



Kek-Gardner
Powder Processing Excellence

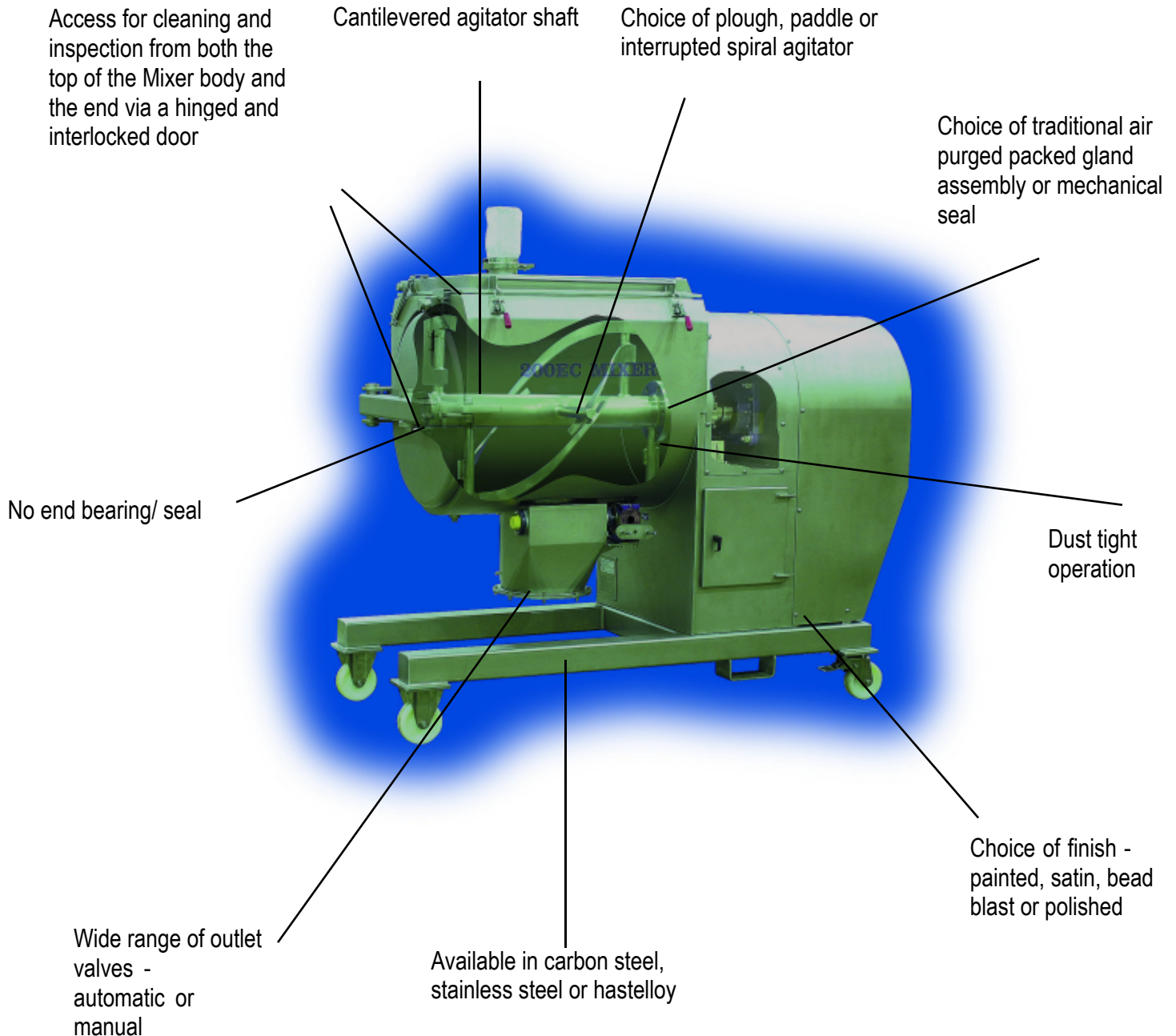
Mixers And Blenders

**MIXING AND BLENDING
TECHNOLOGY FOR THE
FOOD
PHARMACEUTICAL
AND CHEMICAL
INDUSTRIES**



Cantilever Mixers

Kek-Gardner supply a range of Cantilevered Mixers in parallel with their highly successful range of Kek-Gardner Cantilevered Sifters. With this Mixer design concept, the bearings and seals at the non drive end are eliminated. This arrangement of cantilevered agitator and Mixer body, together with much improved access via a full diameter hinged and safely interlocked door at the non drive end of the Mixer vessel, offers significantly improved access for cleaning and maintenance.



Proven expertise enables Kek-Gardner to produce a range of mixing equipment, from a standard powder Mixer to custom built processors servicing the food, pharmaceutical and chemical industries.

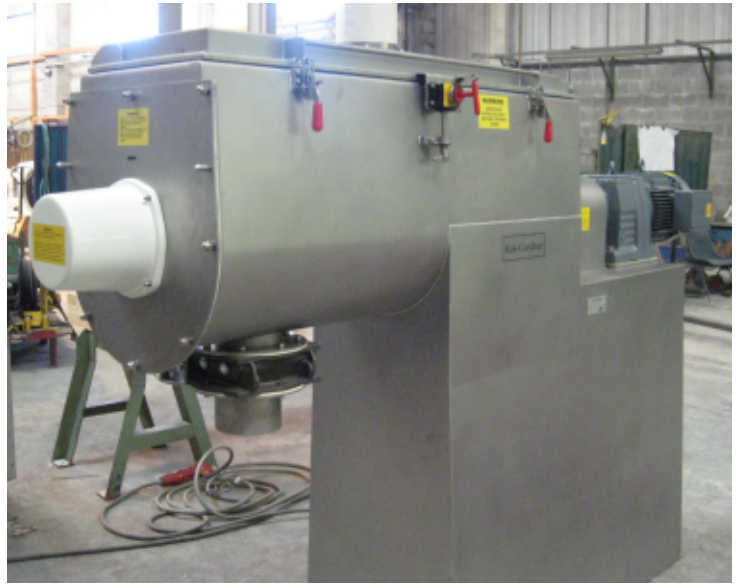
Kek-Gardner specialises in powder process technology and combines this knowledge with vast applications experience to design the most suitable Mixer for any particular application. Manufacturing practices are accredited to ISO 9001, meeting the standards required by customers.

Mixer Range

Ribbon Mixers

L Series U Trough Ribbon Mixers

Designed with hygiene in mind, the L Series U Trough Ribbon Mixer is perfect for small batch applications. This neat and compact range of Mixers is supplied with working capacities of 35 to 400 litres. A large, hinged lid and all-round access to the outlet makes for easy filling and emptying.



H Series U Trough Ribbon Mixers

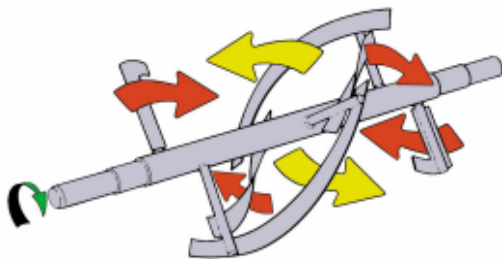
The large surface area to volume ratio of these traditional U Trough Mixers makes them well suited to applications where the mixture has to be heated or cooled. Working capacities range from 600 to 20,000 litres. Trough jackets can be specified for hot or cold water, steam or oil. Alternatively, electric surface heaters can be applied.



HE Series U Trough Ribbon Mixers

These machines have short aspect ratio (length to diameter) mixing troughs and double interrupted spirals for more efficient mixing and ease of cleaning. Working capacities range from 50 to 10,000 litres.

Short mixing times combined with low energy, gentle action and high efficiency, ensures that minor ingredients are dispersed homogeneously without the need for pre-mixing.



Action of double helix Ribbon agitator



Typical Applications for Ribbon Mixers

Powder soup mixes

Chocolate drinks

Custard powder

Jelly crystals

Live storage of sticky powders

Flour

Muesli

Metal powder

Batter mixes

Flavours

Jelly crystals

Animal feeds

Granulation

Instant drink mixes

Bakery ingredients

Spices

Liquid addition into powders

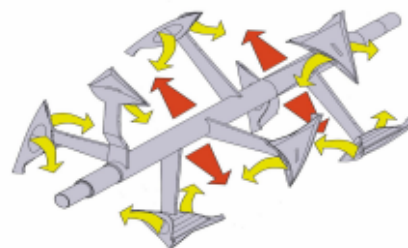
Plough Mixers

The Kek-Gardner "PE" Series Horizontal Plough Mixer is a high shear, high energy, high speed batch mixer.

This machine has a short aspect ratio mixing vessel and a high speed plough agitator to provide fast and effective mixing, with aggressive action.

Further energy can be added by use of high speed intensifier units for mixing powders with liquids and semi-dry solids.

Available in working capacities of 40 - 10,000 litres. The "PE" Series Mixer is designed with cleanliness and hygiene in mind.



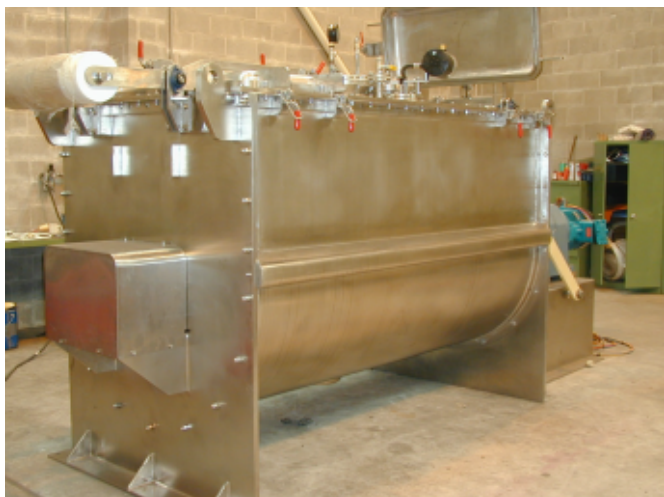
Action of Plough agitator



Stirred Bunkers

Essentially a Ribbon Mixer with an agitator rotating at just a few rpm to keep premixed material "live". Available in working capacities of 50 - 10,000 litres.

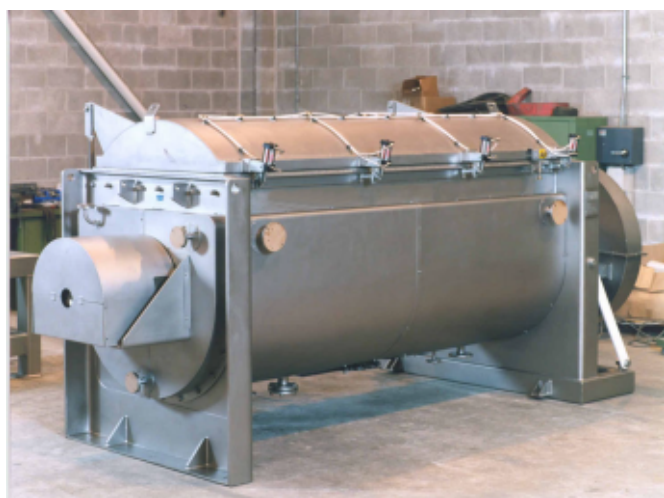
Topping up from a batch Mixer and continuously taking away product from a stirred bunker is an alternative means of providing a continuous supply of mixed product. It also allows checking of each batch before it is discharged into the bunker guaranteeing consistent product quality.



Processors and Reactors

A custom built range of Processors and Reactors, 50 - 5,000 litres capacities based on the range of horizontal Mixers with either ribbon or plough type agitators. Suitable for chemical reactions, sterilising, drying, heating and cooling; each unit is designed and manufactured to meet specific process requirements.

Heating and cooling jackets can be applied to trough exteriors. Processors built to withstand high pressures and vacuum applications will be constructed in accordance with PED and ASME requirements.



Typical Applications for Plough Mixers

Powder & semi-dried solids mixing	Spice mixes
Pharmaceutical powders	Agrochemicals
Breaking down agglomerates	Extending colours
Addition of oils liquids into powders	

Typical Applications for Processors

Chemical reactions	Drying filter cakes
Sterilising	Slurry mixes
Vacuum drying	
Heating / cooling at above or below ambient conditions	

Continuous Mixers

Based upon the tried and tested agitator designs of batch Mixers, Kek-Gardner offer a range of continuous Mixers, custom built to meet individual process requirements.

Typical capacities are 50 to 20,000 litres per hour with aspect ratios of 4:1 or more. An adjustable overflow weir plate is fitted at the discharge end and the agitator is biased to promote flow towards this end, whilst ensuring that the dwell time is adequate for the process.



Vertical Mixers

The Kek-Gardner Vertical Mixer is fast, accurate and versatile and is particularly suited to the mixing of free flowing, heat sensitive or fragile products.

Features

- Easy access for cleaning and maintenance
- Available in a range of sizes from 100 to 25,000 litre capacity
- Low energy, gentle mixing action with minimal heat generation
- Rapid mixing with fast and full discharge guaranteed
- Minimum wear even when processing highly abrasive materials.



Double Cone and Y Cone Blenders

The gentle, low energy tumbling action of the Double and Y Cone Blenders is ideal for blending the most delicate and fragile products and for mixing very heavy and abrasive products.

Our Blenders are designed for hygiene and ease of cleaning. For improved blending efficiency of free-flowing powders and granules the Double Cone Blenders feature our unique multi-shear deflector plates in the centre of the vessel, whereas the Y Cone Blenders utilise the shape of the Y Cone vessel to gently separate and re-combine the material.

Double Cone Blenders can also be designed and built as processors for sterilising and drying from 2 to 100,000 litres capacity.



Typical Applications for Vertical Mixers

Pharmaceuticals	Ceramics	Tea
Metal powders	Spice mixes	Sugars
Detergent powders	Instant drinks	Animal feeds
Liquid spray additions		

Typical Applications for Double Cone & Y Cone Blenders

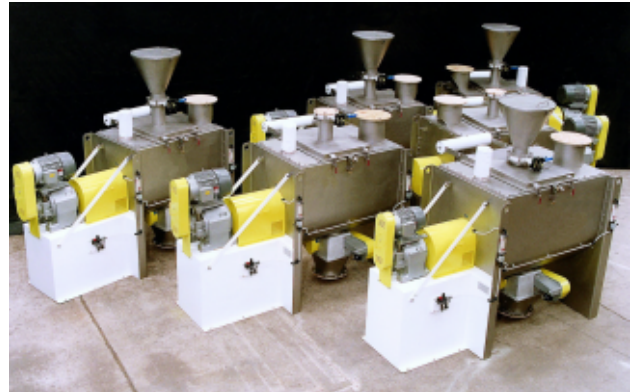
Metal powders	Tea	Herbs
Abrasive powders	Spice mixes	Sugars
Detergents	Nutraceuticals	Plastic pellets
Pharmaceutical powders		

Customised Mixers

The Complete Package

Kek-Gardner possesses a wealth of experience in listening to customers and ascertaining their needs in order to provide an effective solution.

Kek-Gardner are happy to discuss and design Mixers to meet customers' specific applications. The technical team specialise in non-standard designs and will supply the Mixer you want. Our Technology Centre is available for testing to determine the most suitable type of machine required for the task.



Specialised Applications

Every type of Kek-Gardner Mixer can be tailored to the specific application requirements of our customers, including:

Loading Arrangements

- Full-length access lids
- Additive feed hatches
- Gridded loading ports
- Sack tip loading units

Construction Materials

- Carbon steel
- Stainless steels
- Abrasion resistant steels
- Sophisticated alloys
- Hastelloy

Optional Extras

- cGMP and Pharmaceutical designs
- Heating and cooling jackets
- Liquid addition systems
- High intensity side cutters
- Air-purged seals
- Soft start and variable speed drive options
- Hazardous area versions



Surface Finishes

- Acrylic and epoxy resin lining
- Crack and crevice free welds
- Bead blast, satin or mirror
- polished finishes for stainless steels
- Abrasion resistant linings

Discharge Valves

- Contour-fit plug valves
- Iris diaphragm valves
- Bomb doors
- Slide valves

Contact us to find out how we can provide solutions to your powder processing requirements. Visit our website for more details on each product in the Kek-Gardner range.

www.kekgardner.com

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