



# Soft dough and cookies

**IMAFORNI**

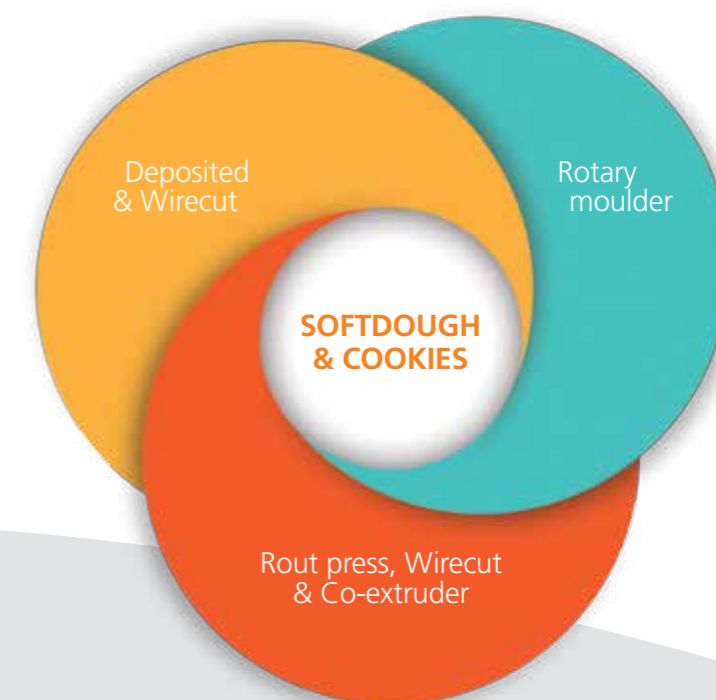


## The process

### Key technologies for a wide range of products

The soft-dough and cookies sector of the biscuit market comprises a wide-ranging family of products. Wire-cutting, depositing and rotary moulding are three of the key processes for manufacturing high quality final products.

Flexibility is a must! GEA Imaformi basic wire-cutting and depositing systems are robust and high-precision units, and can be configured with optional auxiliary equipment to manufacture a wide selection of inventive shapes and forms, and products with inclusions, toppings and decoration.



# Rout press, wirecut and co-extruder

A wide range of products manufactured with a single machine.

The basic unit consists of two grooved rolls that extrude the dough through a set of dies, in order to give the dough pieces the required shape.

A fillerblock is inserted between the rolls and the die plate.

This configuration both equalizes dough distribution across the whole width and also ensures optimum weight control.

The forming machine is configured as a rout press.

A wirecut mechanism can be added for producing plain biscuits or products with inclusions. Rout press products are cut using a

guillotine cutter that can be positioned either before or after the oven, depending on the type of final product to be obtained.

Different types of fruit bars can also be cut either before or after baking.

Adding a crimping device, makes it possible to form soft-centre cookies filled with jam or cream.

Fitting the core route press unit with two separate filling hoppers makes it possible to manufacture products with different fillings within the same row on the machine.

The equipment offers the advantages of flexibility, high-speed performance, user-friendliness, and ease of access and cleaning.



A filler block aids dough distribution and weight control

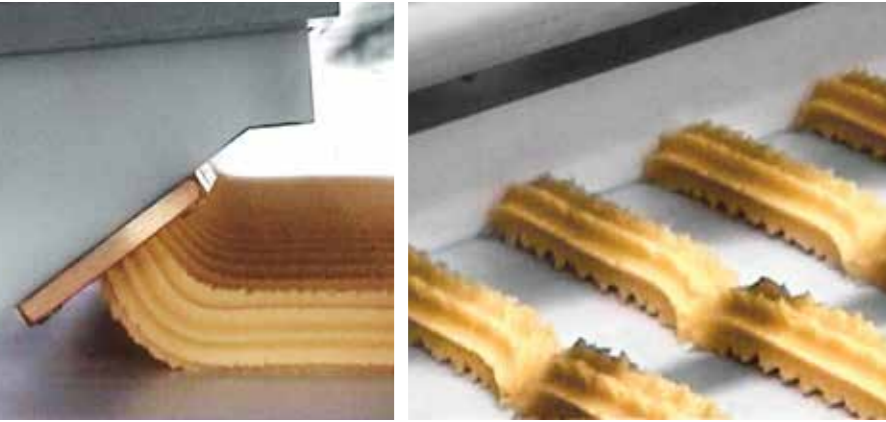


A plain wirecut unit in production



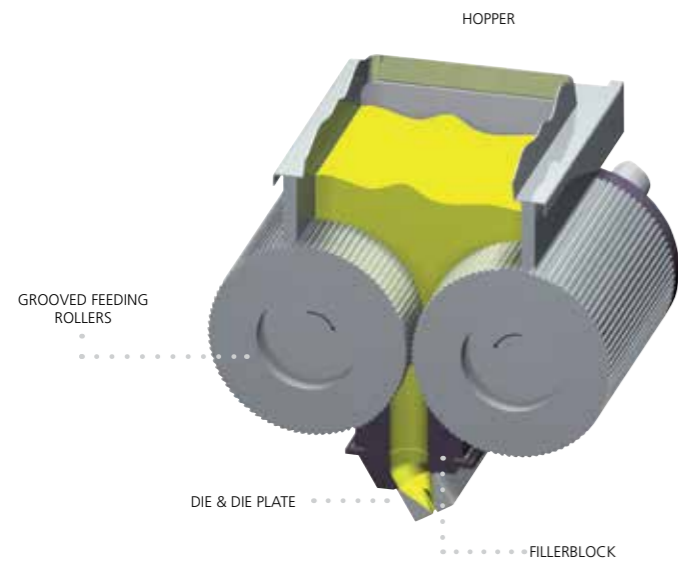
Chocolate chunk cookies exiting a 1,700 mm wide oven chamber

## Rout press configuration

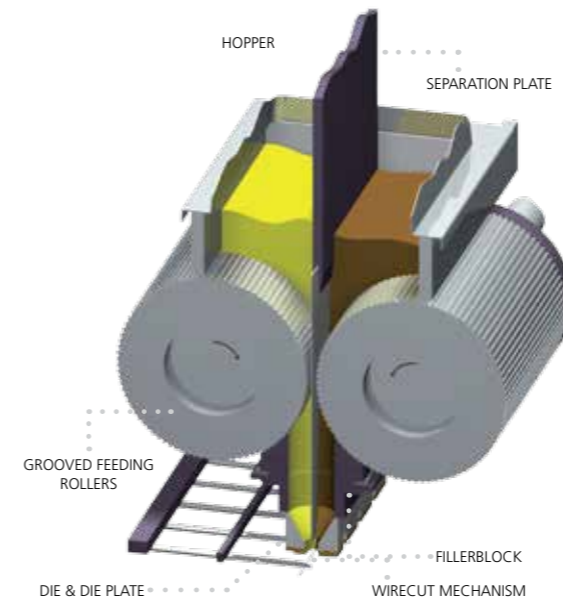
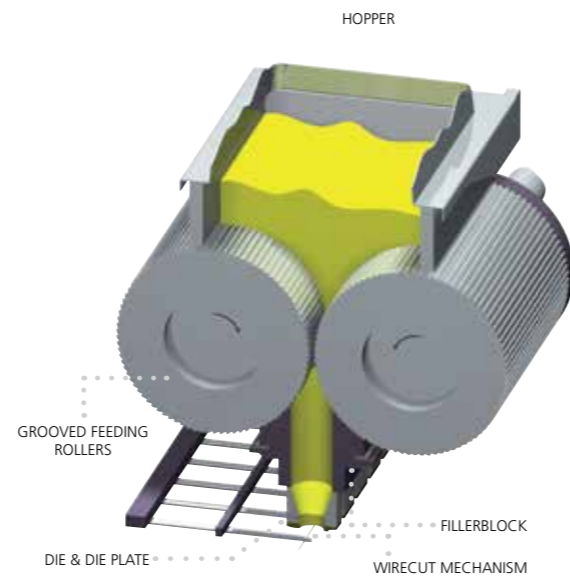


Rout press extrusion dies

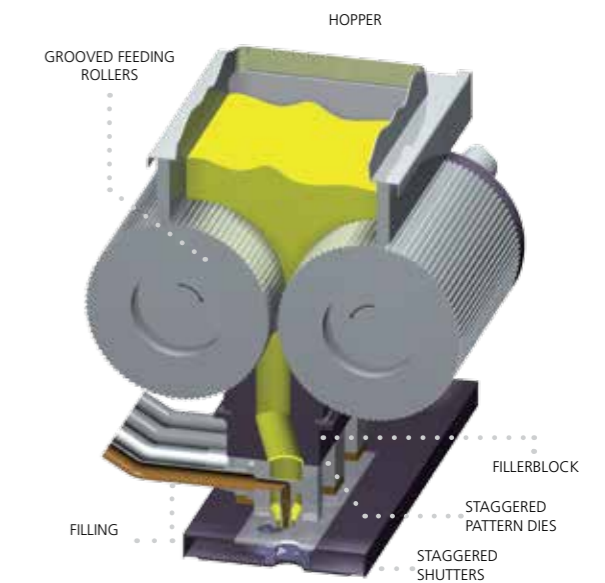
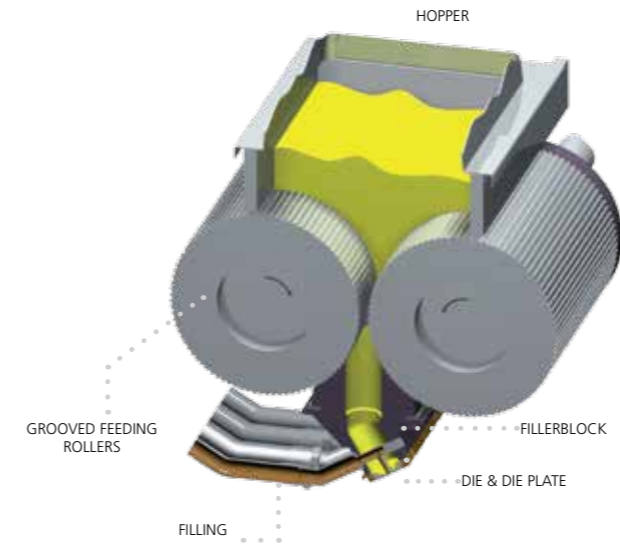
Rout press cutting device



## Wirecut configuration



# Co-Extruder configuration

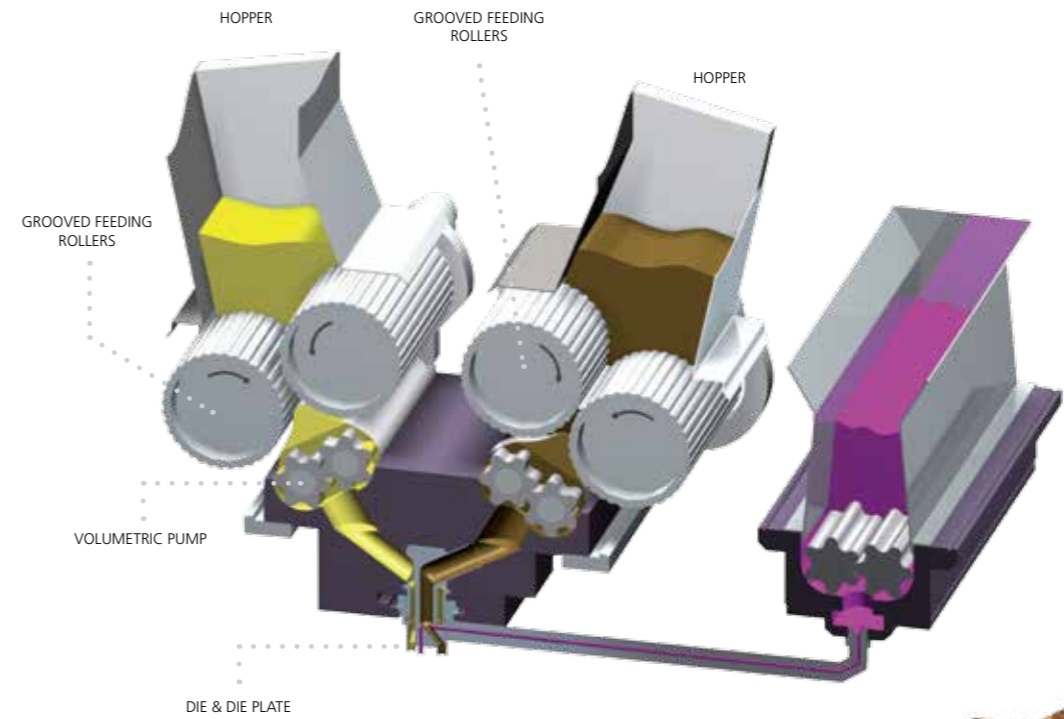


## DV3 Co-Extruder configuration



### Flexible, user-friendly technology for infinite biscuits and cookies

The GEA Comas DV3 Co-Extruder consists of two separate extruding heads, plus a manifold for filling, all in the same unit. Each head comprises a pair of grooved rolls that feed the dough evenly to a set of dosing pumps positioned underneath. A single outlet is connected to each pump, which ensures a consistent weight for each dough piece across the width of the unit. Minimum stress is applied to the dough during extrusion. The DV3 Co-Extruder can be used to manufacture a wide range of products, from traditional plain wirecut biscuits to tastier cookies with two-colour dough and a cream or jam soft centre, or even 3 different colours of dough. The unit is very simple to regulate, as all movements are made by dedicated servomotors without the use of mechanical cams. A user-friendly touch-screen operator interface panel makes it simple to control all working parameters. The unit has been designed to allow tool-free dismantling for access and cleaning.



Center filled twisted bars.

# Depositor

## Designed for accurate, reliable dough depositing

The depositor head consists of a pair of grooved rolls that feed the dough evenly to a set of dosing pumps positioned underneath. The “one pump-one nozzle” concept ensures uniformity of dough weight across the entire width.

Independent servomotors positioned on both external sides of the unit, control all of the depositor head movements.

None of the moving components are controlled by shafts or cams, which means that all adjustments can be made from the touch-screen operator interface panel, which includes a built-in recipe storage system.

The GEA Imaformi depositor can handle a wide range of dough types.

Flexibility can be increased even further by adding a wirecut mechanism for producing a greater range of products either with or without inclusions.

A rotating nozzle mechanism can also be added to the basic depositor configuration for producing swirl dough pieces.

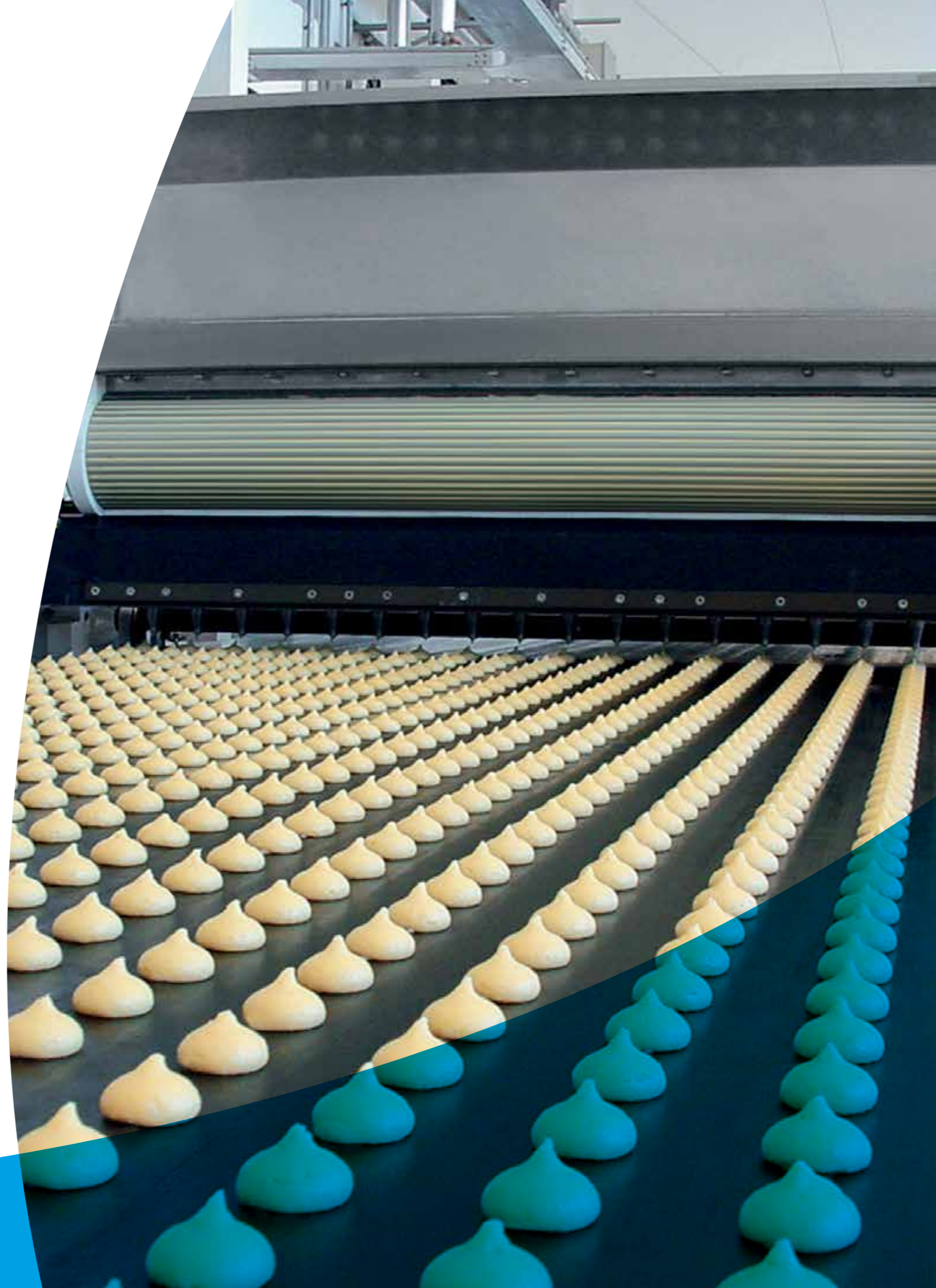
Configuring the system to include a synchronised jam depositor adds further flexibility for manufacturing special products.



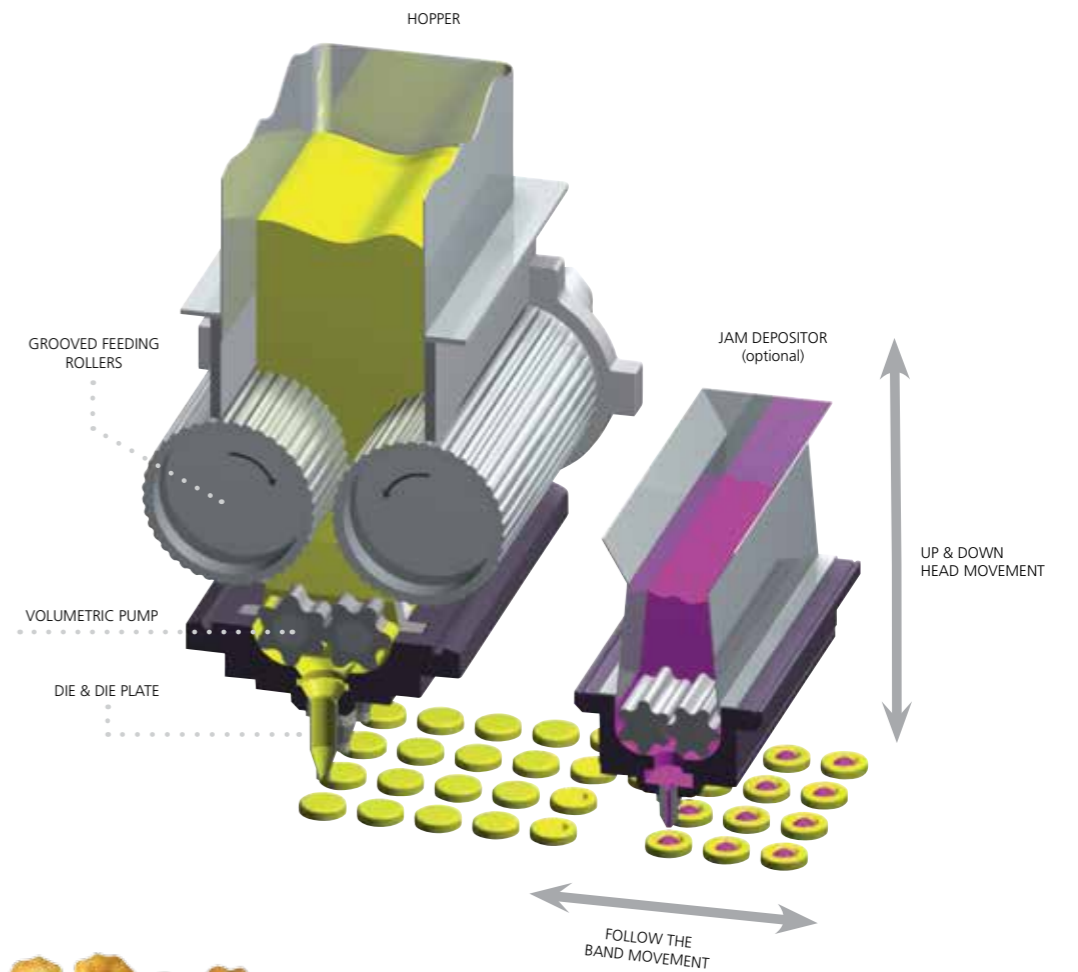
Volumetric pump



A volumetric pump ensures accurate dosing

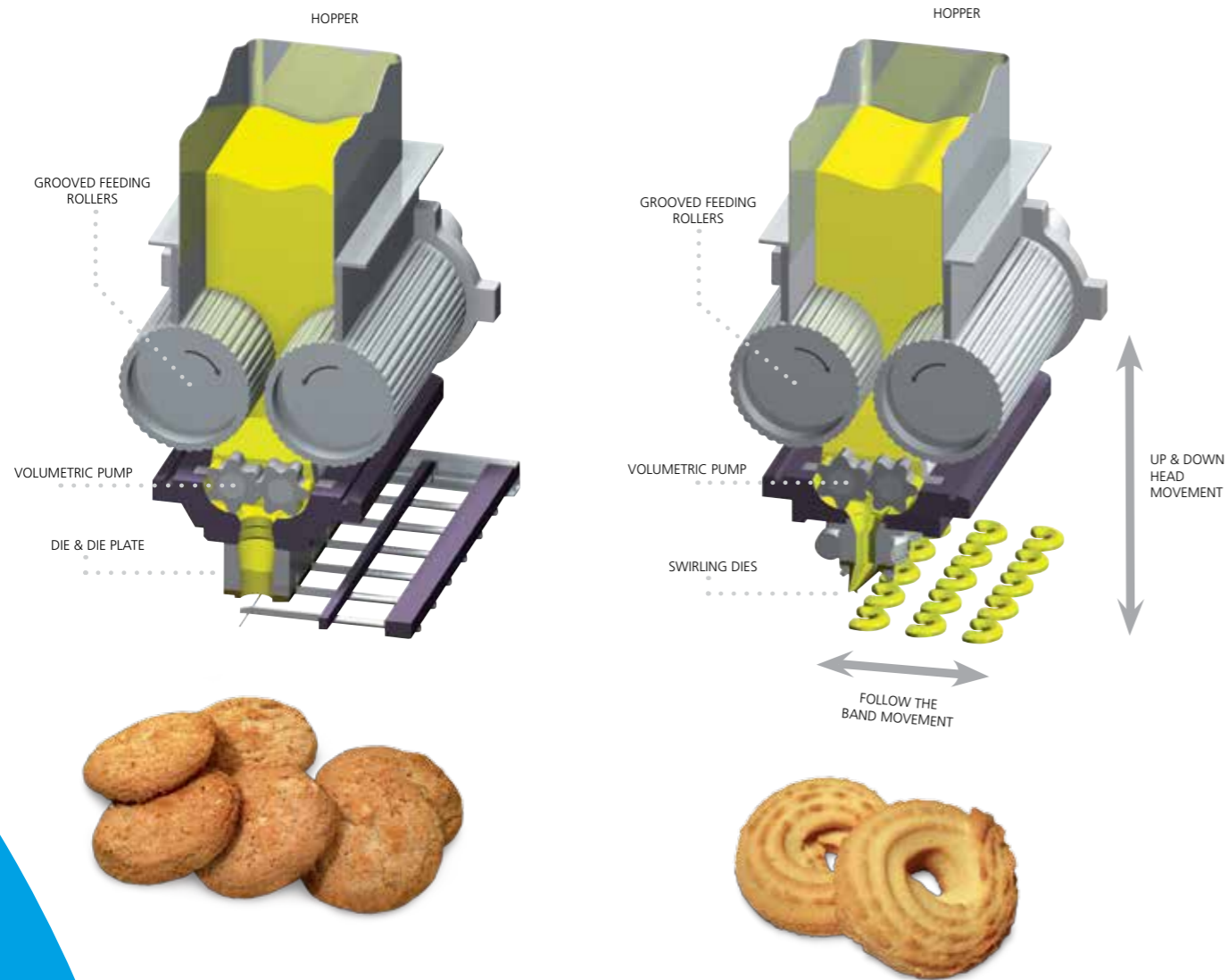


## Depositor configuration

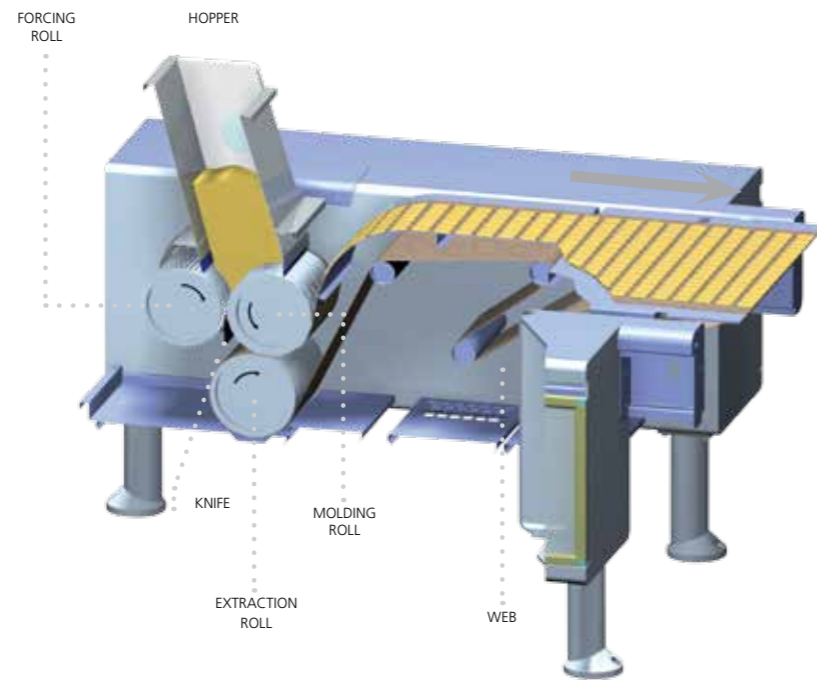




## Wirecut & swirl configuration



# Rotary moulder



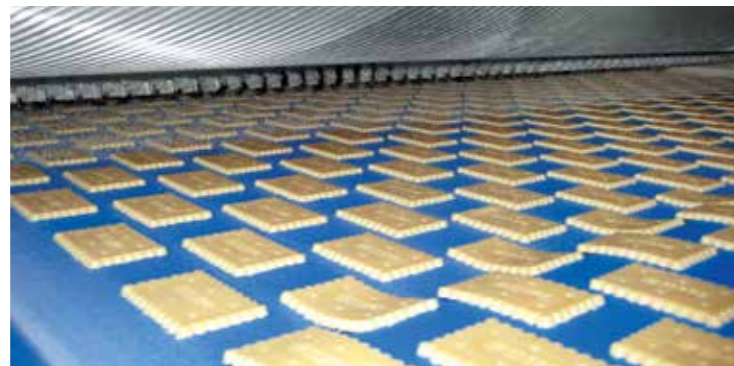
## Flexible, high-performing technology with multiple options

GEA Imaforni rotary moulder can be customized to match product and process requirements, and configured to form part of complete production lines for many different types of biscuits and cookies. A range of optional accessories can be added to the base unit, including egg wash rollers or brushes, a sugar sprinkler, spray-type glazing unit, ink printer or topping machines. Flexible configuration means we can tailor a system with accessories for producing an almost limitless range of products. GEA Imaforni rotary moulder is designed for reliable, high-performance operation. Dough weight and machine running

speed are monitored and controlled precisely to ensure the consistent formation of each piece of dough. Automatic tensioning and belt tracking come as standard, and tool-free mould changeover and belt replacement reduce hands on time. The system can be supplied with full servo-motor control, which allows adjustment of all key working parameters through the user-friendly operator interface. An in-built recipe storage system makes product changeover fast and reduces down time. For high capacity production that requires short baking times through a long oven, GEA Imaforni can supply a unit with wider, 390 mm diameter forming rolls, which guarantees smooth, reproducible extraction of every dough piece from the mould to the belt.



Egg wash unit in operation



Sugar-sprinkling unit in operation



# Auxiliary devices



**EGG WASH**  
(brush/roller type)

**SUGAR SPRINKLER**

**GLAZING UNIT**  
(spray type)

**VARIOUS TOPPINGS**

## Multiple options for toppings and decoration

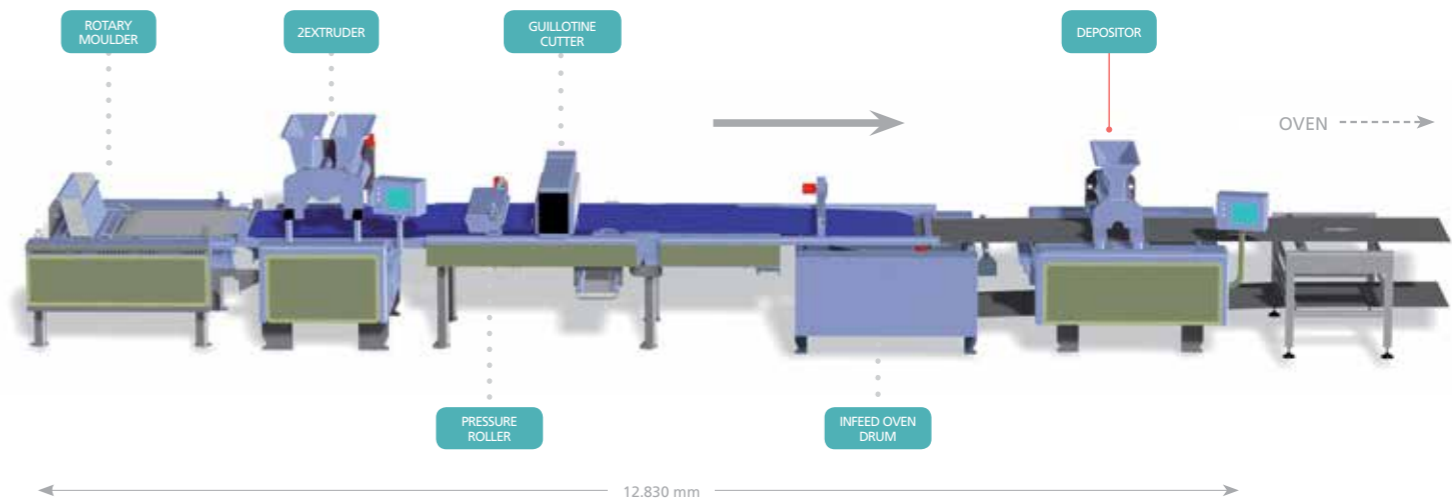
Worldwide bakery industry can be inventive with their recipes and processes to generate market-winning new products thanks to GEA wide range of auxiliary devices to include in the processing lines.



A jam/cream depositor with moving head and separate conveyor works in phase with the rotary moulder

Ink printer unit configured in phase with the rotary moulder

## Flexible line for "Softdough & cookies" production.



# Bakery Experience Centre

## Experienced food technologists at your service

The GEA Bakery Experience Center (BEC) consists of technological and testing labs where various production tests are carried out. GEA skilled personnel assist and guide customers to choose the technology and production processes that prove to be the most suitable for each particular product, using data gathered from specific machines.

The BEC provides research and development trials on new products for customers and pre-tests lines prior to shipment.

The GEA Bakery Experience Center labs are available both in GEA Comas and GEA Imaforni facilities with selected equipment and technologies that simulate complete production processes.

At GEA Imaforni BEC, the new generation of machines consists of a complete 1,200 mm wide industrial cookie line composed of

a rotary moulder, a wirecut machine and a multi-purpose co-extruder/depositor. The oven has a hybrid configuration with radiating (cyclotherm section) and indirect convection heating. The conveyor is a solid steel band.

A second pilot line is available for tests on cracker snacks and hard and soft biscuits.

Its 1,200 mm wide direct gas fired oven bakes the products on a wiremesh conveyor.

Both ovens are equipped with an Energy Recovery System. Our expert food technologists are available to support customers in finding the best production processes, develop new recipes and improve existing ones, with special attention to enhancing shelf life and product quality.



DV3 Depositor / Co-Extruder

Wirecut / Co-extruder

Rotary moulder



## We live our values.

Excellence • Passion • Integrity • Responsibility • GEA-versity

GEA is a global technology company with multi-billion euro sales operations in more than 50 countries. Founded in 1881 the company is one of the largest providers of innovative equipment and process technology. GEA is listed in the STOXX ® Europe 600 Index. In addition, the company is listed in selected MSCI Global Sustainability Indexes.

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