

Taking bread production to a new level

The Rademaker Bread Line is designed to produce a wide range of bread products. Flexibility and fast product change-overs are guaranteed due to the unique modular design and the various mobile units. Rademaker upgraded its Bread Line to the highest required hygienic standards and improved its functionality, efficiency and process. This results in a highly desirable Return On Investment, making it the most effective Bread production line in the market.

Rademaker's Bread Line is based on sheeting technology because it provides various important benefits over traditional bread making systems. It enables the possibility of handling a wide variety of

dough types from 'green' to pre-fermented dough. Therefore, it is capable of generating a wide range of high-quality products that can be produced at capacities starting at 500kg up to 9000kg of dough per hour.

Hygienic Design

The Rademaker Bread Line is designed according to the Rademaker Sigma® design guidelines. These guidelines are directly derived from various high-end requirements for

hygiene & cleanability such as the GMA (Grocery Manufacturers Association) standard and EHEDG recommendations. With excellent machine surface finishing, tilted surfaces, rounded frames, FDA (Food and Drug Administration) approved materials, minimized hinges & bolts and numerous other items, the line lives up to the highest industrial expectations. Total elimination of recesses, cavities and dead corners has been achieved and accumulation of dirt and dust is prevented due to the application of stand-offs.

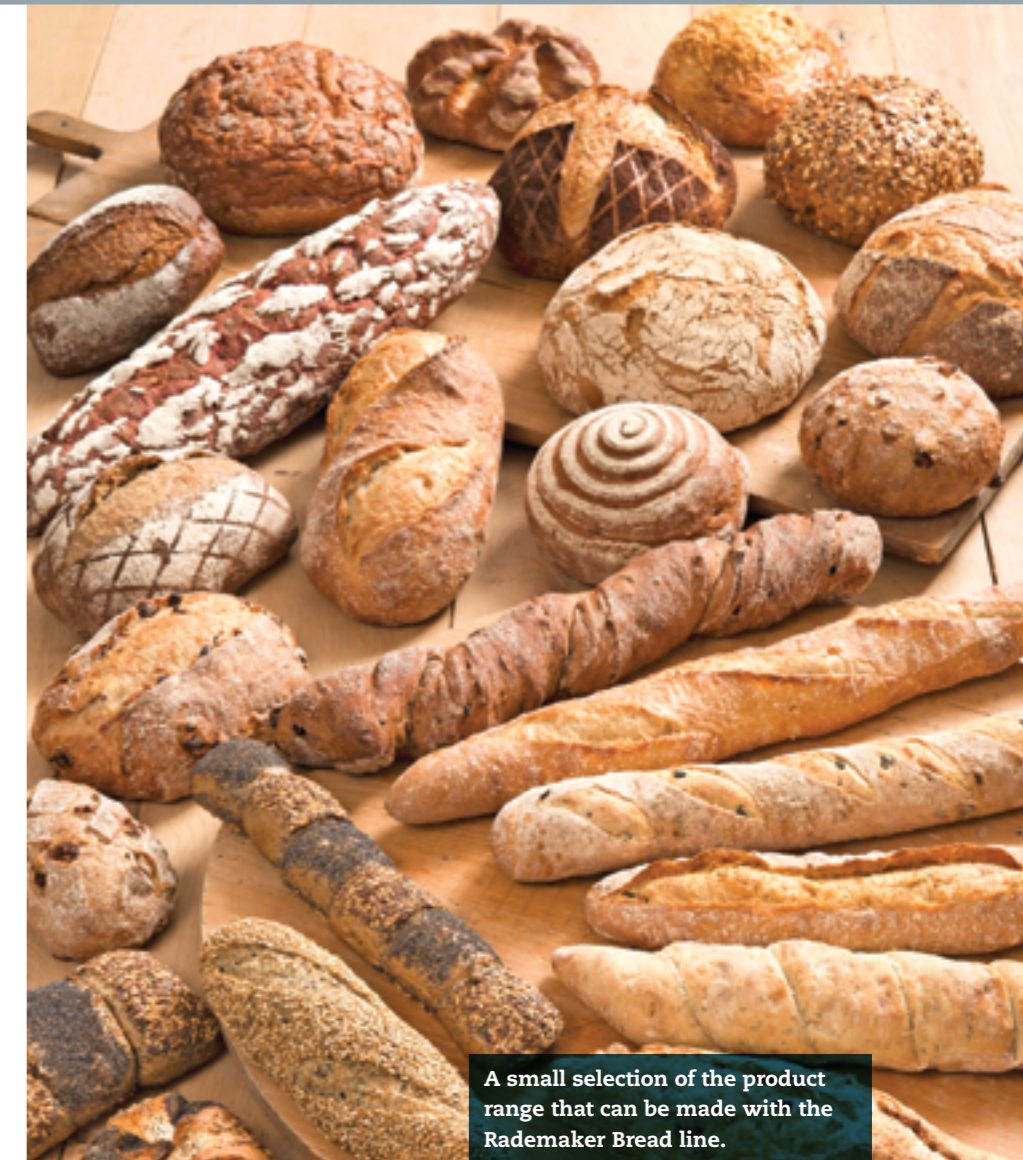
An open design enables easy cleaning whilst guaranteeing the operator's safety. Accessibility for cleaning and inspection is achieved by opening covers on both sides of the machine, retractable belt tensioners and knife transfers.

Functionality

The open design ensures best possible visibility of the process. Rounded edges and fully opening covers on both sides of each unit are applied throughout the system. Accessibility of the process is achieved by optimizing the space between the working stations and application of horizontal conveyor belts. Smaller units are also designed with open housing. Lightweight safety covers with extra handles enable ergonomic operation, with overall safety being guaranteed by the application of safety locks.

Process

The increased roller and belt width results in improved dough support, reducing the risk of micro-damage and stress in



A small selection of the product range that can be made with the Rademaker Bread line.

The new Rademaker moulding solution



the dough's outer edges which eventually leads to reduced variations of dough thickness. Minimized transport height difference throughout the production line ensures that the integrity of the dough remains intact, resulting in the highest possible quality of the end products.

Set-up of the Bread Line

Rademaker's Bread Line comprises two sections; Sheeting and Make-up. The Sheeting section generates a homogeneous dough sheet which is then shaped into the required bread products by the Make-up section.

Double chunking Sheeting System (DSS)

After kneading the (optionally pre-proved) dough batches are deposited into the Double chunking Sheeting System (DSS) producing a dough sheet with minimal stress levels, based on the DSS system's set-up. The Rademaker Bread Line has a proven track record which demonstrates that even the most fragile dough structure stays intact during chunking and sheeting.

Dough recycling system

When the dough sheet is cut to its final width, rework dough is

created which is then transferred back into the DSS by the newly developed Rademaker dough recycling system. To achieve the highest dough quality, it is of huge importance that the rework dough is evenly distributed into the fresh dough sheet. Up to 45% rework can be recycled back to the DSS. No dough is lost making it a very effective and cost saving system.

Make-up section

The modular design of the dough make-up section results in a versatile production line that caters for fast product change-overs; crucial when it comes to configuring customer applications and managing production efficiency.

Rademaker's patented weighing systems are designed carefully to meet the customer's requirements for product accuracy. In particular, the integrated weighing system directly leads to increased product margins and profitability. The final product weight is perfectly achieved by using the measured data to control the guillotine for the exact cutting position.

For the production of rolled bread types, such as baguettes, batards and tin breads, Rademaker's newly designed moulding conveyor module boasts improved reach and cleanability. Customers have optimal access from both sides of the module through the vertically moving upper belt transport. Furthermore, the side guides are designed for fast and easy exchange. The pressure plate settings are saved in the product recipe which reduces

operator mistakes and assures product quality. The new module is designed according all safety standards and is equipped with automatic height adjustment.

Efficiency

The overall set-up of the Rademaker Bread Line is designed for high production efficiency with its operation being made as easy as possible. This is assured by the inclusion of easy-to-remove tools, a reduction in the number of changeable parts, exchangeable scrapers & bins and various options to minimize necessary cleaning periods resulting in increased uptime. In addition, the system is equipped with automatic settings allowing for a "one-button" action to bring the entire machine into cleaning mode ready for perfect cleaning or drying conditions. After cleaning the operator will be warned if belts are not tensioned properly.

Service & Maintenance

Accessibility of the system has been radially improved in order to allow for easy service and maintenance. Lifetime lubricated bearings in the product zone and clear, comprehensive lubrication locations for bearings outside these zones result in minimal downtime. Parts that require regular maintenance are also located in easily accessible places outside the production zone.

All conveyor belts are equipped with quick, belt release mechanisms to further reduce downtime during cleaning and to keep maintenance to a minimum. Data gathered by the system such as motor loadings, running stops and the causes of stops, can be

used to improve maintenance.

Control

Process control by means of intensive data handling & communication is becoming increasingly more important in industrial production processes. Rademaker's control platform enables Organization for Machine Automation and Control (OMAC) based data exchange with neighboring (third-party) equipment as well as various plant control and automation systems. The provision of advanced, data processing enables on-line monitoring and optimization of equipment efficiency. The smart use of a combination of process & recipe information allows easy, fast start-up and reduction of flour usage. The advanced control system features a fully automatic speed adjustment facility enabling the different sections to operate independently. When the final dough piece of the production run is being processed towards the last section of the line, the first section of the line is already being prepared for cleaning or for the production of another product. ■

FIND OUT MORE

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