

# MAXIMATOR®

## Maximum Pressure.



High Pressure Technology • Testing Equipment  
Hydraulics • Pneumatics



Jointly developed with



University of  
Zurich<sup>UZH</sup>

» High Pressure Homogenizer HPL6  
4,200 bar / 60,000 psi

For cell lyser applications and particle size homogenization

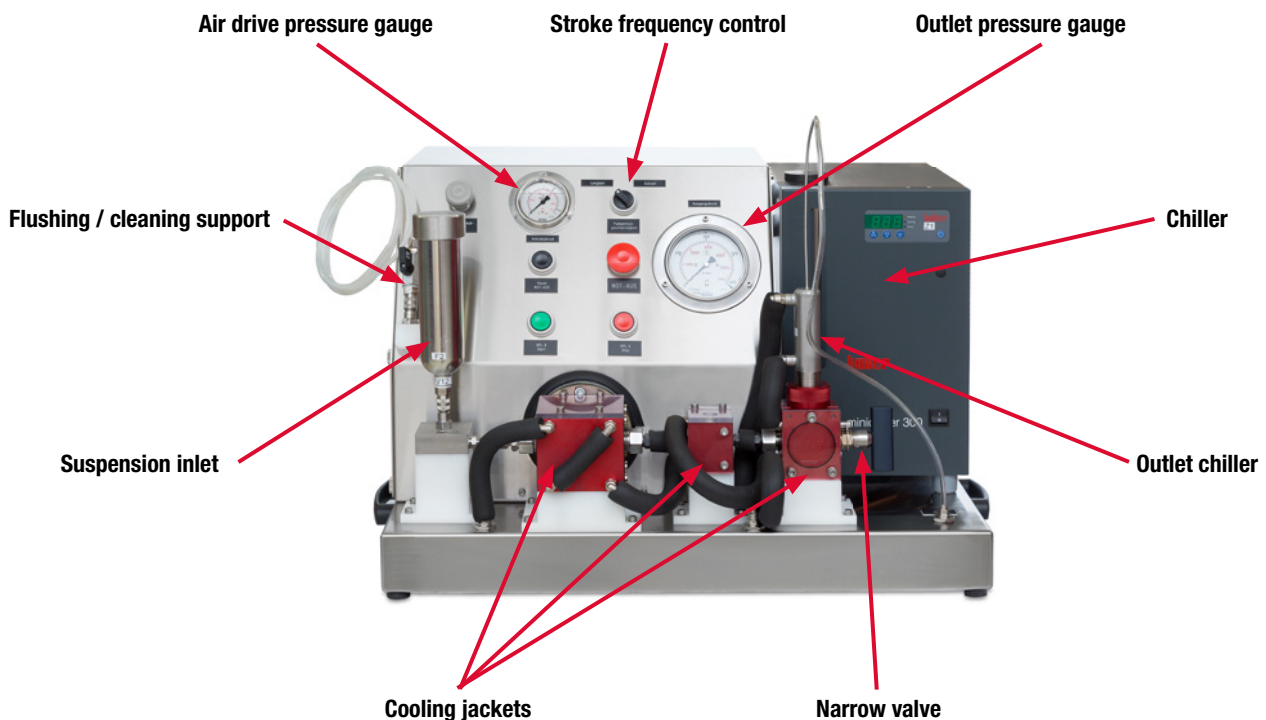
# Application

## High Pressure Homogenizer Type HPL6

High pressure homogenizers are used for many applications in the biotechnology, pharmaceutical, cosmetic, food, and environmental industries, where it is necessary to reach particle sizes in a nano range.

The Maximator high pressure homogenizer HPL6 can be used for cell disruption in the biotechnology, for the homogenizing of dairy products, disruption of cellulose in vegetables, and production of gel systems in the pharmaceutical industry – just to name a few.

## Overview Components of HPL6



The Maximator high pressure homogenizer HPL6 is designed for energy-efficient, continuous production of superfine emulsions. The HPL6 system achieves the homogenizing effect by means of fully adjustable decompression of the liquid from max. 4,200 bar to an ambient pressure.

The high pressure homogenizer uses a Maximator air driven high pressure pump to pressurise the suspension / liquid.

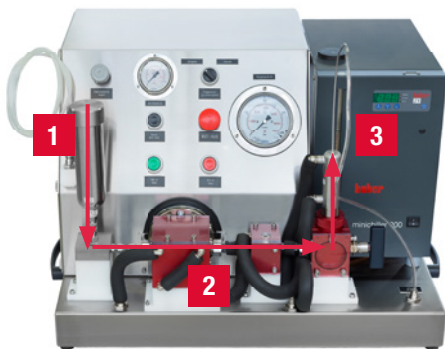
The required pressure for the homogenizing process can be easily pre-set by means of adjusting the air drive pressure from 1 to 10 bar.

In order to achieve the best possible homogenizing results, a Maximator high pressure micrometer-needle valve is used as homogenizing valve and allows the user to adjust the gap in an extremely precise manner.

# User Benefits

## HPL6 user benefits

- Excellent flow rates at comparatively very high pressure
- Low temperature throughout entire process
- Simple and safe operation
- Very easy and fast to clean
- Quiet and low-maintenance
- Small dead space volume
- Very fast support-exchange  
(from sample vessel to flushing swivel)



### 4-zone cooling:

Effective cooling, to maintain temperature specifications ( $\geq 2^{\circ}\text{C}$ ) over the entire homogenisation / cell disruption process.

1. Pump head cooling
2. T-piece cooling
3. Narrow valve cooling
4. Outlet cooling

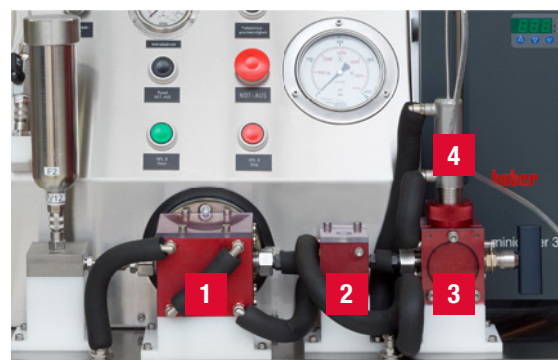


### Technical Data

max. Pressure	4,200 bar (60,000 psi)
Process Temperature	$\geq 2^{\circ}\text{C}$
Flow capacity E.coli	120-330 ml/min @ 1,400 bar
Flow capacity yeast	80-150 ml/min @ 3,200 bar
Cleaning time	< 1 min
Dead space volume	< 6 ml

### Process description:

1. Intake from sample vessel
2. Pressurisation of suspension
3. Homogenization / Cell disruption



### Cleaning process:

The Maximator HPL6 high pressure homogenizer is developed from professional users and hence offers one of the fastest cleaning procedure. The clever design allows the cleaning of the system in less than one minute.

After the homogenization process or cell lyses the sample vessel just needs to be removed and the flushing swivel is to be connected to the intake quick coupling in order to flush the complete system with e.g. DI-Water.

## At your side, everywhere

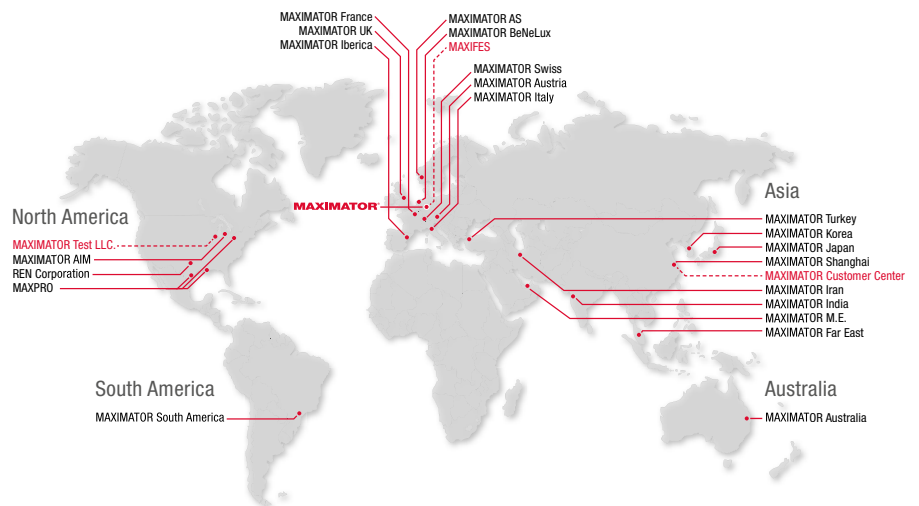
As a technology leader in the field of high pressure and testing equipment up to 25,000 bar, hydraulics and pneumatics, MAXIMATOR GmbH, which is located in Nordhausen, has been a successful global player for more than 50 years. With our products and innovative system solutions, we are a longstanding partner to reputed companies in the automotive and supply industry, and in the chemical, energy, oil and gas industries.

With our international partner companies, experienced specialists in high pressure technology are always available to assist you. We have compiled detailed contact information for our international partners which you can find on our website:

[www.maximator.de/worldwide+distribution](http://www.maximator.de/worldwide+distribution)

### MAXIMATOR GmbH

Lange Strasse 6, 99734 Nordhausen, Germany,  
Telephone +49 (0) 3631 9533-0,  
Telefax +49 (0) 3631 9533-5010  
info@maximator.de



» Visit our Website:  
[www.maximator.de](http://www.maximator.de)