

## Increase Your Capacity for Filtration

### Mainstream® Filter/Strainer

#### 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.

#### 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®.

#### Standard Design

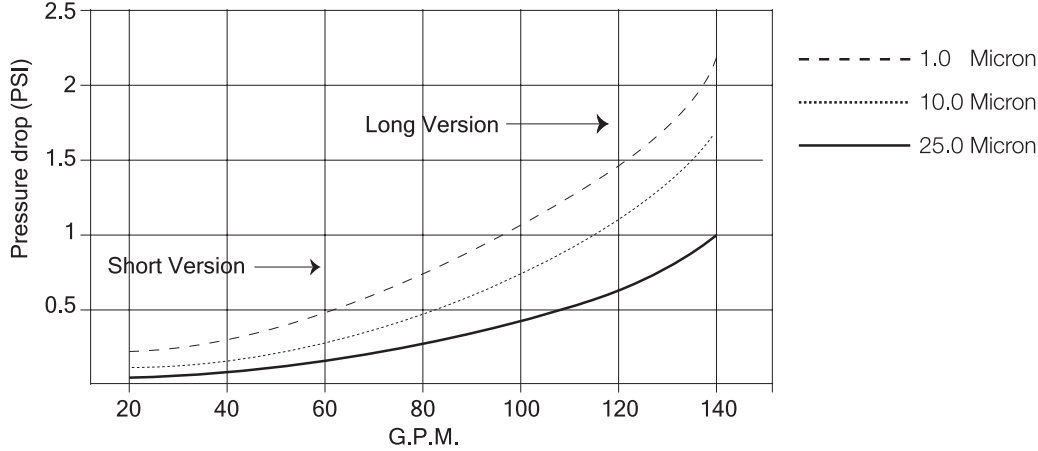
The Mainstream® filters and strainers are designed to promote product quality and sanitation. It also features a free-flow design; stainless steel construction for sanitation and corrosion-resistance; compatibility with a variety of filtering media; and fast, easy servicing. The standard pressure relief 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).

Model SMS Strainers or FMS filters feature convenient sideentry and a pullout top (similar to Mainstream® design) for easy servicing without removal from the process line.



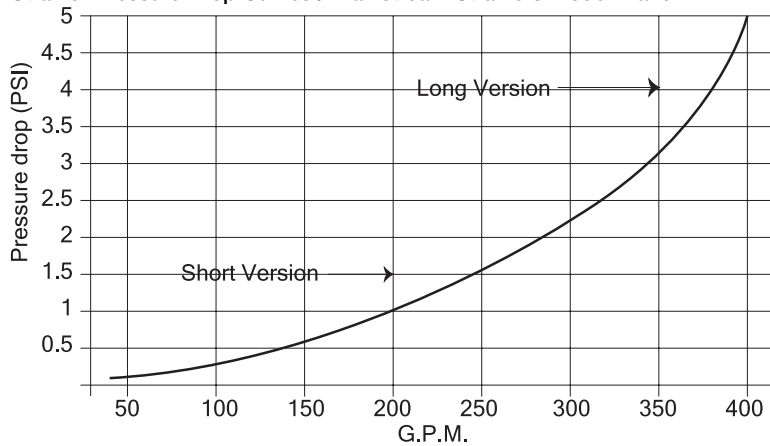
Mainstream® Filter with optional stand

Filter Pressure Drop Curves / Mainstream Filters Model 1 and 2



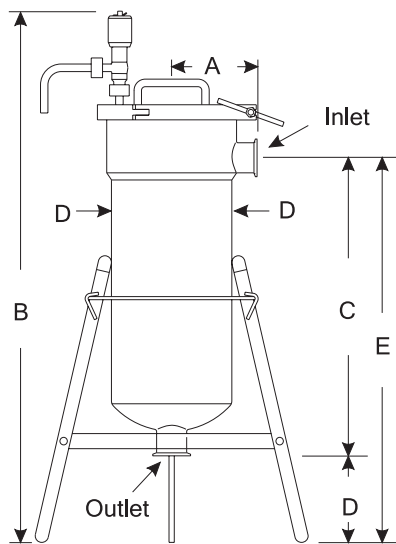
Curve is based on water\*. Max. flows for LONG and SHORT units shown. Curve is typical for listed micron ratings.

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 meshes.

\* Contact Alfa Laval for higher flows and non-water application recommendations.



Mainstream Filter and Strainer Dimensions

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

Effective filter area

Short .....1.7 ft.2  
 Long .....3.8 ft.2

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

## 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
C (Standard)	Cotton	180F			♦	♦	♦
PPR (Standard)	Polypropylene	200F	♦		♦	♦	♦
PES (Standard)	Polyester	300F	♦	♦	♦	♦	♦
NY	Nylon	250F	♦		♦	♦	♦
NMO	Nylon Monofilament	250F	♦		♦	♦	♦
R	Rayon	300F	♦		♦	♦	
G	FEP**	400F	♦	♦	♦	♦	♦
NOM	Nylon Nomex**	450F				♦	

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

## Strainer Media Selection

## Vee-Wire® (SEBHW 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

## Wire Mesh (For SES Strainer)

Screen Code	Square Mesh Size	Space between Wires (in.)	Micron Rating	% of Open area
P	20	0.034	864	46.2
J	40	0.015	381	36.0
F	60	0.009	229	30.3
L	80	0.007	178	31.4
K	100	0.006	140	30.3
M	150	0.004	104	37.4
S	200	0.003	73	33.6

## 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

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

**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, Optional Aluminum Bronze Relief valve handle - UHMW, Optional Aluminum Bronze

**Technical data**

Nominal Temperature and Pressure Ratings:

Buna N gaskets effective up to	.200°F
At 70°F, Buna N's maximum working pressure	.200 psi
At 225°F, Buna N's maximum working pressure	.80 psi

Steam Resistant Fluorelastomer/Silicone gaskets are effective up to . . . . .300°F.

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

Maximum Pressure Differential

SES Strainer (perforated metal or wire mesh)	.40 psi.
SEF Filters	.15 psi.
SEB Single Coarse Strainer	.100 psi.
SEBHWV Vee-Wire® Strainer	.See charts on page 3.

**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

**Ordering**

Please state the following when ordering:

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