New Product Info Sheet

150 UHS & 088/150 UHS Multistage

Small Scale In-Line Mixers

The **150 UHS In-Line Mixer** has been designed for Ultra Sanitary applications and built to the same high specification as production scale UHS models.

Ideal for batches of up to 13 gallons, the mixer features a range of interchangeable workheads and screens, offering intense yet targeted high shear capability; a conversion kit allowing it to be used as a Multistage 088/150 is available.

The **088/150 UHS Multistage In-Line Mixer** offers all the features of the 150 UHS with the addition of a multistage rotor/stator workhead. This dramatically increases the number of shearing actions per revolution of the rotor, providing substantially faster mixing times and increasing the number of products that can be processed in a single pass.

The Multistage workhead also allows customers to configure the mixer to their individual requirements. Depending on the desired results the stators can be a number of different combinations which can be quickly and easily changed to optimise processing and increase mixing versatility.

SILVERSON®

The World Leaders in High Speed High Shear Mixers

Silverson Machines, Inc.
Tel: +1 (413) 525-4825
Email: silverson-usa@silverson.com

Features

- Ultra-Sanitary construction: Crevice-free, no castings - no porosity
- All 316L stainless steel construction of wetted parts
- No manual dismantling and cleaning is required, significantly reducing maintenance, operating costs, increasing reliability and increasing productivity
- Self-pumping on low viscosity liquids. For medium/high viscosity applications the Silverson 150 UHS-HV is recommended
- Vessel package available, comprising vessel, stand, valve and pipework
- The 150 UHS can be converted to Multistage 088/150 UHS configuration, and vice versa.
- Can be supplied with documentation packages conforming to all regulatory standards, including cGMP and FDA.

Technical Specification

Motor Options

1hp (0.75 kW) 3,600 rpm 230/400V 3 phase motor, finished in Silverson blue as standard. Other motor options including high speed, flameproof and stainless steel available.
Variable speed can be obtained via an inverter.

Materials of Construction

Wetted parts and base plate: 316L stainless steel.
Elastomers: Viton. Others available as an option.

Shaft Sealing

Sanitary single mechanical shaft seals. Can be converted to hygienic double mechanical shaft seals suitable for pressurized flush.

Operating Pressure

Single seal: 150 psi (10 bar) Double seal: 100 psi (7 bar) Higher pressure rated double mechanical sealing arrangements available as a special order.

Inlet/Outlet Connections

3/4" Tri-clamp inlet/outlet connections.

Cleaning

Designed for Cleaning-In-Place (CIP) and Sterlizing-In-Place.

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New Product Info Sheet

150 UHS -HV

Small Scale High Viscosity In-Line Mixer

The **150 UHS-HV In-Line Mixer** has been developed for processing higher viscosity products on a small scale. Ideal for batches of up to 13 gallons, the new mixer matches the capabilities of Silverson's production scale UHS-HV In-Line mixer range. It incorporates a unique and innovative "pumping rotor" design that substantially increases the mixer's self-pumping capacity, ideal for processing higher viscosity products.

High flow rates are maintained as viscosity rises, often eliminating the need for an additional feed pump.

The 150 UHS-HV comes with a 9,000rpm high speed motor as standard. This gives the mixer more power to continually recirculate higher viscosity products in the vessel. Other motor types, including Explosion Proof and Stainless Steel are available.

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Features

- Self-pumping, maintaining flow rate as viscosity increases.
- Sanitary construction.
- Wide range of motor and shaft sealing options, suitable for applications from aggressive chemical service to the most demanding ultra-sanitary duties.
- Vessel package available, comprising vessel, stand, valve and pipework
- Conversion kit allows the unit to be configured as an FMX10 Powder/Liquid mixer.

Technical Specification

Motor Options

Powerful 2 hp (1.5 kW) 9,000 rpm 230/400V 3 phase TENV motor.
Other motor options including Flameproof and Stainless Steel available.
Variable speed can be obtained via an inverter.

Materials of Construction

Wetted parts: 316L stainless steel.
Base plate: 316L stainless steel.
Elastomers: Viton. Others available as an option.

Shaft Sealing

Sanitary single mechanical shaft seals. Can be converted to sanitary double mechanical shaft seals suitable for pressurized flush.

Operating Pressure

Single seal: 150 psi (10 bar) Double seal: 100 psi (7 bar)
Higher pressure rated double mechanical sealing arrangements available as a special order.

Inlet/Outlet Connections

1.5” Tri-clamp inlet/outlet connections.

Cleaning

Designed for Cleaning-In-Place (CIP) with Sterlizing-In-Place as an option.

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New Product Info Sheet

Flashmix FMX10

Small ScalePowder/Liquid Mixer

The new Silverson FMX10 provides a simple, fast, effective and sanitary means of powder/liquid mixing and is ideal for higher viscosity mixes.

The FMX10 is a small scale version of the Flashmix powder/liquid mixer, designed to bridge the gap between the laboratory scale FMX5 and larger production models. A number of configurations are available, including:

- High speed model
- Ultra-sanitary specification
- Explosion proof specification
- Chemical Duty model

The unit is suitable batches of up to 13 Gallons, depending on viscosity, and is ideal for small scale manufacturing.

It also offers an accurate and easy means of predicting the performance of production scale FMX units in the laboratory and streamlining the scale-up process.

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Email: silverson-usa@silverson.com

Features

- Fast powder incorporation rates of up to 20 lbs/minute.
- Self-pumping.
- Sanitary construction.
- Wide range of motor and shaft sealing options, suitable for applications from aggressive chemical service to the most demanding ultra-sanitary duties.
- Vessel package available, comprising vessel, stand, valve and pipework.

Performance

The table shows typical liquid flow and powder incorporation rates for the FMX10 and larger Flashmix units.
Note: These figures are based on repeated practical testing and are for guidance only.

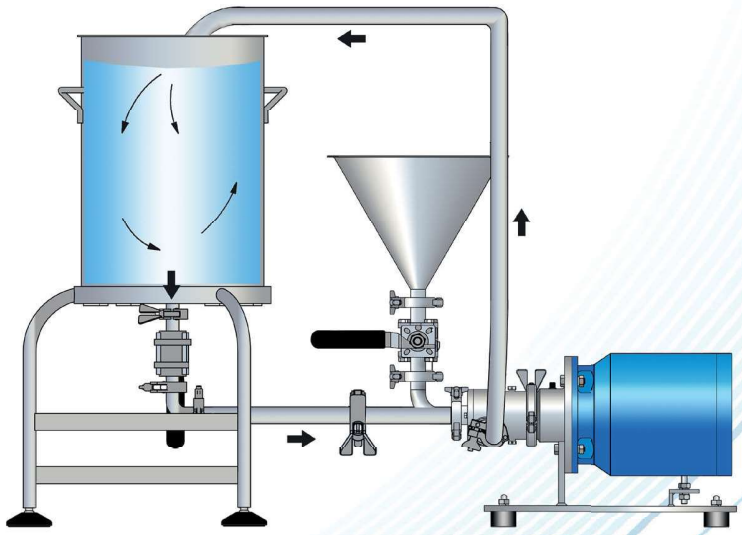
Model	Liquid flow rate (gallons/ minute)	Typical powder incorporation rate (lbs/minute)		
		Gums & thickeners	Milk protiens	Sugars
FMX5	24	7	12	6
FMX10	28	7	20	9
FMX25	120	25	90	40
FMX50	230	48	255	80
FMX75	375	165	460	380

Operation

The FMX10 is designed for use in a recirculation system as shown below.
Typical batch size up to 13 Gallons, depending on viscosity.

Powder is rapidly incoprporated by the self-pumping mixer, and a brief period of recirculation results in an agglommerate-free, homogeneous dispersion.

An auxiliary in-tank mixer or agitator (not supplied) may be required to maintain uniformity in the vessel when processing higher viscosity products.



Technical Specification

Motor Options

Powerful 2 hp 9,000 rpm 230/400V 3 phase TENV motor..
Other motor options including explosion proof and stainless steel available.
Variable speed can be obtained via an inverter.

Materials of Construction

Wetted parts: 316L stainless steel.
Base plate: 316L stainless steel.
Elastomers: Viton. Others available as an option.

Shaft Sealing

Sanitary single mechanical shaft seals. Can be converted to sanitary double mechanical shaft seals suitable for pressurized flush.

Operating Pressure

Single seal: 150 psi (10 bar) Double seal: 100 psi (7 bar)
Higher pressure rated double mechanical sealing arrangements available as a special order.

Inlet/Outlet Connections

1.5" Tri-clamp inlet/outlet connections.

Powder Feed

5 liter stainless steel hopper as standard; other types are available to assist with flow of more cohesive powders.
Ball valves are standard for powder feed.

Cleaning

Designed for Cleaning-In-Place (CIP) with Sterlizing-In-Place as an option.

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