

Daniatech DTM VacuumMaster



The DTM VacuumMaster is the most energy efficient and flexible vacuum mixer on the market:

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

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

The DTM VacuumMaster (patent pending) represents the next generation of mixing solutions for the process industry. Not only is it more compact and perfectly optimized 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 DTM VacuumMaster can be used for various applications e.g.:

- Recombined milk-based products
- Products for spray drying, soft drinks, ice cream, sugar solutions, pectin solutions, syrup, slurries, soups, etc.

The final product must be pumpable using a standard centrifugal pump – viscosity up to 2000 cP. For viscosity above 2000 cP, a DTM process mixer is required.

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
- Man hole 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)
- Level sensor top/bottom (E&H Liquiphant)
- Temperature and pressure transmitter (WIKA)
- Fittings: TRI-Clams, SMS or DIN-ISO

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Options:

- Powder hoppers (100 l, 250 l, 500 l, 1000 l & 2000 l)
- Powder hopper for small ingredients incl. butterfly valve
- Extra powder valve 2½" butterfly/extra inlet in top
- MCC panel with frequency converters
- I/O panel for pre-connection to central control
- Outlet pump
- Load cells (2 Global Weighing) with transmitter in stainless steel box
- Insulated jacket
- Process valves of different brand (GEA,SPX, etc.)

Technical data:

Model:	Mixer size	Product density	Viscosity	Mixereffect	Vacuum pump
DTM 250L V	160	1-1,05 kg/l	1-500 cp	11 kW	3 kW
DTM 250H V	160	1,05-1,35 kg/l	500-2000 cp	18,5 kW	3 kW
DTM 500L V	160	1-1,05 kg/l	1-500 cp	18,5 kW	3 kW
DTM 500H V	160	1,05-1,35 kg/l	500-2000 cp	22,5 kW	3 kW
DTM 1000L V	200	1-1,05 kg/l	1-500 cp	22 kW	5,5 kW
DTM 1000H V	200	1,05-1,35 kg/l	500-2000 cp	30 kW	5,5 kW
DTM 2000L V	250	1-1,05 kg/l	1-500 cp	45 kW	5,5 kW
DTM 2000H V	250	1,05-1,35 kg/l	500-2000 cp	55 kW	5,5 kW
DTM 3000L V	325	1-1,05 kg/l	1-500 cp	55 kW	7,5 kW
DTM 3000H V	325	1,05-1,35 kg/l	500-2000 cp	75 kW	7,5 kW
DTM 5000L V	325	1-1,05 kg/l	1-500 cp	75 kW	7,5 kW
DTM 5000H V	325	1,05-1,35 kg/l	500-2000 cp	90 kW	7,5 kW

Model:	Outlet/U	Powder valve	CIP	Inlet	Water consumption	Dimension (H x W x D)	Shipping weight	Shipping volume
DTM 250L/H	Ø51/650mm	1xØ51 1xØ63,5	Ø51	1xØ51	100 l/H	2200 x 1200 x 900 mm	600 kg	2,3 m³
DTM 500L/H	Ø51/650mm	1xØ51 1xØ63,5	Ø51	1xØ51	100 l/H	2400 x 1300 x 1000 mm	900 kg	3,4 m³
DTM 1000L/H	Ø63,5/650mm	1xØ51 1xØ63,5	Ø51	1xØ51	100 l/H	3400 x 1400 x 1200 mm	1400 kg	5,7 m³
DTM 2000L/H	Ø63,5/1000mm	2xØ63,5	Ø51	2xØ51	100 l/H	3800 x 2000 x 1700 mm	1800 kg	13 m³
DTM 3000L/H	Ø76/1200mm	2xØ63,5	Ø51	2xØ51	150 l/H	4300 x 2500 x 2000 mm	2200 kg	21,5 m³
DTM 5000L/H	Ø76/1200mm	2xØ63,5	Ø51	2xØ51	150 l/H	4600 x 2600 x 2200 mm	2300 kg	26 m³