

Research & Technology Center

Puebla, Mexico



Technologies and Services for Fruit and Vegetable, Thermal Processing, Packaging and HPP Systems



A pilot plant dedicated to serve our customers

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AR 091 MP Retort

The Research & Technology Center (RTC) in México - Puebla, offers technologies and services for the food industry broadly in four areas, Fruit and Vegetable, Thermal processing, Packaging and HPP Systems.

Fruit and Vegetable processing

Fruit and Vegetable processing offers knowledge in two categories, Citrus and non Citrus processing. The primary objectives of each category is to optimize the yield, quality and throughput of the processing equipment and systems that JBT Corporation supplies. With our well-established R&D management process in place, our processing systems consistently maximizes the available expertise and resources.

Currently the Puebla RTC is equipped with three commercial JBT extractors (Models 391 and 593), a Fresh'n Squeeze® Multi-Fruit Juicer, a screw finisher, a paddle finisher, and an FTE Turbo Finisher. The RTC is equipped to simulate many of the processes found in the modern commercial food processing industries. The facility is equipped with sophisticated laboratory instruments prepared to perform quality investigations and physicochemical analysis to analyze fruit, juice and pulp products as established by the USA, European, and Mexico regulatory authorities and the market's demanding requirements.

JBT's READYGo FVP (Fruit and Vegetable Processing) skid is a process system for making cold-extracted juices from a variety of fruits and vegetables.

The quality of our investigations is guaranteed by using sound scientific practices and procedures that consistently use methodologies and statistics to properly plan the experiments and to analyze the results.

Puebla RTC offers the following services for the Fruit and Vegetable Processing Industry:

- 1. Monthly citrus characterization program:** Generate monthly yield and quality reports. These reports are then sent via our JuiceLines™ monthly e-mail distribution to help customers optimize their production facilities.
- 2. Process Audits:** JBT process experts can visit production facilities to review the process line and give support to improve and optimize processes.
- 3. Specific Tests at RTC:** Our Food Scientists and Process Engineers can work with the customers to develop new product and process formulations to address the changing market requirements.
- 4. Training:** Another value provided by the Research and Technology Center is a training facility and specific testing for customers with new raw materials and process optimization. Here customer personnel can learn about scientific processes and procedures, laboratory equipment, equipment operations, and much more. A fully equipped training facility is available to host groups of up to 25 people for special training programs.

In addition, other equipments are available such as pulper (FMC 50), industrial blender (Stephan UM44), A&B tanks and mini MORE equipment, among others, which help to process other fruits and vegetables in our Pilot Plant. Studies have also been conducted with several fruits and vegetables to understand their behavior, generate yield and quality data, and define new processes. Some of these products are grape, melon, litchi, mango, banana, mamey, apple, pineapple, cucumber, aloe vera, carrot, ginger, guava, etc.

Thermal processing systems

Our Thermal Pilot facility has the capability to batch products in our thermal laboratory and then perform the required heat penetration studies in a laboratory sterilizer. The lab is equipped with the most modern measurement technology for thermal process data collection - for batch and continuous systems - and data analysis. Pilot equipment for food product preparation, filling and seaming on the semi-industrial scale is also available.

Our multi-Purpose Laboratory Sterilizer has the flexibility to simulate static and agitating (end over end) batch with steam water spray. Therefore it is capable of accurately simulating majority of production sterilizers engineered and built by JBT. This system provides the processor with the capability and flexibility to accurately design thermal processes using the type of equipment that best fits the requirements of the product, instead of forcing the processor to reformulate a product to fit a certain type of sterilizer.

Different thermal process evaluation and calculation strategies, such as the Ball Method, the General Method, and NumeriCAL™, are used to determine the most beneficial thermal process for a particular product. We can simulate these processes in our pilot installations and/or work directly in your autoclaves ensuring the highest quality of your product. Thermal process work can be performed either in your laboratory, factory, or in our pilot facility in Puebla, Mexico.

Types of Products offered:

- Products with distinct solid and liquid components or in low viscosity products (broths and sauces).
- Canned mushrooms, vegetables, beans, asparagus, etc.
- Products with starch and gums.
- Homogeneous products such as milk, sauces, creams, etc.
- TUNA

Types of Packages offered:

- Cans
- Glass
- Pouches
- Cups and Plastic trays (ready to eat)

Tray sealing solutions

Our products cover all tray sealing processes including shelf life extension techniques such as Atmospheric Seal, Gas Flush, Hermetic Shrink, Vacuum Gas and Skin Packaging. Equipment for food production such as cut fruit, ready meals, protein and non-food applications such as pet food, industrial and pharmaceutical.



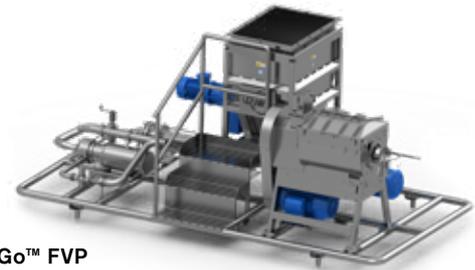
Extractor Model 391



Extractor Model 593



Extractor Model CJE 191



READYGo™ FVP



Multi-Fruit Juicer



UCF 110



UPF 100



FTE-50



Triple Mixer Tank A&B



VacShear A&B



Agilent Infinity II 1260 HPLC



GT1e



GTR



JBT Technical School

List of courses:

- 1 **Thermal Processing Academy**
- 2 **Better Process Control School** (FDA Approved)

Types of Services offered:

- Temperature distribution tests
- Heat penetration tests

JBT Mexico organizes periodically different courses or seminars on fruit and vegetable processing, thermal processing and FDA regulations. The courses are normally in Spanish and can be taught at the JBT facilities or on customer site.

Thermal processing courses are taught by experts in the sector considered "process authorities" and recognized by the FDA.

HPP High-Pressure Processing

The Puebla facility is also capable of running HPP trials on its JBT AVURE 35L system. In addition to the actual high pressure processing of the food and/or beverage, the lab is also equipped to run organoleptic and sensory tests in order to determine the shelf life of the following products:

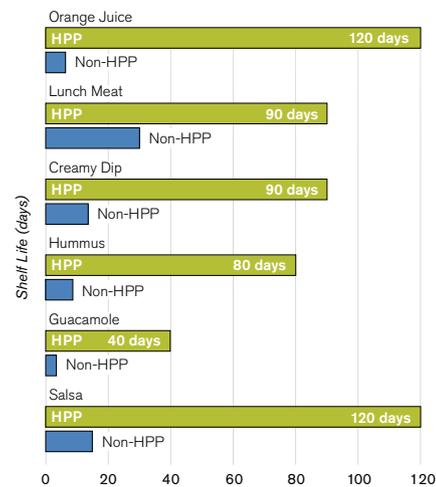
- Wet Salads & Dips
- Ready-To-Eat Meals
- Meat
- Beverages & Juices
- Vegetables
- Avocados
- Seafood

Avure™ Expandable HPP Machine

The world's first expandable High Pressure Processing machine. Produces from 40 to 70 million pounds per year.



Shelf Life Comparison



WE ARE YOUR SINGLE SOURCE FOR PROFITABLE PROCESSING 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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