

VacuumMaster

The **VacuumMaster** is the most energy efficient and flexible multi purpose mixer on the market:

- Low energy consumption/high efficiency
- High shear rate
- High mixing rate
- Fast and easy installation
- Low service cost - few wear parts
- Hygienic design in compliance with EHEDG
- Step-file available on inquiry

The **VacuumMaster** is developed for products with medium to high viscosities and is designed with a directly driven high shear mixer at the bottom and top mounted agitator.



APPLICATIONS

The **VacuumMaster** represents the next generation of mixing solutions for the process industry.

Not only is it more compact and perfectly optimised for energy-efficient high shear mixing, it is also virtually maintenance-free.

The vacuum feature allows automatic handling of the powder dosing directly from big bags or silos. By means of vacuum the powder is drawn into the mixer below liquid level and instantly wetted. The powerful, high shear mixer generates a controlled vortex in the tank.

The combination of vortex and vacuum effectively separates air from the liquid and generates a perfect homogenous dispersion within seconds.

The result is a highly stable and homogenous, air- and lump-free end product.

Depending on the selected options, the mixer can be used as a batch mixer or as an in-line mixer. For in-line mixing a circulation loop is required.

APPLICATIONS:

The **VacuumMaster** can be used for various applications e.g.:

- Products for spray drying
- Soft drinks
- Ice cream
- Sugar solutions
- Pectin solutions
- Syrup
- Slurries
- Soups
- Recombined milk-based products
- Etc.

The final product should be pumpable with a centrifugal pump - up to 500 cP. Depending on type of viscosity (Shear sensitive e.g. Ketchup) products with up to 2.000 cP can be processed. For viscosity above 2000 cP, a Daniatech ProcessMaster is recommended.



VACUUMMASTER

EQUIPMENT

STANDARD EQUIPMENT:

| |
|--|
| Mixer unit (WEG) with flushed mechanical shaft seal (requires frequency control) |
| Vacuum pump with water-saving unit (requires frequency control) |
| 3-way valve for CIP of vacuum pipe |
| Cleanable vacuum system |
| Manholde with safety sensor |
| Inspection glass with wiper / inspection glass with LED light source (Lumiglas) |
| 2 x powder valves with Alfa Laval LKLA actuator (butterfly) |
| 1 x outlet valve with Alfa Laval LKLA actuator (butterfly) |
| 2 x rotating spray balls with 3-way valve from vacuum pipe (Alfa Laval Uniq type 21) |
| 2 x level sensors top & bottom (IFM) |
| Temperature and pressure transmitter (IFM) |
| Fittings: TRI-Clams, SMS or DIN-ISO |

OPTIONS

| |
|---|
| Powder hoppers (100l, 250l, 500l, 1000l & 2000l) |
| Powder hopper for small ingredients incl. butterfly valve |
| Extra powder valve 2½" butterfly / extra inlet in top |
| MCC panel with inverters |
| I/O Panel for connection to central control |
| Outlet pump |
| Load cells (2 pc global weighing) with transmitter in stainless box |
| Insulated jacket |
| Process valve - different type (GEA, SPX, etc.) |

TECHNICAL DATA

| Model: | Mixer size | Product density: | Viscosity | Mixer effect: | Vacuum volume |
|--------|------------|------------------|-----------|---------------|---------------|
| 250 | 160 | 1-1,35 kg/l | 1-2000 cp | 11-18,5 kW | 3 kW |
| 500 | 160 | 1-1,35 kg/l | 1-2000 cp | 18,5-22 kW | 3 kW |
| 1000 | 200 | 1-1,35 kg/l | 1-2000 cp | 22-30 kW | 5.5 kW |
| 2000 | 250 | 1-1,35 kg/l | 1-2000 cp | 45-55 kW | 5.5 kW |
| 3000 | 325 | 1-1,35 kg/l | 1-2000 cp | 55-75 kW | 7.5 kW |
| 5000 | 325 | 1-1,35 kg/l | 1-2000 cp | 75-90 kW | 7.5 kW |

| Model: | Outlet/U | Powder valve | CIP | Inlet | Service Water | Dimensions (H x W x D) | Shipping weight | Shipping volume |
|----------|--------------|----------------------|-----|--------|---------------|--------------------------|-----------------|---------------------|
| 250 L/H | Ø51/650mm | 1 x Ø51 1 x Ø63,5 | Ø51 | 1x Ø51 | 100 L/h | 2200 x 1200 x 900 mm | 600 kg | 2.3 m ³ |
| 500 L/H | Ø51/650mm | 1 x Ø51 1 x Ø63,5 | Ø51 | 1x Ø51 | 100 L/h | 2400 x 1300 x 1000 mm | 900 kg | 3.4 m ³ |
| 1000 L/H | Ø63,5/650mm | 1 x Ø51 1 x Ø63,5 | Ø51 | 1x Ø51 | 100 L/h | 3400 x 1400 x 1200 mm | 1400 kg | 5.7 m ³ |
| 2000 L/H | Ø63,5/1000mm | 2 x Ø63.5 | Ø51 | 2x Ø51 | 100 L/h | 3800 x 2000 x 1700 mm | 1800 kg | 13 m ³ |
| 3000 L/H | Ø76/1200mm | 2 x Ø63.5 | Ø51 | 2x Ø51 | 150 L/h | 4300 x 2500 x 2000 mm | 2200 kg | 21.5 m ³ |
| 5000 L/H | Ø76/1200mm | 2 x Ø63.5 | Ø51 | 2x Ø51 | 150 L/h | 4600 x 2600 x 2200 mm | 2300 kg | 26 m ³ |