

Alfa Laval LKSF

Filters and strainers

Introduction

The Alfa Laval LKSF Slot Strainer is a filter which separates solid matter from liquid that flows through it. The impurities are stopped by the filter element. When the filter is full of particles, it can be cleaned by removing the clamp and pulling out the filter element.

Application

The LKSF Slot Strainer is designed to fulfil basic filtration duties in hygienic applications across the dairy, food, beverage and brewery industries to protect equipment and product.

Benefits

- Fine filtration
- Easy to install
- Easy to clean
- High durability
- Flexible filter element selection

Standard design

The LKSF Slot Strainer consist of a housing in which the strainer element is fitted centred. There are two types of LKSF Slot Strainers: the LKSF-BL with housing in two parts and the LKSF-CL with housing in three parts for vertical installation.

To allow for quick dismantling for cleaning, the housing is assembled by means of clamps. The upper clamp ring has a wing nut for manual operation. The strainer element has direct access to the end cover with welded handle to facilitate dismantling when cleaning is required.

The strainer element is available from 0.0021 in. to 0.157 in. Various male parts are also available to attach the strainer to a process line.

Working principle

Type LKSF-BL: The product enters from the bottom. The filter element captures impurities. When the filter is full of particles, it can be cleaned by removing the clamp and pulling out the filter element. It is also possible to reverse the flow and flush out the impurities (backflush).



Type LKSF-CL: The product enters the filter from the side. Most of the impurities collect at the bottom and can be manually emptied during operation via a valve. Automatic discharge is also possible using two remote controlled valves at B. The upper valve is open during operation and the lower is closed. The impurities will collect between the two valves. Closing the upper valve and opening the lower one will empty the impurities with minimal product loss.

The filter can be cleaned as LKSF-BL. The degree of filtering can be altered by changing filter element. Strainer type LKSF-CL must always be installed vertically. The filtration degree may be immediately adjusted by changing the strainer element.

TECHNICAL DATA

Pressure

Max. working pressure. (68 °F): 145 psi (10 bar)

Temperature

Temperature range: 14 to +284 °F (EPDM)

Strainer area: 170.5 in²

Max. Δp in flow direction: 145 psi (10 bar)

Capacity: 2642-31701 gallon/h (water) at $\Delta p = 14.5$ psi



Note!

Separate pressure drop/capacity diagrams are available on request.

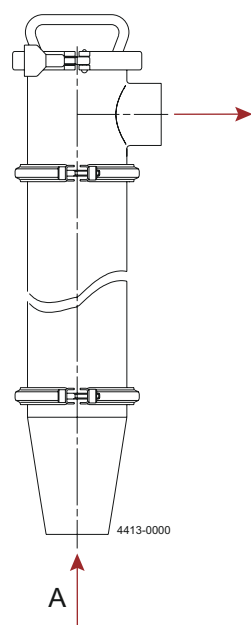


Figure 1. Type LKSF-BL

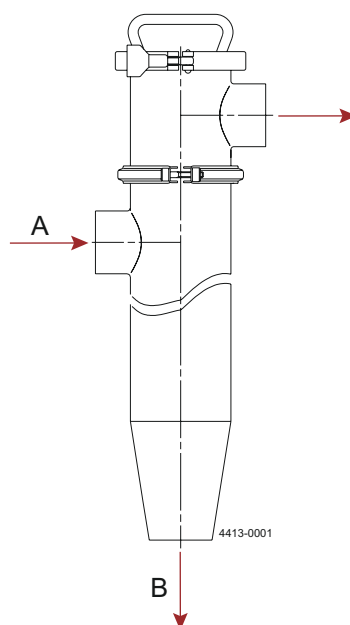


Figure 2. Type LKSF-CL

PHYSICAL DATA

Materials

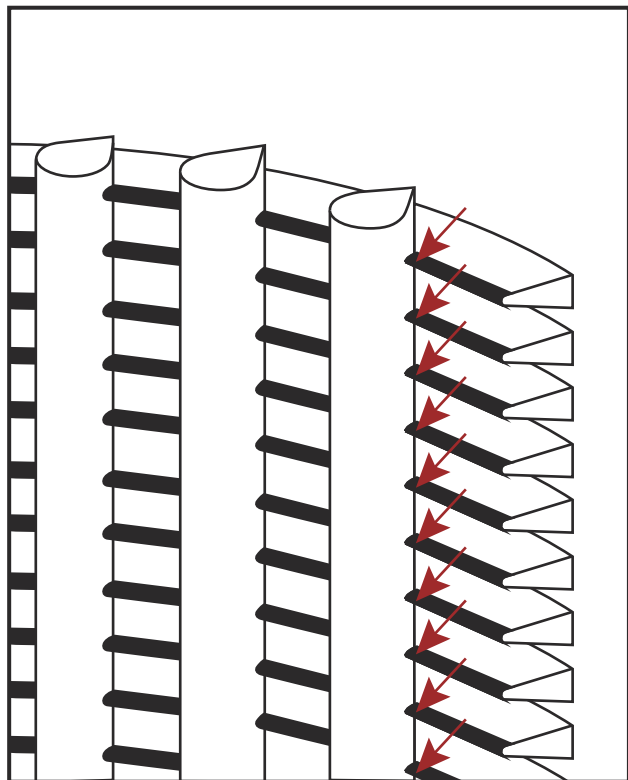
Product wetted steel parts: AISI 316

Other steel parts: AISI 304

Seals: EPDM rubber

Surface finish: Semi bright

The LKSF strainer element is welded at every intersection of vertical rod and surface wire



Ordering

When ordering please specify strainer element, type of male part and position. (See: Connection position).

Strainer elements - available slot sizes

Standard	Option	
74 µm	53 µm	595 µm
105 µm	63 µm	841 µm
177 µm	88 µm	1190 µm
500 µm	125 µm	1410 µm
707 µm	149 µm	1680 µm
1000 µm	210 µm	2380 µm
2000 µm	250 µm	2830 µm
	297 µm	3360 µm
	354 µm	4000 µm
	420 µm	

Additional length mm - for male parts (both types)

Size	1 inch	1.5 inch	2 inch	2.5 inch	3 inch	4 inch
DS	0.73	0.79	0.79	0.94	0.94	0.94
SMS	0.59	0.79	0.79	0.94	0.94	1.38
IDF	0.85	0.85	0.85	0.85	0.85	0.85
BS	0.87	0.87	0.87	0.89	0.87	1.06
Clamp	0.85	0.85	0.85	0.85	0.85	0.85
DIN	0.87	0.87	0.87	0.98	1.18	1.18

Connection Position

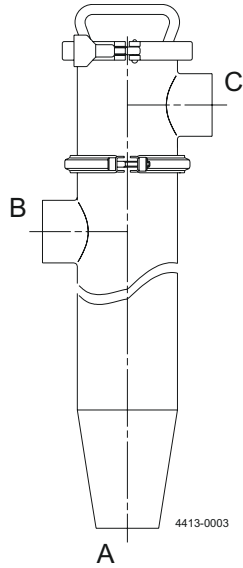


Figure 3. LKSF-CL

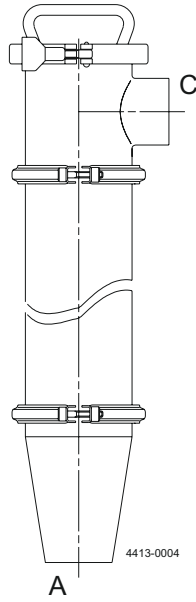


Figure 4. LKSF-BL
(1-3")

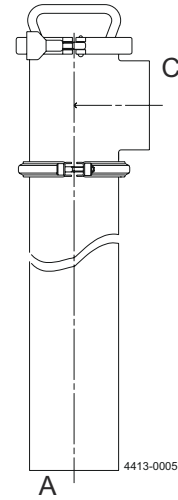


Figure 5. LKSF-BL
(4")

Dimensions

Size	1 inch	1.5 inch	2 inch	2.5 inch	3 inch	4 inch
A1	28.62	28.62	28.62	28.62	28.62	32.28
A2	33.54	31.81	30.16	28.62	27.09	27.28
B1	24.90	24.90	24.90	24.90	24.90	27.76
B2	29.76	28.03	26.38	24.84	23.31	22.95
C	5.12	5.12	5.12	5.12	5.12	5.91
OD ₁	1.00	1.50	2.00	2.50	3.00	4.00
ID ₁	0.87	1.37	1.87	2.37	2.87	3.84
t ₁	0.06	0.06	0.06	0.06	0.06	0.08
OD ₂	2.50	2.50	2.50	2.50	2.50	2.50
ID ₂	2.37	2.37	2.37	2.38	2.37	2.37
t ₂	0.06	0.06	0.06	0.06	0.06	0.06
OD ₃	0.98	1.50	2.01	2.50	3.00	4.00
ID ₃	0.89	1.40	1.88	2.37	2.84	3.84
t ₃	0.05	0.05	0.06	0.06	0.08	0.08
E	3.39	3.39	3.39	3.39	3.39	3.39
Weight (lb)	0.34	0.36	0.35	0.33	0.35	0.37

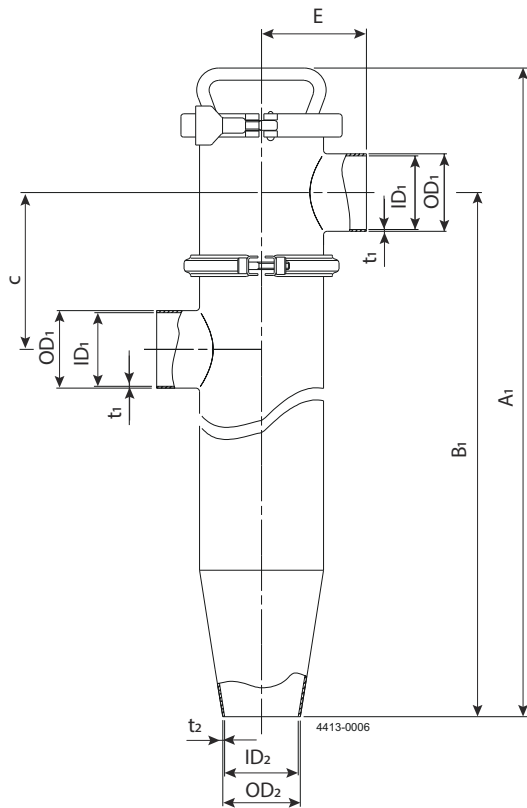


Figure 6. LKSF-CL

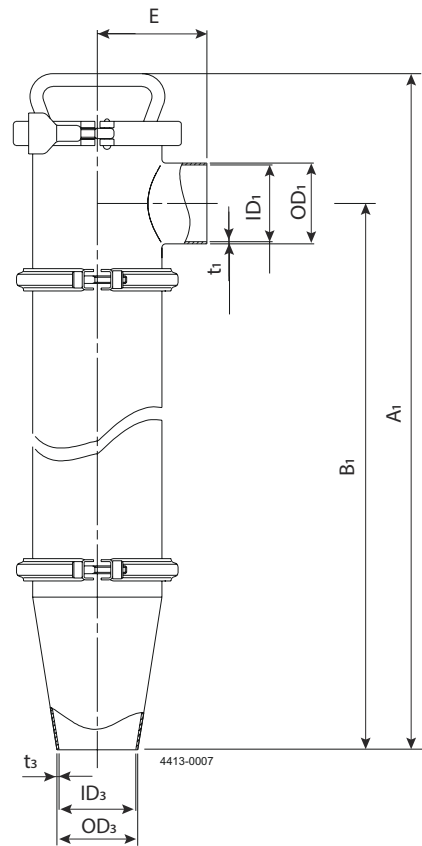


Figure 7. LKSF-BL

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