

GEA Batch Formula™

Mixing Systems





The Most Versatile Mixing System Available Today!

With the unique patented dynamic stator system, it is now possible to mix and homogenize in one unit operation, going from low shear to high shear with a single input.

The powder introduction point is below the liquid surface in the mixing vessel, thereby achieving instant wetting of the ingredients. This is possible for even the most difficult applications such as pharmaceutical coating solutions at 100,000+ centipoise.

As a result, very short mixing times are possible of process flexibility.

Batch sizes from 50 ltrs. (13 Gal.) to 15,000 ltrs. (3,900 Gal.)
 Rotor sizes from Ø 120 to Ø 600 mm.
 Power consumption from 5 to 630 kW.
 Frequency control of mixing speed.

Options:

- Cooling / Heating
- Different stators
- Inducer or knife
- Scraper agitator
- Direct steam injection
- Condition monitoring system

Unique Turbo Unit

The GEA Batch Formula™ is a versatile unit for multiple applications. For mixing and processing products with total solids up to 80%.

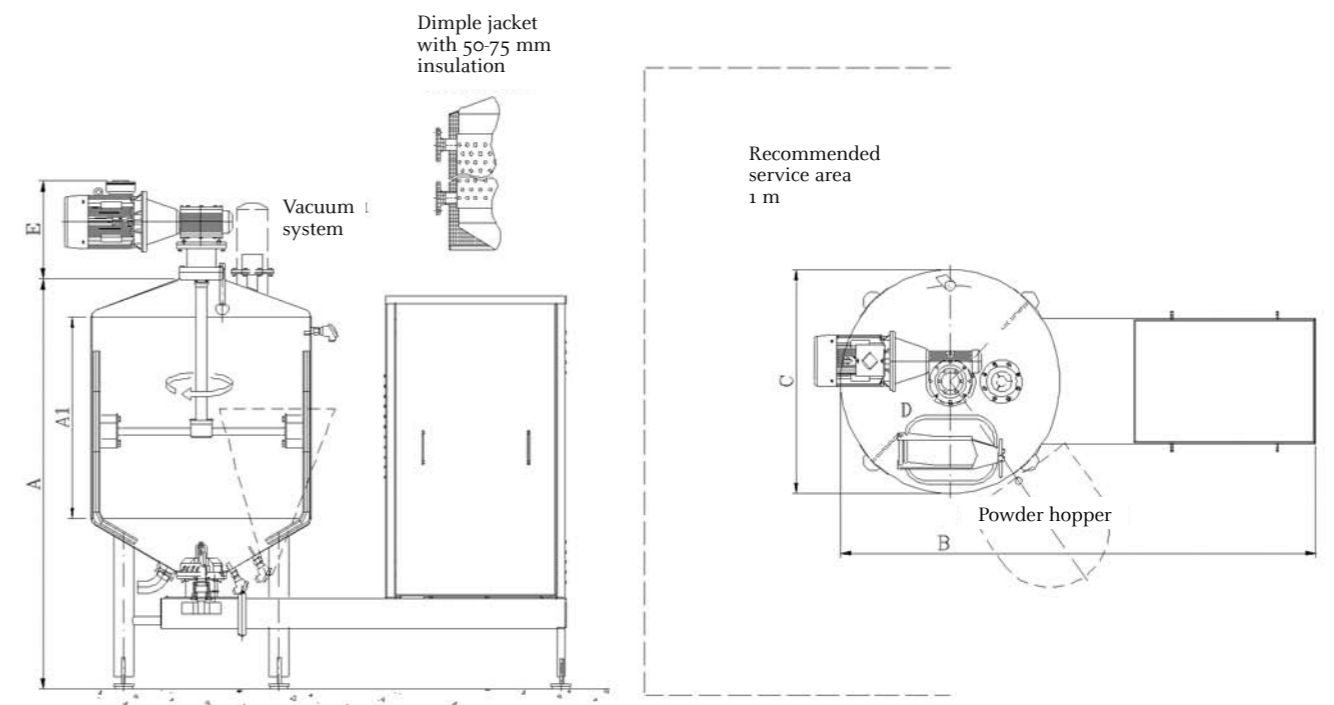
The high efficient mixing device placed in the bottom of the tank is the key to a uniform, homogeneous mixing of products in the process unit.

Wide Range of Options

The process vessel can be supplied with different options not limited to the following:

- Heating by direct steam injection
- Heating with steam or hot water by dimple jacket
- Indirect cooling via dimple jacket
- Vacuum for de-aeration of product
- Vacuum for powder transport
- Vacuum for flash cooling or evaporation
- Equipment for handling of powder and liquids.

Ask us for your special needs!



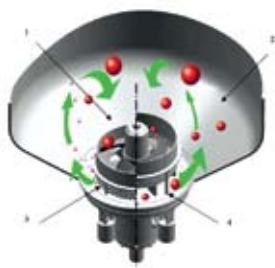
GEA Batch Formula™ Standard Sizes

SIZE STM / SPM	PRODUCT CAPACITY	TURBO MOTOR	AGITATOR MOTOR	VACUUM PUMP	SIZE mm						WEIGHT kg
					A	A1	B	C	D	E	
100	100	11	0,9	0,75	1250	400	1600	582	314x424	390	470
250	250				1530	600	1800	756	314x424	390	710
500	500				1680	550	2210	1100	314x424	390	865
1000	1000				2205	1000	2485	1250	314x424	445	1565
1500	1500				2550	1250	2560	1300	314x424	445	1725
2500	2500				2935	1500	2710	1600	314x424	445	2115
5000	5000				3440	1800	3210	2000	314x424	445	3060
7500	7500				3740	2000	3460	2300	314x424	580	3470
10000	10000				4130	2300	3660	2500	314x424	580	4900
15000	15000	200	9,2	11	4565	2500	4110	3000	314x424	615	5275

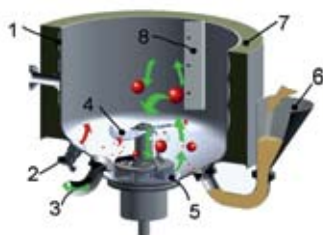
cGMP Process Solutions for the Pharmaceutical and Biotech Industries

GEA Liquid Processing is a world leader in providing technically advanced cGMP process solutions for liquid processes. Utilizing good engineering practices and GAMP compliant automation, knowledgeable staff deliver completely integrated and reliable, hygienic liquid process systems that meet the most stringent regulations. Engineering and technical support offices are located in every major industrial market, providing support to the highest standards.

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1. The product is sucked into the turbo wheel by centrifugal force.
2. The speed of the product against the tank wall generated by the turbo wheel gives optimum heat transfer when using the jacket for heating, especially when the stator is lifted due to higher flow.
3. High shear mode: the stator is lowered and all product flow is forced through the stator holes to break down particles and give a homogenous mix/product. The shear level is determined by the size of the holes in the stator and the speed of the turbo wheel is regulated by an inverter drive.
4. Low shear/blending mode: the stator is raised and the product flow is fast but gentle. This mode allows the addition of particulates/solids to be blended into the product homogeneously with little or no damage or to be chopped by a special knife attachment.



Tailor-made Solutions:

1. Dimple jacket
2. Direct steam injection
3. Outlet
4. Knife / propeller
5. Stator
6. Funnel
7. Insulation
8. Scraper



Process Engineering

GEA Liquid Processing

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