Alfa Laval Mainstream® Filter/Strainer

Increase Your Capacity for Filtration

Application

Available in long and short models, Mainstream® filters and strainers with side-entry ports provide versatile, cost-effective, basket-style filtration. Designed for maximum application flexibility, the Mainstream housing accepts a wide range of filtration and strainer media. For strainer applications, the unit can be fitted with a variety of different baskets. When used as a filter, the Mainstream® unit incorporates a perforated stainless steel basket designed to hold disposable filter bags. Fine filtration can be achieved down to 0.5 micron. They are ideal for use in the dairy, food, beverage, meat and poultry, cosmetics, and pharmaceutical industries.

Cleaning

The Mainstream housing is approved for CIP (cleaned in place). All internal components must be removed for COP (Cleaned out of place).

Refer to Filter/Strainer instruction manual for complete cleaning instructions.

Warning: Reverse flow or back flushing can result in damage to the internal components.

Standard Design

The Mainstream® filters and strainers are designed to promote product quality and sanitation. It also features a free-flow design; stainless steel construction for sanitation and corrosion-resistance; compatibility with a variety of filtering media; and fast, easy servicing. The standard pressure relief cover for safe operation includes manual valve and drain elbow assembly. Two model sizes are available to accommodate a wide range of capacities. The inside-out flow prevents basket damage and, the unique handle with lock design for positive O-ring sealing prevents bypass and improves efficiency (US Patent No 4,775,469).

TECHNICAL DATA

Materials

Product wetted steel parts:	AISI 316L Stainless Steel
Other steel parts	AISI 304 Stainless Steel
Finish	32 µ-inch (0.8 mm) Ra on product contact surfaces
Product wetted seals	Buna, EPDM, SFY (Fluorelastomer)
Other	SEF cam lock - UHMW, Relief valve handle - UHMW

OPERATING DATA

Nominal Temperature and Pressure Ratings:

Buna N gaskets effective up to	200°F

Maximum working pressure:

At 70°F, Buna N's	200 psi
At 190°F, Buna N's	80 psi

Steam Resistant Fluorelastomer/Silicone gaskets are effective up to 350°F.

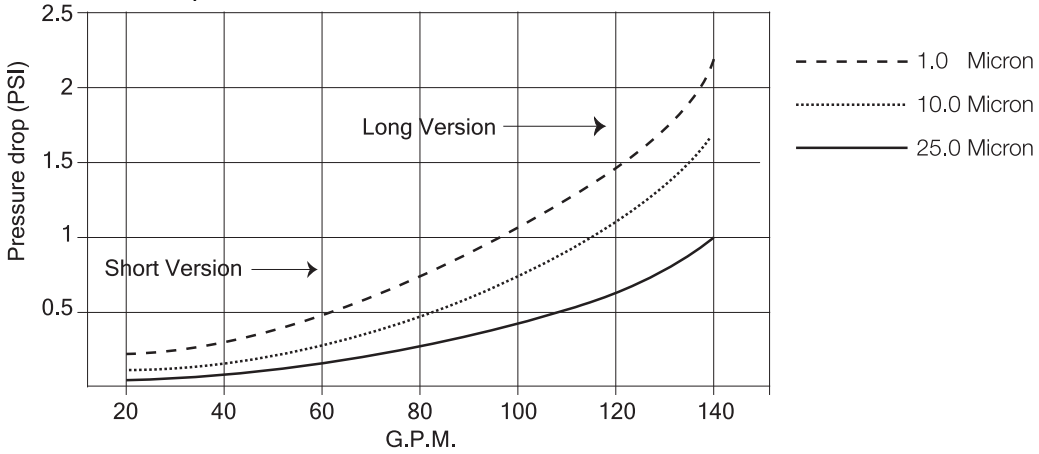
Maximum working pressure
At 70°F, Fluorelastomer/Silicone's . . . . . 200 psi.
At 350°F, Fluorelastomer/Silicone's . . . . . 50 psi.

Maximum Pressure Differential
SES Strainer (perforated metal) . . . . . 50 psi.
SEF Filters . . . . . 10 psi or application dependent.
SEB Single Coarse Strainer . . . . . 100 psi.
SEBHVW Vee-Wire® Strainer . . . . . See charts on page 3.

Working principle

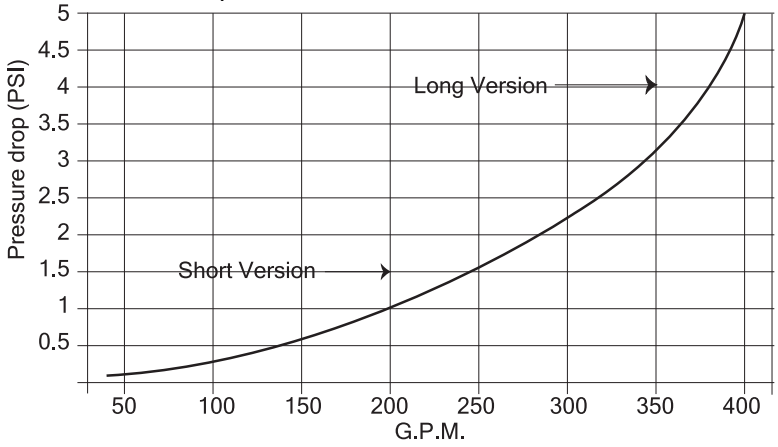
With their large surface area, Mainstream® filters and strainers combine high flow rates, low pressure drop, and simple cleanup and servicing. High capacity and long filter cycles mean Mainstream® filters and strainers need significantly less servicing — all particles are contained inside the basket (or bag) for quick, easy disposal. The Mainstream® housing stays in the processing line; only the basket is removed during change-over. The end result for you is more efficient separation, faster throughput, and reduced media change over due to the larger surface area of the Mainstream®.

Filter Pressure Drop Curves / Mainstream Filters Model 1 and 2



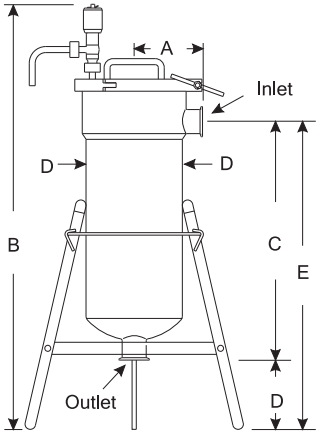
Curve is based on water*. Max. flows for LONG and SHORT units shown. Curve is typical for listed micron ratings.

Strainer Pressure Drop Curves / Mainstream Strainers Model 1 and 2



Curve is based on water*. Max. flows for LONG and SHORT units shown. Curve is typical for all size perforations.

* Contact AL for higher flows and non-water application recommendations.



Note: Mainstream filter/strainer stand optional. Order separately.

Mainstream Filter and Strainer Dimensions

Model	Inlet / Outlet-Diameter	Dimensions for Tri-Clamp® A	B	C	D	E
Model 1 (Short)	2"	$5^{11/16}$	$35^{3/8}$	19 ¼	8	27¼
	3"	$5^{11/16}$	$35^{3/8}$	19¾	8	27¾
	4"	$6^{5/16}$	$35^{3/8}$	20¼	8	28¼
Model 2 (Long)	2"	$5^{11/16}$	$51^{3/8}$	35¼	8	43¼
	3"	$5^{11/16}$	$51^{3/8}$	35¾	8	43¾
	4"	$6^{5/16}$	$51^{3/8}$	36¼	8	44¼

Effective filter area

Short 1.7 ft.2

Long 3.8 ft.2

Filter Media (for SEF Filter) Product Compatibility and Temperature

Media Code	Fiber	Maximum Temperature	Product Compatibility and Temperature				
			Inorganic Acid	Organic Acid	Alkali	Vegetable Oils	Organic Solvents
PPR (Standard)	Polypropylene	200F	•		•	•	•
PES (Standard)	Polyester	300F	•	•	•	•	•
NY	Nylon	250F	•		•	•	•
NMO	Nylon Monofilament	250F	•		•	•	•

* Micron ratings available from 0.5 to 800 micron. Not all filter materials are available in all micron choices - Contact AL.

Strainer Media Selection

Vee-Wire® (SEBHVW Strainer)

Code	Space Between	Pressure Differential	Micron Equivalent
A	.005	100	127
B	.0075	100	190
C	.010	85	254
D	.015	85	381
E	.020	70	508
F	.025	70	635
G	.030	55	762
H	.035	55	889

Vee-Wire® is a registered trademark of US Filter

Mainstream units with filters, V-wire, or perforated metal strainers are authorized to carry the 3A symbol

Perforated Material

Code	Description	Micron Rating	% of Open area
A (SES)	.033 dia./24 ga.	838	20.0
C (SES)	.062 dia./22 ga.	1590	30.0
D (SEB)	.09375 dia./18 ga.	---	33.0
E (SEB)	.125 dia./18 ga.	---	40.0
G (SEB)	.250 dia./18 ga.	---	58.0

Options

Equipment

A. Mainstream® floor stand
B. Wall mounting bracket
C. Aluminum Bronze (BR) Relief Valve Handle
D. Aluminum Bronze (BR) Cam lock on SEF
E. Altrenative connections (Tri-Clamp® standard)

Ordering

Please state the following when ordering:

- SES, SEF, SEB, SEBHVW
- Short unit or long unit
- Port connection size
- Elastomers
- Micron or perforation size of Filter or Strainer
- Options

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How to contact Alfa Laval
Contact details for all countries
are continually updated on our website.
Please visit www.alfalaval.us to
access the information direct.