



MICROFLUID



High-Pressure Homogenizer

400 LPH Technical Datasheet

Model: HM-10



HM-10 two-stage high-pressure homogenizer, a positive displacement reciprocating pump manufacturing with state-of-the-art technology for customized solutions for many applications. This machine is convenient for dairy, food & beverages, pharmaceuticals, biotechnology, chemical, and cosmetic industries.

Microfluid homogenizers are specially designed for low speed, which can execute high efficiency and reduce noise, vibrations, and maintenance costs.

Liquid End (Drive Unit)

- A single piece of highly precise and high wear resistant machined cylinder block made from special high tensile corrosion resistance forged stainless steel materials.
- This cylinder block is designed with a reduced number of parts for easy use and maintenance.
- This cylinder block is designed and is suitable for interchangeable ball and poppet-type valve seats.
- Friendly maintenance of the liquid end.
- The fully sanitary design, which can be suitable for CIP, SIP and pharma.
- Fully electropolished available as an option.
- Duplex and super duplex material for cylinder block available as option.

Power End (Pump Head)

- The single piece high strength cast iron crank case specially design for heavy duty and reliable transmission.
- Special forged alloyed steel crankshaft on standard roller bearings.
- Self-align roller bearings.

- The crossheads are designed with self-align and adjustable technical, which is very reliable and can reduce maintenance and break-down time.
- Splash lubrication.
- "V" belts drive system.

Homogenizing Valve

- Double stage hand operated manual homogenizing valve for effective homogenization of product.
- Impact head and valve seat specially surfaced from stellite material (hardness 56 to 58 HRC).
- Impact head is specially designed to reduced maintenance cost.
- Microfluid's homogenising valve engineered for easy maintenance and cleaning.
- Its suitable for CIP, SIP and pharma.
- Fully electropolished available as an option.
- Wear parts made in tungsten carbide and in ceramics material as an option or request.
- Duplex and super duplex material for homogenising valve available as an option.
- Pneumatic operated homo valve available as an option.

Plunger & Seals

- Colmonoy coated stainless steel (hardness 58 to 60 HRC).
- Many options available in plunger materials like tungsten carbide coated, hard chrome coated, solid ceramic, ceramic coated.
- Self-centring clamped connections.
- Dedicated hygienic food grade seals & O-rings.
- Sealing cooling system.

Valve & Valve Seats

- High wear resistances stainless steel double side stellite surfaced alloy seats, which reduce maintenance cost and down time.
- Ball type and poppet type valve available for different viscous materials.
- Tungsten carbide and ceramic materials available as an option.

Valve & Valve Seats

- Made out from polished stainless steel with sound proof facing and reduce noise.
- Made on CNC laser cut and CNC bending for better quality and appearance.
- Easy to maintenance and operate.
- Appropriate ventilations with lowers.

Product Line Connections

- SMS standard union connections.
- Tri-clamps and any other standard options available on request.

Technical Details

| | |
|--------------------|---------------------------|
| Inlet connections | 1½" SMS |
| Outlet connections | 1½" SMS |
| Oil type | 220 gear oil |
| Oil capacity | 3 liter |
| Approx. weight | 100 Kg |
| Max. power up to | 10 kw @ 1200 LPH, 250 Bar |

Applications



Dairy



Food & Beverages



Chemical



Home &
Personal Care



Pharmaceuticals
& Biotech

Pressure Measurement & Safety

- Sanitary design diaphragm type analog high-pressure gauge.
- Pressure relief valve (Safety valve) installed on liquid end.
- Pressure transducer & controller available as an option.
- Diaphragm type analog digital pressure gauge available as an option.
- Stainless steel enclosure control panel.

Special Option

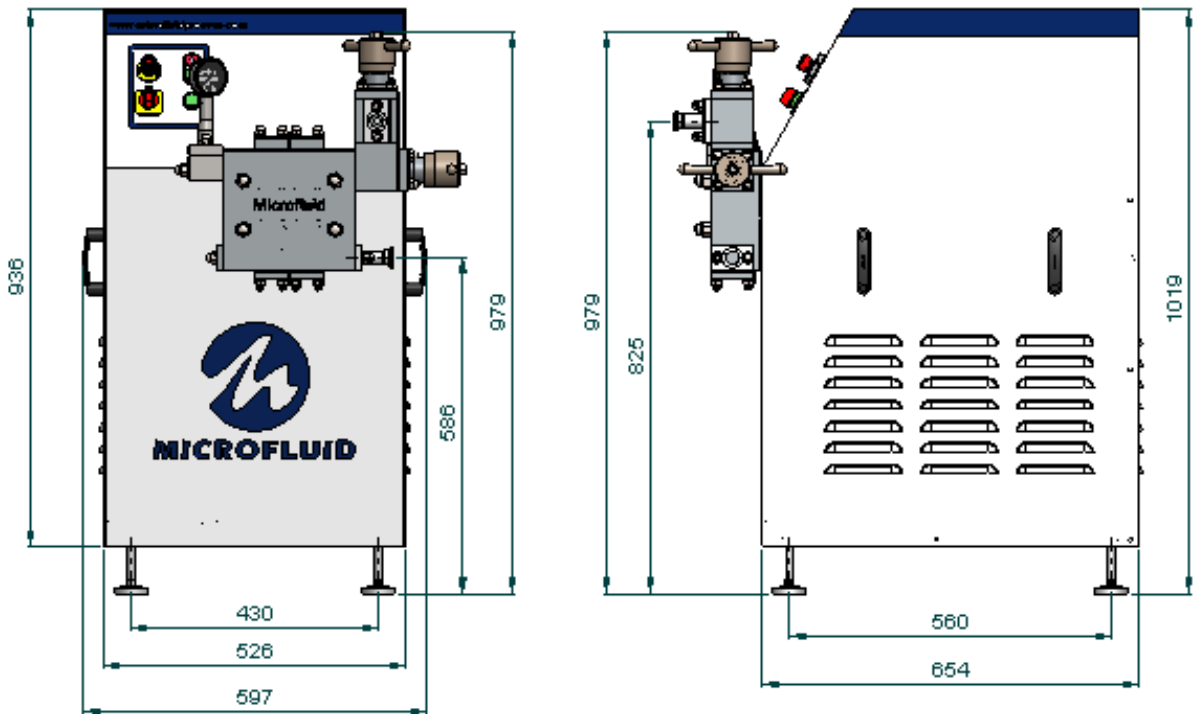
- Fully machine automation.
- Pneumatic homogenizing valve.
- Duplex & Super duplex material.
- Electropolished liquid end and contact parts available as an option.

Performance Chart

| Max. Flow Rate (LPH) | Max. Pressure in BAR (PSI) | Max. Motor HP (KW) |
|----------------------|----------------------------|--------------------|
| 200 LPH | 250 Bar (3600 PSI) | 2 HP (5.6) |
| 300 LPH | 250 Bar (3600 PSI) | 3 HP (2.2) |
| 400 LPH | 250 Bar (3600 PSI) | 5 HP (3.7) |
| 500 LPH | 200 Bar (2900 PSI) | 5 HP (3.7) |

❑ Customized models are available.

Dimensional Drawing





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