



Alfa Laval LabStak™ M39L/H module

LabStak™ modules for membrane filtration

Introduction

The Alfa Laval LabStak™ M39L/H module is specially developed for ultrafiltration and microfiltration of highly viscous products and fermentation broths.

The module is designed to provide quick and precise process evaluations in laboratories or other test facilities, while keeping equipment and set-up costs to a minimum. It is ideal for process development, scale-up, membrane testing, quality assurance and small-scale production.

The Alfa Laval LabStak™ M39L/H module utilizes the same size support plates and membranes as those found in the full-scale plate-and-frame systems.

It can be equipped with the whole range of flat sheet membranes from Alfa Laval for ultrafiltration and microfiltration.

Applications

The Alfa Laval LabStak™ M39L/H module is a popular choice for use within a range of industries which includes biotech and pharmaceuticals as well as food and beverages.

To meet the demands experienced here, the module is designed for optimized flow dynamics, low energy consumption and pressure operation.

Benefits

- easy exchange of flat sheet membranes
- can be coupled to the by-pass stream of an industrial plant
- different channel height options to optimize flow and pressure
- simultaneous test of up to five different membrane types
- high operating temperature (up to 80°C)
- low internal volume
- flexible system design
- flexible membrane area between 0.2 and 1.0 m²
- all components manufactured in compliance with FDA and EEC regulations

Scope of supply

The Alfa Laval LabStak™ M39L/H module consists of a full-size plate-and-frame module for cross-flow membrane filtration. It can be equipped with alternative plate set configurations, according to use.

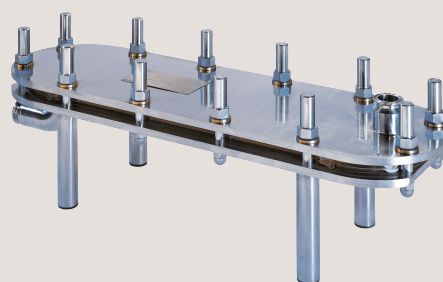
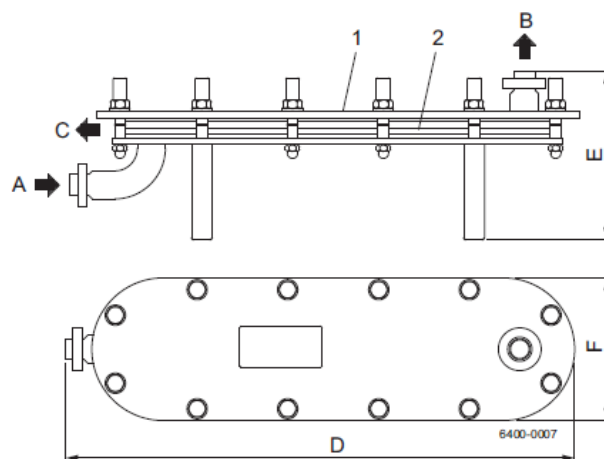


Plate set options	Applications	Code No.
M39L (Low channel)	Ideal for low and medium viscous liquids	PL835
M39H (High channel)	Ideal for highly viscous liquids	PL836



- 1: Steel frame
- 2: Support plates and membranes
- A: Feed inlet
- B: Retentate outlet
- C: Permeate outlet
- D: 928 mm
- E: 307 mm
- F: 260 mm

Technical Data

Model	Alfa Laval LabStak™M39L module	Alfa Laval LabStak™M39H module
Code number ¹ ,	515496	515496
Code number ¹ , plate set	PL835	PL836
Membrane area, m ²	0.2 — 1.0	0.2 — 1.0
Max. inlet pressure ² , bar	7	7
Operating pH range	1 — 14	1 — 14
Max. operating temperature ² , °C	80	80
Cross-flow range, l/min.	5 — 20 / support plate in one section	20 — 50 / support plate in one section
Liquid capacity, l	0.4 + 2.0 l/m ² membrane area	0.4 + 2.5 l/m ² membrane area
Number of support plates	1 — 5	1 — 5
Number of sections	1	1
Number of end plates	2	2
Number of flat sheet membranes	2 per support plate	2 per support plate
Weight, kg	30 + 3.8 kg/m ²	30 + 3.5 kg/m ²

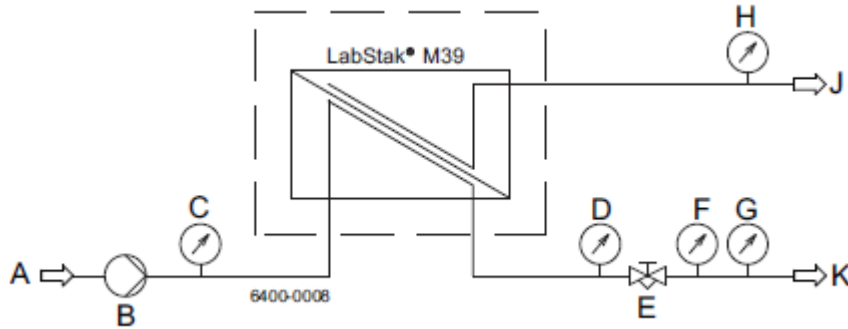
¹ Please specify code number when ordering

² depending on membrane type

Components

Item	Alfa Laval LabStak™M39L module	Alfa Laval LabStak™M39H module
Support and spacer plates	Polysulphone (PSO)	Polysulphone (PSO)
Permeate outlet hose	Silicone rubber (Si)	Silicone rubber (Si)
Gasket and o-ring	Nitrile rubber (NBR)	Nitrile rubber (NBR)
Internal, product wetted steel parts	Acid resistant, AISI 316L	Acid resistant, AISI 316L
External steel parts	Stainless AISI 304	Stainless AISI 304
Cross-flow in/outlet connections	DN 38, ISO 2852 clamp	DN 38, ISO 2852 clamp
Permeate hose outlet connections, mm	ID 4.0, OD 7.4	ID 4.0, OD 7.4

Connections



A = Feed

B = Pump

C = Pressure

D = Pressure

E = Control valve

F = Temperature

G = Flow

H = Flow

J = Permeate

K = Retentate

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200000806-1-EN-GB

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