



# Research & Technology Center

Sint Niklaas, Belgium



Yes we CAN!

# A pilot plant dedicated to serve our customers

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## The JBT Research & Technology Center (RTC) in Sint-Niklaas provides:

- ✓ Wide range of process authority consulting and validation services recognized by FDA and USDA.
- ✓ In-container processing expertise
- ✓ Filling and closing expertise
- ✓ Water treatment support
- ✓ European staff of four highly experienced thermal processing experts

## In-container Sterilization Systems

Thermal process studies can be performed either in your laboratory, factory or in our 600 m<sup>2</sup> pilot facility in Sint-Niklaas (Belgium).

Our pilot plant and laboratory facility are capable of preparing products in a kitchen area and performing the required heat penetration studies. Can integrity tests are also performed in our laboratory sterilizers.

Our RTC is equipped with the most modern measurement technology for thermal process data collection and data analysis, both for continuous and batch systems. Pilot equipment for food product preparation, filling and seaming on semi-industrial scale is also available.

Our process technology scientists and technicians possess extensive knowledge of all kinds of industrial sterilizers, both continuous and batch.



**SuperAgi™ Agitating Batch Retort**

## The simulation capabilities are based on:

- ✓ Continuous Rotary Sterilizer: 804 and 610-B simulator
- ✓ Stationary Waterspray, Agitating Waterspray, Hydrostatic Sterilizer, Hi2flex, Stationary Steam, Full Water Immersion, Partial Immersion, 100% steam: AR091 Multipurpose Laboratory Pressure Sterilizer and SuperAgi-Multifunction Sterilizer

Variable simulation-parameters for the Multipurpose Laboratory Pressure Sterilizer: all factors (temperature, pressure, time, agitation speed, etc.) can be modified within the control system to provide almost unlimited combinations to meet all testing needs.

In addition to heat penetration and cooling rate studies, the Multipurpose Laboratory Pressure Sterilizer can be used to study container behavior and strength (container integrity) under a variety of processing conditions. A special custom-made version of the AR091-H simulator is available for this purpose.

## Filling and Closing Systems

The Technology Center offers the equipment to perform filling and closing studies. A monovalve Unifiller (XL-U001), a SeamTec ST206-F2 and a Weight Filler simulator are available. For filling studies a steam tilting cooking kettle to preheat the product is installed directly next to the monovalve Unifiller.

## Validation and Consulting Services

- ✓ Process validation of newly installed sterilization equipment and re-validation of existing equipment (temperature distribution, heat transfer distribution, heat penetration)
- ✓ Based on these studies JBT provides:
  - Validation Reports
  - Process Deviation Analysis
  - Reference Letters for Thermal Process Filing (FDA)
- ✓ JBT's Research and Technology Center comprises a broad range of data collection equipment for temperature and pressure. We can, for example, simultaneously measure up to 128 channels, wired and/or wireless.

## Container Performance Testing

We help you develop new packaging solutions for existing machinery by determining container specifications (can deformation testing, bulging, deflection, etc.) in conjunction with thermal processing studies.

## Training & Audits

- ✓ Thermal processing training and Better Process Control School (BPCS)
- ✓ Operator training
- ✓ Processing NumeriCAL™ software training

## Thermal Process Development

Our RTC has accumulated widely appreciated know-how in virtually all process-related issues and will help you develop the optimal process for your equipment/product combination, either in your own facilities or in our pilot facility. We can simulate any type of sterilizer to help you with:

- ✓ Development of new sterilization processes
- ✓ Process optimization

Our RTC also assists you in optimizing the filling and seaming operations for your JBT equipment.

- ✓ Can Seaming Performance
- ✓ Can/Jar Filling Performance



## Kitchen/Formulation Area

The product preparation area includes:

- ✓ Mixing equipment
- ✓ Lab closing machines (all can sizes)
- ✓ Pouch sealer
- ✓ Tray sealer
- ✓ Heating (cooking) and cooling equipment

## Measurement equipment

- ✓ Tenderometer
- ✓ Viscosity
- ✓ Density
- ✓ Water analysis
- ✓ ATP measurement
- ✓ Refractometers
- ✓ Residual air
- ✓ Calibration baths
- ✓ Wireless and wired measurement systems for temperature and pressure
- ✓ Deflection sensor

### WE ARE YOUR SINGLE SOURCE FOR PROFITABLE PROCESSING & PACKAGING SOLUTIONS

JBT is a leading provider of integrated food processing solutions. From single machines to complete processing lines, we enhance value and capture quality, nutrition and taste in food products. With a local presence on six continents, JBT can quickly provide our customers and partners in the food processing industry with the know-how, service, and support needed to succeed in today's competitive marketplace.

#### JBT DIVERSIFIED FOOD & HEALTH

FRESH PRODUCE TECHNOLOGIES | FRESH-CUT, ROBOTICS, STEAMING | FRUIT AND VEGETABLE PROCESSING | SECONDARY PROCESSING | ASEPTIC SYSTEMS | FILLING AND CLOSING | IN-CONTAINER STERILIZING | TRAY SEALING | SECONDARY PACKAGING | HIGH-PRESSURE PROCESSING | POWDER PROCESSING | TUNA PROCESSING

#### OUR BRANDS



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We're with you, right down the line.™

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