



Co-extruded Foods

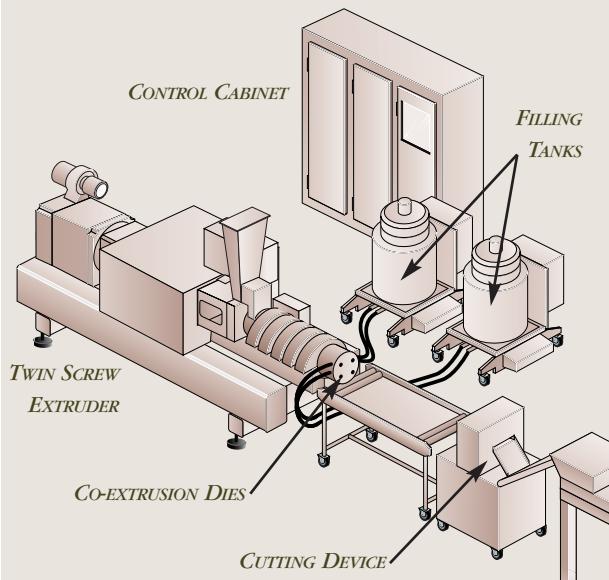
Dual-textured co-extruded foods, with crisp cereal shells and soft fillings, are enjoyed by consumers around the world. Clextral's expertise in co-extrusion technology and creativity in die design constitute the winning formula for new product success in co-extruded foods.

Combining the art and science of extrusion technology, Clextral's experts create co-extruded foods that delight consumers of all ages. That is why leading food processors rely on Clextral to produce successful snacks and breakfast cereals with tasty flavour and texture combinations. Our experience in co-extrusion processing yields distinct advantages in the development and production of co-extruded products.

- Production-proven processing techniques and scale-up expertise
- Expertly crafted co-extrusion dies with superior flow design
- Pre-engineered dies for many shapes such as bars, pillows, nuts, balls, long and short ovals and specialty profiles
- Ingredient flexibility to process a variety of cereal grains and granulations
- Processing ability to manage a variety of filling recipes including cream, jelly, fruit puree, cheese and meat
- Automated control systems can supply programmed start up and shut down, monitor line performance, generate production reports and provide automated recipe storage and recall
- Output from 100 to 800 kg/h



Clextral's modular extruders offer food marketers unprecedented opportunities to tailor products for a variety of regional and ethnic tastes.



CO-EXTRUSION PROCESSING LINE

A typical co-extrusion processing line includes mixing and feeding vessels for both cereal shell and soft filling, twin screw extruder and forming equipment. Belt dryers and coating drums are offered for specific applications.

Complete processing lines include equipment, engineering services, commissioning, product specifications, on-site training and maintenance.

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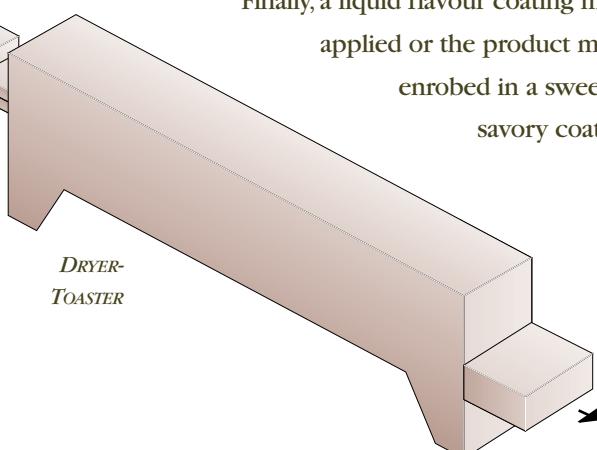
Co-extrusion processing lines

The co-extrusion production line starts with dry ingredient blending in a separate mixing vessel. The dry mix is fed to the extruder with the liquid ingredients. At this point, the screw flights are an open design to form an amalgamous dough. The screw flights quickly become more severe generating mechanical heat and shear within the product. Processing temperatures are precisely controlled by heating and/or cooling circuits in each section of the extruder barrel.

Meanwhile, the soft filling is prepared and held in an agitating tank. As processing is completed, the extrudate enters the co-extrusion die which concurrently forms and fills the product. Upon exit from the extruder, the malleable product is shaped and cut. Clextral offers a variety of flattening units, crimping rollers, pulling belts and stamping systems to accurately create the desired profile of the co-extruded product.

Next, the product may enter a belt dryer to reduce the moisture content, if required. Multi-belt drying systems are used for small products and single belt dryers for longer products.

Finally, a liquid flavour coating may be applied or the product may be enrobed in a sweet or savory coating.



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