

Tweedy™ High Speed Mixing Systems

The Tweedy™ is an integrated weighing and mixing system for all types of mechanically developed bread dough. Consistent quality is achieved by rapid mixing in small batches under pressure and/or vacuum, while hygienic design and automatic controls contribute to high levels of availability and efficiency. New SuperCool technology reduces the temperature rise during mixing, making the Tweedy™ the ideal mixer for hot climates.



Consistently high-quality dough

Consistency is achieved through accurate weighing of ingredients followed by precise control of mixing to time or energy. Dough quality is enhanced and controlled by applying pressure at the start of the mix to assist with dough development and vacuum at the end to promote the creation of gas bubbles.

Efficient operation and low production costs

Downstream waste, giveaway and downtime caused by dough stickiness and/or gassing are minimised by short mixing times, small batches and dough temperature control while dynamic scheduling optimises mixer availability and plant output. Product costs are kept low by water absorption rates up to 75% and efficient development of the available protein which produces strong dough from lower protein flour.

Hygienically designed and easy to clean

A bowl wash attachment provides a quick and effective method of cleaning the bowl and lid. The ingredient platform and lid have been designed to minimise the accumulation of debris and make any that does collect very easy to remove. Liquids on the ingredient platform are contained by a fully drained wash-down wet area.

Typical Installation Includes:



Pan/Tin Bread



Buns & Rolls



Sandwich Bread



Hearth Bread



Toast Bread



Brioche

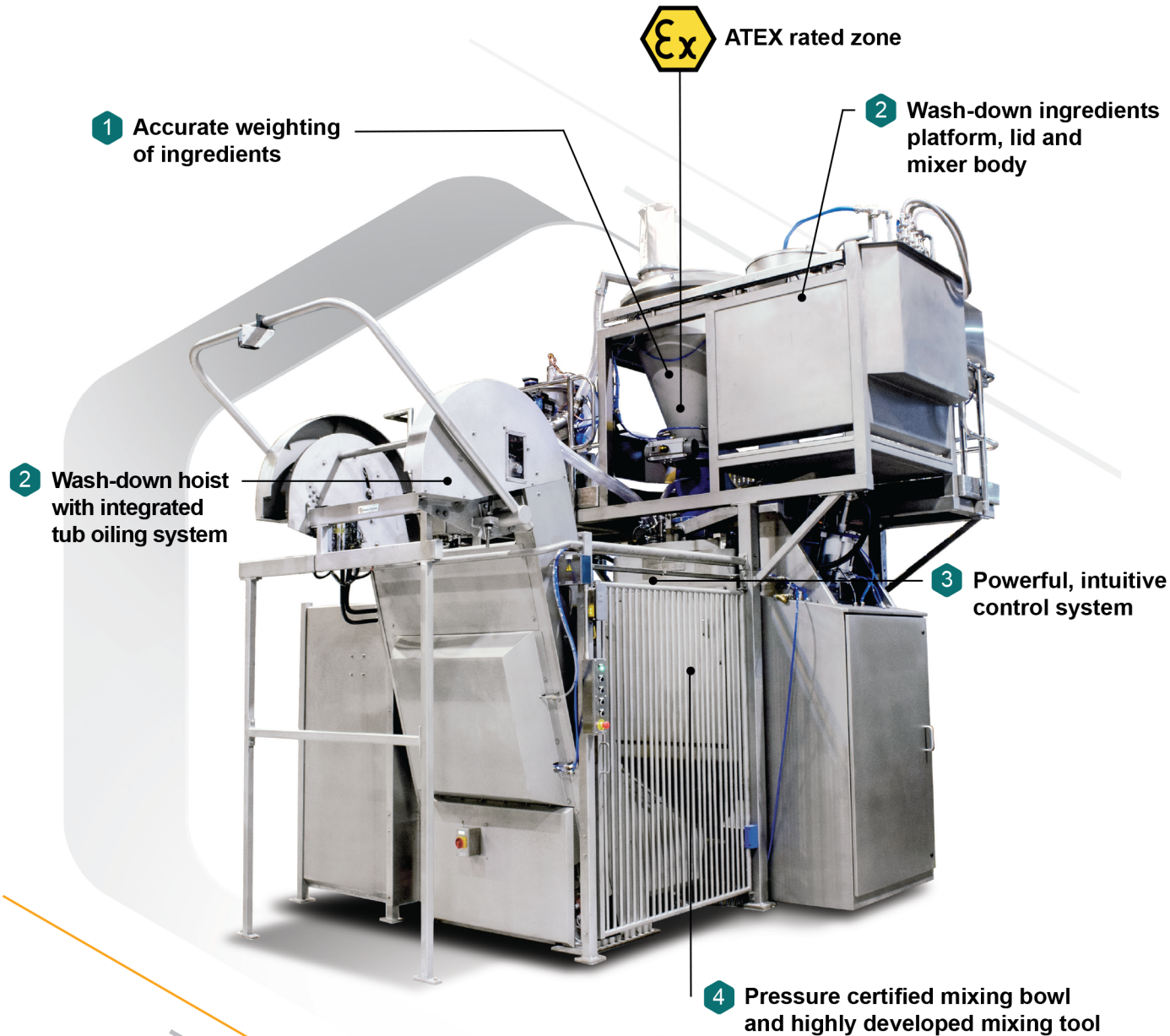


Rye Bread



Pizza Dough





The Chorleywood Bread Process

The Tweedy™ is well suited to all types of mechanically developed dough and is the definitive machine for the Chorleywood Bread Process (CBP).

CBP uses a high-shear mixing action - an accurately controlled high-energy input - and an oxidising agent (ascorbic acid) to develop the dough. The application of pressure in the early stages of mixing enhances the action of the ascorbic acid by increasing the availability of oxygen: this accelerates the oxidation process and leads to more and larger gas cells.

Applying partial vacuum towards the end of mixing causes the gas cells to expand. The action of the mixer breaks these up into smaller cells which are then compressed when the vacuum is released. The result is a large number of small and evenly distributed cells in the dough.

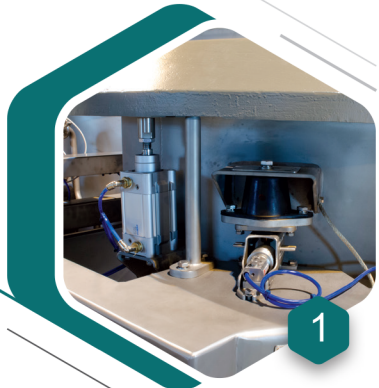
Varying the level and duration of the pressure and vacuum phases enables a range of textures, from fine to open, to be created.



Tweedy™ SuperCool

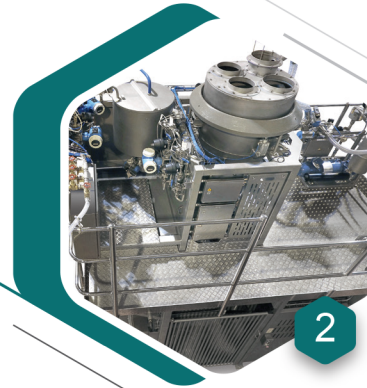
Baker Perkins' SuperCool technology unlocks the benefits of high speed mixing for bakeries in hot climates, including the Middle East, Latin America and Asia, where effective dough temperature control has always been a potential problem.

The Tweedy™ SuperCool mixer features a re-designed cooling system that significantly increases heat transfer from the dough to the cooling jacket during mixing. It combines this radically enhanced bowl cooling with advanced control technology to provide precise management of dough temperature in any climate.



Accurate weighing of ingredients

- Weighing occurs while simultaneously mixing batches, reducing cycle time and increasing availability
- A blended ambient, chilled and warm water system, with proportional weighing of water to flour, provides real-time correction to achieve desired dough temperature
- Unique dynamic discharge of the flour hopper improves consistency and further reduces cycle times



Wash-down ingredient platform, lid, mixer body and hoist

- Liquid ingredients are located in a separate wash-down area with floor drain
- The fully guarded and interlocked dough transfer area accepts dough from one or two mixers and feeds directly into the bulk hopper or gated feed of the divider
- Easily accessible, uncluttered wash-down mixer lid
- Wash-down hoist increases hygiene



Powerful, intuitive control system

- Full process visualisation allows operator to manage plant scheduling for maximised plant output
- Dynamic recipe management ensures changes made to recipes are implemented immediately
- Reporting functions for real-time and historical trending, plus alarm management and history
- An external network connection is available for remote troubleshooting and connection to factory data network
- Enhanced component life-cycle management aids preventative maintenance scheduling



Pressure certified mixing bowl & highly developed mixing tool

- Integrated pressure-vacuum system for enhanced texture control
- Mixing bowl and lid clamping system rated up to 1.0 bar.
- Forward bowl-tilt up to 125° (depending on bowl size) for easy discharge
- Rear bowl-tilt up to 105° for hand ingredients and access to the mixing tool for cleaning and maintenance
- High-shear, 3D mixing action is generated by the highly-developed mixing tool working in conjunction with sidewall baffles
- 3D mixing achieves rapid hydration and consistent dough development maintenance scheduling

Tweedy™ High Speed Mixing Systems

Increased hygiene and reduced noise

A wash attachment and self-clearing drain valve enable high-pressure clean-in-place of bowl and lid. A fully sealed, stainless steel swing frame allows easy wash-down, and incorporates removable covers for maintenance and access to the wash-down motor.

The mixer body and swing frame are sealed for noise reduction, and are placed on anti-vibration mounts. The PV pump set can be mounted on a separate skid for remote installation. A high-performance silencer, fully sealed drive train enclosure, large diameter pulley and reduced width drive belts further diminish noise.

Easy to remove covers for access



Wash attachment for clean-in-place



Range Chart

Model	Minimum Batch Size kg	Maximum Batch Size kg	Maximum Output kg/hr*
170	85	170	2,380
220	110	220	3,080
275	138	275	3,850
340	170	340	4,760
385	193	385	5,390

*At Max 14 Mixes/Hour (subject to dough characteristics and mix time)

Options

- Large capacity flour hopper (for low density ingredients)
- Weigh hopper for additional dry ingredients
- Metered liquid ingredient feeds
- Lid connections for additional ingredients
- Sliding safety gates
- 140° bowl tilt for through-floor discharge
- Extra hoist tubs
- Oil spray system for dough tub and divider hopper
- Divider dough level sensor

lifetime
support

Baker Perkins supports every piece of equipment throughout its life, with a comprehensive programme of parts, service, upgrades and rebuilds. Parts are available around the clock, while our team of bakery service engineers can assist with both repairs and routine maintenance. Existing equipment may be rebuilt to extend service life, and/or upgraded to improve performance.