

# 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 an instant wetting of the ingredients. This is possible for even the most difficult applications such as pharmaceutical coating solutions at 100,000+ centipoises.

As a result, very short mixing times are possible with a high degree 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

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### Unique Turbo Unit

The BATCHFORMULA™ is a versatile unit for multiple applications - for mixing and processing products with total solids up to 80%.

The highly 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, such as:

- 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



View Our BATCH FORMULA™ Animation  
[www.gea-liquid.dk/batchformula](http://www.gea-liquid.dk/batchformula)



## Our Competencies

GEA Liquid Processing has an understanding of the entire process through know-how and many years of experience - guaranteeing complete integration with up- and downstream processes.

GEA Liquid Processing likes to challenge traditional thinking, and we are able to offer customized solutions meeting the specific requirements of each single customer.

Please tell us about your special needs!

Characteristic features of the BATCH FORMULA™ Mixer are:

- One pot processing reducing process time and increasing profitability
- A hygienic design, ensuring total drainage of the mixer from batch to batch
- Manifolds for accurate dosing of high-viscous liquids
- No circulation loop
- Ease of cleaning

## BATCH FORMULA™ Standard Sizes

SIZE BF	PRODUCT CAPACITY	TURBO MOTOR	AGITATOR MOTOR	VACUUM PUMP
	LTR.	KW	KW	KW
100	100	11	0.9	0.75
250	250			
500	500			
1000	1000			
1500	1500			
2500	2500			
5000	5000			
7500	7500			
10000	10000			
15000	15000	200	9.2	11

## BATCH FORMULA™ Test Mixer

Why not let us test the BATCH FORMULA™ Mixer on your specific product?

To take advantage of this special offer or to order a free feasibility study, please visit our website:

[www.gea-liquid.dk/batchformula](http://www.gea-liquid.dk/batchformula)



*Test Mixer*

# 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, our 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.

## BATCH FORMULA™

Mixing Systems



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 homogeneous 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.



GEA Process Engineering

### GEA Liquid Processing

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