



Alfa Laval Mainstream®

Filter/Strainer

Introduction

The Alfa Laval Mainstream® Filter/Strainer removes particles from process streams with high flow rates, ensuring product quality and hygiene as well as protecting equipment from clogging, fouling and corrosion. This reduces the risk of unplanned downtime and prolongs equipment maintenance intervals.

Versatile and cost-effective, this basket-style filter/strainer with its free-flow design and side-entry ports features a large surface area and side-entry port to handle high flow rates with minimal pressure drop. It is also able to handle a wide range of disposable filter and reusable strainer media, providing maximum application flexibility.

Application

The Mainstream® Filter/Strainer is designed to remove particles from process streams thereby promoting product quality and hygiene, while protecting processing equipment. It is widely used across the dairy, food, beverage, meat and poultry, personal care, and pharmaceutical industries.

Benefits

- Faster throughput and more efficient particle removal
- Hygienic, corrosion-resistant construction
- Quick, easy disposal of particles inside the basket or bag
- Reduced media changeover due to large filtration surface area

Standard Design

The Mainstream Filter/Strainer consists of stainless steel side-entry housing and filter/strainer basket with free-flow design that can accommodate a wide range of filter and strainer media.

For filtration applications, the unit incorporates a perforated stainless steel basket designed to hold disposable filter bags. It is possible to achieve fine filtration for removal of particles down to 0.5 micron in size. For strainer applications, the unit can be fitted with a Vee-Wire® baskets or basket made of perforated metal. Two model sizes – short model (1.7 sq. ft.)



and long model (3.8 sq. ft.) – are available to accommodate a wide range of capacities.

To ensure safe operation, the filter/strainer comes with a standard pressure relief cover with manual valve and drain elbow assembly.

The inside-outflow 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).

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®.

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

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

Cleaning

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

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

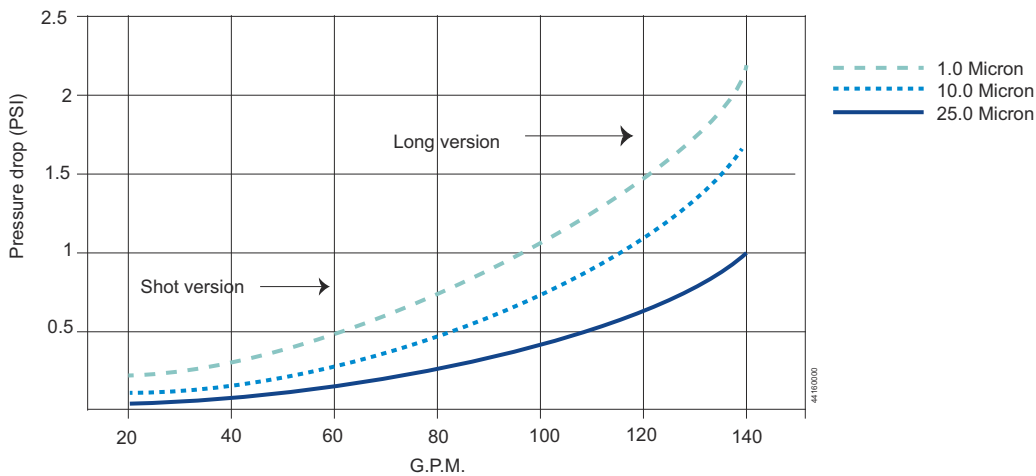
Maximum working pressure	
At 70 °F, Buna N's :	200 psi
At 190 °F, Buna N's:	80 psi

Gaskets	
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

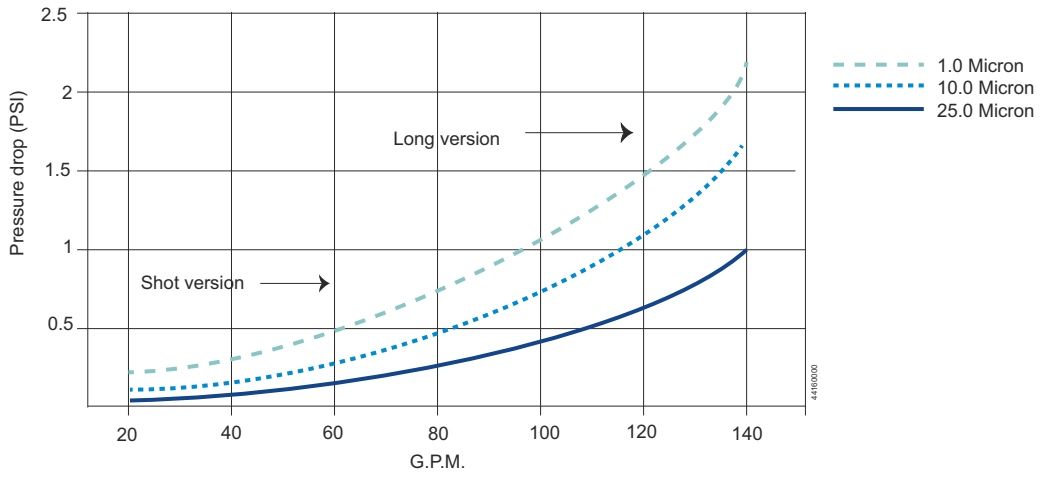
Maximum Pressure Differential	
SES Strainer (perforated metal):	50 psi
SEF Filters:	10 psi or application dependent
SEB Single Coarse Strainer:	100 psi
SEBHWW Vee-Wire® Strainer:	See charts below

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.

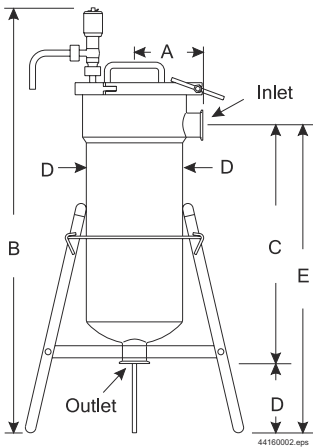
Strainer Pressure Drop Curves / Mainstream Strainers Model 1 and 2



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.

Dimensions (inch)




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

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	27 ¼
	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

 Authorized to carry the 3A symbol

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

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® (SEBHW Strainer)


 Authorized to carry the 3A symbol

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

 Authorized to carry the 3A symbol

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

- Mainstream® floor stand
- Wall mounting bracket
- Aluminum Bronze (BR) Relief Valve Handle
- Aluminum Bronze (BR) Cam lock on SEF
- Alternative connections (Tri-Clamp® standard)

Ordering

Please state the following when ordering:

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

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