

# Rotary Atmospheric Sterilizer



Cooker-Cooler

# “Practice makes perfect”



Since 1913, more than 7,500 JBT Continuous Rotary Sterilizers have been placed into production around the world. An estimated 100 billion food cans are globally produced every year to preserve a broad range of ready meals, vegetables, soups, sauces, milk, non-carbonated beverages, etc. Today, more than 50% of the world's canned foods are sterilized on the JBT Rotary Sterilizer.



Year-by-year JBT has advanced the rotary sterilizer technology to offer high, consistent product quality at the lowest cost per unit produced. Today's rotary sterilizer technology allows processors to handle traditional and modern, stackable, lightweight and easy open-end cans.

There simply is no better way to sterilize high volumes of foods in cylindrical metal containers.

The latest atmospheric drive simplifies how atmospheric cookers and coolers are powered. A right angle gearbox supports the pinnion, that drives the reel gear and also drives the free roller feed. Maintenance is reduced to changing the oil in the gearbox.



58" DIAMETER VESSELS - MAX CAPACITY		
REEL STEP	CAN SIZE	MAX CAPACITY
24	603 x 700	1,608
35	401 x 411	3,500
42	307 x 409	4,452
47	300 x 407	5,170
56	211 x 400	7,056

84" DIAMETER VESSELS - MAX CAPACITY		
REEL STEP	CAN SIZE	MAX CAPACITY
35	603 x 700	2,485
55	401 x 411	5,665
64	307 x 409	6,976
72	300 x 407	7,776
79	211 x 400	9,954

112" DIAMETER VESSELS - MAX CAPACITY		
REEL STEP	CAN SIZE	MAX CAPACITY
48	603 x 700	3,408
74	401 x 411	7,622
86	307 x 409	9,374
94	300 x 407	10,528
110	211 x 400	13,860

Additional can size capacities available upon request.



To meet the industry's need for reduced energy and water consumption, ever-lower cost per unit produced and high, consistent product quality and safety, continues to relentlessly advance the rotary sterilizer technology. These innovations allow canners to address new consumer needs, packaging trends and market opportunities in the most effective and cost-efficient way possible.

# Low cost per unit produced

# High and consistent product quality

## Low labor cost

The JBT Continuous Rotary Sterilizer offers important advantages to substantially lower labor cost. Cans are directly transferred from the seamer to the rotary sterilizer and automatically transferred through the cooker and cooler shells. All critical machine functions are displayed on a centralized control system. Machine operation is completely automated. Moreover, multiple rotary sterilizers can be supervised by one operator.

A new, optional menu-driven control system offers automatic start-up and an optional process recipe changeover, further reducing labor requirements and eliminating the risk of human error. Finally, JBT provides turnkey installation and start-up services with detailed operator training classes.

## High reliability and availability

## Reduced machine maintenance

Since 1913, JBT has relentlessly advanced the JBT Continuous Rotary Atmospheric Sterilizer technology to ensure and further improve sustained, trouble-free operation. The application of high-grade materials, high-quality, proven designs and the smart use of new technologies go a long way to ensure maximum reliability and low-cost, easy maintenance.

JBT offers a broad range of food-grade lubricants specifically designed for the JBT Continuous Rotary Atmospheric Sterilizer. JBT's corrosion control experts help customers to maximize the life of their shells.



## Product uniformity

## High product quality and safety

Every can is cooked and cooled in the same manner and receives exactly the same thermal process for consistent product quality. Reduced processing time helps preserve the natural flavor, nutrients and appearance of the product.

## High processing speed

Higher line speeds require either more shells or shells with a larger holding capacity. To be able to offer the most cost-effective solution for each application, we have extended length and various diameter shells in our portfolio.

## Positive container handling

Positive mechanical handling minimizes can damage. This makes the system particularly suitable for processing traditional but also modern light-weight, stackable cans with conventional or easy-open ends. Additionally, necked-in or lithographed containers can be processed in JBT's latest generation of Continuous Rotary Atmospheric Sterilizers.

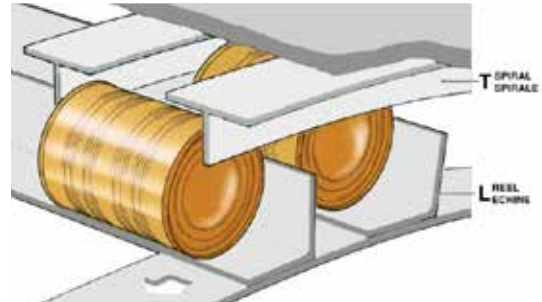
## Reduced processing time

The rotary sterilizer operates in a continuous, steady state mode. Faster heat penetration, resulting from forced product agitation, typically reduces the processing times required.



# A simple and extremely efficient operating principle

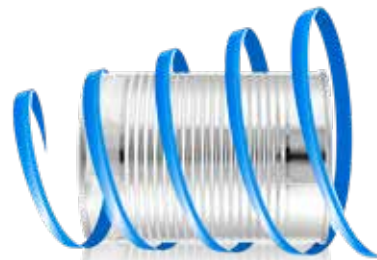
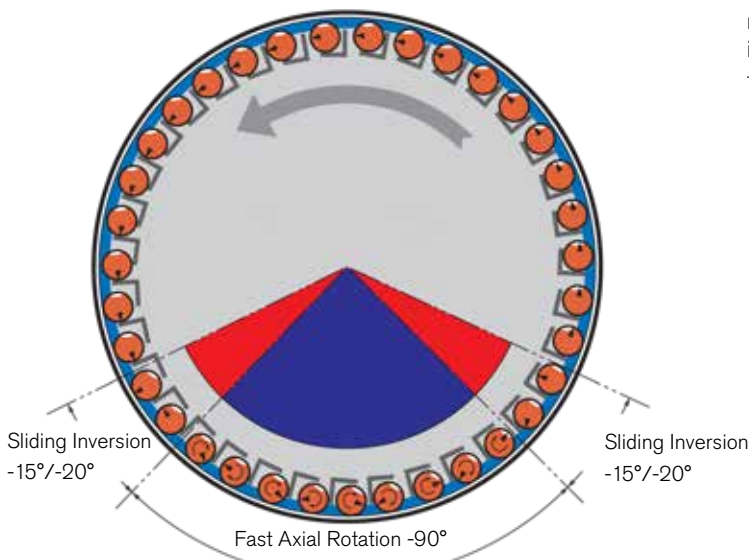
Closed cans enter the sterilizer directly from the closing machine with minimum waiting time. A feed device delivers the cans into the revolving reel of the cook vessel. The reel, working in conjunction with the stationary spiral, advances the cans through the vessel. Cans never stand still. The continuous spiralling motion and rotation of the container through the vessel provide an even cook to every container. Every can is handled individually and undergoes the exact same thermal process. At the end of the cooking process the cans are discharged and sent to a separate atmospheric cooler. Another option is to have a close coupled atmospheric cooler.



## Increased heat penetration & reduced cooking time

The Continuous Rotary Atmospheric Sterilizer agitates the can, permitting short-time, high-temperature cooking and rapid, efficient cooling in an automatic, continuous operation.

For each turn of the reel, the can undergoes a 3-phase movement cycle. This intermittent axial agitation induces forced convection heating and results in faster cooking and cooling of the product.



## Some of the Products currently processed in The JBT Rotary Atmospheric Sterilizer



- ✓ Apricots
- ✓ Berries
- ✓ Cherries
- ✓ Fruit Cocktail
- ✓ Fruit Salad
- ✓ Peaches
- ✓ Pears
- ✓ Pineapple
- ✓ Tomatoes
- ✓ Fruit Juices
- ✓ Fruit Concentrate
- ✓ Chocolate Syrup
- ✓ Tomato Juices
- ✓ Jams and Jellies
- ✓ Tomato Pastes
- ✓ Tomato Sauces
- ✓ Apple Sauces

# Flexibility

## Line layout flexibility

When multiple cooking or cooling vessels are required for longer processes, many shell configurations are possible. Our modular and flexible design allows for easy future modifications of an existing system by adding vessels.

## Small footprint and easy installation

The Continuous Rotary Atmospheric cookers and coolers require a limited industrial floor space considering a production capacity up to 1,000 containers per minute. Apart from the limited footprint, the installation of a Continuous Rotary Atmospheric Sterilizer in most cases does not require any major modifications to the available space.



## Other possible features

- High capacity 19.8 m (65') long vessels
- Multiple can size combinations
- Multiple can processing lanes
- Half shell coolers for increased evaporative cooling
- Multiple feed and discharge types
- Multiple feed inlets
- Flexible configurations for feed and discharge locations
- Ceramic insulation

## Product and Container Flexibility

JBT Continuous Rotary Atmospheric Sterilizer lines allow a combination of can sizes to be processed in a single unit. Twin spiral systems offer more flexibility.



Twin spiral systems allow higher speed processing. Two cans go through the entire process in parallel.

In addition, delicate products can be run with high output levels by reducing the rotation speed of the reel. The product is subjected to less agitation, therefore keeping a consistent quality.

### CAN COMBINATIONS IN TWIN SPIRAL SYSTEMS

603 x 600	&	603 x 700
401 x 411	&	404 x 700
307 x 309	&	401 x 411
300 x 407	&	307 x 512
300 x 407	&	303 x 602
211 x 300	&	211 x 400

## Feed & Discharge systems

Multiple infeed systems allow the processing of different cans with different cooking times without having to perform changeovers or to speed up the machine, or reducing cooling time.

## Modern process control systems

JBT provides various PLC-based options for controlling rotary lines. The options include a touchscreen Operator Interface. The screens are menu-driven and include a process overview, operator controls for local PID tuning, a customized recipe management system and diagnostic screens for troubleshooting. The Operator Interface also includes displays for current and previous alarms. Other customized features can be provided on request, such as trend graphs and detailed troubleshooting.





## Thermal process expertise at your service, around the globe

Our mission: to provide you with maximum uptime and smooth operation. You can count on JBT for technological support, installation supervision, training and after-sales support anywhere in the world.

More than 50% of the world's shelf-stable foods are filled, seamed or sterilized on JBT equipment. With several thousands of canning lines in operation worldwide, JBT is the world's leading supplier of integrated processing solutions for metal, glass and plastic containers. From single machines to complete processing lines, we enhance product value and safety. JBT equipment captures the quality, nutrition and taste of your product at the lowest cost per unit produced.

## Process Technology Centers at your service

JBT's Process Technology Centers in Europe, Asia and the Americas provide a broad range of added-value services to improve processing and packaging techniques. JBT has the staff, equipment and experience to perform the required heat penetration, temperature distribution and process validation studies in our pilot facility or right in your own plant. The JBT Pilot Sterilizer simulates rotary, hydrostatic or still processing for all can sizes and speeds and is used for heat penetration tests, container performance testing and product quality evaluation. JBT is a USDA/FDA-recognized process authority.





## Global Service and Support Minimize downtime and control your budget

Your business revenues and profits are directly related to how much you can produce in a given time period, which in turn depends on the performance, reliability and availability of your equipment. This requires each machine to be regularly serviced and optimized.

JBT offers OEM parts for repairs and maintenance. JBT stocks over 6,000 parts with most items available for shipment within 24 hours.

JBT's continuing commitment to its customers includes a staff of highly experienced field technicians available 'on call' around the world to service your equipment.

In addition to a full line of OEM parts and skilled field technicians, JBT offers JBT-branded lubricants and cleaning products, specially formulated to keep your equipment running smoothly.

Finally JBT provides a broad range of services to keep the sterilizer in good condition such as electrical and controls upgrade kits and a corrosion monitoring program.

The JBT PRoCARE service agreement offers you scheduled preventive inspections and maintenance of your equipment, minimizing unexpected and budget-shattering costs for reactive maintenance. A PRoCARE service agreement is designed to give you a predictable monthly cost, based on actual equipment use, and simple administration. PRoCARE offers peace of mind that you can produce as planned with optimum performance from your equipment throughout its working life.



**PRoCARE®**

The smart way to produce more tonnage per day

## COUNT ON JBT TO HELP PROTECT YOUR INVESTMENT

JBT's greatest value in PRoCARE® services comes from preventing unexpected costs through smart, purposeful, and timely maintenance based on unmatched knowledge and expertise. PRoCARE service packages are offered as a maintenance agreement in various service levels, depending on your production and cost management requirements.



### JBT LIQUID FOODS

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

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We're with you, right down the line.™

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