

**ISOFLUX®**



In tangential Microfiltration, some separations can be difficult to do because of the high pressure drop existing along the membrane.

The level of the resulting performance depends on this pressure drop.

The **ISOFLUX®** membrane improves performances of existing separations and allows separations which were previously difficult or impossible to achieve.

The **ISOFLUX®** membrane permits a constant permeate flux on each point of the membrane without using a complex and expensive system. To obtain this result the thickness of the separating layer decreases from the inlet to the outlet in order that the ratio pressure/thickness of the layers stays constant. **ISOFLUX®**

The tubular membranes **ISOFLUX®** produced by TAMI Industries are made of high purity ceramic materials.

They are assembled in stainless steel carters with clamps, screw clamps or flange connections.

According to size chosen the surface of the carter can vary between 0.20 and 34.65 m<sup>2</sup> (see table).

**Applications**

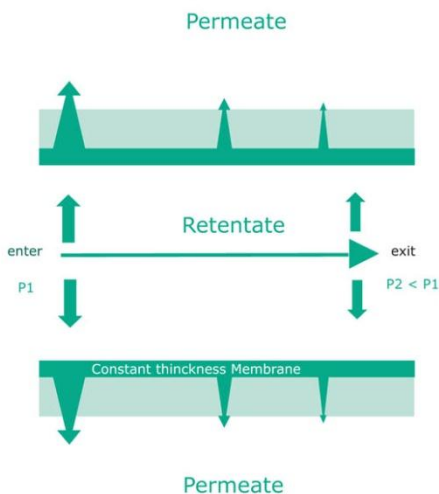
**Food processing**

- Milk bacteria removal,
- Whey bacteria removal,
- Milk casein/ whey protein separation,
- Fat / protein separation from whey
- Syrup bacteria removal

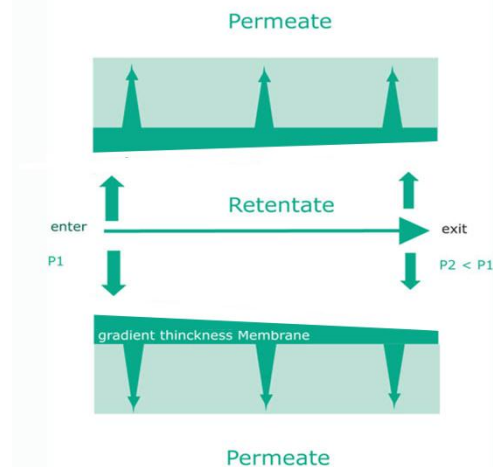
**Bio-industry**

- Enzyme/protein extraction from the fermentation broth
- bacteria / active principle separation

standard membrane



ISOFLUX membrane



In contrast to classical membranes for which the permeate flow rate decreases from the entry to the exit, the **ISOFLUX®** membrane provides a constant permeate flux throughout the membrane.



# ISOFLUX®

## Functioning

The solution to be treated is introduced into the housing where are the membranes, by the circulation pump, which allows the tangential circulation on the surface of the membranes.

For good application of the membranes we recommend you a tangential circulation velocity between 5 and 7m/s.

## Technical datas

### Length

#### Standard :

Ø 25 mm : 1178 mm

#### Special :

Ø 25 mm : 1020 mm

## Support

- Material: Titanium Oxyde
- Burst pressure: >90 bars
- Average pore diameter: 3,5 µm
- Operating maximum pressure: 10 bars
- pH operating range: 0-14
- Solvents: Insensitive
- Operating temperature: < 350 °C

## Membranes

- Active layer : Titanium Oxyde
- pH operating range : 0-14
- Solvents : insensitive
- Operating temperature : < 350 °C

## Carters/Cellules




- pH operating range : 0-14
- Operating temperature : < 95 °C
- Max operating pressure: < 10 bars

Distributed by:

## Advantages

- High performances.
- Simple use (classical filtration loop)
- Flexible use (important latitude in terms of work pressure, standard cleaning)
- Reduced risk of fouling because:
  - ⊗ all the channels work in identical way,
  - ⊗ the membrane layer remains fine despite its thickness gradient,
  - ⊗ the support of the membranes is standard,
  - ⊗ geometrical configurations are compatible with other existing industrial units.

### STANDARDS LENGTHS OF MEMBRANES

| Ø Ext.<br>(mm) | Cut  | Chanel<br>Nb. | Area<br>(sqm) | Available<br>range                           |
|----------------|--|---------------|---------------|--|
|                |  |               |               | MF<br>µm                                     |
| Ø25            |    | 08            | 0.20          | 1,40<br>1,20<br>0,80<br>0,45<br>0,20<br>0,14 |
|                |  | 23            | 0.35          | 1,40<br>1,20<br>0,80<br>0,45<br>0,20<br>0,14 |
|                |  | 39            | 0.50          | Contact us                                   |

## Regeneration

- Standard cleaning:
  - ⊗ Base NaOH: 15 g/l - 85°C – 30mn
  - ⊗ Acid HNO3: 5 ml/l - 50°C – 15mn
  - ⊗ Steam sterilisation: 121°C - 30mn
- Drastic cleaning:
  - ⊗ Base NaOH: pH = 14 - 85°C
  - ⊗ Acid HNO3: pH = 0 - 50°C
  - ⊗ Oxydants H<sub>2</sub>O<sub>2</sub> in solution at pH <3:  
2.10-3 V/V NaOCl: 300 ppm

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