

# ⚡ FHL-1800

## High-pressure homogenizer

FLUKO®

### Introduction

High-pressure homogenizer is a processing equipment that can break, evenly disperse and emulsify material particles or droplets at the nanometer level, and can achieve highly homogenized processing at the microscopic scale.

### Working principle

The high-pressure homogenizer is based on the power drive system of the high-pressure reciprocating plunger pump, which transports the material to the slit area of the homogenizing valve with adjustable pressure. When the material passes through the micron-level gap of the homogenizing valve at high speed, an ultra-high-speed jet is formed. In this process, when the material flows through the homogenizing valve group, due to the drastic pressure change and kinetic energy release, the potential energy conversion is completed, which will simultaneously trigger three core physical effects. The synergistic effect of the three effects gives the high-pressure homogenizer a powerful processing capability.

Cavitation effect: The sudden change in pressure causes the microbubbles inside the liquid to collapse instantly, generating a local high-pressure shock wave;

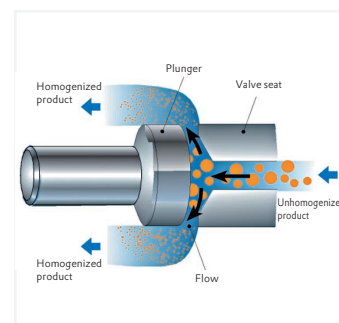
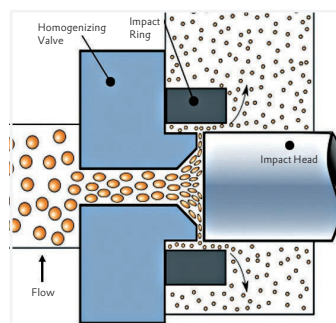
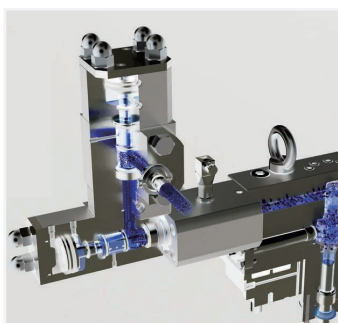
Shock effect: The high-speed jet collides strongly with the homogenizing valve wall or the opposite jet;

Shear effect: The material is subjected to extremely high laminar shear force in the slit.



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## High-pressure homogenizer



| Model                               | FHL-1800                      |
|-------------------------------------|-------------------------------|
| Power                               | 1.5Kw                         |
| Power supply                        | 220V/50Hz                     |
| Minimum flow rate                   | 7L/H                          |
| Maximum flow rate                   | 10L/H                         |
| Minimum processing volume           | 25ml                          |
| Maximum working pressure            | 2000bar                       |
| Maximum product viscosity           | 20000cP                       |
| Maximum product temperature         | 90°C                          |
| Maximum sterilization temperature   | 140°C                         |
| Mental material of wetted parts     | SS316L                        |
| High pressure pump type             | Single-bar high-pressure pump |
| Safety valve type                   | Electronic safety valve       |
| Number of homogenizing valve stages | One stage                     |
| Optional pressure regulation method | Manual/pneumatic              |
| Dimensions                          | 550×700×510                   |
| Weight                              | ~160kg                        |
| Packaging                           | Wooden case                   |

**Application :** vaccines, proteins, fat emulsions, suspensions, juices, milk, creams, nanocellulose, etc.



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Food

Daily Care

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FLUKO EQUIPMENT SHANGHAI CO., LTD.  
#21-22 NO. 300, Shunda Road, Jiading, 201802, Shanghai, China  
Phone +86 21 230 993 68, Fax +86 21 510 103 68  
sales@fluko.com, www.fluko.com