



Pilot Laboratory Equipment for Membrane Filtration

LabStak® M37/38

The LabStak® M37/38 is ideal for process development, scale-up, membrane testing, quality assurance and smallscale production. It can be fitted with the whole range of flat sheet membranes for ultrafiltration and microfiltration.

The LabStak® M37/38 is designed to provide rapid, precise evaluations in laboratories or other test facilities, while keeping equipment and set-up costs to a minimum. The module utilizes the same size support plates and membranes as those found in the full-scale plate-and-frame systems.

Advantages

- Rapid, easy exchange of 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 seven different membrane types
- Low internal volume
- All components manufactured in compliance with FDA regulations
- Flexible system design
- Flexible membrane area between 0.11 and 1.05 m²
- High operating temperature (up to 80°C).

Plate set options

The module consists of a full-size plate-and-frame cross-flow membrane filtration module, type LabStak® M37/38. The module can be equipped with alternative plate set configurations, according to use.

M37

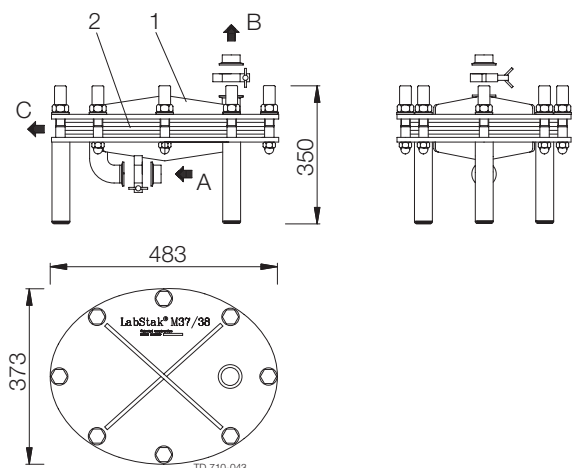
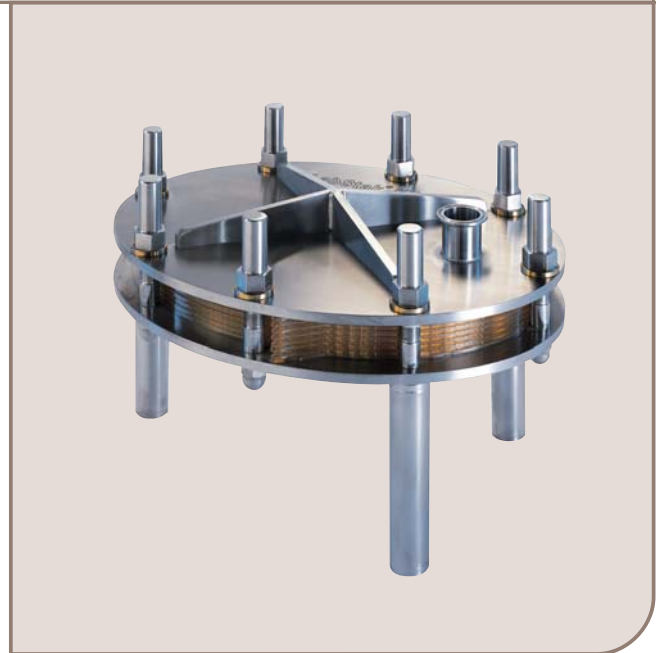
Ideal for highly viscous liquids, code no. PL 745

M38H

High channel, for medium viscous liquids, code no. PL 777

M38L

Low channel, ideal for low viscous liquids, code no. PL 741

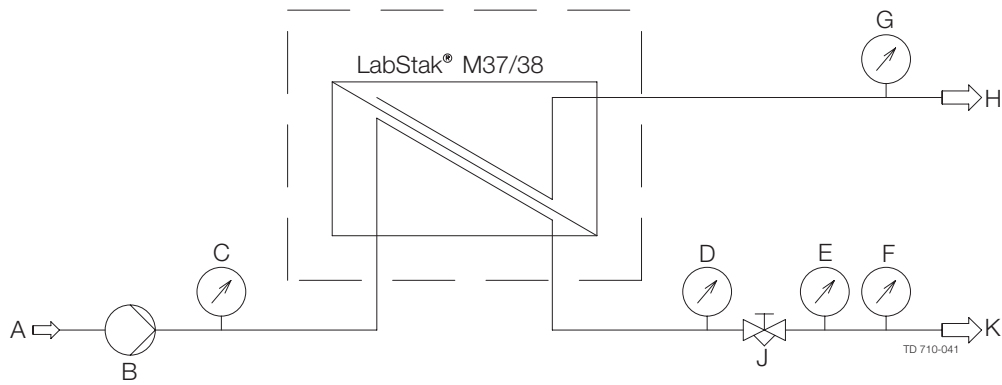


All dimensions are in mm

Pos. Description of parts included

1. Steel frame
2. Support plates and membranes

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



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|-----------------|-------------------|
| A = Feed | F = Flow |
| B = Pump | G = Flow |
| C = Pressure | H = Permeate |
| D = Pressure | J = Control valve |
| E = Temperature | K = Retentate |

Technical data

Number of support plates	1-7
Number of section stop discs	2, or 1 less than number of sections
Number of end plates	2
Number of flat sheet membranes	2 per support plate
Membrane area M37®	0.11-0.77 m ²
Membrane area M38H®	0.15-1.05 m ²
Number of sections	1, 2 or 3 uniform sections in series
Basic liquid capacity = A	0.2 litres
Liquid capacity M37	A + 2.1 litres/m ²
Liquid capacity M38H	A + 1.4 litres/m ²
Liquid capacity M38L	A + 1.2 litres/m ²
Liquid flow M37	20-50 litres/min. per support plate contained in one section
Liquid flow M38H	10-35 litres/min. per support plate contained in one section
Liquid flow M38L	5-15 litres/min. per support plate contained in one section
Max. inlet pressure*	6 bar
Max. operating temperature*	80°C pH operation range* 1-14
Basic frame weight = B	30 kg
Module weight M37	B + 4.3 kg/m ²
Module weight M38H	B + 3.3 kg/m ²
Module weight	M38L B + 3.2 kg/m ²

*depending on membrane type

Module data

All external steel	Stainless, AISI 304
Internal, product wetted steel	Acid resistant, AISI 316L
Support and spacer plates	Polysulphone (PSO)
Permeate outlet hose	Silicone rubber (Si)
Gasket and o-ring	Nitrile rubber (NBR)

Connections

Cross-flow in-/outlets	DN 38, ISO 2852 clamp
Permeate hose outlets	ø 4/7.4 connection