



Powerful, modular, efficient:

**RONDO MLC 4.0**

Laminating, feeding and making up

# What produces a uniform, laminated dough band? The automatic, high-precision RONDO MLC 4.0

## Powerful MLC 4.0 concept

What started in 2005 as the Modular Laminating Concept MLC has developed into the MLC 4.0, a comprehensive modular solution for laminating, feeding and making up many different doughs and products.

Made entirely of stainless steel, the MLC 4.0 is built for 24/7 operation. It incorporates high-quality components such as modern, reliable Siemens control systems or energy-efficient gear motors from Nord or SEW (optional). Like all RONDO machines, it complies with applicable international safety standards.

## Different MLC 4.0 lines

With the MLC 4.0, you can do whatever your baker's heart desires. With **Block, Feeding and Laminating** Line versions (see example on right), you can produce very uniform laminated dough blocks and endless dough bands, sheet bread doughs and maintain continuous feed to make-up lines or croissant machines.

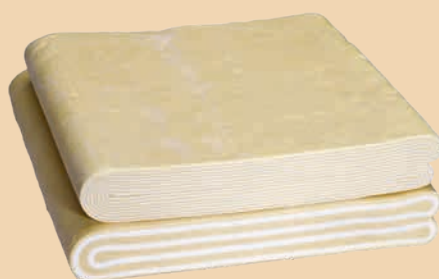
The **Make-up** Line version (see example on next page) is your doorway to the entire world of pastries, bread and pizzas.

## Dough band former

The dough band former gently forms doughs of all kinds into homogeneous, stress-free dough bands without damaging the dough structure. The compact machine is mounted on castors and can be cleaned easily and quickly.

## Fat pump

The fat pump automatically creates a continuous fat band of uniform width and thickness from blocks of margarine or butter, placing it on the dough band. The folding belts then fold the dough band, completely enclosing the fat in the dough.



**Satellite head**

The orbital rollers of the satellite head reduce the thickness of the dough band without damaging the layers of dough and fat.

**Fan-folding station**

The dough band is gently fan-folded, producing between 2 and 10 homogeneous fat layers. The fan-folded dough band is now very thick, so it passes to a second satellite head for repeat reduction.

**End section**

For block production, the dough band is automatically cut into pieces and then folded manually. At this point, the dough block has between 2 and 40 fat layers.

Alternatively, you can sheet your dough band down to the desired final thickness with a cross roller and one or more calibrators and feed directly to your make-up line or croissant machine.

**Production of additional fat layers (after resting time)**

After allowing resting time, you can run your dough blocks back through the MLC 4.0 to increase the number of fat layers. The satellite head reduces the dough blocks then joins them together to form an endless dough band.

# How can "outstanding performance" be surpassed? With the MLC 4.0 Make-up Line!

## Full modularity for huge diversity – and a safe future

With the MLC 4.0 Make-up Line you have an enormous choice of solutions for the production of pastries, yeast pastries, artisanal bread and rolls, pizzas, donuts and much more. All the accessories and tools you need for filling, folding, cutting, decorating and rolling up can be integrated directly into the line by plug & play. Going forward as well, of course. No matter which configuration you decide on today, you will be able to adapt your MLC 4.0 Make-up Line to all growth needs in future.

## MLC 4.0 Make-up Line – your advantages:

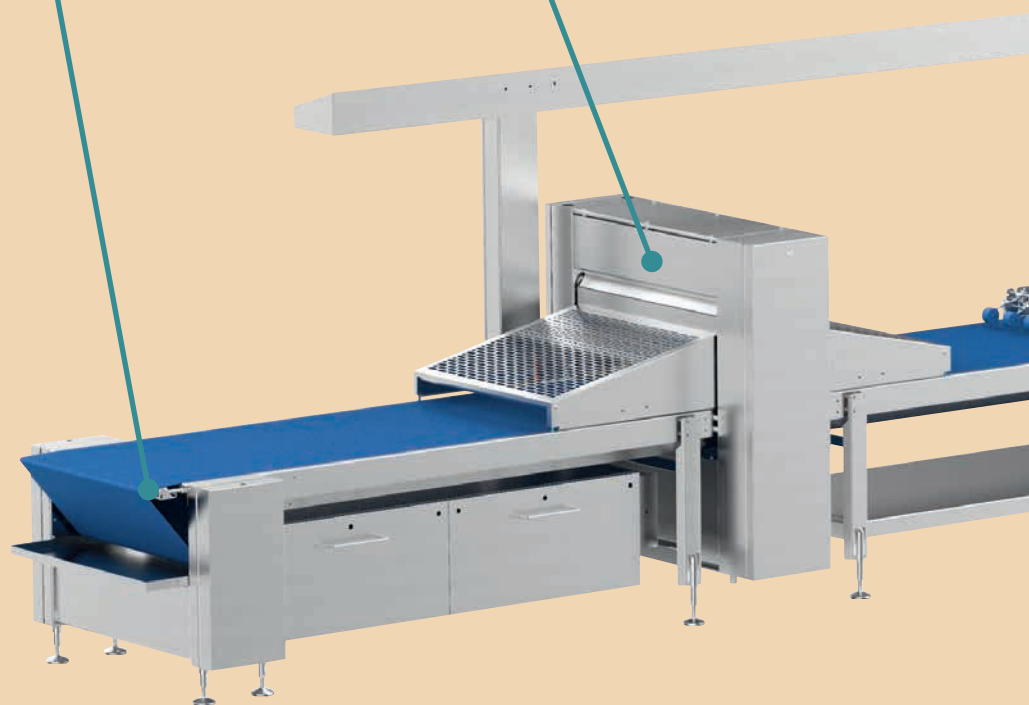
- Modern operation
- Highly configurable
- Expandable for future applications
- Wide range of products
- Fast machine set-up times
- Designed for 24/7 operation
- Quick and easy cleaning
- Numerous options (accessories, tools, add-ons)

### Sharp transition

The special nose roller enables the transfer of small pastries readily and smoothly to downstream machines. The built-in quick-release belt makes cleaning easy.

### Powerful guillotine

Operating with superb precision the speedy electromechanical guillotine stamps and cuts the pastries out of the dough band.



**Modern operation**

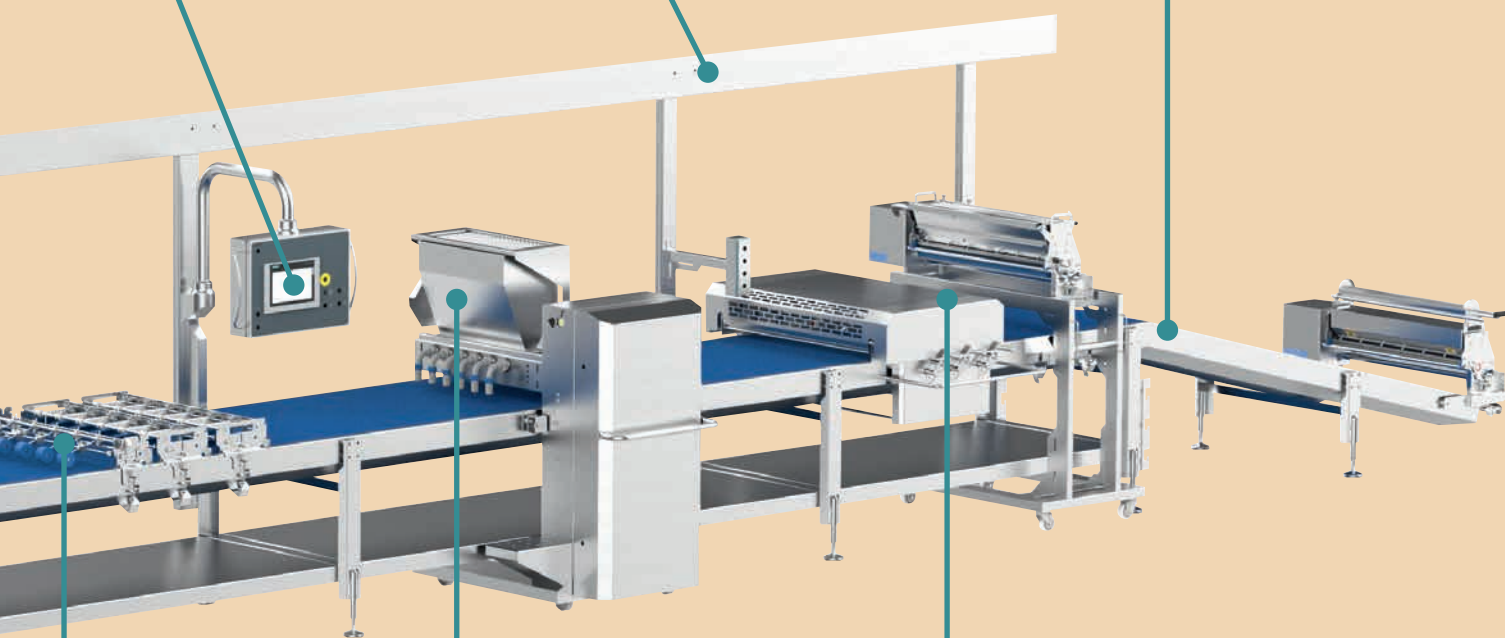
The MLC 4.0 Make-up Line has a large touchscreen and is easy and safe to operate.

**Overhead-mounted cable duct**

Wiring and connectors are well clear of the production zone.

**Automatic feeding**

You have a choice of various MLC-4.0 solutions for feeding. Choose the solution that satisfies your capacity and automation requirements.



**Wide range of accessories**

The accessories and tools make the line ideal for automatic production of a very wide range of pastries.

**Filling device**

You have a choice of filling depositors for a very wide range of fillings. They all dose and fill with ultra-high precision.


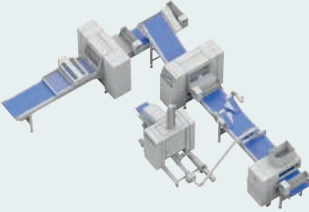
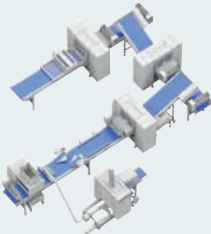
**Double cutting station with counter-pressure rollers**

The double cutting station cuts the dough band along its length. The counter-pressure rollers keep the cuts very clean and reduce wear and tear on the conveyor belt.

**Technical data**

Length	9000 / 12000 / 15000 mm
Table height	920 mm
Table width	1000 mm
Conveyor belt width	940 mm
Conveyor belt speed	0.5 – 12 m/min
Supply voltage	3 × 200 – 480 V, 50/60 Hz
Control voltage	24 V

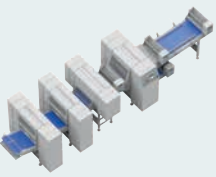
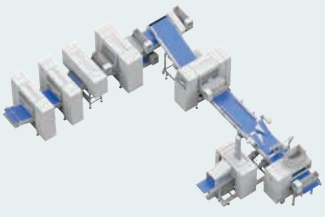
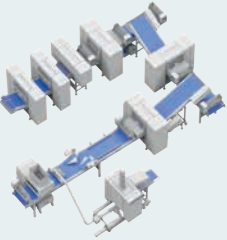
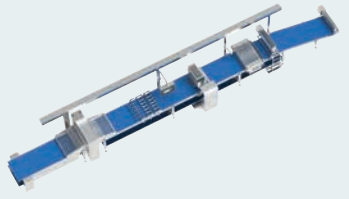
# What solution convinces you? One that meets your needs.

MLC 4.0 Versions	I-Block Line Standardised version	L-Block Line Standardised version	U- or Z-Block Line Standardised version
<b>Application</b>	Production of dough blocks with up to 4 fat layers	Production of dough blocks with up to 40 fat layers	Production of dough blocks with up to 400 fat layers
<b>Layout</b>			
<b>Components</b>	<ul style="list-style-type: none"> <li>• Dough band former</li> <li>• Fat pump (optional)</li> <li>• Folding belts</li> <li>• Satellite head</li> <li>• Rotary cutter</li> </ul>	<ul style="list-style-type: none"> <li>• Dough band former</li> <li>• Fat pump (optional)</li> <li>• Folding belts</li> <li>• Fan-folding station</li> <li>• Two satellite heads</li> <li>• Rotary cutter</li> </ul>	<ul style="list-style-type: none"> <li>• Dough band former</li> <li>• Fat pump (optional)</li> <li>• Folding belts</li> <li>• Two fan-folding stations</li> <li>• Three satellite heads</li> <li>• Rotary cutter</li> </ul>
<b>Space needed</b>	8300 × 1850 mm	8000 × 6000 mm	8000 × 7200 mm

MLC 4.0	Version
<b>Conveyor belt width</b>	700 and 900 mm (MLC 4.0 Block, Feeding and Laminating Lines) 940 mm (MLC 4.0 Make-up Lines)
<b>Conveyor belt speed</b>	MLC 4.0 Block Line: up to 8 m/min MLC 4.0 Laminating Line: up to 12 m/min MLC 4.0 Make-up Line: up to 12 m/min MLC 4.0 Feeding Line: up to 12 m/min

Medium connections, control system and voltage	
<b>Operation</b>	PLC, 12" colour touchscreen, 100 programs
<b>Supply voltage</b>	3 × 200 – 480 V, 50/60 Hz
<b>Water connection</b>	For make-up lines
<b>Air connection</b>	For fat pump and make-up lines

The right to make changes of a technical nature is reserved. The technical safety and type-specific instructions in the operating manual must be complied with. Prohibition, information and warning signs on the machines are to be complied with in accordance with the operating manual.

I-Feeding Line Configurable version	L-Laminating Line Configurable version	U- or Z-Laminating Line Configurable version	Make-up Line Configurable version
Continuous feeding of make-up lines	Production of dough bands with up to 10 fat layers and continuous feeding of make-up lines	Production of dough bands with up to 100 fat layers and continuous feeding of make-up lines	Make-up of a very wide range of products (pastries, yeast pastries, artisanal bread, rolls, pizzas, donuts and many more)
			
<ul style="list-style-type: none"> <li>• Satellite head</li> <li>• Cross roller</li> <li>• Calibrator</li> </ul>	<ul style="list-style-type: none"> <li>• Dough band former</li> <li>• Fat pump (optional)</li> <li>• Folding belts</li> <li>• Fan-folding station</li> <li>• Two satellite heads</li> <li>• Cross roller</li> <li>• Calibrator</li> </ul>	<ul style="list-style-type: none"> <li>• Dough band former</li> <li>• Fat pump (optional)</li> <li>• Folding belts</li> <li>• Two fan-folding stations</li> <li>• Three satellite heads</li> <li>• Cross roller</li> <li>• Calibrator</li> </ul>	<ul style="list-style-type: none"> <li>• Double cutting station</li> <li>• Filling depositor (optional)</li> <li>• Numerous accessories (optional)</li> <li>• Various tools (optional)</li> <li>• Guillotine</li> </ul>
6000 × 1800 mm	8000 × 6900 mm	8000 × 7200 mm	9000 / 12000 / 15000 mm

### Industrial laminating and feeding solutions

Need an industrial laminating and feeding solution for ultra-high performance? Check out our ASTec (Advanced Sanitary Technology) lines. Working width is up to 1500 mm, so they offer extra-high capacity and are custom-built to your requirements. The cutting-edge ASTec design meets the very latest hygiene regulations.



# RONDO

Dough-how & more.

**RONDO Burgdorf AG**  
3400 Burgdorf / Switzerland  
Tel. +41 34 420 81 11  
info@rondo-online.com

**RONDO Schio s.r.l.**  
36015 Schio (VI) / Italy  
Tel. +39 0445 575 429  
info.it@rondo-online.com

**RONDO GmbH & Co. KG**  
57299 Burbach / Germany  
Tel. +49 2736 203-0  
info.de@rondo-online.com

**RONDO S.à.r.l.**  
67319 Wasselonne Cédex / France  
Tel. +33 3 88 59 11 88  
info.fr@rondo-online.com

**RONDO Ltd.**  
Chessington, Surrey KT9 1ST / UK  
Tel. +44 20 8391 1377  
info.uk@rondo-online.com

**000 RONDO Rus**  
127495 Moscow / Russia  
Tel. +7 495 419 51 23  
info.ru@rondo-online.com

**RONDO Inc.**  
Moonachie, N.J. 07074 / USA  
USA  
Tel. +1 201 229 97 00  
info.us@rondo-online.com  
Canada  
Tel. +1 416 650 0220  
info.ca@rondo-online.com

**RONDO Asia Sdn. Bhd.**  
58200 Kuala Lumpur / Malaysia  
Tel. +60 3 7984 55 20  
info.my@rondo-online.com

**RONDO China**  
Regional Office  
Guangzhou 510700 / China  
Tel. +86 20 8388 2211  
info.cn@rondo-online.com

**RONDO México**  
Regional Office  
C.P. 15530 México, D.F. / Mexico  
Tel. +52 55 2580 7075  
info.mx@rondo-online.com

[www.rondo-online.com](http://www.rondo-online.com)

