INTERPUMP GROUP

INTERPUMP
PROCESS TECHNOLOGY

PHARMA TECHNOLOGY

Shaping the Future of Pharma's
Homogenizers – Emulsions and
Dispersions up to 4.000 bar

ADVANCED HOMOGENIZING TECHNOLOGY IN PHARMA APPLICATIONS

Interpump Process Technology High-Pressure Homogenizers – up to 4.000 bar – are the ideal solution for developing and producing stable emulsions and dispersions in pharmaceutical and biotech applications.

Through Interpump Homogenizer you can get a faster and more efficient way to reach the nanodispersion and production targets.

PLUS

- High volumetrical efficiency
- Innovative design of the liquid end for minimized sterilization time and to make more effective the CIP
- High reliability at full pressure
- Very low noise level
- Friendly maintenance of liquid end
- Validated for nano dispersion and emulsion
- Proven for high viscous products

GREEN SERIES | STAR LINE - Flow rate @ Pressure

MODEL HA/PA53	10.000 l/h @ 1.000 bar	9.000 l/h @ 1.200 bar	6.000 l/h @ 1.500 bar

PLUS

- User friendly
- Triplex homogenizer
- Reliable scale up from pilot to production line
- Very low noise level
- Innovative design of the liquid end for minimized sterilization time and to make more effective the CIP

ATOMO 3.0 - Flow rate @ Pressure

MODEL ATOMO 3.0	100 l/h @ 1.000 bar	100 l/h @ 1.200 bar	30 l/h @ 1.500 bar

PLUS

- Minimum volume of 10 ml
- Tabletop homogenizer
- Suitable for abrasive products
- Reliable lab testing
- Very low noise level

QUARK - Flow rate @ Pressure

MODEL QUARK	3 l/h @ 2.000 bar

BERTOLI

Increasing the homogenizing pressure plays a key role in enhancing cell disruption and emulsion quality in pharmaceutical processes.

By introducing the patented UP-Valve, the pressure can be raised up to 4.000 bar, optimizing process efficiency and reducing production time.

PLUS

- Particle Size Reduction: Nano or micro scale for better stability
- Uniform Dispersion: Homogeneous mixtures, no agglomerates
- Improved Texture: Smooth, consistent product
- Enhanced Stability: Prevents phase separation and sedimentation
- Higher Bioavailability: Faster and more efficient absorption
- Controlled Release: Enables advanced drug delivery systems
- Chemical Stability: Longer shelf-life with antioxidants and buffers
- Cell Disruption: Efficient extraction of proteins, enzymes, and metabolites
- Reduced Additives: Less need for synthetic stabilizers
- Scalable & Reproducible: From lab to industrial production

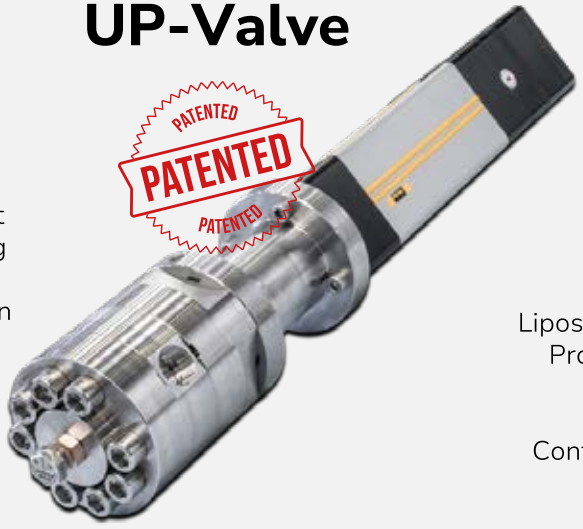
HBI SERIES - Flow rate @ Pressure

MODEL HBI	up to 2.000 l/h @ 4.000 bar

INTERPUMP DIVISION FOR PHARMA APPLICATION

The UP-Valve (Ultra Pressure Homogenizing Valve) delivers exceptional performance in pharmaceutical applications such as cell disruption and emulsions. Designed with high mechanical and wear-resistant metal alloys, it operates up to 4.000 bar, ensuring superior efficiency, optimized processes, and reduced production time.

UP-Valve



Typical Applications:

Antibiotics -
Vaccines -
Syrups -
Cell disruption -
Vitamins -
Injectable fine emulsions -
Intravenous emulsions -
Liposomal drug delivery systems -
Protein and enzyme extraction -
Ointments and creams -
API micronization -
Controlled release formulations -

"Evolution Green: Reduction of water consumption, oil consumption and carbon footprint in the manufacture and usage of the equipment"

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