

# RADINI

by Rademaker



## *Radini bakery solutions*

For single layer dough sheets, puff doughs and yeast doughs



# DOUGH PROCESSING SOLUTIONS

## WHERE ARTISANAL MEETS AUTOMATION

If you are looking for flexible and high quality dough processing equipment, Radini offers you outstanding solutions. Scaling up your production capacity or expanding your product range is brought within reach. Radini offers you the possibility to partly or fully automate your production process. If desired the automated process functions of Radini can be combined with manual process steps such as dough supply, fat application, offline resting and cooling as well as additional shaping steps for specialty products.

With our expertise we are excited to guide you through the transition of an automated production process. Helping you achieve your ambitions is our priority. Our ultimate goal is to provide you with solutions that allow you to create beautiful, high quality products that exceed your customers' highest expectations.

**Radini is a brand of Rademaker, a family company that specializes in developing and building equipment for the food processing industry.**



Since 1977 Rademaker has built up decades of knowledge about bakery automation and bakery products. The company is represented all over the world and has formed many partnerships.

## A PRODUCTION SYSTEM AS VERSATILE AS YOUR PRODUCT PORTFOLIO!

The Radini equipment configurations are as extensive as your product portfolio and can handle a variety of pastry: from sweet to savoury - with yeast -, croissant, puff pastry and Danish pastry. Whether cut, folded, rolled, filled or die-cut products - the variety of production possibilities are all you can wish for. By simply adding tooling to the line, new product types can be added to your product range. By adding manual process steps you can expand your range further and create signature products.

## FLEXIBILITY

Converting the line to produce another product can be done in an efficient and effortless manner.

- Easy change of product recipes, stored in the machine interface
- Lightweight tooling for quick and ergonomic changeovers
- Tooling is easy to secure and remove from the line
- Easily adjustable tool settings for consistent and repeatable end products

## EASE OF USE

Radini production lines are easy to operate by means of a user-friendly machine interface. Smart and intuitive line control, automated process features and extensive recipe management are included in every line.



*The Radini mission is to make bakers smile!*

## Processing different dough types

From single layer to laminated dough sheets, puff doughs or yeast doughs.  
The possibilities are extensive!

### SHEETING OF (NON-) LAMINATED DOUGH

The Radini dough sheeting line produces a consistent stress-free dough sheet. With advanced sheeting features you are able to create the consistent and high-quality products you desire.

#### The sheeting process in brief

Our sheeting systems create a continuous dough slab from a dough batch at the start of the production process. If desired a dough sheet can be formed from manually supplied laminated dough blocks at the start of the process.

Reduction stations and calibration units are used to gently reduce the sheet to its desired thickness. Throughout the process, the dough is handled carefully to prevent damage to the gluten network. The result is a consistent and high quality dough sheet.



*Radini lines are executed with advanced process control features: automatic gap adjustment and infeed- and outfeed-control synchronize the production line settings to create an optimal, stress-free dough sheet. This cascading system ensures a consistent and high quality product at the end of the sheeting line.*

### EXAMPLE OF A YEAST DOUGH SHEETING LINE

Produces a single layer sheet from an extruder or a laminated sheet from pre-fabricated dough blocks. A minimum dough thickness of 3 mm can be achieved!



#### TECHNICAL DATA

<b>Dough output</b> Up to 1.000 kg/h	<b>Table height</b> 900 mm	<b>Maximum working width</b> 600 or 800 mm
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# SHEETING AND LAMINATING

## SEMI- OR FULLY AUTOMATIC

### Laminating puff pastry and yeast dough

The secret of quality pastry originates in the lamination process. Lamination starts with sheeting the dough and adding a continuous fat layer that is folded into the dough sheet. The folded dough sheet is repeatedly laminated to create the desired number of fat/dough layers. The number of layers can be adjusted automatically for each different product.

### Capacity

The number of layers that needs to be achieved depends on the specifications of your end product. A variety of machine configurations provide different lamination possibilities, ranging between 4 and 256 layers. Would you like to know more about the lamination process? Take a look at our animation!

Radini laminators are designed to be flexible, enabling the equipment to be used for both dough block making as well as block processing. During this process, combinations of both manual and fully automatic processes are possible.

After the sheeting and/or laminating process you can:

- Add a Radini Make-up line to directly produce your pastry
- Load the created dough blocks on trays automatically
- Manually handle the created dough blocks

Can you start to see the possibilities that are possible for you?



WATCH THE VIDEO  
LAMINATING  
animation

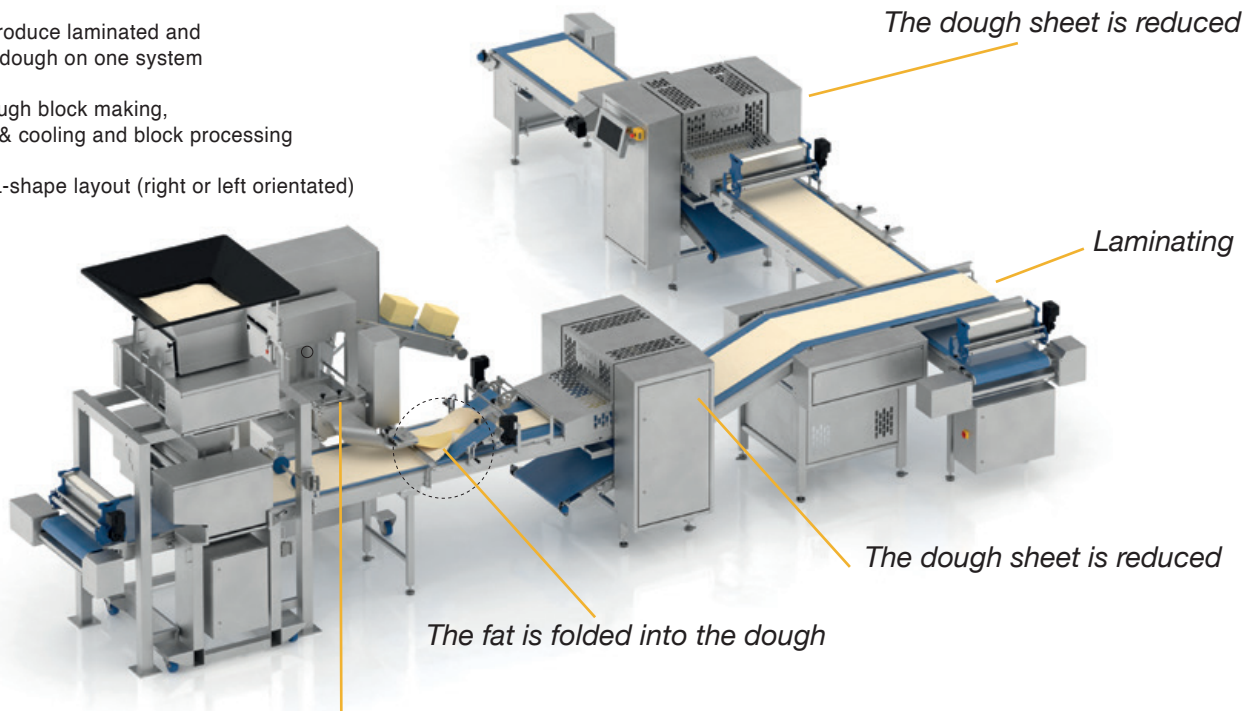


## CONFIGURATION EXAMPLE

### Two section laminator for puff pastry dough

Processes dough into a laminated dough slice of up to 8 layers.

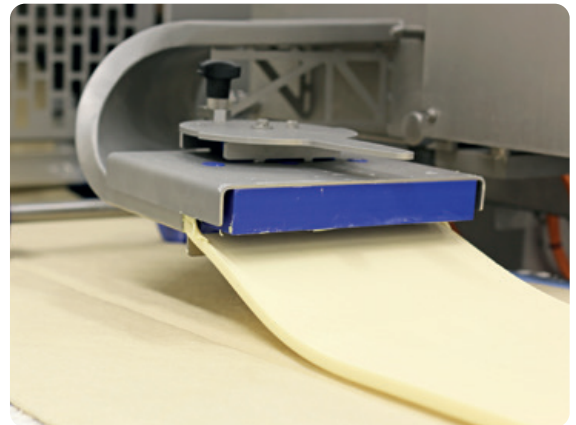
- Possibility to produce laminated and non-laminated dough on one system
- Suitable for dough block making, off line resting & cooling and block processing
- Available in a L-shape layout (right or left orientated)



## RADINI FAT PUMP

### THE AUTOMATIC SOLUTION FOR PROCESSING OF YOUR FAT TYPE

Adding a continuous fat layer is a precise process because the type and quantity of fat has a major influence on the taste of the end product. The fat pump is therefore a key unit when you want to produce a laminated dough sheet. The pump turns blocks of fat into a continuous fat sheet. The thickness of this fat sheet is adjustable and depends on the desired product characteristics.



### ADDED VALUE:

- Adjustable fat nozzle gap
- An undisrupted flow of the fat
- Can be fully dismantled for fast & easy cleaning
- Mobile unit
- Foldable incline conveyor

*Also available*

A broad selection of configurations provides numerous possibilities for your bakery! Ranging from a straight sheeting line to a three-section laminator, Radini offers a suitable solution for producing the desired dough sheet.

### Three section laminator for puff pastry dough

- Processes dough into a laminated dough slice of up to 256 layers
- Possibility to produce laminated and non-laminated dough on one system
- Available in a U-shape, S-shape, Z-shape or in line laminating layout



3 section laminator

## SHAPING METHODS

We are happy to give you a glimpse into the automatic production of pastries and croissants! This brochure depicts some of the many possibilities offered by Radini. In addition to sheeting and laminating for creating a consistent dough sheet - see the previous pages, we offer a wide range of tools enabling endless possibilities to shape beautiful and tasteful bakery products!

We have developed various tools for carrying out these processes. Depending on the shape of the product, the correct tool will be chosen. One tool can be used to produce multiple products.

A product can be shaped in various ways, we use the following key shaping methods:

**- CUTTING - ROLLING - FOLDING - BRAIDING**

Manual shaping also belongs to the possibilities.

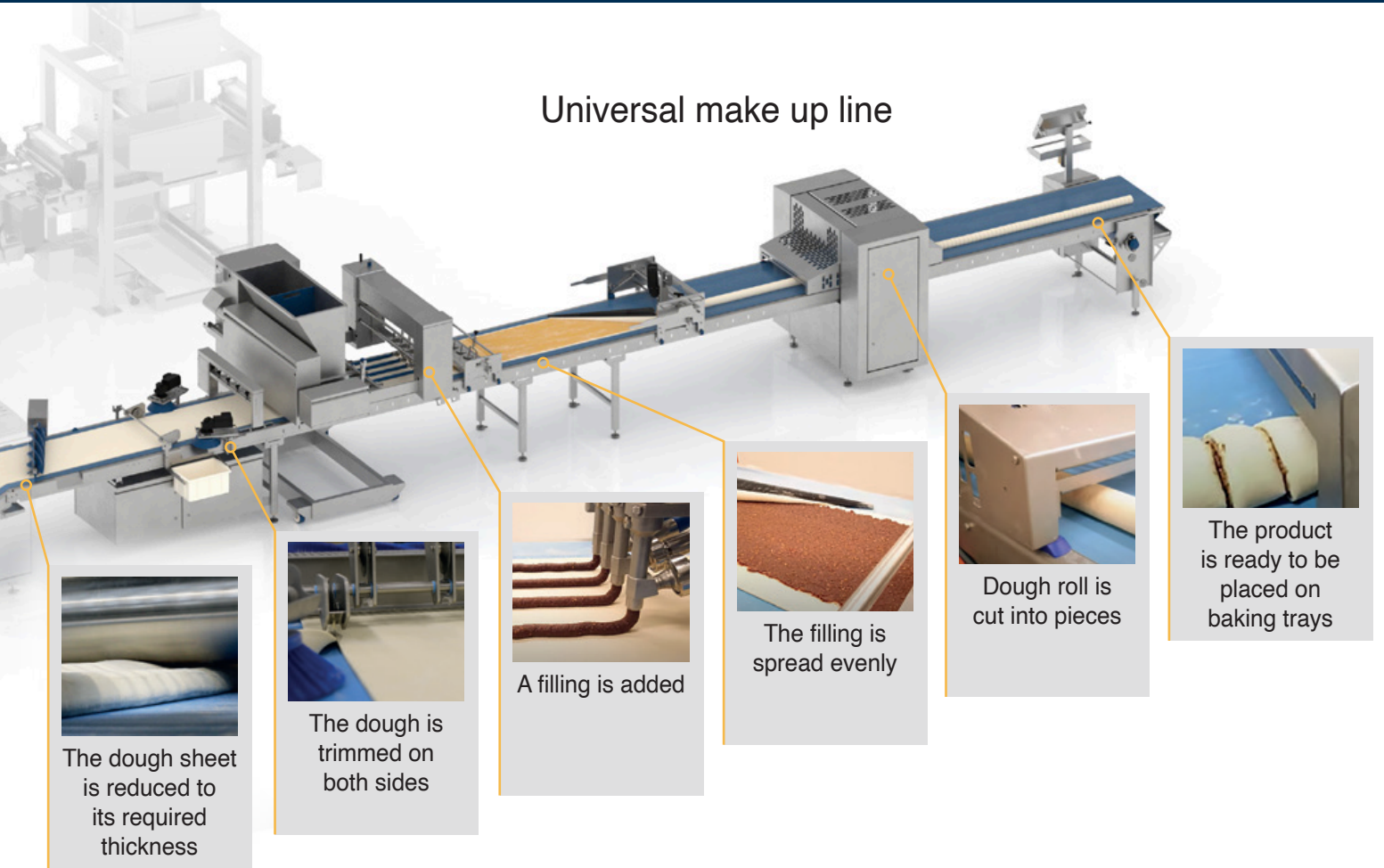
On the next pages you can learn more about the different shaping options that Radini offers.



3 section laminator

*Producing the  
variety of your  
choice*

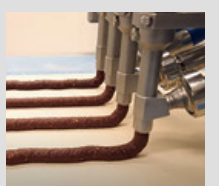
## Universal make up line



The dough sheet is reduced to its required thickness



The dough is trimmed on both sides



A filling is added



The filling is spread evenly

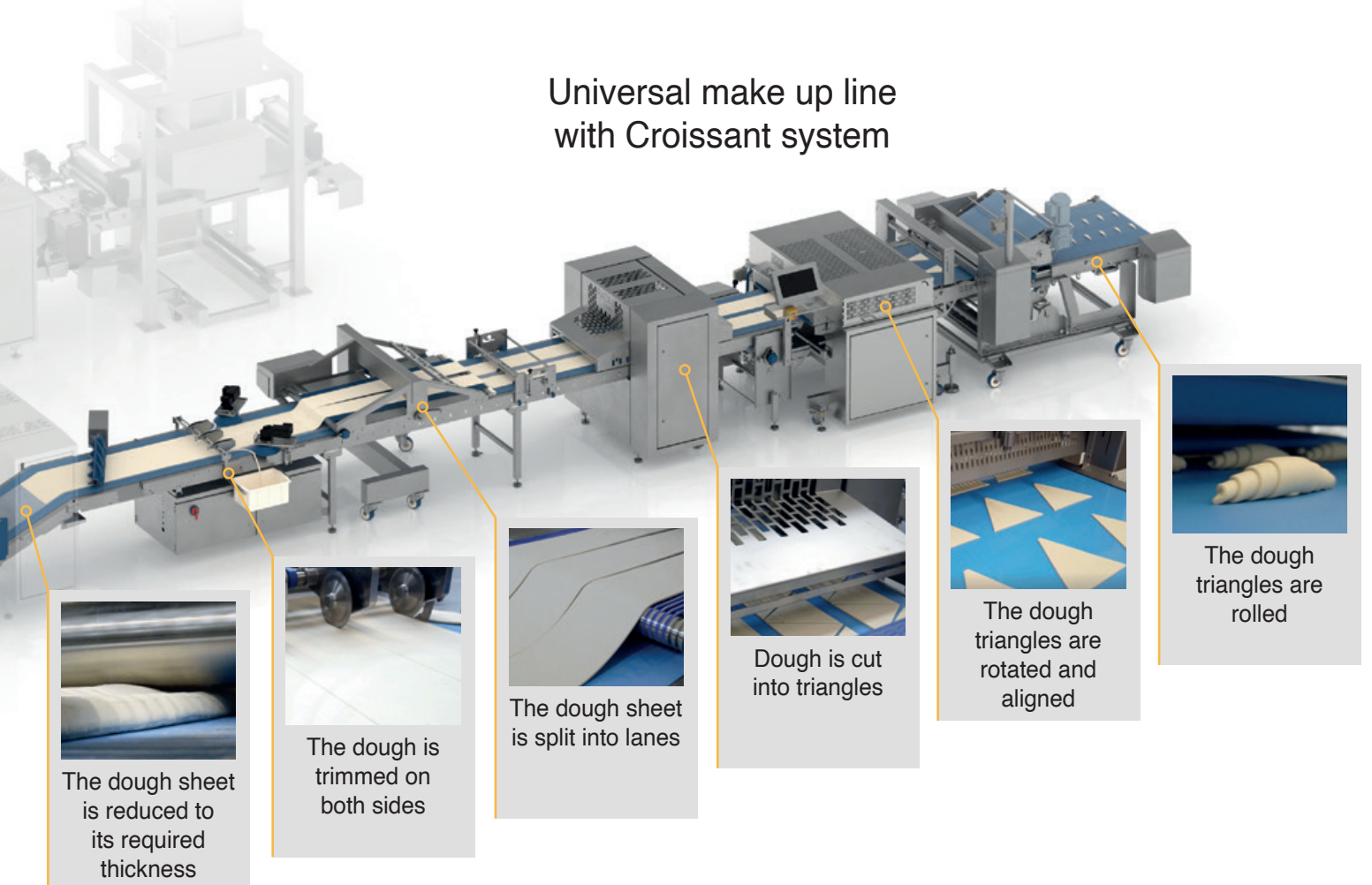


Dough roll is cut into pieces



The product is ready to be placed on baking trays

## Universal make up line with Croissant system



The dough sheet is reduced to its required thickness



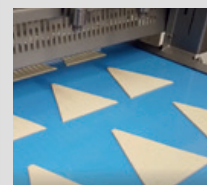
The dough is trimmed on both sides



The dough sheet is split into lanes



Dough is cut into triangles



The dough triangles are rotated and aligned



The dough triangles are rolled

# MACHINE CONFIGURATION

## FILLING AND DECORATION

### DEPOSITORS

For semi-liquid, sweet and savory fillings you can apply a large variety of filling materials onto your bakery products with our depositing solutions. The big benefit of using our depositor is the guaranteed, consistent depositing volume that is applied.

### DOSING PATTERNS

DOSED BY A DEPOSITOR

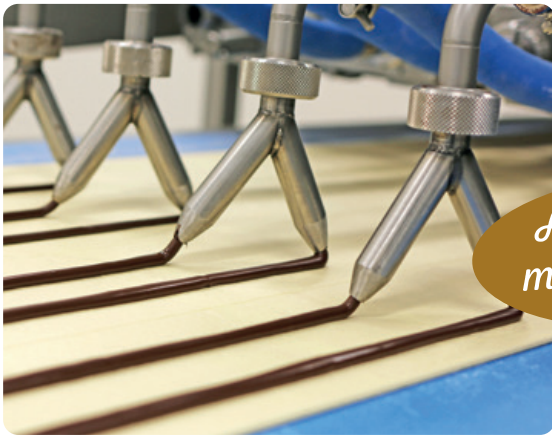
●  
DOTS/  
SPOTS

— — — — —  
DIS-CONTINUOUS STRIPS

—————  
CONTINUOUS STRIPS

.....  
EVENLY SPREAD

☞  
MANUALLY

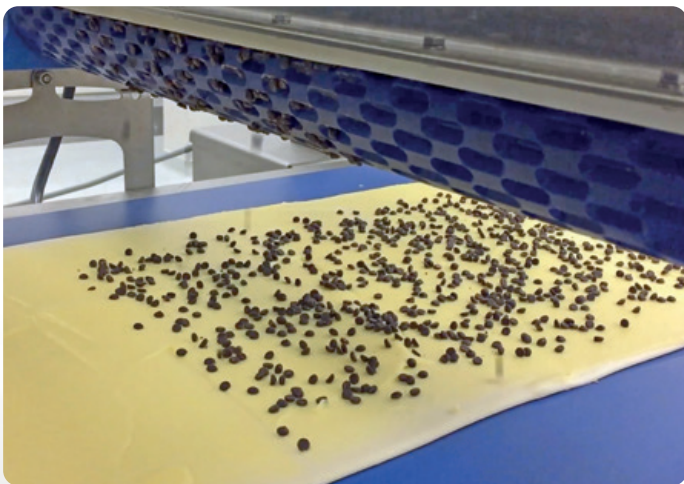


*Automated or manual filling*



### TOPPING AND DECORATION

Our strewers can provide your products with toppings such as sugar, seeds, raisins, chocolate drops and many more! Both automated and manual strewing is possible with Radini.



*Automated strewing*



*Manual strewing*



## CUT PASTRY

The dough sheet can be cut into various shapes:



Round



Hexagon



Triangle



Square/rectangular



Free form

### BE DISTINCTIVE

Is there a product that is typical for your region or company? Or do you want to make your product just a little bit more special by responding to the season? We can help you by making a cutter in the shape of your desired product.

Production process in a nutshell

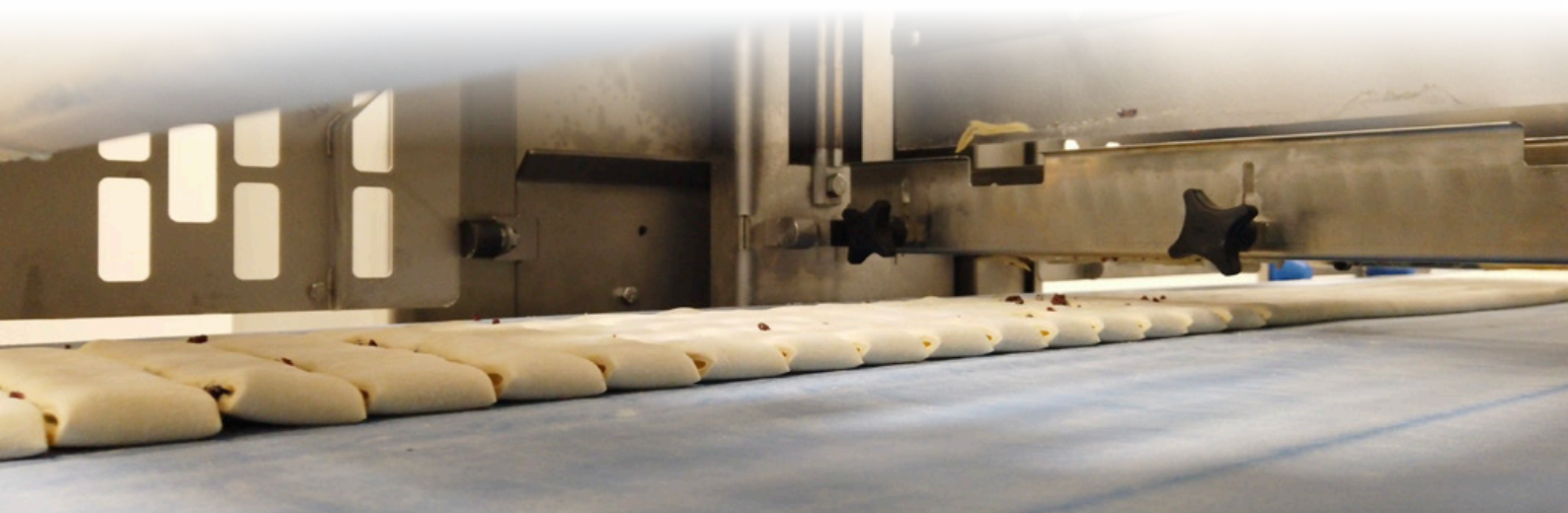
The dough sheet is split into lanes and a guillotine cuts the product shapes. The filling can be added at various times during the production process.



KEY TOOLING:  
GUILLOTINE CUTTER



## *Tasty cut pastries*



*Rolling methods*

After the filling of your choice is added to the dough sheet it can be rolled into various shapes. The shape of the product determines the required tool.



**SWIRL**

Typical swirl type products are cinnamon roll, pain raisin etc.

Production process in a nutshell. The dough strip is rolled using a conical roller, after which it is cut into slices by the guillotine.



KEY UNIT: CONICAL ROLLER



WATCH THE VIDEO

Swirl production

Vary by adjusting the filling or thickness of the swirl or adding a manual action by shaping the product.

**BUTTERFLY SHAPED PASTRY**

Production process in brief:  
The dough sheet is rolled using two mirrored conical rollers on each side of the dough sheet into a spectacle shape. After the dough has been rolled completely, it is cut into slices by the guillotine.



KEY UNIT: CONICAL ROLLER



WATCH THE VIDEO

Butterfly shaped production

**ROLLED PRODUCTS**

This rolled product form can for example be filled with a sausage or a more semi-liquid filling.

Production process in a nutshell:

The dough strips will be rolled using a coiling unit. After the dough strips have been rolled up completely, the rolls are cut to the required size by the guillotine. During the process, a decorative cut can be added to the product.



WATCH THE VIDEO

Sausage pocket production



KEY UNIT: COILING UNIT



### Folding methods

The dough sheet with filling can be folded and cut into various shapes. Fold the dough once or multiple times to create a variety of products. The shape of the product determines the tooling to be used.

### RECTANGULAR OR SQUARE POCKETS

An example of this product is an almond pocket. Your top layer may have a decoration or notch/incision.

The production process in a nutshell. A decoration roller creates a notch or incision in the dough if desired. The dough slice is folded in half, then a guillotine cuts the products to its required size.

Folding possibilities:

- Center fold seam up or down
- Side fold



**WATCH THE VIDEO**  
Almond pocket production



### SHAPED FOLDED POCKETS

Available shapes:



D-shape



Triangle



Square/  
rectangular



Free form

The production process in brief:

The dough lane will be folded around the filling using folding ploughs. The guillotine cuts out the desired shape with a cutter or knife. Cutters can be provided with a decorative seal, creating an outstanding product appearance.

Key tooling: • Folding ploughs • Guillotine cutter

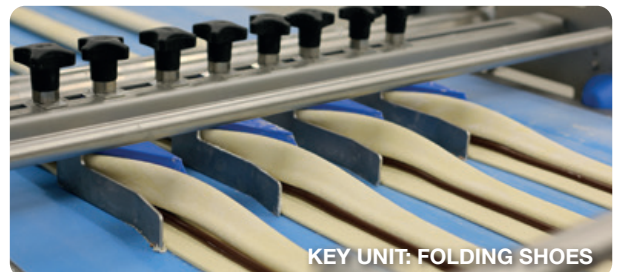
Among various optional features, an automated rework removal system is recommended for the production of several shaped pockets. Then a guillotine with a stans cuts the products to the required shape.

KEY UNIT: FOLDING PLOUGHS

### PAIN AU CHOCOLATE

Specific folding techniques are used to achieve a variety of two- or three-fold pain-au-chocolates.

The production process in a nutshell: The dough lanes are supplied with a chocolate filling, this is possible with a depositor or by the manual application of chocolate sticks. The multiple folding steps enclose the chocolate in the distinctive pain-choc shapes. A guillotine will cut the products into the desired size.



The size of the products can easily be adjusted. This way you can make the same suitable product both for breakfast or snack and increase your (product range) sales.

**WATCH THE VIDEO**  
Pain au chocolate

*Folding and braiding method*

**BRAIDING**

The production process in a nutshell:  
A decoration roller adds a pattern on the dough sheet. The filling is added in the middle of the product lanes. Then the braiding unit folds the dough flaps on top of each other. Afterwards a guillotine cuts the products to the required size.



KEY UNIT: BRAIDING UNIT



*In addition, you can add a topping to give the product a unique finish.*



**BOOKFOLD AND TWIST**

The production process in a nutshell:  
The dough slab is folded, then a guillotine cuts the products to its required size. When desired, the bookfold can be shaped into unique product shapes by a manual fold, twist, or knot.

*Sweet or savory, different shapes?  
There are many variations to be made of this product.*



*Add your personal twist*



KEY UNIT: FOULDING PLOUGHS



## Manual shaping

As a company you want to serve your customers in the best possible way. This entails meeting existing needs and responding to changing demands. Besides your signature products, you also want to surprise your customers with new and innovative products. Or perhaps you want to temporarily add a product to your range during the holiday season. Radini gives you this freedom. The opportunity to discover, develop and making your mark. You decide to what extent. We give you the opportunity to combine automation with manual operations.



MANUALLY BENT



MANUALLY INCISED AND KNOTTED



MANUALLY CUT THROUGH FOR FOLDING OR BRAIDING



MANUALLY DENTED

## Continue to develop

Keep exploring and developing! Working with Radini gives you the opportunity to do so.

## Make your mark

Be creative and original! Endlessly vary the filling, shape and finishing touch. This gives you countless possibilities with regard to your assortment.



MANUALLY TWISTED



BRAIDED (BASIC: SWIRL)



ADDING A TOPPING

Rademaker is the main sponsor of the Dutch BoulangerieTeam. Together are aiming for a positive impact in the bakery industry. The origin of the co-operation is our common interest in high quality artisan products. Taste, smell and shape are key factors for the continuous process of improving and developing processes and products.

### CROISSANT MODULE

Our croissant module is an addition to the Universal make up line. The croissant module functionality consists of small number of additional units, based on movable frames. This flexibility enables a minimal impact in your bakery while making croissants in various shapes and sizes!

#### SIZES AND SHAPES

Different countries, different requirements. Every region has its unique characteristics regarding bakery products and this certainly applies to croissants. Aspects like taste, texture, shape and size can differ all over the world! Radini enables you to create croissants in a variety of sizes and shapes in a consistent manner. Different specialized moulders are available, which provide flexibility for the production line.



*Achieve optimal versatility;  
add croissants to your product range*



RADINI TURNING UNIT

### CROISSANT TURNING MODULE

This unit can be seen as the heart of the croissant production. After the products are cut to size, they are turned and aligned with the croissant base to the front, preparing the dough pieces for the rolling operation. A water sprayer moistens a precise area of the croissant, to secure the croissant shape after rolling the dough pieces.



### CROISSANT MOULDING UNITS

We have different croissant rolling units available to make sure that you can produce the best possible croissants:

#### R-MOULDER

Is your need to produce straight, unfilled croissants only? Then the dedicated Rolling moulder is the best solution for you. The R-Moulder rolls the dough triangles into croissants by rolling technology.

#### V-MOULDER

The one-stop solution for bakeries that want to produce filled and unfilled croissants. The V-Moulder rolls dough triangles by use of vacuum technology. With the Vacuum Moulder you are also able to produce open- and closed-ends croissants.

#### B-MOULDER

For bakers that require special moulded bread types like Salzstangen, Gipfel, Pao Frances or Kornspitz, we offer our Bread moulder. It is called the B-moulder because it is designed for products based on a bread type dough.



## TECHNOLOGICAL SUPPORT

Visit our Technology Centre and experience the many possibilities of our Radini lines. We offer testing possibilities as well. If desired we can help you with product development, for example when you run into certain issues or want to (re)develop products. Our skilled bakers will be pleased to advise you on all desired processes concerning the production of bakery products. Together with you, we will come up with the product that suits you best.



## 24/7 SERVICE

If you run into problems, you want to be helped as quickly as possible. We are at your service 24/7. Because we think the service does not stop after delivery of the equipment.

## *What do our clients say?*

### Barbarossa

*"The Radini production line provides a very high and consistent product quality among other things because the system is very gentle on the dough. There is significantly less waste during reprocessing. Additionally the production line operates very clean and quite. This in combination with more ergonomics results in happier employees. Due to optimal production flow our personnel costs have been reduced."*

### Alpes Frais

*"The Radini sheeting line suits our needs perfectly because it is flexible and offers precise process control. This allows the extrusion and lamination of a homogeneous and high quality dough. The demands of our customers are constantly changing. Thanks to the Radini line, we have been able to maintain this capacity to produce small badges, with specific and varied recipe sequences. The easy recipe management of the Radini line enables flawless production and smooth operations."*

*Our experts are happy to assist you!*

See the back of the brochure for contact details





# RADINI

by Rademaker

*Where artisanal meets automation*

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**CONTACT ME**  
Through contact form

