



Pilot laboratory equipment for membrane filtration

PilotUnit Combi-50 UF/MF

The Alfa Laval PilotUnit Combi-50 UF/MF is a handy, versatile test unit that provides a perfect combination of flat sheet and spiral wound designs. It consists of a module M37/38 and a 3.8" spiral element.

The Alfa Laval PilotUnit Combi-50 UF/MF is the ideal tool for selective flat sheet membrane screenings, pilot scale spiral tests and small-scale production using ultrafiltration and microfiltration. To meet these demands, the module has a flat sheet membrane area of 1.65/2.25 m² and a 3.8" spiral element with a membrane area of up to 7 m².

Alfa Laval also provides tailor-made system solutions for individual requirements.

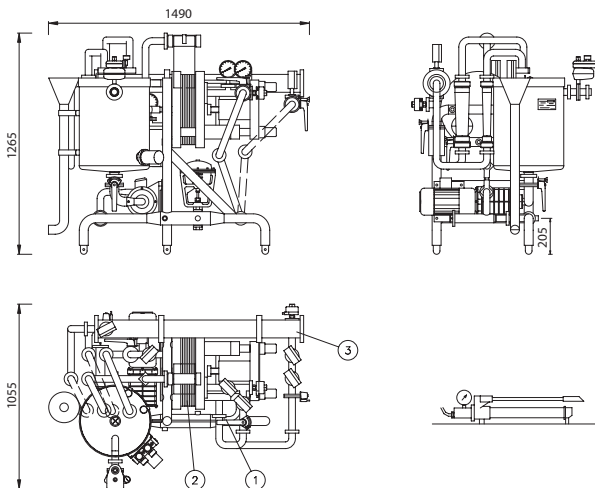
Spiral element options

The element housing in the Alfa Laval PilotUnit Combi-50 UF/MF is 965 mm long and is specially designed for Alfa Laval 3.8" UF and MF spiral elements. For further information, please consult the product descriptions for the Alfa Laval sanitary spiral elements.

Advantages

- Versatile filtration properties
 - membrane area ranging from 0.15 to 7 m²
 - simultaneous test of different membrane types
 - system configuration tests and comparison tests
 - product volumes ranging from 50 to 1,000 litres
- Sanitary design with all components in compliance with FDA regulations
- Rapid, easy exchange of membranes and spiral element
- Operation at pH 1-13, and pressures of up to 10 bar
- Complete unit with pump, valves, tank, etc. Needs only a power supply, compressed air, water, and feed product to operate

Dimensions (mm)



Pos. Description of parts included

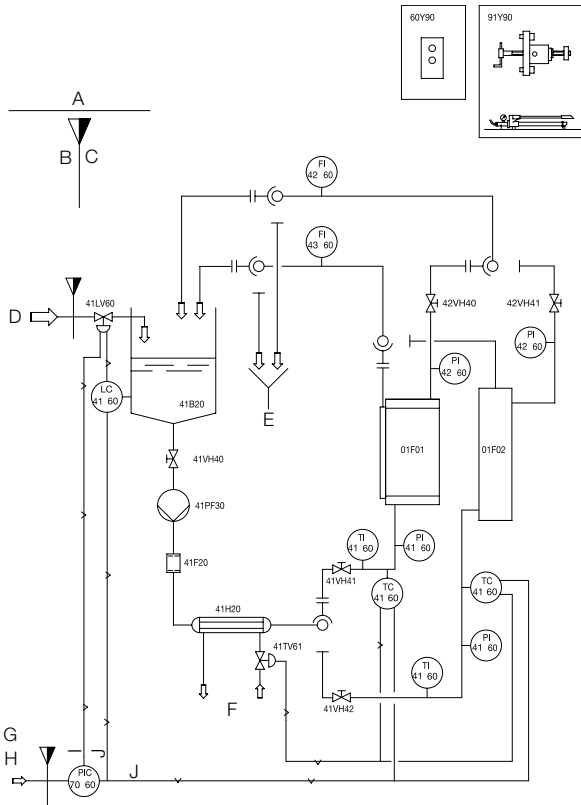
1	Basic Equipment	
2	Plastic set	Code no.
	A: M37	PL451
	B: M38L	PL735
	C: M38H	PL781
3	ATD system	101945, 101946, 102935

Flat sheet membrane options

Flat sheet UF and MF membrane types:

- CA
- GR
- FS
- RC
- ETNA
- FSM
- MFP

Flow diagram of Alfa Laval PilotUnit Combi-50 UF/MF



- | | |
|--------------------|-----------------------|
| A = Delivery Limit | F = Cool/Heat. Medium |
| B = Excl. | G = Air supply |
| C = Incl. | H = 6 bar (85 psi) |
| D = Product | I = 5.6 bar |
| E = Sewer | J = 1.4 bar |

Alfa Laval PilotUnit Combi-50 UF/MF data

Feed/drain	Ø38/34 for welding or outer diameter 28 mm hose connection
Retentate	Ø38/34 for welding or outer diameter 28 mm hose connection
Permeate	Ø38/34 for welding or outer diameter 28 mm hose connection
Cooling/heating water	1.2" BSP female or outer diameter 14 mm hose connection
Tank capacity	65 l
Weight, empty	355 kg
Weight, liquid filled	395 kg (inclusive of 25 litres in tank)

Pump Data

Make	Alfa Laval
Type	LKH 113
Capacity	10 m ³ /h at 8 bar
Product wetted parts	Acid resistant, AISI 316
Motor size/speed	7.5 kW/2800 rpm

Instrumentation

Pressure gauge, 0-10 bar	Inlet, module/element
Pressure gauge, 0-10 bar	Retentate outlet, module/element
Temperature gauge, 0-100°C	Retentate outlet, module/element
Flow meter, 1,100-13,000 l/h	Retentate outlet, module/element
Flow meter, 40-600 l/h	Permeate outlet, module/element
Level control, feed tank	Pneumatic level controller + valve with actuator and positioner
Temperature controls	Pneumatic thermostat directly governing temperature control valve

Code no.: 522234

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The information contained herein is correct at the time of issue, but may be subject to change without prior notice.

How to contact Alfa Laval

Contact details for all countries are continually updated on our website. Please visit www.alfalaval.com to access the information direct.