

# CTS Sterile tank

When innovation meets tradition



**PIERRE GUERIN**  
TECHNOLOGIES

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ISO 9001  
BUREAU VERITAS  
Certification



# CTS, Sterile tank on legs



**Pierre Guerin**, specialist of stainless steel processing, design and manufacture of stirred vessels and complete process lines for major clients whose reputation depends on bacteriologic quality of their dairy and food products.

With more than 60 years of experience, **Pierre Guerin** is the preferred partner of many Food & Beverage companies. We provide a wide range of storage and process vessels manufactured in our factories in Niort (France) and Burgos (Spain).

## Applications - Functionalities

- \_ aseptic holding of finish product before conditioning (*UHT Milk, UHT cream, Baby Food, fruit juices, etc.*).

## Design

- \_ capacities: 5 000 up to 30 000 litres
- \_ Clean-In-Place and Steam-In-Place stainless steel cylindrical tank with jacket
- \_ dished bottom and cover
- \_ construction according to the PED (*Pressure Equipment Directive*)
- \_ insulation of bottom, liner and cover utilizing non-hydrophilic Mineral Wool with water-proof stainless steel cover.

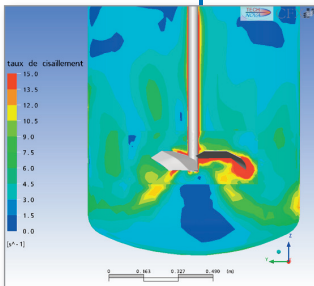
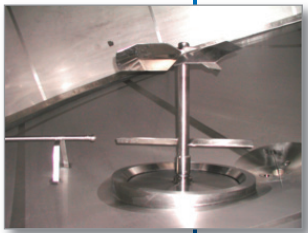
## Two high performance & Innovative agitation system

Depending on the product and the application, two agitation options can be proposed:

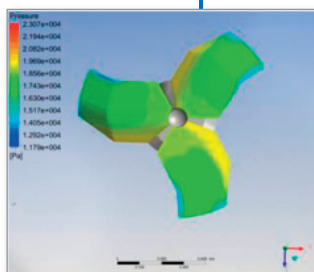
- \_ centred top-mounted agitator (*without bottom-guide to avoid abrasive effects*) with patented HTPG4 impellers and one turbine fitted on the lowest part of the shaft provides an efficient agitation at minimum volume. This agitation system is fitted with double mechanical seals lubricated by low pressure steam or steam condensate.
- \_ off-centred bottom-mounted PG-MAG magnetic agitator. This agitation option is specially adapted to the homogeneous holding of milk, fruit juices in aseptic conditions.

## Main features

- \_ calculation conditions: 3 barg (143°C) - full vacuum
- \_ frame support utilizing 3 to 6 adjustable feet
- \_ material: all parts made of stainless steel EN 1.4307 (304L) including insulation cover, frame, feet, etc.
- \_ finishes:
  - welds and surfaces polished Ra <0.8 µm
  - welds brushed and surfaces polished grit 120.



Measurement of shearing rates in the different tank zone



Digital simulation CFD: pressure on upper surface of blades

## Accessories

- \_ 1 man-way  $\varnothing$  405 x 450, without retention area, with opening safety device
- \_ 1 technical pipe with pressure relief valve, manometer, nozzle for pressure probe, sterile air inlet and cleaning devices
- \_ 1 set of nozzles for instruments (*temperature probe, low and high level switches, continuous level probe*)
- \_ 1 set of cleaning devices including 1 or 2 spray balls - static or rotating type - fitted on the cover above the product level
- \_ 1 tangential product inlet on the lower part of the wall
- \_ 1 outlet with anti-vortex device.



*Circular Safety Rail*

## Options

- \_ material: stainless steel EN 1.4404 (316L) for all product-contact parts
- \_ jacket to the bottom and the lower part of the liner for faster cooling after sterilization
- \_ anti-vortex baffle
- \_ circular guardrail made of stainless steel EN 4307 (304L)
- \_ supports for framework.



*Rotative spray ball*



## Dimensions - Weight - Sizes

Nominal Volume (l)	Useful Volume (l)	Internal Diameter (mm)	External Diameter (mm)	Wall Height (mm)	Total Height (mm)
5 000	5 920	1 800	2 000	1 800	4 300
7 500	8 710	2 000	2 200	2 250	5 100
10 000	11 895	2 200	2 400	2 500	5 400
15 000	16 640	2 400	2 600	3 000	6 000
20 000	22 620	2 500	2 700	4 000	7 500
25 000	27 600	2 500	2 700	5 000	8 500

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