Rademaker Next Generation Sigma® Laminator

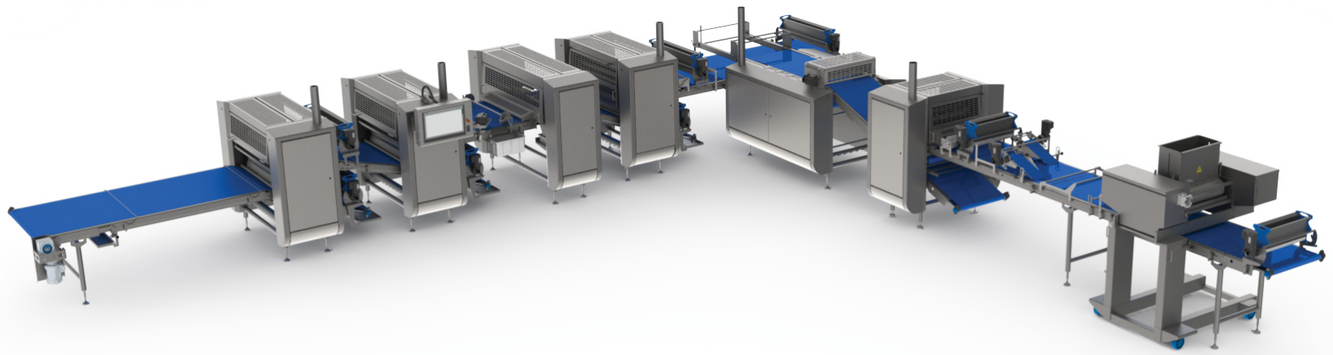
The secret of high quality pastry originates in the laminating process; a process that Rademaker masters perfectly. Rademaker uses its experience in sheeting technology to develop innovative, stress-free dough sheeting and handling processes, capable of handling a broad range of dough, butter and fat types. Capacities range from 250 – 10,000 kg/hour, consistently produced hour after hour, day after day and year after year.

Rademaker Sigma® Laminators are well known for the unmatched quality of your laminated dough products. Being the first in the industry to introduce the technology, the previous generation had already been designed for wet cleaning (D4W©) with the new laminators bringing an even higher level of hygiene. Meanwhile, numerous improvements such as enhanced process control, easier maintenance and simplified operation has resulted in a significant reduction of cost of ownership.

Key benefits of the new Sigma® Laminator:

- Hygienic design exceeding current standards
- Fast and easy cleaning
- Operating cost reduction due to significant improvements in service & maintainability
- Efficiency improvement resulting from advanced process control and an increase in nett working width
- Highest possible level of user friendliness
- Considerably reduced energy usage

Rademaker redesigned their new Sigma® Laminator that is yet again ahead of the competition. The Dutch company looked very closely at the market requirements and gathered valuable input from their customers to set up key development objectives which in turn formed the foundation of the new Sigma® Laminator.



HYGIENIC DESIGN
The new Sigma® Laminator is designed in accordance with the Rademaker Sigma® design guidelines. These guidelines are directly derived from many high-end requirements in hygiene & cleanability such as the GMA standard and EHEDG recommendations. With excellent machine surface finishing , tilted surfaces, rounded frames, all blue plastic parts, minimized hinges, bolts and numerous other items, the line is living up to the highest industrial expectations. A new standard feature of the machines includes life-time lubricated bearings in the product-zone.

Apart from unmatched product quality and practically zero risk of contamination, the overall combination of the above improvements is resulting in extremely short cleaning times, very high levels of uptime and siginficantly reduced maintenance. Needless to say, Rademaker's new line is fully designed and approved for wet cleaning (D4W©) which was introduced into the industry by Rademaker itself more than a decade ago.

PROCESS EFFICIENCY & FUNCTIONALITY
The overall set-up of the new Rademaker Sigma® Laminator is designed for high production efficiency. This is enabled by easy-to-remove tools, exchangeable scrapers & bins and various options to minimize requisite cleaning.. Furthermore, the system is equipped with automatic settings allowing for a "one-button" action bringing the entire machine into a perfect cleaning or drying status.

An open design with best possible visibility of the process has been the focus for the system design. Rounded edges and covers which can be opened fully on both sides of each unit are applied throughout the system. The new Sigma® Laminator is designed with improved nett working width. Apart from a delivering a higher output this is resulting in improved dough support and reduced risk of micro-damage and stress in the outer dough edges. The final resulting product has even less variation in thickness and improved consistency of the layers than was experienced previously.

EASY SERVICE & MAINTENANCE
Accessibility of the system has been radically improved in order to allow for easy service and maintenance. The service & maintenance requirements are reduced by optimal material selection resulting in minimal wear and importantly, due to clever design a requirement of fewer spare parts than in previous machines.

Reduction of maintenance effort is achieved by carefully focusing on the increased lifetime of all sensitive items such as bearings used in or above the product zone which contain lifetime lubrication so they do not need to be replaced. The greasing of nipples and other parts that require regular maintenance are located in easily accessible places outside the production zone.

Cleaning and maintenance require less time enabling production to continue without interruption. All conveyor belts are equipped with quick, belt release mechanisms to reduce downtime during cleaning and, once again, to keep maintenance to a minimum.

USER FRIENDLINESS

Great care is given to the new user interfaces. The size of the central interface has been increased to 12 inches with larger sizes of 22 inch and 32 inch screens available. Furthermore, the touch panel position can be easily adjusted to the proper working height. A mobile control is available to enable remote operation at any position in the line.allowing the operator to walk alongside the line to monitor and fine-tune the dough production process, making it a timesaving and user-friendly operational tool. The advanced control system features fully automatic speed adjustment and enables the different sections to operate independently. While the last part of the dough production run is processed towards the end of the line, the beginning of the line is ready for cleaning or for the production of another product.

PROCESS CONTROL

Process control by means of intensive data handling & communication is becoming increasingly more important in industrial production processes. Our control platform enables data exchange with neighbouring (third party) equipment. Furthermore advanced data processing enables on-line monitoring and optimization of Overall Equipment Efficiency (OEE). The smart use of the combination of process and recipe information allows easy and fast start-up and a reduction of flour usage. The proven existing cascade system and automatic belt speed adaptation (DDIC / Dough loop) is adapted to fit the increased hygiene demands but remains part of the new laminator design. Finally the number of sensors is reduced in order to guarantee optimal control with minimal risk of downtime through malfunction.

CONCLUSION

One may consider that over 35 years of Rademaker expertise can't be further improved easily, however. the new Sigma® Laminator has effectively "broken the mould" and is a sublimation of technological excellence developed over time resulting in an even better product quality than before at a significantly lower cost of ownership. ■

FIND OUT MORE

Rademaker

Rademaker BV
Plantijnweg 23, NL-4104 BC Culemborg
P.O. Box 416, NL-4100 AK Culemborg
T: +31 (0) 345 543 543
info@rademaker.nl
www.rademaker.com