

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.

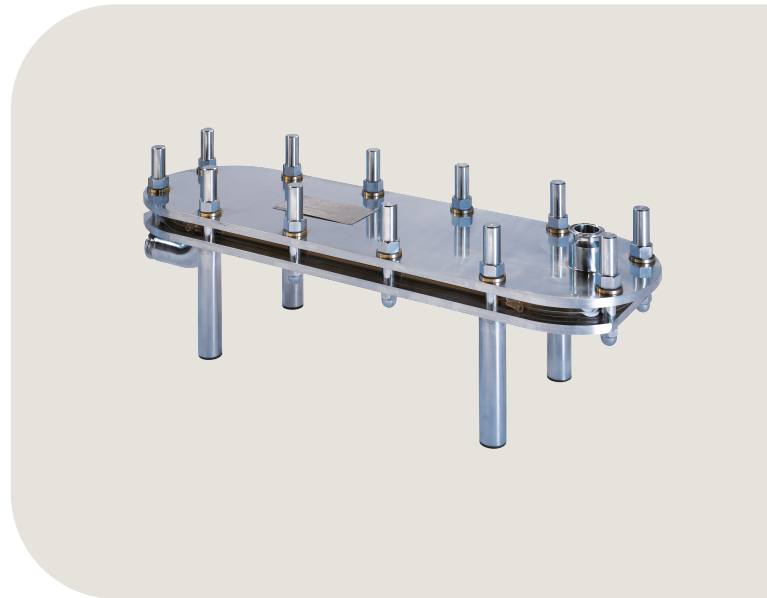
Benefits

- 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 2.0 m²
- all components manufactured in compliance with FDA and EU regulations

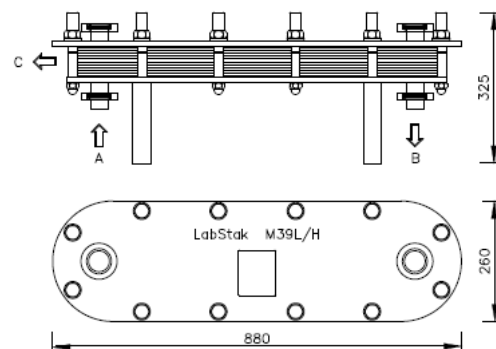
Scope of supply

The Alfa Laval LabStak™ M39L/H module consists of a full-size plate-and-frame module for cross-flow membrane filtration.

The LabStak™ M39L/H module 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 | PL872 |
| M39H (High channel) | Ideal for highly viscous liquids | PL873 |



- A: Feed inlet
- B: Retentate outlet
- C: Permeate outlet

Technical Data

| Model | LabStak™ M39L/H-2-1 module |
|---|-----------------------------------|
| Code number, frame | 541069 |
| Code number ¹ , plate set | M39L: PL872 / M39H: PL873 |
| Membrane area, m ² | 0.2 – 2.0 |
| Max. inlet pressure ² , bar | 7 |
| Operating pH range | 1 – 14 |
| Max. operating temperature ² , °C | 80 |
| Cross-flow range, l/min./support plate in one section | M39L: 5 – 20 / M39H: 20 – 50 |
| Liquid capacity, l/m ² membrane area | M39L: 0.4 + 2.0 / M39H: 0.4 + 2.5 |
| Number of support plates | 1 – 10 |
| Number of sections | 2 |
| Number of end plates | 2 |
| Number of flat sheet membranes | 2 per support plate |
| Weight, kg/m ² | M39L: 30 + 3.8 / M39H: 30 + 3.5 |

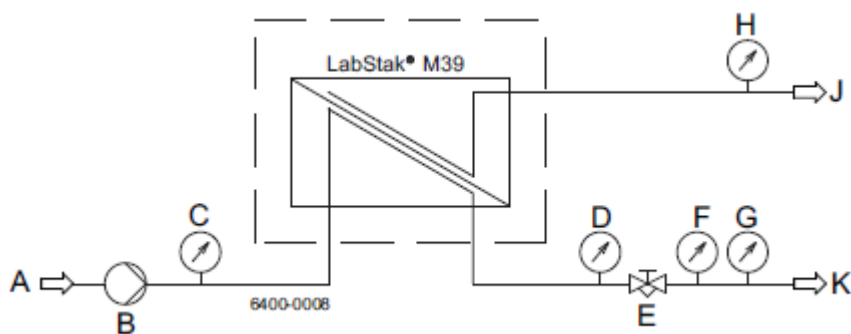
¹ Please specify code number when ordering

² Depending on membrane type

Components

| Item | Alfa Laval LabStak™ M39L/H module |
|--------------------------------------|-----------------------------------|
| Support and spacer plates | Polysulphone (PSO) |
| Permeate outlet hose | Silicone rubber (Si) |
| Gasket | Polypropylene (PP) |
| Internal, product wetted steel parts | Acid resistant, AISI 316L |
| External steel parts | Stainless AISI 304 |
| Cross-flow in/outlet connections | DN 38, ISO 2852 clamp |
| Permeate hose outlet connections, mm | 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

This document and its contents are subject to copyrights and other intellectual property rights owned by Alfa Laval AB (publ) or any of its affiliates (jointly "Alfa Laval"). No part of this document may be copied, re-produced or transmitted in any form or by any means, or for any purpose, without Alfa Laval's prior express written permission. Information and services provided in this document are made as a benefit and service to the user, and no representations or warranties are made about the accuracy or suitability of this information and these services for any purpose. All rights are reserved.

200000797-4-EN-GB

© Alfa Laval AB

How to contact Alfa Laval

Up-to-date Alfa Laval contact details for all countries are always available on our website at www.alfalaval.com