

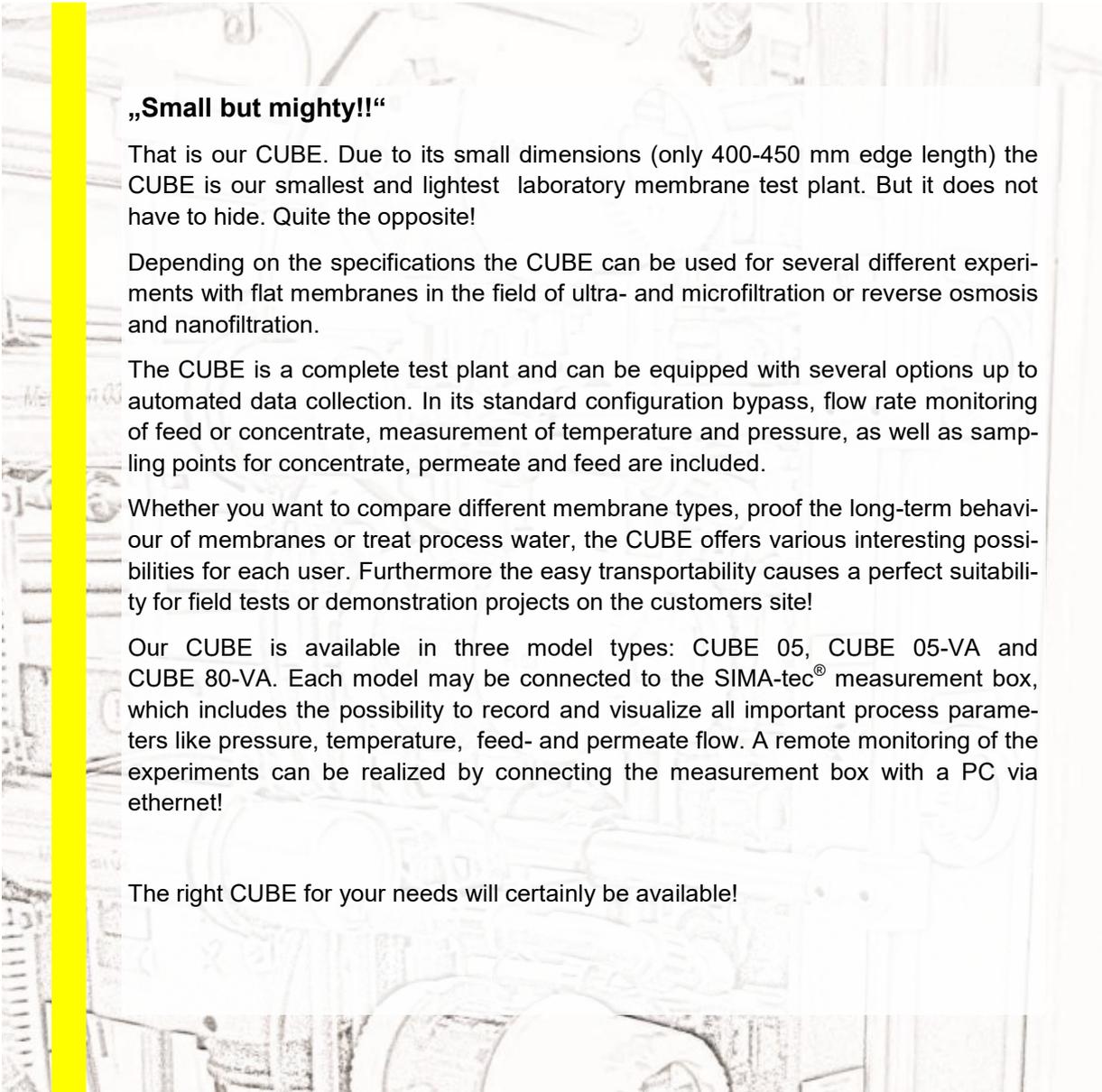


SIMA-tec® GmbH

Serviceleistungen für Industrie-, Membran- und Analysetechnik GmbH

# SIMA-tec® The CUBE-line





### **„Small but mighty!!“**

That is our CUBE. Due to its small dimensions (only 400-450 mm edge length) the CUBE is our smallest and lightest laboratory membrane test plant. But it does not have to hide. Quite the opposite!

Depending on the specifications the CUBE can be used for several different experiments with flat membranes in the field of ultra- and microfiltration or reverse osmosis and nanofiltration.

The CUBE is a complete test plant and can be equipped with several options up to automated data collection. In its standard configuration bypass, flow rate monitoring of feed or concentrate, measurement of temperature and pressure, as well as sampling points for concentrate, permeate and feed are included.

Whether you want to compare different membrane types, proof the long-term behaviour of membranes or treat process water, the CUBE offers various interesting possibilities for each user. Furthermore the easy transportability causes a perfect suitability for field tests or demonstration projects on the customers site!

Our CUBE is available in three model types: CUBE 05, CUBE 05-VA and CUBE 80-VA. Each model may be connected to the SIMA-tec<sup>®</sup> measurement box, which includes the possibility to record and visualize all important process parameters like pressure, temperature, feed- and permeate flow. A remote monitoring of the experiments can be realized by connecting the measurement box with a PC via ethernet!

The right CUBE for your needs will certainly be available!

## The CUBE 05

The CUBE 05 is the basic and therefore the most favourably priced unit of the available versions and designed for a feed pressure of 5 bar at maximum. This CUBE can be used for experiments in the field of ultra- and microfiltration. The materials used (POM<sup>1</sup>, PA<sup>2</sup>), already offer a wide range of application in the membrane technology. Due to its easy handling the CUBE 05 is the perfect test plant for operative training purposes or practical course in university. Even your customers will be delighted, with you having a test plant right in the trunk of your car, every time it is needed! The monitoring possibilities for pressure, cross-flow velocity and filtrate output are realized user-friendly with local pressure gauge and rotameter. For digital visualization and saving of data the connection to the SIMA-tec<sup>®</sup> measurement box is recommended.



1 POM = Polyoxymethylene    2 PA = Polyamide

### The CUBE 05-VA

Few modifications of the CUBE 05 carried out the CUBE 05-VA. Also designed for a feed pressure of 5 bar at maximum, experiments in the field of ultra- and micro-filtration are possible. Due to its stainless steel storage tank and fittings, the CUBE 05-VA is more resistant to several different fluids and provides an even wider application spectrum. The measurement system in this CUBE-version is similar to the CUBE 05. For digital visualization and collection of data the connection to the SIMA-tec® measurement box is recommended.



## The CUBE 80-VA

The CUBE 80-VA is the top-of-the-range of our CUBE-line. With its special equipment composed of controlled high-pressure pump, snubber, stainless steel storage tank and stainless steel tubing on pressure side, the CUBE 80-VA is designed for a feed pressure of 80 bar. Therefor experiments in the field of reverse osmosis and nanofiltration are realisable. Thus, the CUBE 80-VA opens up another large testing field in membrane technology. By default this CUBE is equipped with local pressure gauge, a digital temperature display, a rotameter to monitor the concentrate flow rate and a VA<sup>1</sup>-test cell. For digital visualization and saving of data the connection to the SIMA-tec<sup>®</sup> measurement box is recommended.



1 VA = Stainless steel (Group 316)

## Options

Furthermore you can choose the following options for each version of our CUBE:

### Cooling coil

The process temperature can be controlled by a cooling coil which is optionally installed in the storage tank.

### Permeate rotameter

Each CUBE can be equipped with an optional permeate rotameter. Available spare tubes cover a wider measurement range.

### Test cells

Depending on the CUBE model you are able to choose several test cells. Two synthetic test cells are available for our CUBE 05 (POM<sup>1</sup>; either with a membrane surface of 27 cm<sup>2</sup> or 85 cm<sup>2</sup>). The CUBE 05-VA can additionally be equipped with a stainless steel test cell (VA<sup>2</sup>; membrane surface 85 cm<sup>2</sup>).



1 POM = Polyoxymethylene    2 VA = Stainless Steel (Group 316)

## SIMA-tec® measurement box

The SIMA-tec® measurement box is a stand-alone system for measuring, displaying and saving data and is independent of a PC. The data acquisition is realized by an inductive flow meter for permeate (measuring range 0,1-10 l/h), an electrical temperature sensor, two electrical pressure sensors and a thermal flow rate sensor for feed or concentrate. These sensors are directly connected to the SIMA-tec® measurement box and supplied by this device. (Plug and Play). The measured values are presented numerically or as graphs on the measurement box. This offers a complete recording and monitoring of the test parameters. Data can be directly read-out with a SD card. Furthermore a remote monitoring of the entire system is possible since the measurement box is PC compatible. Once purchased, the SIMA-tec® measurement box can be used for various units of the SIMA-tec® GmbH.



## Request form

Interested? Please fill out the request form and send it to us without obligation by fax, e-mail or by mail. You will receive an individual offer as soon as possible!

### Your contact information:

.....  
Name Surname  
.....  
Company Street  
.....  
Postcode and City Phone  
.....  
Fax E-mail adress

### Your CUBE (please mark your desired equipment):

- |   |   |
|---|---|
| <input type="checkbox"/> CUBE 05                        | <input type="checkbox"/> with cooling coil                          |
| <input type="checkbox"/> with POM (27 cm <sup>2</sup> ) | <input type="checkbox"/> with SIMA-tec <sup>®</sup> measurement box |
| <input type="checkbox"/> with POM (85 cm <sup>2</sup> ) | <input type="checkbox"/> with permeate rotameter                    |
| <input type="checkbox"/> CUBE 05-VA                     |   |
| <input type="checkbox"/> with POM (27 cm <sup>2</sup> ) |   |
| <input type="checkbox"/> with POM (85 cm <sup>2</sup> ) |   |
| <input type="checkbox"/> with VA (85 cm <sup>2</sup> )  |   |
| <input type="checkbox"/> CUBE 80-VA                     |   |

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