# MixSing Pilot

# Key benefits

- Flexibility in production
- Smal scale batches
- Nitrogen purge/blanket
- Noise <78 dB(a)</li>
- Improved ergonomic
- · Hygienic design
- · CAPEX & OPEX optimised
- EHEDG, EC 1935 and CE marked

Shear performance 2600 rpm

Mean shear rate

200000.

166833.

133667. 100500.

100000

67333.

34167.

000.

### **Operations**

Creating the perfect suspension without particle separation or the quintessential emulsion, the MixSing caters for your needs.

The impeller vortex effect forces the ingredients through the impeller / stator construction where the product will be exposed to high shear forces up to 200,000  $\rm s^{-1}$  reducing the size of the particles.

The high shear unit is designed for operation between 300 - 3600 rpm.

# Design basis

Computational Fluid Dynamics form the basis of the design development and optimisation.

Experienced resources created a virtual model and arranged a simulation of flow & shear patterns, vacuum effect on flow, cavitation risk, visualisation of flow, shear, CIP-ability, baffle design, wear and strength analyses. A physical unit was tested for operational performance to confirm the advanced and optimised design.



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# **MixSing Pilot**

### Application integration

Batch, in-line or continuous mixing — no limitation. Designing the right process for your product recipe and adapting it as your process needs changes, the MixSing facilitates your requirements.

Fat filled products

Cappuccino foamer

Non-dairy creamer

Condensed milk

condensed milk

Sweetened



### **Dairy**

- Recombined milk products
- Flavoured milk
- Infant formula
- Nutritional
- Ice cream
- Protein Standardisation

Contact us for other applications



### **Beverage**

- Sugar dissolvers
- Syrup preparation
- Stabiliser blends
- Juices and nectars
- Smoothies
- Soft drinks
- Whey based drinks
- Sports & energy drinks
- Sport engergy gels



#### Prepared food

- Sauces
- Mayonnaise
- Mustards
- Ketchup
- Dips
- Salad dressings
- Fruit preparations
- Hummus
- Puree



### Personal care

- Gels
- Creams
- Soap and gels
- Shampoo
- Lotions

# Design

- Mixer system
  - Standard motor
  - Frequency inverter
  - Shaft seal and drive
  - Impeller & stator system
- Vacuum system
  - Liquid ring pump
  - Frequency inverter
  - Service water
- Scraper-agitator
- Pressure sensor
- Product inlet/outlet valve
- Ingredients hopper (2pcs.)
- Minor ingredients hopper
- Ingredients valve(s)
- Level switches
- Manway with safety switch and linear electrical actuator for lifting
- Handle for tipping (1pcs.)
- Non-foam inlet
- Sight glass with lamp
- Sight glass with wiper
- Adjustable feet
- · Other client requirements

### Technical data

	Unit	Pilot
Power installed	kW	15
CIP	m <sup>3</sup> /h @ 2 bar(g)	Manually
Service water	l/h	300
Built-in tank volume	1	50
Dimensions HxWxD	m	Open 2.6x 1.2x 1.6 Closed 2.0x 1.2x 1.6
Shipping weight	kg	750
Shipping volume	$m^3$	4

<sup>\*</sup>customisation/products can alter values