

Daniatech

VacuumMaster

ABOUT THE 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



Specifications

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

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 & syrup
- Ice cream & recombined milk-based products
- Soups and slurries
- Sugar & pectin solutions

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 on a standard VacuumMaster unit. For viscosity above 2000 cP, a Daniatech ProcessMaster is recommended.

Equipment

STANDARD EQUIPMENT
Mixer unit 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
Manway with safety sensor
Inspection glass with wiper / inspection glass with LED light source
2 x powder valves with actuator (butterfly)
1 x outlet valve with actuator (butterfly)
2 x rotating spray balls with 3-way valve from vacuum pipe
2 x level sensors top & bottom
Temperature and pressure transmitter
Fittings: TRI-Clams, SMS or DIN-ISO

OPTIONAL EQUIPMENT
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
Insulated jacket
Load cells (2 pc global weighing) with transmitter in stainless box
Process valve - different types

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 (HxWxD)	Shipping weight	Shipping volume
250	Ø51/650 mm	1 x Ø51 1 x Ø63.5	Ø51	1 x Ø51	100 l/h	2200 x 1200 x 900 mm	600 kg	2.3 m³
500	Ø51/650 mm	1 x Ø51 1 x Ø63.5	Ø51	1 x Ø51	100 l/h	2400 x 1300 x 1000 mm	900 kg	3.4 m³
1000	Ø63.5/650 mm	1 x Ø51 1 x Ø63.5	Ø51	1 x Ø51	100 l/h	3400 x 1400 x 1200 mm	1400 kg	5.7 m³
2000	Ø63.5/650 mm	2 x Ø63.5	Ø51	2 x Ø51	100 l/h	3800 x 2000 x 1700 mm	1800 kg	13 m³
3000	Ø76/1000 mm	2 x Ø63.5	Ø51	2 x Ø51	150 l/h	4300 X 2500 2000 mm	2200 kg	21.5 m³
5000	Ø76/1000 mm	2 x Ø63.5	Ø51	2 x Ø51	150 l/h	4600 x 2600 x 2200 mm	2300 kg	26 m³