

GEA BATCH FORMULA® SOL High Shear Vacuum Mixer (runs as inline)

Batch Unit 1000L, 1500L, 2000L, 3000L,
4000L, 5000L





BATCH FORMULA® SOL High Shear Vacuum Mixer
Affecting product quality, batch cycle times and total cost of ownership, selecting the most appropriate mixing and/or cooking technology is crucial for your process.

BATCH FORMULA® SOL High Shear Vacuum Mixer

Batch Unit 1000L, 1500L, 2000L, 3000L, 4000L, 5000L

The multifunctional BATCH FORMULA® SOL High Shear Vacuum Mixer uniquely introduces powder under vacuum below the liquid surface. This instantly wets and deaerates the powder, thereby creating a uniform and homogenous product. The high shear mixing device produces small oil droplets to support a stable emulsion.

Running as an inline unit, the BATCH FORMULA® SOL High Shear Vacuum Mixer has been specifically designed to process materials with viscosities greater than 700 cP to the same standards of homogeneity as those obtained with lower viscosity products by our INLINE FORMULA® SOL High Shear Vacuum Mixer. Typical applications include e.g. ice cream, standardization and sweetened condensed milk as well as milk or fruit beverages with added thickeners and stabilizers.

Key benefits

- One-pot-process for efficient cooking and mixing processes
- Low CAPEX/OPEX
- Rapid dissolution of powders into liquids without fish eyes or agglomerates
- Stable suspensions
- Gentle product handling
- Hygienic design and total batch-to-batch drainage
- Multiple application versatility for highly viscous products



Main components

- Vacuum tank
- High shear mixing device (HSMD)
- Stator ring, Ø4 mm (available in other sizes)
- Vacuum pump
- Baffle plate

Materials

All parts in contact with the product are made from stainless steel EN 1.4404 (AISI 316L). Other parts are made from EN 1.4301 (AISI 304).

Options

- Direct steam injection
- With recirculation: Load cells & flowmeter
- Insulation
- Knife/cutter

GEA BATCH FORMULA® SOL High Shear Vacuum Mixer	1000L	1500L	2000L	3000L	4000L	5000L
Processing parameters						
Batch capacity, L/h	1000-4000	1500-6000	2000-8000	3000-12000	4000-16000	5000-20000
Batches per hour	1-4	1-4	1-4	1-4	1-4	1-4
HSMD, mm ø	190/290	190/290/390	290/390	290/390	390	390
Minimum batch, L	400	550	650	750	1100	1200
Typical recirculation capacity (external pump), L/h	20000	30000	40000	60000	80000	100000
Max. dry matter, %	≤ 80	≤ 80	≤ 80	≤ 80	≤ 80	≤ 80
Max. viscosity, cP	≤ 5000	≤ 5000	≤ 5000	≤ 5000	≤ 5000	≤ 5000
Viscosity (recirculation), cP	≤ 5000	≤ 5000	≤ 5000	≤ 5000	≤ 5000	≤ 5000
Powder, kg/min.	≤ 150	≤ 200	≤ 200	≤ 200	≤ 200	≤ 200
Consumption data						
Installed power, kW	37-51	37-83	51-83	51-83	75-90	75-90
Power supply, IE3, IP66, 50/60 Hz, V	380-480	380-480	380-480	380-480	380-480	380-480
Mixing temperature (no vacuum), °C	≤ 100	≤ 100	≤ 100	≤ 100	≤ 100	≤ 100
Mixing temperature (vacuum), °C	≤ 70	≤ 70	≤ 70	≤ 70	≤ 70	≤ 70
Service water, L/h at max 20 °C	≤ 400	≤ 400	≤ 600	≤ 600	≤ 600	≤ 600
Instrument air, NL/min	100	100	100	100	100	100
Connections* (for all sizes)						
Steam	Flange DN50, DIN 11850 type 11B					
Liquid inlet	DN50 - DN65 / ISO 2" - ISO 2½"					
Product outlet	DN65 - DN100 / ISO 2½" - ISO 4"					
Service water, ball valve	Female, BSP½"					
Cooling/hot water	Flange DN50, DIN 11850 type 11B					
Air	6 mm tube					
Estimated dimensions						
Length, mm	3000	3000	3100	3700	3800	3800
Width, mm	1800	1800	1900	2000	2200	2200
Height, mm	3400	3600	3700	4000	4000	4100

* All connections are DIN 11851, unless stated otherwise
Above process parameters are guidelines and can vary depending on powder ingredients.



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Working with GEA Service means partnering with a dedicated team of service experts.

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Beginning of Life Services

Getting you started with seamless support for instant productivity and performance.

Lifetime Services

Keeping it running with the cost-efficient

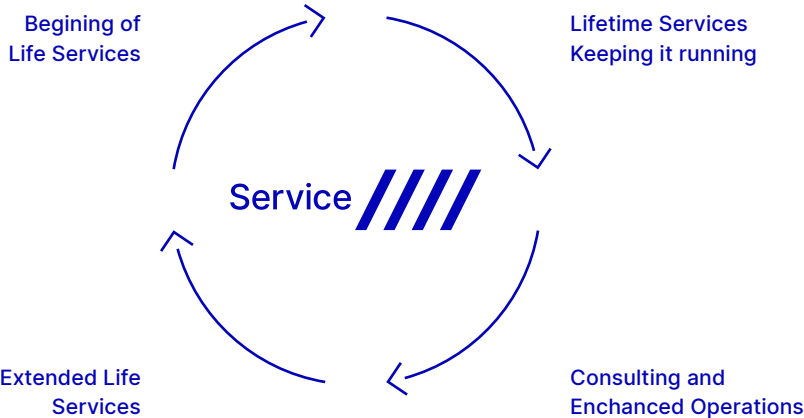
way of ensuring safety and reliability.

Extended Life Services

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