



Big Dutchman®



UFO

The ultrafiltration module with oscillation
– versatile use, high throughput –

UFO – the ultrafiltration module for water treatment

UFO is an innovative, patented ultrafiltration module offered by Big Dutchman. The module allows customers to separate macromolecular components and very fine particles from liquids mechanically, completely avoiding the use of chemicals!
With mechanical ultrafiltration, steel springs

cause a membrane to vibrate at a high frequency. The filtrate, including its dissolved components, permeates the membrane, removing the fine particles.
The ultrafiltration module can be used for a wide range of water treatment applications. For example, it can purify well water or the

liquid proportion of slurry after the slurry's solids have been separated through ultrafiltration. Let our experts advise you comprehensively on the options Big Dutchman can offer.

How the ultrafiltration module works

UFO consists of a stainless steel container with 99 vertically aligned membrane sheets. These sheets alternate with support plates, an arrangement which ensures a good inflow and an optimal flow profile. An unbalance motor causes the entire membrane stack to vibrate.
The oscillation leads to a high throughput and reduces the number of necessary cleaning cycles, increasing the period of time the module can be used between cleaning. Additionally, the special flow pattern achieves

a high cross flow rate over the filter surface area with limited pressure loss, enabling very efficient operation. Small particles are removed as retentate; only the clean permeate remains.
The operating pressure is low at 5 to 6 bar, requiring little pump energy and thus reducing operating costs. Made of high-quality materials, the module can resist even high temperatures and marked fluctuations in pH levels.



Advantages

- ✓ use of innovative membrane technology: high throughput;
- ✓ energy-saving and environmentally friendly method;
- ✓ low pump pressure;
- ✓ compact design;
- ✓ pre-assembled module checked for functionality that can be extended by additional modules;
- ✓ use of high-quality materials;
- ✓ easy operation;
- ✓ modern control system;
- ✓ low maintenance requirements;
- ✓ low number of cleaning cycles due to oscillation;
- ✓ wide range of possible applications.

Technical specifications

Pore size of membrane sheets	nm	5–100
Filter surface area	m ²	13
Drive power	kW	~0.9
Max. operating pressure	bar	6
Max. cross flow*	m ³ /h	4
Max. particle size in input material	mm	0.5
Pressure loss	bar	1–2
Max. temperature	°C	85
Dimensions (LxWxH)	mm	898 x 745 x 1912
Total weight	kg	616

* depends on the input material



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