

Kemutec KEK Cone Mill for biscuit rework



High speed
rotor grinds
rejected biscuits,
wafers and
granola bars



Cone milling is a low energy size reduction mechanism ideal for fatty, heat sensitive, sticky, or moist products.

Because the residence time within the cone mill to process the product is very short, heat generation is negligible and product build-up is drastically reduced – even for moist or sticky products such as biscuits.

The problem

During the production process for biscuits and wafers, biscuits frequently may be damaged and are considered unsuitable in a finished product. For example, the biscuits may be:

- Under or overcooked
- Damaged or broken
- Content in packaging is out of specification

Bakers must rework the rejected biscuits and re-introduce them into the baking process without affecting the integrity or quality of the finished product.

The requirements

The rejected biscuits need to be ground down to a suitable size and reworked into the biscuit product stream using a Kemutec KEK Cone Mill and re-introduced into the original production line. Size control of the ground biscuit is important, to eliminate detection of the reworked material in the final product. This process is often part of the basic biscuit recipe for some bakers, adding “crunch” to the final biscuit’s texture. It is imperative that the method of grinding the biscuits is suitable for all types of products, from dry wafers through to cream filled biscuits.

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The solution

The Kemutec KEK Cone Mill is an inline grinding machine capable of reworking all types of dry and cream filled biscuits. A high-speed rotor grinds the product through a perforated conical shaped screen, providing the following versatility:

- Adjustable rotor speed
- Adjustable rotor-to-screen gap
- Interchangeable screen hole sizes

The damaged biscuits are collected from the production line and milled in the cone mill to the required specs, typically as shown in the flow diagram. The ground biscuit pieces are reintroduced into the preparation of the new mixes.

The benefits

- Reintroduction of the reworked product into the biscuit baking process saves money by not having to scrap product
- Adjustable grinding set up allows for flexibility
- Kemutec KEK Cone Mills are easy to clean at the end of campaigns, reducing down time between grinding of different types of biscuits

Applications

- Plain biscuits e.g., ginger biscuits, crackers, shortbread
- Chocolate coated biscuits and cream filled sandwiches
- Removal of fruit from fruit filled biscuits
- Cream filled biscuits
- Milling of biscuit crumb for cheesecake bases
- Milling of biscuit crumb as additives in other food products

This technology also applies to a range of cereal and granola bars.

Put us to the test

Coperion / Kemutec has a fully equipped Test Center enabling customers to test their products on a range of different Kemutec KEK Cone Mills. In addition, most of the test cone mills are mobile, allowing customers to conduct trials on their own sites. This has the advantage of processing product straight from the production line avoiding any change to the biscuit during transport.

