

TruClean™ Sheet Forming and Cutting Lines

Baker Perkins' TruClean™ sheet forming and cutting lines handle a wide range of dough types to produce laminated and/or sheeted biscuits, crackers and snacks. The range covers every application, from dedicated plants to flexible, multi-purpose lines. Every machine has been designed for high output while minimizing costs in areas such as labor, waste and downtime.

Hard Sweet Biscuits

Crackers

Baked Snacks



Precise weight control at high outputs

All units have the motor power and mechanical strength to run at very high speeds for long periods without loss of weight control or quality. Low-deflection gage rolls guarantee weight control over many years. The control system provides accurate speed control of each unit, and a sophisticated cascade system maintains a smooth flow of dough along the line.

Efficient and reliable for low production costs

Waste and scrap are very low, while changeover and cleaning between production runs is quick and straightforward. High quality components and software maintain trouble-free operation for long periods. Motors and gearboxes operate well within capability to ensure that component stress does not affect reliability.

Designed to achieve the highest levels of hygienic operation

Every unit is designed with hygiene in mind: maximum access, minimum components between the frames and tool-free removal of scrapers make cleaning simple and quick. Baker Perkins' TruClean™ standard achieves the highest level of hygienic operation in accordance with the GMA's 10 Principles of Equipment Design and other relevant industry guidelines.

innovation center

The development work required to launch a successful new product or improve an existing process can be carried out in the Baker Perkins Innovation Center. With a full range of pilot-scale equipment and assistance from our expert food technologists, all the necessary tests can be conducted without using valuable plant time.

Typical Installation Includes:



TruClean™ Sheet Forming and Cutting Lines

TruClean™ sheet forming and cutting lines have been designed for high output while controlling costs in five main areas – weight control, ease of cleaning, ease of use, reliability and ease of maintenance. The result is a line that minimizes the costs of labor, waste and downtime.



Combination Laminator



Three Roll Sheeter



Gage Roll



Rotary Cutter

Laminator

An integrated Three-Roll Sheeter and two sets of Gage Rolls produce a sheet that is cut and then laid down on a continuously moving conveyor to the first Gage Roll.

To add flexibility, Baker Perkins' Combination Laminator incorporates an ingenious miter turn after the Sheeter, feeding the dough sheet either to the Laminator or directly to the first Gage Roll via a bypass conveyor.

Laminating produces a lighter, crisper texture than sheeting. This can be further enhanced by incorporating a layer of dry ingredients between laminations.

Three Roll Sheeter

Baker Perkins' Three Roll Sheeter takes either a bulk or metered feed of dough and forms a compacted, homogenous sheet ready for the first Gage Roll.

The three-roll arrangement provides optimum control over the size and condition of the dough sheet.

The infeed hopper contains a partitioned compartment to integrate returned scrap dough into the underside of the fresh dough, preserving the high quality appearance of the dough's surface.

Gage Rolls

Gage Rolls progressively reduce the dough sheet thickness from the initial sheeted or laminated output to that required for the cutting process.

The rolls reliably achieve and maintain the desired thickness across the full width of the dough sheet, with repeatable precision.

Various roll options are available, including roll material, non-stick coatings, and water-cooled specifications. Standard Gage Rolls are 300mm diameter. Heavy-duty Gage Rolls with 400mm diameter rolls are also available for tougher doughs and higher output lines.

Rotary Cutter

The Rotary Cutter produces cut pieces from the gaged dough sheet via removable embossing and cutting rolls, each acting on its own rubber-covered anvil roll.

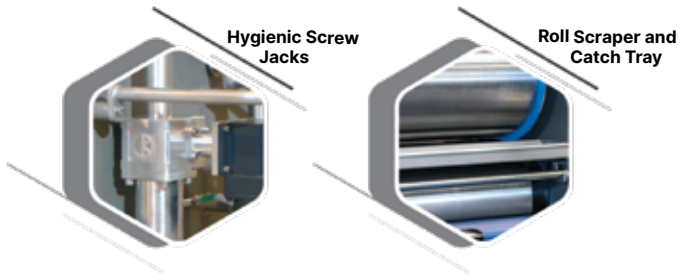
The scrap web is lifted and returned to the Laminator or Sheeter. Returned dough is integrated into the underside of the fresh dough for a consistent product with minimal waste.

The TruClean™ Rotary Cutter has been designed and constructed to minimize costs in every area of operation, while introducing a completely new approach to hygienic design.

Standard widths:

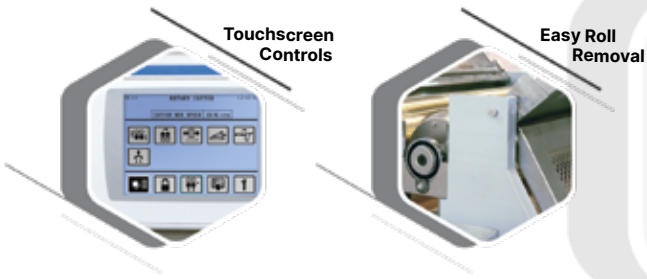
- 1,016mm
- 1,220mm
- 1,525mm

Gage Rolls provide precise weight control



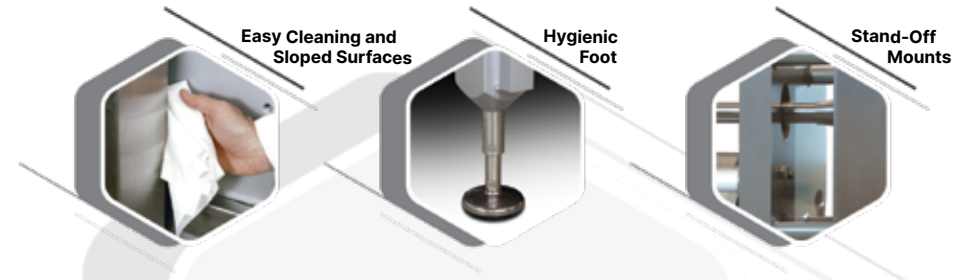
- Solid rolls and tubular cast iron rolls are available
- Solid gage rolls are made from high strength carbon steel with a stainless steel cladding. Rolls can be machined from a solid billet to offer the ultimate in rigidity and weight control across the full width of the plant
- Deflection on solid rolls is 25% less than tubular chilled cast iron rolls
- Hardened stainless steel ground finish is resistant to corrosion and pitting
- High specification gap adjustment provides fine tuning with accurate and stable positioning with no backlash
- Take-off web nosepiece provides fully supported, reliable transfer for maintenance of weight control

Processes are easy to control and adjust



- Local touchscreens along the line enable operators to visualize and control the process easily and intuitively
- Local adjustment only is required: upstream and line adjustments are fully cascaded
- Simple removal of cutter rolls without tools, plus precision phasing adjustment, facilitate rapid changeovers
- Independent embossing and cutting with separate rolls make adjustment for optimum pressures very easy
- Pneumatic dough bypass function helps to avoid jams, especially on start-up
- Dual hardness rubber rolls to optimize cut and emboss as well as extend life of cutting web

Hygienic designs are easy to clean



- All sheet forming and cutting equipment is designed to our TruClean™ standard
- Minimum components and no horizontal surfaces between frames
- Fully welded construction with continuous hygienic welds: holes, niches and other debris accumulation points have been eliminated on all machines
- Dough sheet is fully supported by wide webs to reduce debris. Webs are easy-clean polyurethane coated synthetic material
- Gage rolls have corrosion resistant stainless steel finish
- Top scrapers and catch trays can be easily removed without tools
- Generous floor clearance for easy access for cleaning
- Hygienic foot design with no exposed threads and easy-to-clean surfaces

Lines are reliable and easy to maintain



- All maintenance items are outboard of frames or otherwise easily accessible
- Sealed bearings reduce maintenance, avoid grease migration and prolong life
- Major roll bearings can be replaced without removing the roll
- Light damage to gage roll surface can be repaired in situ
- Maintenance-free AC motors with variable speed drives used throughout
- Web drive and tension arrangement is maintenance-free and self-regulating

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The TruClean™ Standard: Hygienic Design by Baker Perkins

The TruClean™ range has been designed from the ground up to achieve the highest levels of hygienic operation and to improve on the outstanding performance of its predecessors.

The equipment has been designed in accordance with all relevant industry and statutory guidelines, including the GMA's 10 Principles of Equipment Design. Particular attention has been paid to reducing the accumulation of unwanted materials; improving visibility and access for cleaning; and simplifying the removal and replacement of components and assemblies without the need for tools or technicians.

A Customized Approach

While designing for the highest possible levels of hygienic operation, Baker Perkins' engineers have recognized that the risks are not the same in every instance and that customization is required. Two levels of hygienic design are offered allowing manufacturers to choose the one that best matches the sensitive cross-contact risks they face and the cleaning protocols they use.

