



SEPARATION

# FULLY GELATINIZED BABY FOOD

DRUM DRYING TECHNOLOGY TO  
MEET HIGHEST CUSTOMER DEMANDS

**ANDRITZ**

ENGINEERED SUCCESS

# Baby/infant food processing lines

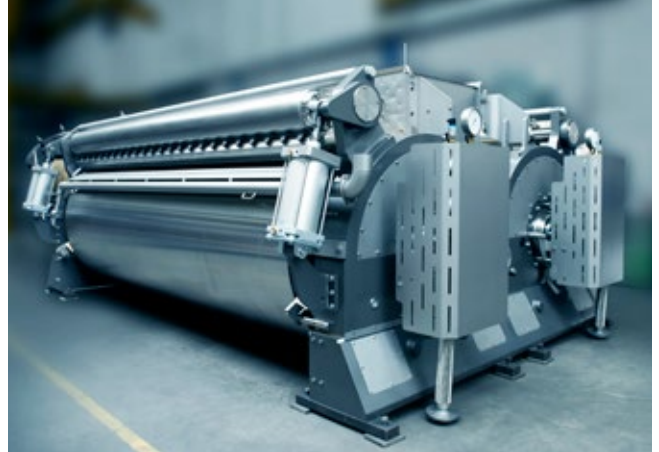
A determining factor in the quality of baby food is the production line, which starts with proper mixing of the ingredients and is followed by pre-cooking of the slurry and concluded with the drying process. For more than a century, instant cereal-based baby food has been manufactured in process lines 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.



ANDRITZ Gouda double drum dryer



ANDRITZ Gouda single drum dryer

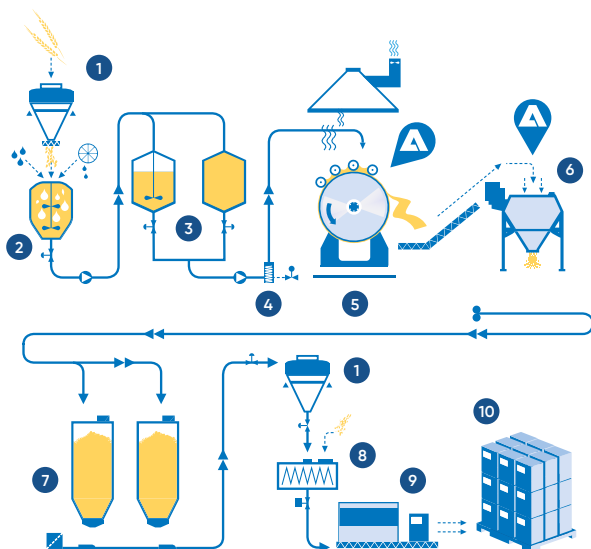


### TURBO MIXER

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.



Baby food drum drying process

- 1 Weighing hopper
- 2 Turbo mixer
- 3 Holding tanks
- 4 Pre-heater
- 5 Drum dryer
- 6 Mill sifter
- 7 Storage silos
- 8 Dry mixer
- 9 Package machine
- 10 Storage

### 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.

#### KEY FEATURES

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



## WHAT'S YOUR SEPARATION CHALLENGE?

ANDRITZ Separation is the world's leading separation specialist with the broadest technology portfolio and more than 2,000 specialists in 40 countries. For more than 150 years, we have been a driving force in the evolution of separation solutions and services for industries ranging from environment to food, chemicals, and mining & minerals. As the OEM for many of the world's leading brands, we have the solutions and services to transform your business to meet tomorrow's changing demands – wherever you are and whatever your separation challenge. **Ask your separation specialist!**

### AFRICA

ANDRITZ Delkor (Pty) Ltd.  
p: +27 11 012 7300  
separation.za@andritz.com

### EUROPE

ANDRITZ Gouda BV  
p: +31 182 623 723  
gouda@andritz.com

### ASIA

ANDRITZ Singapore Pte. Ltd.  
p: +65 6512 1800  
separation.sg@andritz.com

### NORTH AMERICA

ANDRITZ Separation Inc.  
p: +1 817 465 5611  
separation.us@andritz.com

### AUSTRALIA

ANDRITZ Pty. Ltd.  
p: +61 3 8773 4888  
separation.au@andritz.com

### SOUTH AMERICA

ANDRITZ Separation Ltda.  
p: +55 47 3387 9100  
separation.bra@andritz.com

### CHINA

ANDRITZ (China) Ltd.  
p: +86 757 8258 6802  
separation.cn@andritz.com

**ANDRITZ.COM/SEPARATION**



All data, information, statements, photographs, and graphic illustrations in this leaflet are without any obligation and raise no liabilities to or form part of any sales contracts of ANDRITZ AG or any affiliates for equipment and/or systems referred to herein. © ANDRITZ AG 2018. All rights reserved. No part of this copyrighted work may be reproduced, modified, or distributed in any form or by any means, or stored in any database or retrieval system, without the prior written permission of ANDRITZ AG or its affiliates. Any such unauthorized use for any purpose is a violation of the relevant copyright laws. ANDRITZ AG, Stattegger Strasse 18, 8045 Graz, Austria. Baby Food 2.0/03.2018 EN