



**JBT 112" Diameter
2- Shell Rotary Pressure Sterilizer**

Condition

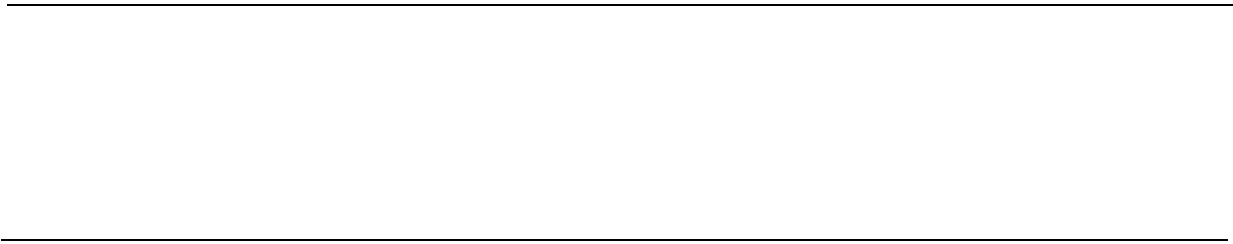
New never used.

**Carries Full Manufactures Warranty
(After Commissioning.)**

Continuous processing of 603 x 600 and 603 x 700 cans at a rate of 125 cans per minute.
For full specifications and details please see attached documentation.

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Description: JBT, 112" Diameter, 2-shell rotary pressure sterilizer for the continuous processing of 603x600 & 603x700 cans.

Prepared for: Juanitas Foods





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A. OPERATING SPECIFICATIONS

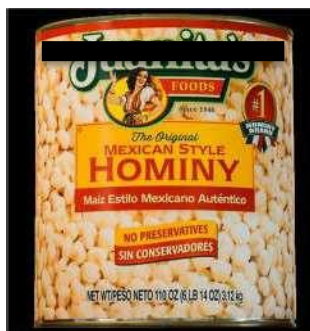
The machine quoted has been dimensioned on the basis of the following information:

CONTAINERS	603x700	603x700
	603x600	603x600
PRODUCT	Hominy	Menudo
COOK TIME	25.3 Minutes	36.0 Minutes
COOL TIME	25.3 Minutes	36.0 Minutes
OPERATING CAN SPEED	125 CPM	88 CPM
PROCESS TEMPERATURE	252°F	252°F

B. CAN SPECIFICATIONS

1. Container - 603x700

- 3-piece with standard sanitary ends
- 603x700 can (110oz) measures 6.19" in diameter and 7.00" in height



2. Container - 603x600

- 3-piece with standard sanitary ends
- 603x600 can (94oz) measures 6.19" in diameter and 6.00" in height



3. Type of Containers

- All containers to be processed are non-lithographed bright cans that have a label applied after the sterilization process

4. Containers With Pull Tabs

- Containers with pull tabs on the lids such as EZO lids should have the lid designed so that the tabs do not extend past the chime of the container during processing.

5. Container Inspection Requirements

- The customer should have a method of checking container fill weight, seam integrity and damage level (denting) prior to containers entering the rotary sterilizer. Containers that are not within specifications should be rejected and not be allowed to enter the rotary sterilizer.

C. CAN QUALITY CRITERIA

1. Two Piece Container With a False Chime

If the can is necked-in on one end and has false chime near the necked-in (stackable) end. It is expected that some minor indentations will appear on the false chime as it passes through rotary system. JBT will attempt to minimize the level of indentations to the false chime as the containers comes in contact with the spiral, reel angle, ejector star, bridge and other can transfer parts.

Based on JBT's experience on similar containers currently being processed on other Rotary Sterilizer Lines we would expect to see the following:

- Small indentations to the false chime approximately 1/32" (deep). Quantities per can will vary from (0) to as many as (4) per can.
- A roll mark will also be evident on the false chime where it comes with the spiral during rotation in the shells. It will be similar to the roll mark on the chimed/sanitary end.

The indentations described above will not affect the integrity of the can or the double seam.

The customer assumes the responsibility for the overall condition of the container entering the sterilization system and the condition of the container after exiting the sterilization system, provided however, that the container exits the system with no damage. Damage resulting from up or downstream can handling equipment, including can conveying leading to the feed chute and from the discharge chute is beyond JBT's control. The cans will be considered acceptable if they are within the requirements listed above once they exit the sterilization system.

It is understood by the customer and JBT that other factors can contribute to container indentations such as minor body plate weight variations, headspace, vacuum and other potential variations.

2. Two/Three Piece Containers With a Straight Wall

If the can is necked-in on one end and has a straight sidewall near the necked-in (stackable) end. It is expected that some minor indentations will appear on the can shoulder and can body near the necked-in end as it passes through rotary system. JBT will attempt to minimize the level of indentations, but it is unavoidable for the shoulder area and can body near the necked-in portion of the can to not come in contact with the spiral, reel angle, ejector star, bridge and other can transfer parts.

Based on JBT's experience on similar containers currently being processed on other Rotary Sterilizer Lines we would expect to see the following:

- Small indentations to the shoulder area and can body near the necked-in end of the can well below the double seam area measuring from barely visible to as large as 1/4" x 1/4" x 1/32" (deep). Quantities per can will vary from (0) to as many as (4) per can.
- A roll mark will also be evident on the can body where it is in contact with the spiral during rotation in the shells. It will be similar to the roll mark on the chimed end, only wider.

All of the above described indentations to the can (if present) could be hidden by the label that will applied by the customer. The indentations described above will not affect the integrity of the can or the double seam.

The customer assumes the responsibility for the overall condition of the container entering the sterilization system and the condition of the container after exiting the sterilization system, provided however, that the container exits the system with no damage. Damage resulting from up or downstream can handling equipment, including can conveying leading to the feed chute and from the discharge chute is beyond JBT's control. The cans will be considered acceptable if they are within the requirements listed above once they exit the sterilization system.

It is understood by the customer and JBT that other factors can contribute to container indentations such as minor body plate weight variations, headspace, vacuum and other potential variations.

3. Unacceptable Can Damage

- Scuffing of can lids: 603x700 and 603x600 3-piece cans with ends bulged to a maximum of x.xx" past the chime at the can center (to be determined by can deflection testing) will be run without scuffing the can ends.
- Chime dents: 603x700 and 603x600 3-piece cans with sharp cuts or deep dents to the chime.
- Body dents: 603x700 and 603x600 3-piece cans with sharp cuts or deep dents to the body.

4. Acceptable Can Damage

- Scuffing of can lids: 603x700 and 603x600 3-piece cans with ends bulged to greater than the maximum of x.xx" past the chime at the can center (to be determined by can deflection testing) may experience lid scuffing.
- Chime dents: 603x700 and 603x600 3-piece cans with small indentations to the chime approximately 1/32" deep not to exceed (4) in quantity per end. The indentations described will not affect the integrity of the double seam.
- Body dents: 603x700 and 603x600 3-piece cans with small indentations to the body approximately 1/32" deep not to exceed (4) in quantity per can body. The indentations described will not affect the integrity of the can.
- Roll Mark: 603x700 and 603x600 3-piece cans will show a roll mark or scuffing on the chime at both ends of the can.

D. EQUIPMENT DESCRIPTION

1. Operating principle & benefits

There simply is no better way to sterilize cylindrical cans.



The JBT Rotary Pressure Sterilizer is a continuous machine where, at one side, the unsterilized cans enter the machine and at the other side the sterilized and cooled cans leave the machine in a continuous way.

- Continuous feeding of cans into the first shell through the infeed valve
- Cans are transported through the machine in pockets created by the L-profiles on the reel and the T-spirals on the inside of the shell
- For every full turn of the reel, the cans shift (1) spiral lead over in the shell
- Transport to the next shell is handled by a rotary pressure transfer valve
- At the end of the last shell the cans exit continuously through the discharge valve
- Every can gets exactly the same treatment throughout the process.
- The can is never still during its travel through the machine.

2. JBT ROTARY PRESSURE STERILIZER

2.1. SYSTEM CAPACITY

Based on the required system capacity, JBT proposes the use of a rotary sterilizer with the following key machine parameters.

	<i>Pressure Cooker</i>	<i>Pressure Cooler</i>
Shell diameter (in)	112"	112"
Nr. of cans per turn	48	48
Nr. of turns per shell	66	66
Shell holding capacity	3168	3168
Process time(*) at 125 CPM	25.3 min	25.3 min
Overall length (ft-in)	51.8'	51.8'

(*) actual process should be confirmed prior to order entry.

2.2. SHELL CONFIGURATION

2.2.1. One (1) Continuous Rotary Pressure Cooker

- 112" inch inside shell diameter. Shell will be rated for 33 psig MAWP which will allow for a maximum operating pressure of 29 psig.
- Maximum operating temperature of 271°F
- Mild steel shell and shell heads
- Stainless steel spiral tees welded to the inner shell surface. Spiral will be crimped.
- Stainless steel welded reel angles
- Steam piping and auto condensate removal system for 100% steam process
- Standard or reverse configuration

2.2.2. One (1) Continuous Rotary Pressure Cooler

- 112" inch inside shell diameter. Shell will be rated for 33 psig MAWP which will allow for a maximum operating pressure of 29 psig.
- Mild steel shell and shell heads
- Stainless steel spiral tees welded to the inner shell surface. Spiral will be crimped.
- Stainless steel welded reel angles
- Steam, air and water piping for water immersion cooling process
- Water baffles in the reel and trough as needed to obtain temperature gradient (when applicable)
- Standard or reverse configuration

2.3. STANDARD DESIGN FEATURES

2.3.1. Shells/Reels

- Pressure vessels will be designed in accordance with the requirements of ASME and will come with a U-stamp.
- Exterior of all shells to be primed and painted
- Exterior of all shells are finished with a layer of high temperature resistant paint (JBT gray)
- All reels are equipped with a detachable end section
- All reels will be equipped with feed cups and body plates
- All piping required for the input of steam, air and water is provided. This piping will include all necessary control and manual valves as well as ports for draining water from the shells as necessary
- Galvanized conduit
- Floor jack levelling kit for each vessel
- Safety guarding covering all moving components

2.3.2. Feed, transfer and discharge devices

- Can conveying to the infeed chute is to be provided by the customer.
- A cup feed assembly will be supplied
- A stainless steel, discharge chute will be provided
- Non-paddle feed valve will be supplied with cast iron rings and bronze strips.
- Non-paddle transfer and discharge valves with trip stars will be supplied with cast iron rings and bronze strips.
- Ejector stars will be provided at the discharge of each shell.
- A safety clutch on the feed valve will disengage the feed valve from the reel gearing in the event of a can jam. The line will continue to run if the clutch is tripped. A remote reset station will be provided near the feed valve. During resets, the program will ramp the speed of the line down to jog speed until the clutch re-engages, upon which time the line speed will be brought back up to processing speed.
- The discharge chute will be equipped with a can back up jam paddle. An alarm will be sounded if the back-up paddle is activated.
- Can conveying from the discharge chute to be supplied by the customer.

2.3.3. Lubrication systems

- A Lubricator will automatically supply oil to the feed, transfer, and discharge valves, ejector stars and the cup feed.
- Manual grease system with lubrication headers for zerk type fittings, are provided to allow for convenient manual lubrication of drive and driven gears, bushings, bearings, etc.
- Copper tubing will be used for all grease, oil and pneumatic lines. Braided stainless steel hose will be used for final points where removal of lines may be common, and other areas as determined by JBT.

2.3.4. Motor and drive assembly

- Allen Bradley, Variable Frequency Drive (230 - 575 volt, 50/60 Hz, 3 phase – customer to verify voltage and HZ required) will be provided.
- One (1) integrated motor/gearbox, inverter duty (customer to verify voltage and HZ required).
- One motor mounted brake with manual override.
- Line speed will be monitored.
- No mechanical shear pin or clutch will be supplied with the main drive shaft. An electronic shear pin module that looks for changes in the average power draw as well as peak current will be supplied to minimize mechanical damage to the rotary sterilizer system in the event of a jam.

2.3.5. Standard process control features

- Automatic process control valves for control of temperature and pressure, with integral I/P's
- Automatic condensate removal system on cooker, equipped with analogue level probe and condensate removal valve
- Pressure transmitters for sensing pressure in all pressure vessels
- One pressure gauge per pressure vessel as per the pressure vessel code
- RTD's to monitor and/or control temperatures in all vessels
- TID's with visual temperature read-out at both ends of each vessel
- Variable Frequency Drive to control AC motor with open loop speed control

2.4. PROCESS CONTROLLER

A SST control cabinet with air conditioning to house all electrical components will be provided. The cabinet will be pre-wired prior to shipment.

This cabinet will also house the operator panel, recorder and pushbuttons for reel start/stop, emergency stop and mode selection (hand / jog / auto).

This cabinet includes the following:

- PLC control system
- Operator interface screen (10"), with the following screens:
 - Machine overview
 - Shell Detail
 - Manual override
 - Alarms
 - PID loop
 - PID overview
 - PID trending
 - Actual Recipe
 - Selected Recipe
 - Recipe entry
 - Recipe selection
- All operator actions are done by means of the operator screen except the following functions (these are done with push buttons):
 - Machine Start
 - Machine Stop
 - Machine Jog
 - Auto / Manual switch
 - Emergency Stop
 - Reset of faults
- Paper chart recorder (Honeywell) for temperature and speed

The machine overview screen contains all important data to monitor the process during normal run. The Shell detail screen provides additional info such as:

- valve positions

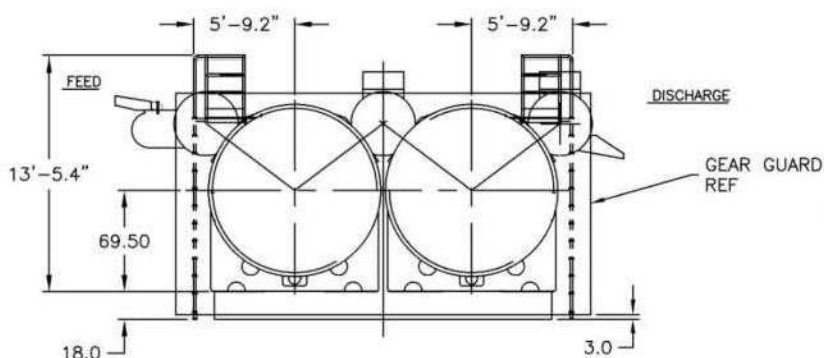
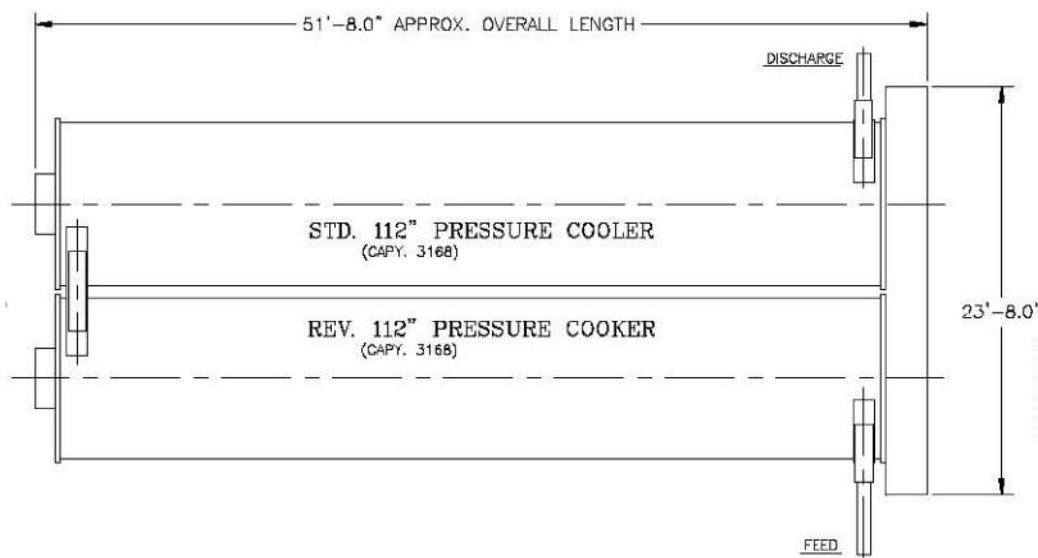
- details of all safety guard switches

2.5. STERILIZER SAFETY DEVICES

- Safety relief valves on the pressure vessels
- Mushroom head emergency-stop pushbuttons at the infeed and discharge as well as on the main panel
- One (1) alarm horn
- All machine guards not requiring a tool to open them are interlocked with a safety sensor that will e-stop the sterilizer if they are opened while the sterilizer is running.

2.6. LAYOUT

- Pricing is based on a box layout as shown below.
- Other layouts are possible but will result in a price increase.



3. JUANITA'S USER REQUIRED SPECIFICATIONS (URS)

- JBT standard components are included in this proposal

- Juanita's has not provided any user required specifications for the rotary pressure sterilizer outlined in this proposal.
- The pricing shown in this proposal does not include JBT compliance with any Juanita's URS.

4. INCLUDED OPTIONS

4.1 Automated grease lubrication System

Pneumatically driven grease pump and divider blocks. Resulting in:

- Correct amount of grease to each lube point
- Lower maintenance
- Lower grease consumption
- Improved machine performance and reliability



4.2 Catwalk

The catwalk provides safe access the top of the rotary sterilizer near key parts of the machine like the can valves. Includes:

- (2) ladders to provide easy access to the catwalk
- Safety gates at the stairs
- Removable hand railing at key maintenance points
- Designed to accommodate shell expansion
- Flooring choices to meet customer requirements



1. STANDARD COMPONENTS

Unless described otherwise, the equipment proposed in this offer is designed and built in accordance with JBT's mechanical/electrical standards and prices given are based on machine execution per JBT's mechanical/electrical standards.

Electric / Electronic	
Programmable logic controller	Allen Bradley (AB)
Operator interface	AB PV Plus
Variable frequency drives	AB
Motor contactors (starters)	Schneider
Motor Overloads	Tele/Square D
Control relays	Tele/Square D
Safety Relays & Switch's	AB
Electrical cabinet	Gaylord (mild steel)/Saginaw (SST)
Terminal blocks	Entrelec
DC Power supply	Phoenix, Puls
Control circuit breakers	Tele/Square D
Control voltage transformer	Tele/Square D
Control voltage	24Vdc
Electric Field devices	
Push buttons / Selector switches	AB
Proximity switches	IFM
Alarm light (column)	Tele/Square D
Process control devices	
Chart Recorders	Honeywell Trueline
Pressure Transmitter	IFM
RTD & Transmitters	Minco
Level control probe system	Warrick
Control valve	Armstrong
Manual globe valve	Hammond
Ball valve (manual and actuated)	BiTorq
Butterfly valve (manual and actuated)	BiTorq
Electro-mechanical devices	



Pneumatic cylinders	Bimba
Solenoid Valves	ASCO
Motor	SEW
Gear Box	SEW
Lubricator	Sloan



ADDITIONAL PHOTOS

