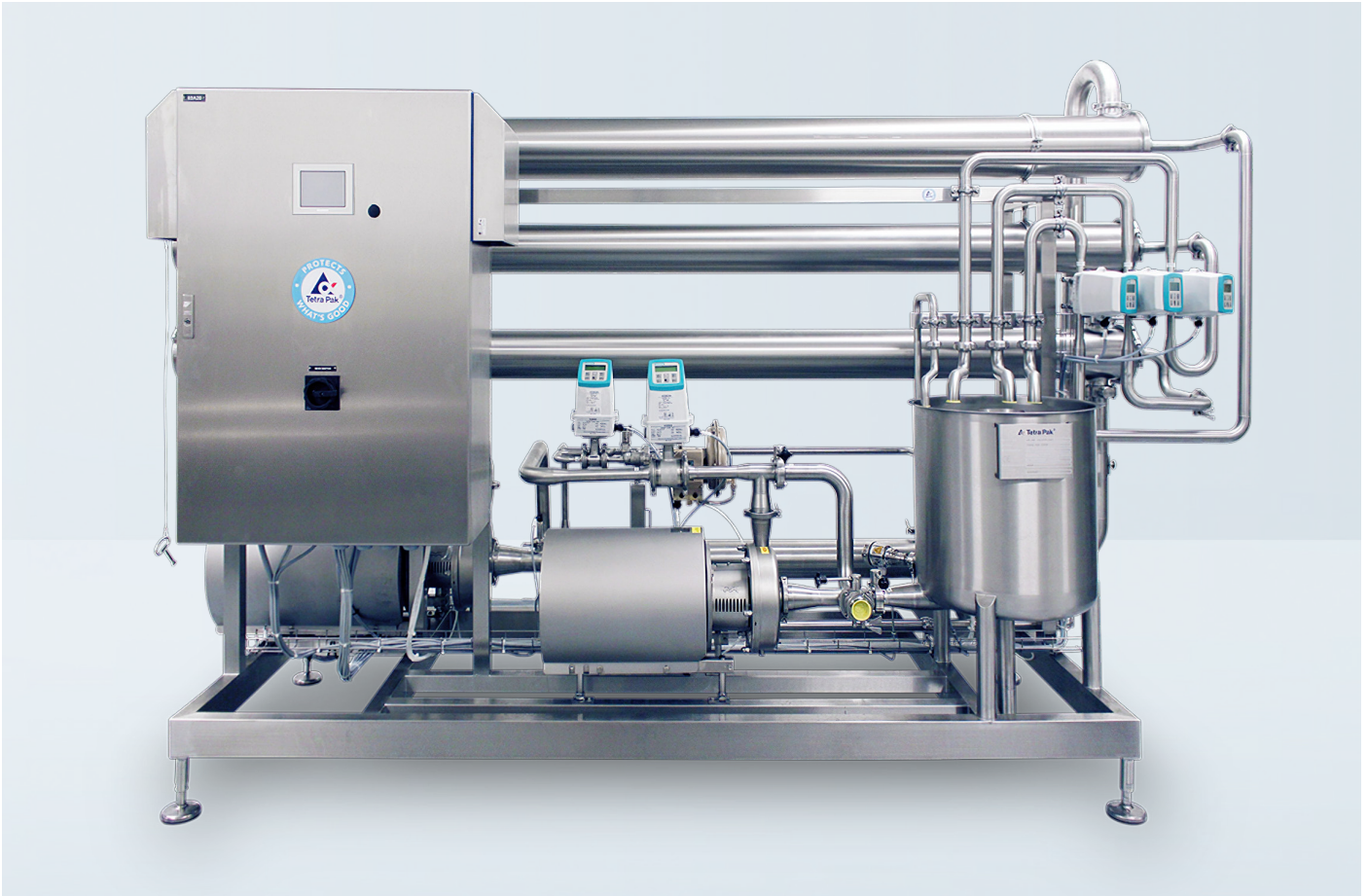




Rental pilot plants

For dairy and plant-based applications



Application

Tetra Pak Filtration Solutions offers different types of easy-to-use pilot plants for rental.

Pilot plants are ideal for developing new products, testing of altered process parameters, new concentration levels, different membrane types, for making product samples to be used in consumer tests, etc.

You can test all the various filtration processes and almost any application: concentration and/or separation incl. diafiltration, bacterial & spore removal, etc. performed on milk and plant-based raw materials such as fermented milk, sweet or sour whey, MF/UF/NF/RO permeates, condensate, cheese brine, coconut water, rapeseed, grains, nuts, rice, soy, etc.

When you rent a pilot plant, we will ship it to your site, where you can perform the tests on your own raw materials, with your staff, and your own packaging options. This ensures valid small-scale testing results, which can easily be converted to industrial scale production.

Pilot plant types

We offer different types of easy-to-use pilot plants for rental:

- Combined RO/NF SW plant
- Combined MF/UF SW plant
- UF P&F plant
- MF ceramic
- UF ceramic (3-step design)

The pilot plants can be rented for a maximum period of three months and may not be used for commercial production.

Design and space requirements

All plants are equipped with clamp connections for easy connection of hygienic pipes to all product and service connections. Flow meters and regulators provide easy access to controlling the flow to and from the plant, the concentration factor and the plant temperature.

Smooth and simple operation

The design of the pilot plants is simple and uncomplicated, making it easy for anybody to operate. The pilot plants are equipped with swing bends for retentate and permeate and a fixed connection for the feed product. It is of course also possible to make either hose or pipe connections for all five plant designs if required.

The pilot plants are equipped with a feed pump, a loop pump for recirculation, a small balance tank for collection of either permeate or retentate, and a discharge pump for the same product.

The pilot plants must be CIP cleaned with standard membrane filtration detergents added manually into the balance tank.

The MF ceramic plant is designed for semi-automatic operation and is flexible with regard to pore size.

Service requirements

The pilot plants need compressed air, steam, water, power, and possibly chilled water. It is the obligation of the lessee to connect the plant to the required service facilities and to connect the necessary product pipes.

The special CIP detergents required for cleaning of the membrane pilot plants must be available from the beginning of the rental period.

Start-up kit to get you going

- Service engineer for training of your staff for one or two days in the features and use of the unit and the processing parameter adjustment possibilities
- Full set of membranes suitable for the intended testing purpose and delivered together with the pilot plant
- Thorough plant cleaning instructions

Plant type	Length, m	Width, m	Height, m
MF/UF	3.7	1.2	max. 2.0
RO/NF	2.6/4.5	1.2	max. 2.2
P&F	2.8	1.2	max. 2.0
MF-C	1.6	1.0	2.45
UF-C	2.25	1.65	2.45

Always follow chemical suppliers' instructions, and use personal protection equipment when handling chemicals.

Tetra Pak Filtration solutions

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