

IKA

designed to work perfectly

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HPH

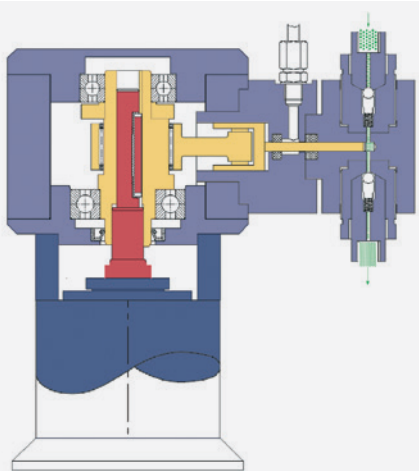
HIGH-PRESSURE HOMOGENIZER FOR ULTRA-FINE EMULSIONS

HPH high pressure homogenizer

/// The powerhouse for ultra-fine emulsions

Efficiently produce emulsions with particle sizes in the nano range and perform cell extractions: Such results are made possible by IKA's high-pressure homogenizers which are capable of operating in continuous in-line operation. For both laboratory and industrial needs, IKA's high pressure homogenizers produce ultra-fine emulsions with extremely narrow droplet distribution and can be used for cell disruption by means of extreme energy input.

The HPH can be used in a wide range of applications: from the food industry, to the pharmaceutical and biotech sectors where the finest of emulsions are always required.



FUNCTIONALITY OF THE HPH

The heart of the HPH is a high-pressure pump which is driven by a special cam. Up to 4 high-pressure pumps can be used for higher throughputs and low-pulsation volumetric flow rates. In the homogenizing valve, a cross-sectional constriction ensures that the constant flow rate of the pumps creates a high pressure of up to 2,000 bar in front of the valve and releases it back to atmospheric pressure in fractions of a second.

Here the pressure is reduced in a spring-loaded, adjustable gap in the homogenizing valve. This results in cavitation and bounce effects, leading in turn to the desired pulverization and mixing effects. Due to its significantly higher energy input, the HPH can produce much finer emulsions than conventional toothed ring dispersers. The homogenizing pressure can be finely adjusted and read off a manometer.

The flow rates of the HPH depend on the size of the machine, the piston diameter and the number of pistons. Depending on the size of the machine, versions with one piston (-SH), two pistons (-DH) or four pistons (-QH) are available. A higher number of pistons results in larger throughput and lower pulsation. Versions with a small piston achieve a maximum homogenizing pressure of 2,000 bar. Versions with large pistons achieve maximum flow rates at pressures up to 800 bar.



HPH 2000/04-SH



ADVANTAGES OF THE HPH

- > Low noise emissions
- > Optimum adaptation to product characteristics thanks to stepless adjustment of the homogenizing pressure and speed (for models with controller)
- > Pressure adjustable up to 2,000 bar
- > All high-pressure connections are sealed in metal
- > Maintenance friendly



HPH-CONTROLLER

Technical Data

/// High-pressure homogenizer for ultra-fine emulsions

TECHNICAL DATA	HPH 2000/4-SH5	HPH 2000/4-DH5	HPH 2000/4-SH8	HPH 2000/4-DH8
No. of pistons	1	2	1	2
Drive power [kW]	1,5	1,5	1,5	1,5
Minimum volume [ml]	30	50	30	50
Version with controller* Dimensions (L x W x H) [mm]	604 x 311 x 525	604 x 292 x 610	604 x 311 x 525	604 x 292 x 610
Version with mounted on/off switch Dimensions (L x W x H) [mm]	604 x 412 x 525	604 x 385 x 610	604 x 412 x 525	604 x 385 x 610
Weight [kg]	36	44	36	44
Piston diameter [mm]	5	5	8	8
Max. homogenizing pressure [bar]	2 000	2 000	800	800
Total throughput [l/h]	3	6	8	16

TECHNICAL DATA	HPH 2000/5-SH8	HPH 2000/5-DH8	HPH 2000/5-SH12	HPH 2000/5-DH12
No. of pistons	2	4	2	4
Drive power [kW]	4	4	4	4
Minimum volume [ml]	50	100	50	100
Version with controller* Dimensions (L x W x H) [mm]	1 150 x 478 x 803	1 150 x 557 x 932	1 150 x 478 x 803	1 150 x 557 x 932
Version with mounted on/off switch Dimensions (L x W x H) [mm]	1 150 x 478 x 803	1 150 x 557 x 932	1 150 x 478 x 803	1 150 x 557 x 932
Weight [kg]	180	200	180	200
Piston diameter [mm]	8	8	12	12
Max. homogenizing pressure [bar]	2 000	2 000	800	800
Total throughput [l/h]	20	40	50	100

* Dimensions of controller: (L x W x H) 344 x 200 x 463 mm

AREAS OF APPLICATION



Food industry technology



Pharmaceuticals



Cosmetics



Biotechnology / Biochemistry



Environmental Technology



WolfLabs

Pricing on any accessories shown can be found by keying the part number into the search box on our website.

The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct. If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

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Please contact us if this literature doesn't answer all your questions.