

# Alfa Laval Streamline™

## Strainers

### Introduction

The Alfa Laval Streamline™ In-Line Filter/Strainer removes particles from process streams, 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 filter/strainer with its free-flow design is able to handle a wide range of disposable filter and reusable strainer media, providing maximum application flexibility.

### Application

The Streamline™ In-Line Filter/Strainer is designed to remove particles from process streams thereby promoting product quality and hygiene, while protecting processing equipment, such as homogenizers, meters, spray nozzles, needle valves, and pumps. It is widely used across the dairy, food, beverage, meat and poultry, personal care, and pharmaceutical industries.

### Benefits

- Promotes product quality and hygiene
- Protects processing equipment
- Hygienic, lightweight and corrosion-resistant construction
- Easy to maintain without removing from the process line
- Approved for use in plants that produce meat, poultry, and/or egg products regulated by USDA Food Safety and Inspection Service

### Standard Design

The Streamline™ In-Line Filter/Strainer consists of AISI 316 stainless steel housing, filter or perforated metal single screen or overscreen strainer, pullout top (similar to Mainstream® design), and clamp connections. Available in two lengths to provide optimum filtration area for the application and/or with inlet positioned on the side of the unit.

The Streamline™ In-Line Filter version can be supplied with one of five filtering media, down to 40 microns, including woven and non-woven polypropylene and polyester materials and nylon mesh. The Streamline™ In-Line Strainer version can



be furnished with a single-perforated screen for removing large particles, or with a backup tube and overscreen with small perforations for removing fine particles.

### Working principle

The Streamline™ filters and strainers are designed to promote product quality and sanitation, while protecting processing equipment such as homogenizers, meters, spray nozzles, needle valves, and pumps.

### Cleaning

The Streamline™ 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.

## TECHNICAL DATA

### Temperature

Temperature range: 250 °F max.

Footnote: (with fluorelastomer gaskets)

### Pressure

Pressure range at 70 °F: 300 PSI

Pressure range at 210 °F: 180 PSI

### Maximum Differential Pressure

Single strainer: - 50 PSI

Overscreen: - 25 PSI

Filter: - 15 PSI

## PHYSICAL DATA

### Materials

Product wetted steel parts: AISI 316/316L Stainless Steel

Other steel parts: AISI 304 Stainless Steel

Finish on product contact surfaces: Ra 32 µ-inch (0.8mm)

Product wetted seals: Buna, SFY (fluorelastomer)



### Filtration



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Streamline filters can be furnished with any one of five filtering media, down to 40 microns, including woven and non-woven polypropylene and polyester materials and nylon mesh.



### Fine or Medium Strainer



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Complete with a backup tube and overscreen with small perforations for removing finer particles (838 to 1590 microns).



### Coarse Strainer



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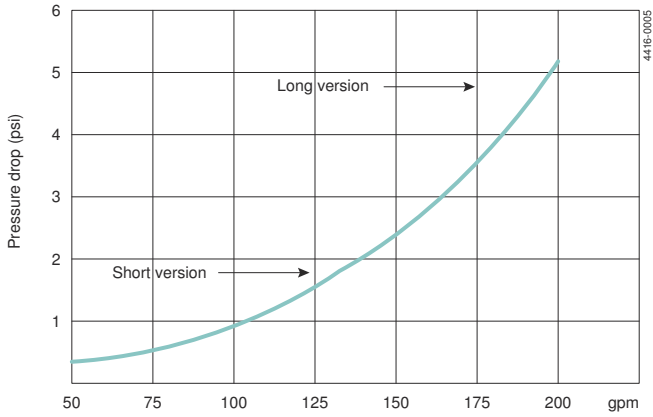
Furnished with a single perforated screen for straining large particles.



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## Pressure Drop Curves

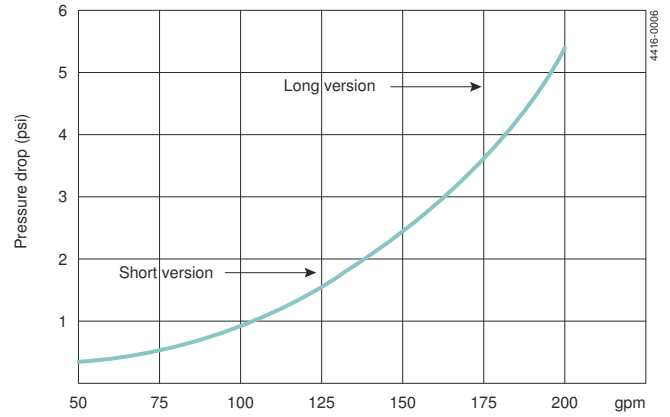


**Figure 1. Filter Pressure Drop Curves**

Streamline Filters Model 1 and 2

Curve is based on water.  
Max. flows for LONG and SHORT units shown.  
Curve is typical for all filter socks.

Contact AL for sizing of non-water applications.

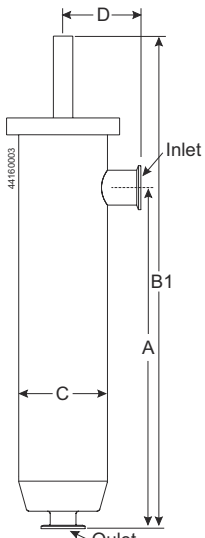


**Figure 2. Strainer Pressure Drop Curves**

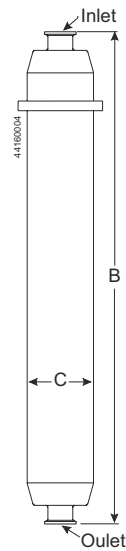
Streamline Strainers Model 1 and 2

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

## Dimensions



**Figure 3. Side-Entry Streamline**



**Figure 4. Standard Streamline**

## Streamline (inches)

| Connection Size | Tri-Clamp® Connections |                   |                    |                   | Outer Assembly      |    | Effective Filter Area (ft. <sup>2</sup> ) |
|-----------------|------------------------|-------------------|--------------------|-------------------|---------------------|----|-------------------------------------------|
|                 | Length (in.)<br>A      | Length (in.)<br>B | Length (in.)<br>B1 | Length (in.)<br>D | Diameter (in.)<br>C |    |                                           |
| Short           | 1                      | 15 <sup>3/8</sup> | 15 <sup>3/4</sup>  | 22 <sup>1/4</sup> | 3 <sup>1/2</sup>    | 4  | 0.65                                      |
|                 | 1½                     | 15 <sup>3/8</sup> | 15 <sup>3/4</sup>  | 22 <sup>1/4</sup> | 3 <sup>1/2</sup>    | 4  | 0.65                                      |
|                 | 2                      | 15 <sup>3/8</sup> | 15 <sup>3/4</sup>  | 22 <sup>1/4</sup> | 3 <sup>1/2</sup>    | 4  | 0.65                                      |
|                 | 2½                     | 15 <sup>3/8</sup> | 15 <sup>3/4</sup>  | 22 <sup>1/4</sup> | 5                   | 4½ | 0.75                                      |
|                 | 3                      | 15 <sup>3/8</sup> | 15 <sup>3/4</sup>  | 22 <sup>1/4</sup> | 5                   | 4½ | 0.75                                      |
| Long            | 1½                     | 35                | 35 <sup>3/8</sup>  | 41 <sup>7/8</sup> | 3 <sup>1/2</sup>    | 4  | 1.95                                      |
|                 | 2                      | 35                | 35 <sup>3/8</sup>  | 41 <sup>7/8</sup> | 3 <sup>1/2</sup>    | 4  | 1.95                                      |
|                 | 2½                     | 35                | 35 <sup>3/8</sup>  | 41 <sup>7/8</sup> | 5                   | 4½ | 2.25                                      |
|                 | 3                      | 35                | 35 <sup>3/8</sup>  | 41 <sup>7/8</sup> | 5                   | 4½ | 2.25                                      |




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## Replacement Strainer Selection


### Perforated Metal Strainer Single Screens

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| Screen Part No.  | Port Connections                                | Gauge    | Hole Diameter (in.)      | Holes Per Square Inch | Percent of Open Area |
|------------------|-------------------------------------------------|----------|--------------------------|-----------------------|----------------------|
| 09G <sup>1</sup> | 1, 1 <sup>1/2</sup> , 2<br>2 <sup>1/2</sup> , 3 | 14<br>12 | 1/4 / .250<br>1/4 / .250 | 9<br>9                | 58<br>58             |
| 09D              | 1, 1 <sup>1/2</sup> , 2                         | 16       | 3/32 / .093              | 47                    | 33                   |
| 09E              | 1, 1 <sup>1/2</sup> , 2<br>2 <sup>1/2</sup> , 3 | 14<br>12 | 1/8 / .125<br>1/8 / .125 | 33<br>33              | 40<br>40             |
| 09V              | 2 <sup>1/2</sup> , 3                            | 12       | 3/16 / .187              | 18                    | 51                   |

<sup>1</sup> Note: All strainers using over screens require a backup tube — the recommended type G screen will be furnished as standard backup tube in all Alfa Laval filters and strainers.


### Perforated Metal Over Screens

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| Screen Part No.  | Gauge | Hole Diameter (in.) | Micron Rating | Holes Per Square Inch | Percent of Open Area |
|------------------|-------|---------------------|---------------|-----------------------|----------------------|
| 44A              | 26    | .033                | 838           | 236                   | 20                   |
| 44B              | 26    | .050                | 1270          | 132                   | 26                   |
| 44C              | 26    | .062                | 1590          | 97                    | 30                   |
| 44U <sup>1</sup> | 26    | .040                | 1015          | 179                   | 23                   |

<sup>1</sup> Available only in long units.

## Replacement Filter Media Schedule

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| Media | Micron Rating <sup>1</sup> | Description                                             |
|-------|----------------------------|---------------------------------------------------------|
| 30B   | 513                        | 100% polyester multifilament                            |
| 30C   | 300                        | Polypropylene and polyester                             |
| 30D   | 765                        | Nylon, 26/29 mesh, rectangular opening, (.025" x .030") |
| 30E   | 40 - 42                    | Polypropylene                                           |
| 30G   | 420                        | Woven nylon, 40 mesh                                    |

<sup>1</sup> Estimated

## Ordering

Please state the following when ordering:

- Filter or strainer
- In-line or side-inlet
- Long or short unit
- Connection size
- Filter or strainer choice

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Streamline units with filters or perforated metal strainers are authorized to carry the 3A symbol.

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