



# GEA MultiDrum for homestyle breeding

Perfect authentic homestyle appearance,  
reduced labor, dust free





# Re-create authentic homestyle breading

Re-creating delicious homestyle breading on an industrial scale used to be a compromise. You had to choose between an authentic look but with low production efficiency, or a non-authentic appearance with better efficiency. No more! GEA has perfected an innovative multi-drum breader that overcomes all of the automated homestyle breading drawbacks to produce authentic looking natural bone-in and boneless products with a crunchy golden coating.

## What makes homestyle so special?

Typical homestyle (or Southern style) breaded coating looks homemade, and with its very coarse crunchy texture, it has the appearance of a coral reef. Familiar for many years in quick-service restaurants (QSRs), where it is still created by hand, it is gaining popularity as consumer 'heat and eat' products sold in supermarkets. But the look, bite and feel of these products just did not match the real thing! Until now that is!

## Fast becoming a major trend

An authentic golden coating adds real value to bone-in like drums, wings, legs, thighs and 8-piece chicken and boneless products like tenders, fillets and chicken popcorn as well as formed products like nuggets.

## Why is it hard to automate homestyle breading?

It is a real challenge to re-create genuine homestyle breading in an automated process. With a flatbed breader, full coating coverage is difficult and the appearance is non-authentic. It is possible to use a seeded flour on a flatbed to get a coating that starts to resemble homestyle, but the eating experience is totally different. Using flip-style application of flour looks slightly better, but this is not an efficient process. A conventional single drum breader gets close to the right look, particularly with a double pass, but has inherent process drawbacks and very high labor costs.





# Automating homestyle breading

## A Singel drum is not enough

The tumble motion of a drum gives a homestyle appearance, but this comes at a price in terms of process steps, manning levels and other process drawbacks. To start with, the product stream has to be converged to enter a single drum, and products leaving the drum also have to be spread, which is a labor intensive process, typically requiring up to 20 people! Although a shaker could be used for spreading, this is costly and adds to the overall line length. From a day-to-day maintenance perspective, conventional drum breaders have poor access for cleaning, tend to create dust in the work environment and cannot handle wet products due to blockage. And quite often, the drum has to be so large it is difficult to clean.

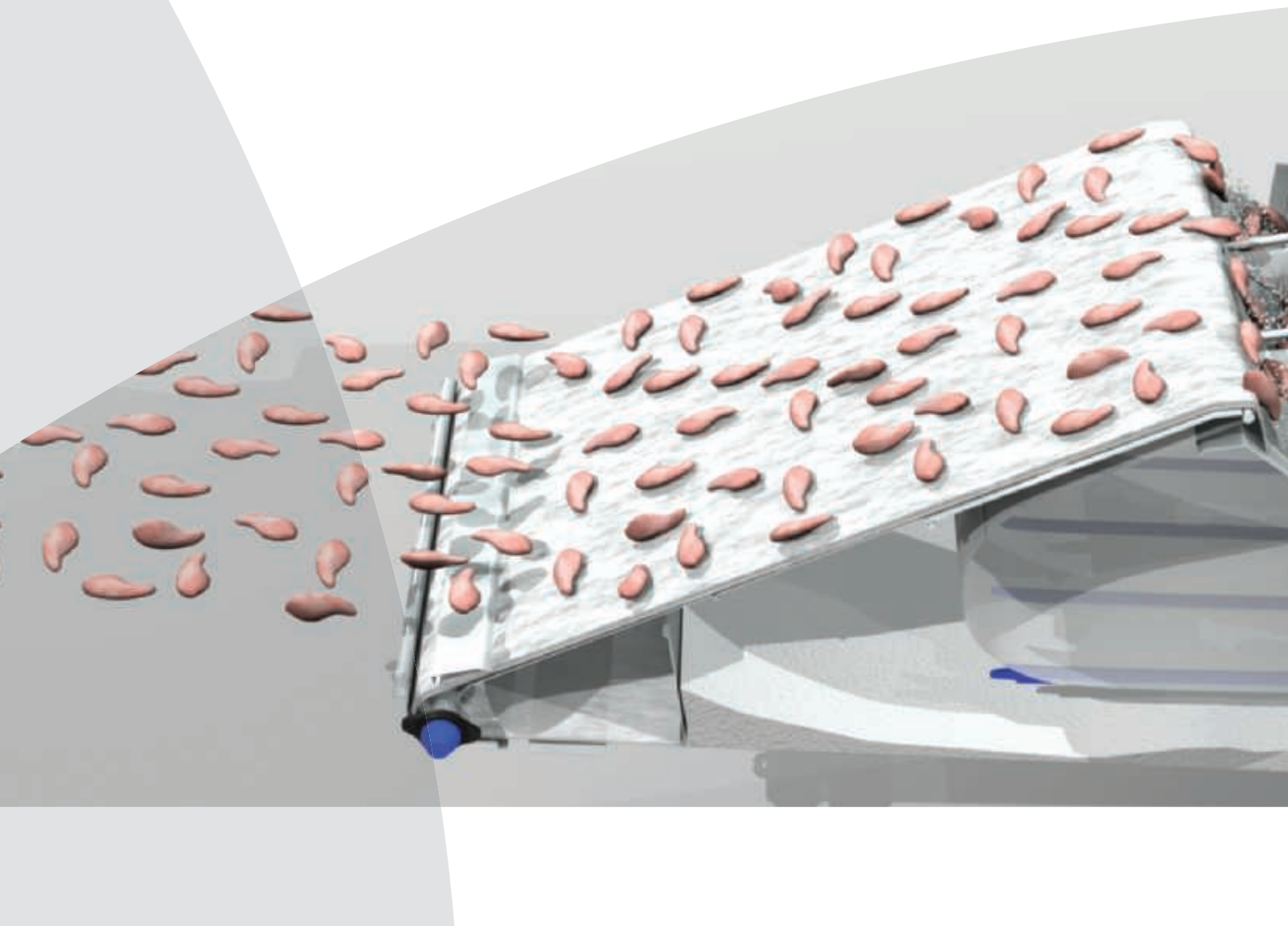
## Multiple drums provide the perfect solution

To overcome all these obstacles, GEA has developed an

innovative homestyle breader with multiple drums. This patented concept splits the product stream, and feeds the products evenly into multiple drums. The products leave the drums evenly spread across the belt.

## The GEA MultiDrum breader

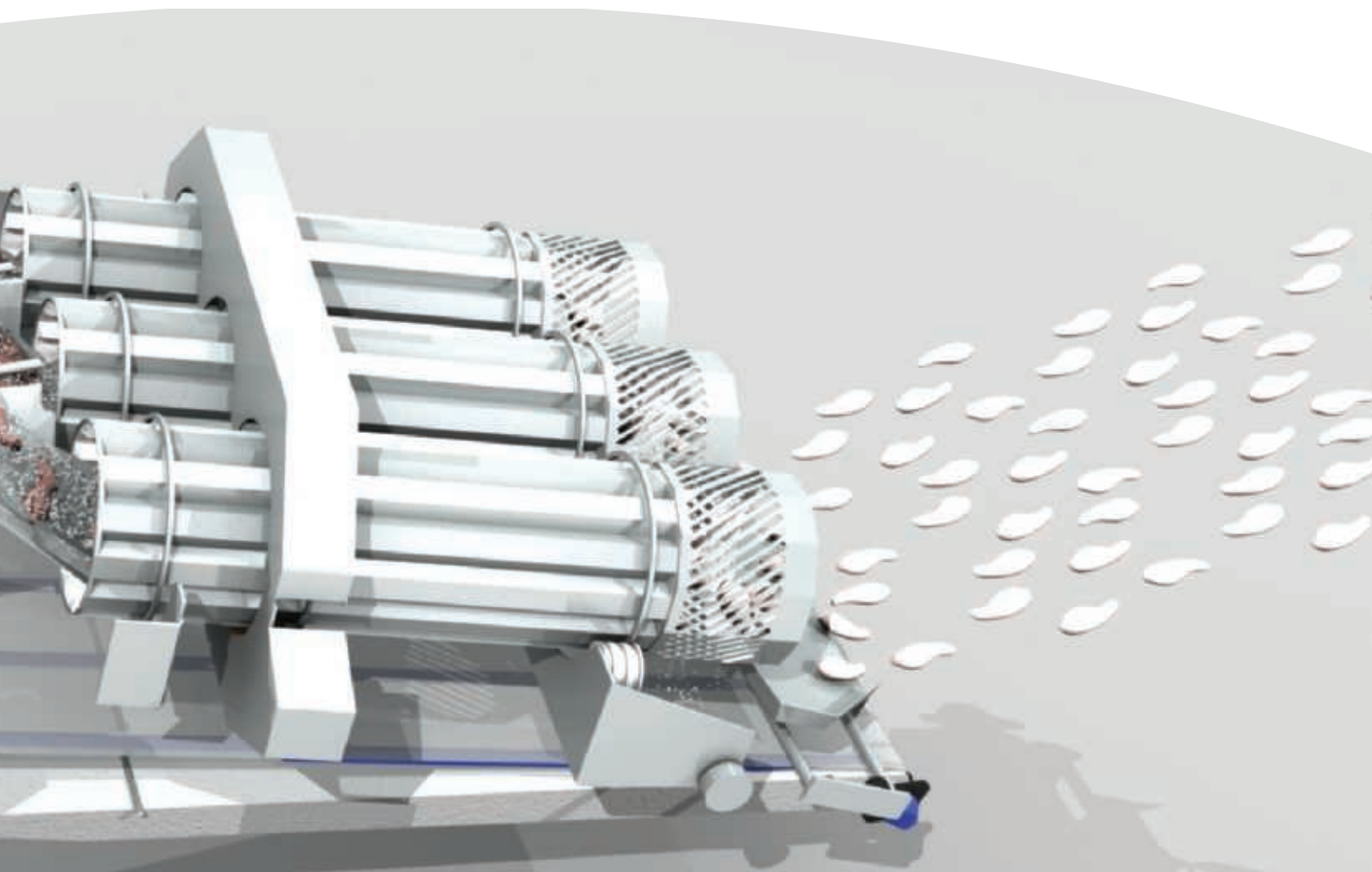
Called the GEA MultiDrum, it delivers consistent coating quality with the authentic homestyle look, taste and bite. The pick-up percentage is controllable, and the machine requires considerably less space than a single-drum breader and associated spreading belts. This means the overall line is shorter. The design is easy to clean, and thanks to the GEA OptiAir technology, the amount of dust in the work environment is greatly reduced. The GEA MultiDrum is available in a three-drum configuration (1000 mm wide) and a twin-drum configuration (600 mm wide).



### MultiDrum in action

Products rise on a chain belt at the MultiDrum infeed and are naturally divided into two or three channels (depending on the model). The level of flour on the flour bed is adjustable and kept constant so that the right amount falls into the drums with the products. There are no augers used to return flour to the infeed, so wet products can be fed into the drums without the risk of blockages forming. Tumbling the products in the rotating

drums ensures an authentic homestyle appearance. After tumbling, they exit the drums evenly spread across the belt and the excess flour falls through slits to be recycled back into the machine. Adjusting the drum angle, its rotational speed and the flour dosing at the infeed enables the flour pick-up level to be very accurately controlled.

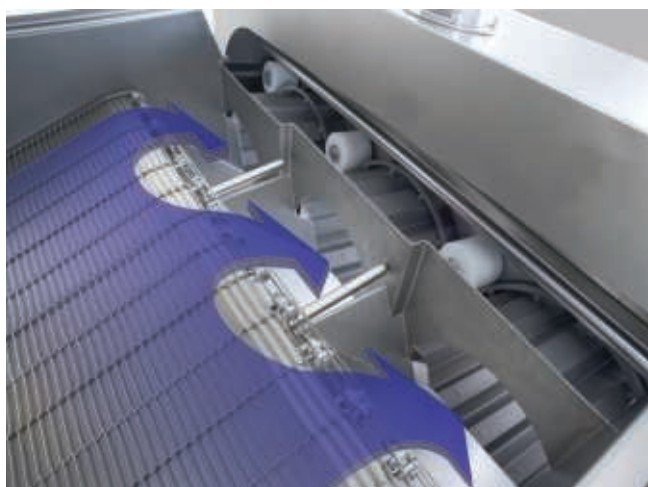


# The solution to bulk load the breading line

On a single drum breader, converging products at the infeed and spreading them at the outfeed requires additional equipment, manual labor or both. This is costly and needs a longer line. The GEA MultiDrum enables products (bone-in or boneless) to be bulk loaded without the need for converging, and creates three even streams, one for each drum. Also at the outfeed, the breaded products are evenly spread across the transport belt, ready for the next step in the process.

## No Converging at the infeed

The benefits of the GEA MultiDrum start at the infeed, where products can be bulk loaded. There is no need for additional converging machines, which would add cost as well as make the line longer. As the products rise up on a chain belt, they are naturally divided into three channels, one for each drum (two for the 600 mm version). An adjustable level of flour on the flour bed is constantly maintained, so the right amount of breading falls into drums with the products.



*No need to converge the product infeed stream*

## Three rotating drum

This unique multi-drum breading technology is only available on GEA coating machines. Tumbling the products in a drum ensures a homestyle appearance, and there are no augers in the design so the potential for blockage is minimized. After tumbling, excess flour falls through slits and is constantly cycled back into the machine. At the outfeed, products exit evenly spread across the belt and there is no need for additional spreading machines or manual workers. In fact up to 80% fewer manual workers are required on a GEA MultiDrum breading line!



*Perfect product spreading at the GEA MultiDrum outfeed*













# Controllable pick-up and appearance

In addition to the labor-saving and space saving aspects of GEA's innovative breading technology, the GEA MultiDrum also provides a very high degree of process control. It enables you to accurately control the pick-up percentage and creates a perfect homestyle appearance.

## Controlling the pick-up percentage

To ensure you can create the ideal homestyle coating according to specific recipe and product requirements, the GEA MultiDrum features adjustable flour bed level, drum angle and drum speed. This enables the pick-up percentage to be accurately controlled.

## Designed for cleanability

Unlike conventional single drum breaders, which have difficult access for cleaning, the drums on the GEA MultiDrum can automatically be lifted to a special cleaning position, enabling thorough cleaning of the whole machine, including the normally difficult to reach areas below the drum.

## Minimizing dust levels in the air

Working with flour and breading coatings on a drum breader can lead to considerable dust in the air. This not only increases the amount of work required for cleaning the work area but it is also unpleasant for operators and can even influence safety. The GEA MultiDrum is designed to work with the GEA OptiAir flour recycling unit (see panel), which is the most effective system currently available.

## Also for pre-dust applications

The benefits of GEA's innovative coating technique are not limited to homestyle. Thanks to the bulk loading capability of natural portions where no spreading labor is required, the machine is also excellent for pre-dust applications. It delivers 100% pre-dust coverage, and products exit at the outfeed evenly spread across belt width. This singulated product with no spreading labor translates into high capacity and low operating costs (see next page upper line illustration).



GEA MultiDrum with pre-dust application



GEA MultiDrum with homestyle application (final step)

# Range of line configurations

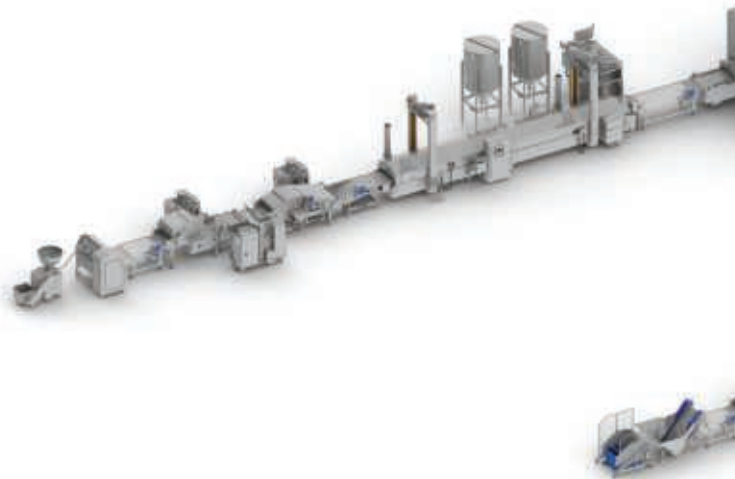
A few of the high capacity, low labor line examples include are shown below. They include a bulk-fed line for homestyle portions with two GEA MultiDrum breaders that offers 25 to 35% pick-up. An extended homestyle line that provides up to 45% pick-up is shown in the bottom line illustration below. This line features an extra GEA OptiFlour between two GEA MultiDrum breaders. For formed homestyle products such as boneless wings and chicken popcorn, a GEA MultiDrum can be fed directly from the a drum former and delivers 25 to 35% pick-up (below center line illustration).

## Your benefits

- A coarse, high pick-up homestyle coating
- The possibility to bulk load the line
- No need to converge the product stream
- Perfect product spreading at the outfeed
- Reduction of labor by up to 80%
- Reduced footprint and line length
- Controllable pick-up levels
- Reduced dust in the environment
- Excellent accessibility for cleaning



The GEA OptiAir sets the world standard for creating a dust-free environment for coating applications. Developed together with the innovative GEA OptiFlour pre-duster, it leads to dust-free operation for a cleaner, safer and more pleasant working environment. It also reduces the risk of cross contamination in the factory. The GEA MultiDrum is fully compatible with GEA OptiAir. The potential cost savings in flour usage are considerable (flour can be re-used in many applications), while shorter machine cleaning time, less water usage and reduced factory cleaning further save money.



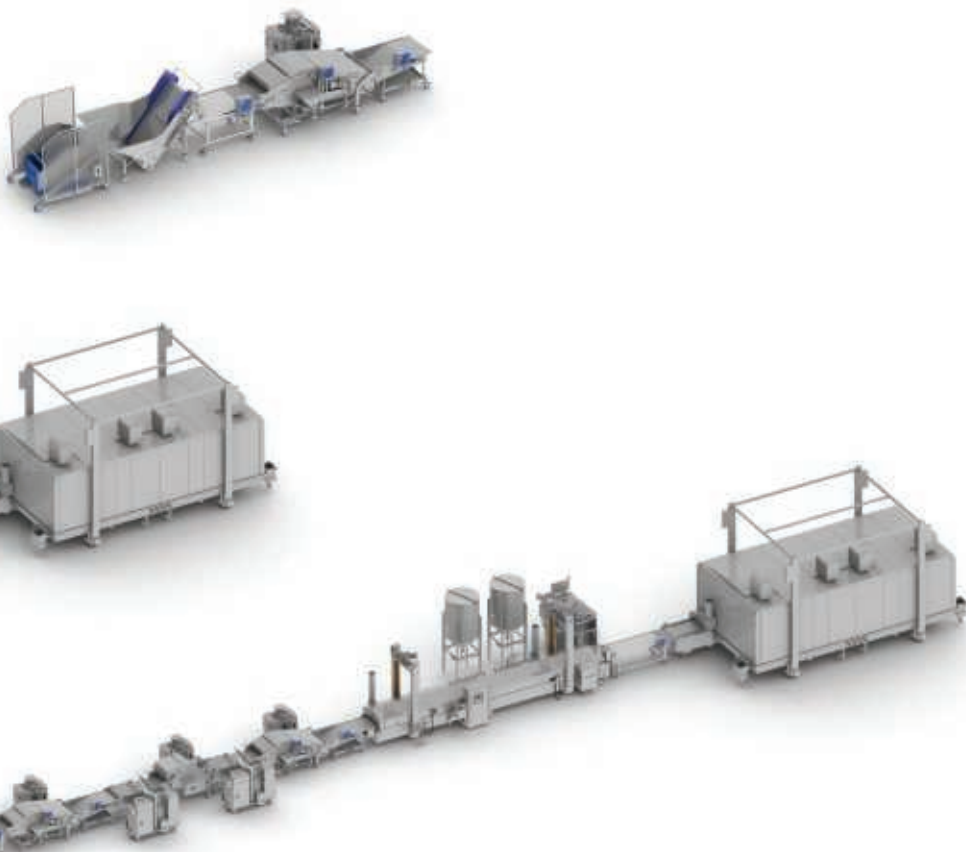


### Quick reference data

	GEA MultiDrum 600	GEA MultiDrum 1000
Dimension L x W x H	5300 x 1740 x 1700 mm (209 x 68.6 X 67")	5300 x 2140 x 1700 mm (209 x 84.3 x 67")
Belt width	600 mm (23.6")	1000 mm (39.4")
Speed	2.5 to 25 meter/minute	2.5 to 25 meter/minute
Machine weight	1000 kg (2205 lbs)	1350 kg (2976 lbs)
Min. product height	16 mm (0.63")	16 mm (0.63")
Max. product height	70 mm (2.76")	70 mm (2.76")

### The full range of GEA coating equipment

GEA Multidrum	Homestyle breading with a coarse, hight pick-up, golden appearance on boneless and bone-in products, reduced labor and dust free environment (in combination with GEA OptiAir).
GEA OptiFlour® & GEA OptiAir	Finely adjustable pre-dust, flour or breading pick-up, dust-free processing environment, flour cost savings, suitable for heavy duty 'seeded flour' applications.
GEA CrumbMaster®	Ideal for both fine and coarse crumbs ensures product consistency and quality, easy to clean, simple to operate.
GEA WetCoater & GEA TempuDipper	Efficient, even coverage of batter or tempura, easy to clean.
GEA OptiCoater & GEA OptiDipper	Versatile, even product coverage with batter or tempura, extra options to meet high product demands, extremely hygienic, recipe controllable.
GEA TempuMixer	Fully automatic tempura mixer - industry standard in product quality, fluffiness, consistency and savings on tempura mix ingredients, low product waste, easy and safe to operate, simple to clean.
GEA BatterMixer	Versatile batter mixer, suitable for milk wash, adhesion batters and high viscous batters, simple to operate, easy to clean. Manually supply of flour and water.





## We live our values.

Excellence • Passion • Integrity • Responsibility • GEA-versity

GEA Group is a global engineering company with multi-billion euro sales and operations in more than 50 countries. Founded in 1881, the company is one of the largest providers of innovative equipment and process technology. GEA Group is listed in the STOXX® Europe 600 index.

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