

Baby/infant food processing lines

To meet consumer demands



Cereal-based baby food

A fully gelatinized product



A determining factor in the quality of baby food is the production line, which starts with proper mixing of the ingredients and is followed by pre-cooking of the slurry and concluded with the drying process. For more than a century, instant cereal-based baby food has been manufactured in process lines incorporating drum drying technology. The drum dryer gives its products a distinctive taste and excellent “porridge-forming” characteristics: very good solubility, swelling behavior, and water absorption. Furthermore, the drum drying technology guarantees that the product is fully gelatinized. This ensures that the product derived from the drum dryer can be digested easily by babies and infants. No other drying process gives cereal-based baby food this unique mix of qualities and organoleptic properties.

Drum drying technology

The drum drying technology not only meets high consumer demands, but also offers many advantages for manufacturers. The wet product is dried to the required final moisture content in one single process step, without the need for any additional equipment. Due to the intensive, high-temperature treatment the product undergoes during the drying process on a drum dryer, the product is actually pasteurized while being dried.

The drum drying technology is incorporated into processing lines that also include slurry preparation, a mill-sifter section, a section for dry mixing with other ingredients, such as dried milk and fruit powders, and blending additives, such as vitamins and minerals, and a storage section with silos.

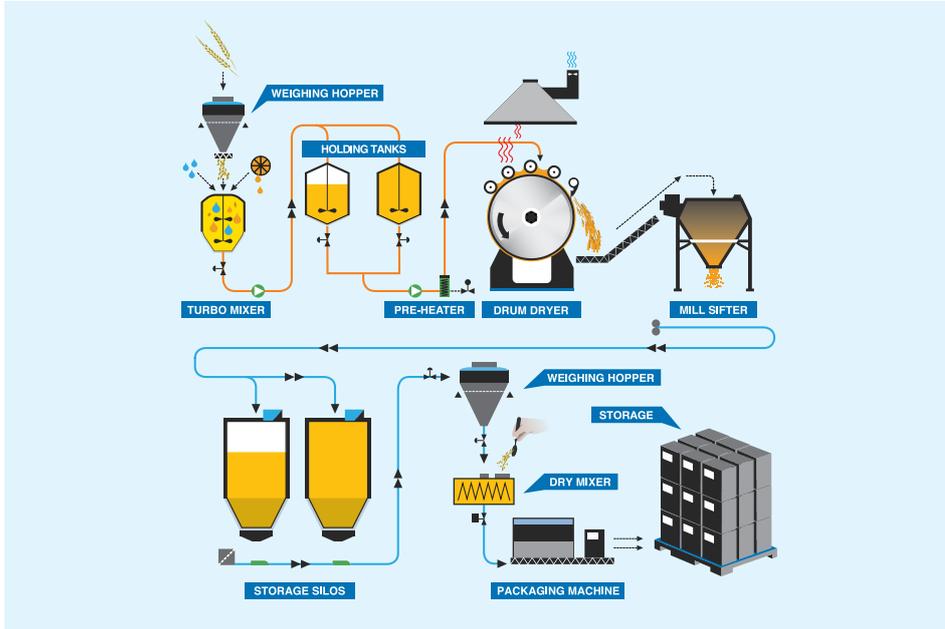
Each production line is specially engineered, designed, installed, and commissioned. The process starts with intake hoppers, bulk bag (FIBC) unloading stations, silos, or a combination thereof, where the ingredients for the baby food are stored. Based on the formula, a combination of ingredients in the required composition is weighed in a weighing hopper and the ingredients are then fed into a turbo mixer.

Key features

- Constant quality
- Fully gelatinized product
- Unique taste
- Energy-efficient
- Reliable

The ANDRITZ Gouda drum dryer

To meet hygienic standards



▲ Baby food drum drying process

Single drum dryer ▶



Turbo mixer

The turbo mixer is filled with the right amount of water and the ingredients are added to the mixing tank, which is the starting point for preparation of the slurry. The final result of the mixing process depends on several design aspects of the turbo mixer.

Pre-cooking

From the batch-based mixing process, the slurry is transferred to holding tanks, which also have a stirring unit. The holding tanks form the transition from the batch-based process to the continuous pre-cooking and drum drying process. For pre-heating, ANDRITZ Gouda offers either a direct or an indirect solution: a direct heater, the Jet Cooker, or an indirect, scraped-surface heat exchanger. The slurry is generally pre-heated in order to pasteurize or sterilize the slurry and obtain a low bacterial count. Moreover, it is used to obtain optimum pre-gelatinization.

Enzymatic treatment

To sweeten the final product without the addition of sugar, liquefy it, or a combination of both, ANDRITZ Gouda offers a process line design for enzymatic treatment of the slurry. Based on modern enzyme technology, the starches are broken down into sugars in an enzymatic treatment tank. As the viscosity of the slurry can be reduced during the hydrolyzation process, slurries with higher dry solids can be processed.

CIP and flushing system

A Cleaning in Place (CIP) or flushing system can be installed as an integrated part of ANDRITZ Gouda's production lines for baby food. These systems meet all hygiene standards for baby food production and avoid product degradation and contamination by residual product from a previous batch during the process. The systems offer a fast and simple solution for cleaning in place after each production run, as well

as flushing after each batch. The CIP and flush systems can be fully automated, and their design guarantees minimum water consumption. Besides the CIP and flush features of ANDRITZ Gouda's processing lines, the units can also be disassembled easily for cleaning and inspection.



ANDRITZ Gouda

ANDRITZ Gouda has been implementing complete process solutions for the environmental, chemical, and food industries for over 100 years. As a machine manufacturer as well as process solutions expert, ANDRITZ Gouda is able to handle all of the stages involved in designing and building plants, including engineering, service, installation, and commissioning.

ANDRITZ Gouda, as part of the international ANDRITZ GROUP, has several pilot plants available to test new materials, generate design data, and provide representative product samples. The proven calculation model for scaling up to industrial size ensures successful application in full-scale processing.



NETHERLANDS

ANDRITZ Gouda

Phone: +31 (182) 623 723

Fax: +31 (182) 619 217

gouda@andritz.com

AUSTRIA

ANDRITZ AG

Phone: +43 (316) 6902 2318

Fax: +43 (316) 6902 92318

separation@andritz.com

www.andritz.com/gouda