



# Integrated Mixing & Forming Systems Consistent Quality and Low Production Costs

The Baker Perkins range of integrated dough mixing and forming systems has been well proven in demanding high-output applications around the world. Precise mixing, accurate weight control and gentle dough handling all contribute to performance that drives consistency up and production costs down.

### **Consistent Quality**

Gentle dough handling throughout the process minimises stress and damage to the dough. This helps it to proof very evenly and fill the pan well, giving an attractive appearance and a good crumb structure. Shape, colour and resilience good enough for premium or sandwich bread can be achieved with a standard recipe; alternatively, standard products can be made using a lower-cost recipe.

#### **Low Production Costs**

Ingredient costs are reduced as less yeast and improvers are required to achieve the same bread quality. Gentle handling minimises dough damage so more of the cell structure developed in the mixer is retained. The dough proofs and bakes well to achieve the required volume, colour and softness, but at a lower cost. Production costs are further reduced because gentle handling eliminates the sticking and smearing that lead to jams. It also means that a lot less cleaning and maintenance are necessary.

Systems comprise a number of unit machines linked together by an integrated control system but every unit may be installed individually on existing lines. Each one contributes to consistent bread quality and reduced production costs so even a single unit will result in an immediate and measurable improvement in performance.





## Lifetime Support

Baker Perkins is committed to Lifetime Support for our customers' equipment. For as long as a machine remains in production we will continue to offer parts, service, repairs, upgrades, rebuilds and training that improve performance, increase service life and reduce running costs. The service ranges from simple repairs through maintenance contracts to management of large-scale plant.

## **Process Support and Training**

Full process support is available at the evaluation stage of a project to ensure that the system you choose is right for you. From on-site consultations and tests in your bakery through to development trials in one of our Innovation Centres we will work with you at every stage to get the process and equipment specifications exactly right.

We offer a complete range of installation and commissioning services including operator training. Follow-up and custom training packages are also available.

## **Replacement Parts**

Genuine Baker Perkins parts guarantee the performance and extend the service life of your systems. We offer a comprehensive parts service, including 24/7 emergency breakdown cover.

All the parts we supply are made to the original drawings using the correct materials and tolerances so they fit first time and perform as well as the original. Where designs have been improved since the machine was supplied the upgraded parts will be offered as an alternative.

#### Service

From simple inspections and repairs through to maintenance contracts and management of large-scale alterations and additions we provide specialist service technicians who can assist with process and engineering problems.

#### **Upgrades and Rebuilds**

As part of our commitment to Lifetime Support, we offer a range of refurbishment and rebuild services to keep your systems running at peak performance. When performance improvements are required we have available a range of upgrades drawn from the latest versions of our current machines.





# Integrated Mixing and Forming Systems

Systems are made up from one or more of the following units to achieve the desired product range and output. All the machine and conveyor running speeds are carefully optimised to ensure smooth passage of the dough through the plant while minimising process time and avoiding the risk of doubles being created.

In addition, the integrated control system ensures that dough is not mixed unless it is required by the plant. It manages pairs of mixers as a single entity and can dynamically adjust to compensate for stoppages and schedule changes.

**Output Ranges** 

| TWEEDY2™ HIGH SPEED MIXER       | Up to 5,390kg/hr         |
|---------------------------------|--------------------------|
| ACCURIST™/ACCURIST2.1™ DIVIDERS | 14,400 pcs/hr 450g pcs   |
|                                 | 10,800 pcs/hr 1,100g pcs |
| CONICAL ROUNDER                 | 10,000 pcs/hr            |
| INTERMEDIATE PROOFER            | 9,600 pcs/hr             |
| MULTITEX4™ MOULDER              | 6,000 pcs/hr             |

\*Max 14 mixes/hr - subject to dough characteristics and mix time



Every part of an integrated system makes a contribution to improved consistency and reduced costs

| Unit                              | Quality Benefits   | Cost Benefits  |
|-----------------------------------|--|--|
| Tweedy2™ High<br>Speed Mixer      | <ul><li>Consistently developed dough</li><li>Precisely controlled texture</li><li>Wide range of dough types</li></ul>  | <ul><li>High levels of water absorption</li><li>Dynamic schedule management</li><li>Consistency minimises downstream waste</li></ul>   |
| Accurist <sup>™</sup><br>Dividers | <ul> <li>Minimal recirculation</li> <li>Adjustable ram pressure</li> <li>Pressure adjusted to compensate for dough density changes (Accurist2.1™)</li> <li>Dough damage reduced by minimising ram movement (Accurist2.1™)</li> </ul> | <ul> <li>2.5 to 3.5g SD on 900g pieces</li> <li>Accuracy maintained over 10,000hrs</li> <li>Checkweigher feedback loop</li> <li>15 minute clean-down</li> <li>Low oil consumption</li> </ul> |
| Conical Rounder                   | <ul><li>Low-stress process</li><li>Adjustable for optimum moulding</li><li>Conditions dough piece surface</li></ul>  | <ul><li>Minimal cleaning and maintenance</li><li>Tight tolerances reduce chipping</li><li>Soft start/stop</li></ul>  |
| Intermediate<br>Proofing          | <ul><li>Rests dough before moulding</li><li>Open resting conveyors for short proof</li></ul>   | <ul> <li>Tray proofer with synchronized bucket<br/>feed and air circulation system for<br/>longer proof</li> </ul>   |
| Multitex4 <sup>™</sup><br>Moulder | <ul> <li>Gentle sheeting improves volume and crumb structure</li> <li>Tight coiling improves colour</li> <li>Accurate dough placement in pans</li> </ul>   | <ul> <li>Non-stop running</li> <li>Less yeast and improver for same quality</li> <li>Rapid changeover between single and four- or six-piece bread</li> </ul>                                 |



## **Unit Machines**

As well as being the building blocks for integrated systems, our baking equipment range can be supplied as individual units. Whichever unit is chosen the result will be a clear improvement in plant performance.

## Tweedy2<sup>™</sup> High Speed Mixing Systems

Thorough and consistent mixing of no-time dough, Ideal for speciality and artisan-style loaves as well as standard pan bread

- Exceptionally accurate integrated ingredient weighing system
- Up to 75% dough hydration
- Proportional water weighing and temperature control system helps maintain dough consistency and temperature
- Mixing under pressure and vacuum enables a wide range of textures to be achieved
- Fully automatic discharge and transfer to divider
- Easy-to-use graphical control system with full schedule management and ingredient usage reporting













## Accurist™ Divider

A range of ram-and-knife dividers proven over many years to deliver excellent weight control, rock solid reliability and extremely low production costs

- Accuracy is maintained over 10,000 hours by efficient oiling and low-wear components
- Checkweigher feedback helps to compensate for dough density variations
- Easy to clean ram and knife can be cleaned in place
- Low oil consumption 0.02l/min at 30 strokes/min

## Accurist™ 3000/5000/9000

- Fully mechanical design
- Manual adjustment of ram pressure
- Three sizes available with outputs of 3,000, 5,000, and 9,000 pcs per hr (900g)

#### Accurist2.1™

- Servo-drive minimises ram pressure for maintained quality without loss of accuracy
- Touch screen HMI with recipe selection
- Outputs up to 10,800 pcs per hr (900g)













## **Conical Rounder**

## A precision-engineered rounder that requires very little cleaning and maintenance

- Integrated air blowers for dust-free operation
- Long-lasting non-stick surface coating minimises
- Independently adjustable troughs for consistent and reliable moulding
- Tight tolerances minimise chipping
- Soft start/stop to protect machine and avoid power spikes

## **Intermediate Proofing**

## Resting conveyors for a short proof or tray proofer for a longer proof

- Resting conveyors are dust-free and use a combination of specialist conveyor belts, turnovers and air blowers to prevent sticking
- Tray proofer achieves 100% pocket fill with synchronized bucket feed loader
- Air circulation system conditions products and prevents condensation



Resting Conveyor



## Multitex4™ Moulder

## A well-proven moulder with a unique and gentle process that reduces costs

- Reduced ingredient costs less yeast and improver required
- Lower operating costs easy to clean and runs continuously without iamming
- Improved loaf quality greater volume, improved softness and better slice
- Does not need dusting flour easier cleaning, less maintenance and improved safety
- Well-controlled panning dough pieces perfectly positioned in pan



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