM **S** Silicone **T** Teflon encap. Viton **V** Viton	**–R** Factory Rinse **–I** Steam Insert
Example: QSL 0.5–20P3S–I					
QSL	0.5	–20	P3	S	–I

*Available only for DOE (P) configuration

QSL FLOW RATE

Typical Flow Rate Clean Water at Ambient Temperature
(per 10" cartridge)



For liquids other than water, multiply pressure drop by the fluid viscosity in centipoise

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CLEAR SOLUTIONS, INC.
Process Filtration and Fluid Handling Products
970 Calle Negocio
San Clemente, CA 92673
www.clearsolutionscorp.com
info@clearsolutionscorp.com
(949) 429-8922 ph